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THE EFFECT OF MANAGEMENT PRACTICES ON QUALITY
HEALTHCARE IN LEVEL ONE HOSPITALS IN LUSAKA
DISTRICT, ZAMBIA.

A THESIS IS SUBMITTED IN PARTIAL FULFILLMENT FOR THE
AWARD OF THE DOCTOR OF PHILOSOPHY IN MANAGEMENT

By

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DECLARATION

I, Bubala Namakobo do hereby declare that this thesis with the title “The effect of management practices on the Quality Healthcare in First Level Hospitals in Lusaka District, Zambia is the result of my own work and that to the best of my knowledge, it contains no material that was previously published by another person which has been awarded for the award of any degree of an institution of higher learning. Acknowledgement has been given or made when needed by way of citation and subsequent references. Furthermore, I declare that all assistance received in the process of writing this thesis has been acknowledged.

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LIST OF ABBREVIATIONS AND ACRONYMS

WHO	World Health Organization
SDG	Sustainable Development Goal
UHC	Universal Health Coverage
MDG	Millennium Development Goal
NCD	Non-Communicable Diseases
LMIC	Low and Middle-Income Countries
HIS	Health Information System
FLH	First Level Hospitals
NHP&S	National Health Policies and Strategies
LOS	Length of Stay
CPD	Continuous Professional Development
HER	Electronic Health Records
HAI	Hospital-Acquired Infections
HSOPSC	Hospital Survey on Patient Safety Culture
SAQ	Safety Attitudes Questionnaire
GHS	General Household Survey
CAS	Complex Adaptive Systems
EHR	Electronic Health Records

ABSTRACT

This study examined the effect of management practices on the quality of healthcare at Matero and Chilenje First Level Hospitals in Lusaka District, Zambia in relation to the goal of achieving the Universal Health Coverage (UHC) by 2030 and Sustainable Development Goal 3. The study specifically assessed the effects of operational efficiency, service quality management practices, and leadership factors on quality healthcare during the 2022–2025 period. Quality healthcare was measured using patient satisfaction, employee satisfaction, patient safety, doctor/nurse-patient care, shorter waiting times, and efficient and effective healthcare services. The study was grounded in systems theory and employed a positivist research philosophy with a quantitative research design. Data were collected using structured questionnaires from a sample of 385 respondents comprising 189 non-management personnel, 168 patients and 28 management personnel. Data were analysed using SPSS, and the findings revealed that operational efficiency and service quality management practices had statistically significant positive effects on quality healthcare. Specifically, shorter patient waiting times, effective pharmacy and laboratory services, availability of medical equipment, and effective medical care significantly improved patient satisfaction. Leadership factors, including employee engagement, participatory decision-making and staff support, also positively influenced healthcare quality. However, the affordability of healthcare was not statistically associated with patient satisfaction regarding the quality of healthcare. The study recommends implementing appointment scheduling systems, adopting digital health technologies such as Electronic Health Records (EHRs), strengthening inventory management systems, decentralizing operational decision-making processes, accelerating the recruitment and retention of healthcare workers to improve service efficiency, and implementing a biometric attendance system to monitor employee attendance and availability when needed at the healthcare facilities.

Keywords: Leadership factors, Operational Efficiency, Service Quality and Quality Healthcare

CHAPTER ONE

BACKGROUND AND INTRODUCTION

1.0 Introduction

The first chapter of the study will look at the background and introduction and elucidate the rationale for conducting this study. The chapter then outlines the research problem, objectives as well as this study's scope and significance.

1.1 Background

The health sector is critical to national development because it promotes productivity, economic growth, and overall societal well-being (Global Citizen, 2023). According to the World Health Organisation (2023), investing in healthcare is crucial for long-term development because it improves fair access to health services and lowers health disparities. The World Health Organisation emphasises the need of effective health systems in increasing population health and promoting economic and social development.

Despite improvements in medical technology and healthcare funding, healthcare systems around the world continue to struggle with issues of efficiency, accessibility and quality (World Health Organisation, 2020; World Bank, 2023). Due to poor infrastructure, geographical barriers, and a lack of qualified healthcare personnel, studies have reported notable differences in healthcare utilisation between rural and urban populations (Regenstreif et al., 2023). Governments and international organisations have prioritised Universal Health Coverage (UHC) and strengthening the health sector as part of Sustainable Development Goals (SDGs) in response to these problems.

The SDGs, particularly SDG 3, focus on guaranteeing healthy lives and fostering well-being for all by 2030 through UHC (United Nations, 2015). According to the World Health Organisation

(2021), UHC assures that all people have access to preventive, curative, rehabilitative and palliative care without financial burden. To achieve UHC, healthcare systems must deliver services that are safe, effective, equitable and patient centred.

Quality healthcare has emerged as a key concern in global health policy, since patient views of healthcare services have a growing influence on healthcare utilisation and satisfaction. Kim et al. (2024) found that patients frequently rate quality healthcare based on responsiveness, communication and overall service experiences. Similarly, Kroneman et al. (2023) observed that differences in healthcare worker skills, experience and service delivery strategies contribute to discrepancies in quality healthcare across facilities and geographies.

The Commonwealth Fund (2024) highlighted patient safety, accessibility, efficiency and patient-centred treatment as critical components of quality healthcare. Chahal et al. (2010) emphasised the significance of communication, empathy and attentiveness in enhancing patient satisfaction and healthcare outcomes. These findings show that management techniques, resource allocation and organisational efficiency all have an impact on quality healthcare in addition to clinical treatment.

UHC and good health system governance have also had a huge impact on healthcare delivery around the world. The Canada Health Act for example, outlines essential standards that healthcare systems must meet to qualify for government financing (Flood et al., 2020). Canada's achievement of UHC highlights the necessity of robust governance and management structures in providing accessible and quality healthcare services. Similarly, the ideas of universality, equal access, and solidarity underpin healthcare systems throughout the European Union (European Commission, 2021). The European Commission (2021) emphasises the importance of quality healthcare in functional healthcare systems since it guarantees that services are efficient, accessible and responsive to the demands of the community. These global standards demonstrate how crucial

efficient management systems are to raising healthcare standards and attaining fair healthcare delivery.

To improve healthcare systems around the world, the World Health Organisation (WHO) developed the health systems building blocks framework. Leadership and governance, health financing, health information systems, service delivery, the health workforce, and medical products and technology are the six essential components of health systems identified by the framework (WHO, 2022). Together, these elements have an impact on health outcomes and the quality of healthcare.

Leadership and management strategies are critical because they influence how healthcare resources are planned, coordinated, overseen and used (Bateman et al., 2023). According to Daft (2021), management entails planning, organising, leading and regulating organisational resources in order to achieve goals efficiently and effectively. Robbins and Coulter (2022) describe management as the coordination and supervision of organisational activities aimed at improving performance and achieving institutional goals. Management techniques in healthcare settings have an impact on staff performance, service coordination, patient safety and operational efficiency (Robbins and Coulter, 2022). Effective management methods, such as supportive supervision, strategic planning, teamwork, communication and effective resource utilisation have been linked to higher quality healthcare and patient satisfaction. In contrast, poor leadership, coordination and resource management have a detrimental impact on service delivery and healthcare outcomes (WHO, 2020; Kumar et al., 2022). The Institute of Medicine (2001) recognised six major dimensions of quality healthcare that are still relevant globally. These include safety, effectiveness, patient-centred care, timely delivery, efficiency and equity. These characteristics offer a framework for analysing healthcare performance and determining how management approaches affect quality healthcare.

Despite ongoing health sector changes, many African countries continue to face healthcare delivery issues on a regional scale. Healthcare systems in low- and middle-income countries are frequently hampered by insufficient funding, a scarcity of healthcare workers, poor infrastructure and limited access to medical technologies (WHO, 2020). The WHO (2020) reports that in low- and middle-income nations, inadequate healthcare has a major role in unnecessary deaths. Several African nations have enacted healthcare reforms with the goal of enhancing the quality and provision of healthcare services. For instance, Ethiopia implemented changes aimed at enhancing accountability, service delivery and healthcare administration (Tsfaye et al., 2021). Ethiopia has been monitoring patient complaints and feedback since 2008 to make healthcare institutions more responsive (Tsfaye et al., 2021). Outpatient, inpatient and emergency medical treatments are offered by Ethiopia's mostly public healthcare systems (European public health institute, 2020). Maternal health and the management of infectious diseases including HIV/AIDS, malaria, and tuberculosis have improved because of these measures (United Nations, 2020). Ethiopia still has issues with infrastructure, resource availability, and sustainable healthcare despite these successes. African nations' dedication to bolstering Primary Healthcare and attaining UHC through robust and sustainable health systems was further and aligned in the 2023 Kigali declaration (World Health Organisation Regional Office for Africa, 2023). In order to improve quality healthcare and accessibility throughout the continent, the declaration highlighted the significance of strong leadership, governance and healthcare administration (World Health Organisation Regional Office for Africa, 2023).

Zambia's healthcare systems are divided into two sectors namely private and public with each providing specialised healthcare services. Although private healthcare institutions are often believed to provide high quality services, the public healthcare systems continue to experience

issues with quality healthcare and service delivery (Chileshe et al., 2021). Zambia's public healthcare systems are divided into three levels:

- i. Primary level: Health posts, rural health facilities, and First Level Hospitals that provide primary care and preventative services.
- ii. Secondary level: Provincial and general institutions that offer curative services.
- iii. Tertiary Level: University teaching hospitals and Central hospitals that offer specialized care.

The Primary healthcare facilities selected for this study were Chilenje First Level Hospital and Matero First Level Hospital. To enhance Primary Healthcare access and management, these facilities were converted from clinics to First Level Hospital (FLHs) in 2017 (Ministry of Health Zambia, 2018). Matero FLH serves approximately 356, 462 people (Central Statistical Office of Zambia, 2022), whereas Chilenje FLH serves over 130, 000 people (Musonda et al., 2021). Outpatient care, inpatient treatment, maternity care, radiography, Laboratory services, physiotherapy, pharmacy services, theatre services, volunteer counselling and testing, and environmental health services are among the services offered by the hospitals.

FLHs are critical components of Zambia's healthcare systems since they are the initial point of contact for medical services and help with early diagnosis, treatment and illness prevention, according to the Ministry of Health Zambia (2020). According to Chirwa et al. (2019), by addressing common ailments and improving community access to healthcare services, FLHs relieve demand on higher level hospitals. Decentralisation policies, leadership competence, resource accessibility and human resource management all have an impact on management practices in the hospitals (Ministry of Health Zambia, 2022). Mulenga et al. (2018) also noted that a lot of clinical managers in FLHs combine clinical and administrative duties, which could have an impact on the effectiveness of operations and quality service.

Additionally, FLHs are crucial in tackling Zambia's public health issues, including health issues affecting mothers and children, infectious diseases like HIV/AIDS and malaria in underprivileged areas (Kamwendo et al., 2021). Their emphasis on primary healthcare, early intervention and preventative programmes greatly enhances public health results. Zambia's healthcare systems still face serious issues with quality healthcare, even after healthcare reforms were implemented under the National Health Policies and Strategies in 1992. The WHO (2020) states that despite ongoing support from both domestic and foreign partners, the provision of quality healthcare in Zambia's public hospitals continues to be a significant challenge.

Despite the ongoing expenditures in the health sector and increase of healthcare infrastructure, many Zambian public healthcare institutions continue to face problems regarding healthcare quality, patient experience, management effectiveness and operational efficiency. Given the strategic importance of FLHs in providing basic healthcare services, it is important to understand how management practices influence quality healthcare. As a result, this study attempted to examine the effect of operational efficiency, service quality and leadership factors on quality healthcare at Matero and Chilenje First Level Hospitals in Lusaka District, Zambia.

1.2 Statement of the Problem

Through the National Health Strategic Plan (2017-2021), the Zambian government implemented reforms to enhance healthcare delivery, such as strengthening facility level management systems and decentralising decision making (Minister of Health Zambia, 2017). By improving service delivery, operational effectiveness, leadership and accountability in healthcare facilities, these reforms aimed to raise the standard of healthcare. Despite these efforts, many public health facilities continue to report quality healthcare issues like resource limitations, inefficient service delivery, patient dissatisfaction and variations in facility performance, indicating that management practices may not be producing the desired results (Chama et al., 2022).

Recent reports of medication diversion and resource mismanagement within Zambia's public healthcare systems have also raised concerns about the effectiveness of healthcare administration (Associated Press, 2025). These findings highlight the absence of strong leadership, accountability, monitoring systems, and operational control in preserving quality healthcare and public trust, even though they do not directly pertain to the hospitals included in this study (Hassen, 2024).

There is limited empirical data on how particular management practices such as service quality management, operational efficiency and leadership factors affect quality healthcare in FLHs in Zambia, even though management practices are generally acknowledged as significant determinants of quality healthcare. Most studies undertaken have concentrated on manpower shortages, illness load, health financing, and other general health system issues while facility level management related problems have received less attention.

According to Hassen (2024), ineffective management techniques can lead to poor quality healthcare, lower patient satisfaction, inefficient resource utilisation, poor staff performance, and negative health consequences. If these obstacles are not addressed, Zambia may continue to struggle in achieving the UHC and SDG three (3), which aim to ensure healthy lives and promote well-being for everyone.

It is for this purpose that this study was undertaken to specifically investigate the effect of Service quality management, operational efficiency and leadership factors on quality healthcare at Chilenje and Matero FLHs in Lusaka District of Zambia.

1.3 General Objective

To examine the effect of management practices on the Quality of Healthcare in First Level Hospitals (FLHs) in the Lusaka District, Zambia.

1.4 Specific Objectives

- i. To examine the effect of operational efficiency on the Quality of Healthcare in FLHs in the Lusaka District, Zambia.
- ii. To assess the influence of service quality management practices on the Quality of Healthcare in FLHs in the Lusaka District, Zambia.
- iii. To investigate the effect of leadership factors on the Quality of Healthcare in FLHs in the Lusaka District, Zambia.

1.5 Research Questions

- i. To what extent does operational efficiency predict the Quality of Healthcare in FLHs in Lusaka District, Zambia?
- ii. What is the effect of service quality management practices on the Quality of Healthcare in FLHs in Lusaka District, Zambia?
- iii. What is the effect of the leadership factors on the Quality of Healthcare in FLHs in Lusaka District, Zambia?

1.6 Significance of the study

The objective of this study was to identify gaps in management practices on the quality of healthcare in FLHs in Zambia, with a particular emphasis on the Chilenje and Matero First Level Hospitals (FLHs) in the Lusaka district. The objective of this study was to provide evidence-based recommendations for improving the delivery of healthcare services at these facilities by analyzing operational efficiencies, service quality levels and management practices.

This study contributes to the discourse on healthcare leadership and governance by offering a deeper understanding of system deficiencies and potential areas of improvement. The findings are particularly advantageous for healthcare professionals, policymakers, and hospital administrators

who are striving to enhance healthcare management procedures. The research provides valuable insights for future research on quality healthcare in low resource environments particularly in public health facilities.

The recommendations from this study can serve as a foundation of strategic reforms, workforce development programmes, and legislative amendments that will improve Zambia's health system. The objective of the research is to address current management deficiencies in order to enhance the delivery of healthcare services, promote patient-centered care, and help Zambia achieve UHC and SDG 3 thereby guaranteeing the health and well-being of all.

1.7 Scope of the Study.

The study focused on two public hospitals, the Chilenje and Matero FLHs, which are located in the Lusaka district of Zambia. The Ministry of Health, the Lusaka Health District office, medical professionals working within these institutions, the management teams of the selected FLHs, and a designated cohort of individuals who utilized these healthcare centers were the primary sources of information. The stakeholders provided critical insights into the management procedures and quality of healthcare of the two hospitals under review.

1.8 Delimitation

The boundaries and scope of this study are defined by their delimitations which specify the inclusions and exclusions of the analysis. This study investigated the effects of management on the quality of healthcare in First Level Hospitals in the Lusaka district of Zambia. The following limitations were identified:

1.8.1 Geographic Concentration

The scope of this study was restricted to two specific FLHs, Matero and Chilenje, located within Lusaka region. The results may not be applicable to healthcare institutions beyond the FLH

classification or to other regions of Zambia. This research endeavors to provide a comprehensive examination of the management methods employed within these institutions in a localized setting.

1.8.2 Demographic Sample

The research primarily included the perspectives of healthcare practitioners, administrative teams, and a designated cohort of patients from the selected hospitals. Additional stakeholders such as policymakers and non-governmental organizations were excluded from the data collection process. This emphasis limited the findings to individuals who were directly involved with the facilities, potentially omitting broader systemic factors.

1.8.3 Time Frame

The data collection for this endeavor was conducted within a designated time frame. The findings reflect the management practices and quality healthcare observed during the 2024 study period and may not capture changes or advancements that occurred before or after this time frame, as indicated by the chronological boundary.

1.8.4 Variables Under Investigation

The research meticulously examined the effect of operational efficiency, service quality, and leadership factors on the quality of healthcare. This study did not explicitly investigate other variables that influence quality healthcare, such as patient demographics, socioeconomic issues, and overarching health system challenges. The purpose of this restriction was to guarantee a focused analysis of the role of management in the quality of healthcare.

1.9 Definitions of Operational/Essential Terminologies

Management	This is the process of directing, organizing, regulating and planning resources, including human, financial, physical and informational to
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achieve organizational objectives in a manner that is both effective and efficient. Management is the process of overseeing operations, ensuring the quality of care, and organizing personnel and resources to enhance patient outcomes in the healthcare sector (Drucker, 2005).

Quality healthcare	The concept of quality healthcare is multifaceted and encompasses a variety of qualities, including safety, efficiency, accessibility, patient-centeredness, equity and effectiveness. It indicates the degree to which health services for individuals and populations increase the likelihood of attaining favorable health outcomes (Liu et al., 2022).
First Level Hospitals (FLHs)	These are facilities that provide primary healthcare services and typically serve as the initial point of contact of patients throughout the healthcare systems. FLHs are responsible for the provision of essential health services, including preventive, curative, and rehabilitative treatment (Mwanza et al., 2023).
Operational efficiency	This is the ability of an organization to effectively deliver services while simultaneously minimizing waste and resource consumption. Operational efficiency in healthcare involves the delivery of services at the lowest cost while maintaining quality, the reduction of waiting times and the optimization of the operational processes (Smith et al., 2023).
Service quality	This is an assessment of the degree to which healthcare services meet or exceed patient expectations. It is typically assessed across dimensions such as responsiveness, assurance, empathy, reliability and tangibles which collectively influence the patient's experience with their healthcare services (Lee et al., 2024)

Management practices	These are strategies, methods and policies that healthcare executives and administrators implement to enhance operational efficiency, optimize care delivery and ensure compliance with regulatory standards and best practices (Smith et al., 2023).
Patient satisfaction	This is the degree to which patients believe that their expectations and requirements are met during their interactions with healthcare professionals. Patient satisfaction is a critical indicator of service quality and has the potential to influence patient retention and health outcomes (Johnson et al., 2023).
Leadership and governance	This refers to the procedures, structures and conduct that govern and manage organizations. In the healthcare sector, effective leadership and governance are essential for the establishment of a vision, the establishment of strategic objectives and the assurance of accountability across health systems (Smith et. al. 2023)

1.10 Chapter Summary

The Zambian government and its collaborations, including non-governmental organizations have consistently worked to enhance healthcare standards by investing in significant financial resources and implementing training programmes that are specifically designed to improve healthcare delivery. The primary objective of these initiatives is to improve public hospitals, which are the primary recipients of these investments. The objective of these initiatives is to assist Zambia in its pursuit of universal health coverage by concentrating on the development of a skilled health workforce and the provision of high-quality healthcare to all.

However, despite these initiatives, problems continue to arise. Substandard quality healthcare in public hospitals is indicated by reports which show that the current healthcare system is

inadequately equipped to satisfy patient needs. In recent years, the government has been compelled to recruit additional personnel due to the significant obstacles posed by the shortage of healthcare professionals. Nevertheless, the objective of achieving universal health coverage by 2030 and donor assistance may be jeopardized by the persistent challenges in service delivery.

This study examined the effects of management on the quality of healthcare in First Level Hospitals in Lusaka, thereby addressing these inequalities. It specifically assessed the effects of operational efficiency, service quality and leadership factors on the quality of healthcare in FLHs. The objective of this initiative is to provide insights that could be used to guide targeted measures that could improve healthcare outcomes and support Zambia's efforts to achieve universal health coverage.

CHAPTER TWO

EMPIRICAL AND LITERATURE REVIEW

2.0 Introduction

This chapter focuses on literature and empirical reviews. It also evaluates and critiques numerous studies conducted by other researchers or academicians. Additionally, it identifies deficiencies in the reviewed studies.

2.1 The effect of Operational Efficiency on Quality Healthcare

Operational efficiency is a crucial factor in determining the quality of healthcare, particularly in low resource environment such as Sub-Saharan Africa (Samuel et al., 2019). It entails making optimal use of scarce human, financial, infrastructure and technical resources in order to provide timely, safe, economical and efficient treatment (Samuel et al., 2019). Peter et al. (2022) argued that the effectiveness of healthcare systems and operational management is directly related to the quality of healthcare which includes aspects like patient outcomes, satisfaction, timeliness and equity. With a focus on hospitals in Sub-Saharan Africa, this research examines empirical data on three key operational dimensions namely medicine stockout, waiting times and effective resource use/distribution.

Health outcomes and service quality are directly impacted by hospital resource utilisation (Rabi et al., 2020). Babalola et al. (2020) evaluated the technical efficiency of public district hospitals in South Africa using data envelopment analysis. Only 30% – 40% of hospitals were found to be functioning properly and inefficiencies were linked to misaligned input-output ratios, underutilised infrastructure and inadequate personnel deployment. Similarly, conclusions were drawn from a systematic review conducted by Jacobs et al. (2020), which discovered that technical and scale inefficiencies frequently caused hospitals throughout Sub-Saharan Africa to operate below

efficiency limits. These inefficiencies reduce throughput, impede service delivery and eventually result in a decline in care quality (Paul et al., 2023).

Lean and Six Sigma approaches have demonstrated positive effects on hospital productivity globally (Jacobs et al., 2020). For example, without compromising infection rates or patient outcomes, a hospital in the United Arab Emirates that implemented Lean Six Sigma into its antimicrobial stewardship programme saw a 54.2% decrease in antimicrobial use and an 81.7% decrease in associated expenses (Khalifa et al., 2023). These results offer valuable lessons for resource utilisation in comparable hospital settings although they are coming from sources or areas outside of Sub-Saharan Africa.

Simulation modelling from studies conducted in India demonstrated that process changes and staff reallocation can greatly improve resource utilisation and decrease bottleneck in the primary healthcare settings (Kumar et al., 2021). Even without increasing infrastructure, these strategies can be modified for use in Sub-Saharan Africa hospitals to enhance patient flow and resource efficiency (Kumar et al., 2021).

In Sub-Saharan Africa healthcare systems, lengthy waiting times are a recurring problem that has been demonstrated to have a detrimental effect on patient satisfaction and service results (William et al., 2022). By applying Lean concept to a rural District Hospital in South Africa, Naidoo et al. (2016) were able to reduce waiting times by 39% and overall patient time by 31%. Throughput and patient satisfaction increased as a result of this strategy. In a similar vein, Rauf et al. (2008) showed that rearranging hospital emergency department personnel and triage procedures greatly decreased waiting times for stable patients.

According to pre-post intervention research conducted at Tanzania's Kilimanjaro Christian medical centre, improvements in staffing levels and operational procedures resulted in a 55.8% decrease in

waiting times in the outpatient department (Mboya et al., 2024). This resulted in better operational performance and perceived care quality. Waiting times reduced and patient satisfaction increased in clinics that used structured waiting time and appointment scheduling (Whittaker et al., 2017).

Although shorter waiting times are highly linked to better patient experiences, there is less evidence linking them to clinical results (Peter et al. 2022). Although there is conflicting data about pain management or longer-term physical function, a systematic review by Harding et al (2018) found some evidence that shortening referral-to-treatment timeframes in outpatient settings improve specific outcomes, such as quality of life and productivity. According to numerous research, extensive waiting periods are directly associated with decreased patient satisfaction levels, such as evidenced by a multitude of studies. Anderson et al. (2020) demonstrated that increased waiting times are associated with a lower level of patient satisfaction. Alnemer et al. (2020) in a study conducted by at King Abdulaziz university, further substantiated these findings by illustrating that patient satisfaction was significantly reduced by extended waiting times.

Recent research has emphasized the significant impact of extended waiting times on healthcare outcomes, particularly in public institutions. These delays contribute to patient dissatisfaction, increased tension among healthcare personnel and ineffective utilisation of patient time (Mukumang et al., 2021). In South Africa, a study found that patient dissatisfaction in public institutions was significantly influenced by extended waiting times with a significant number of patients experiencing delays exceeding two hours in outpatient departments (Mukumang et al., 2021). According to research conducted in Ethiopia, the average delay time for patients at Jimma University Medical centre was 3.5 hours, which resulted in heightened dissatisfaction and reduced access to timely care (Demeke et al., 2022).

More developing nations are included in this global concern. The average outpatient waiting time in Ghana was recorded at 72 minutes, which contributed to a negative perception of public

healthcare services (Appiah et al., 2021). These results emphasize the urgent need for structural reforms to improve patient flow and address inefficiencies in public healthcare systems (Randi et al. 2022). According to research, the utilisation of digital health solutions, the augmentation of personnel, and the implementation of efficient queue management systems can significantly reduce waiting times and enhance patient satisfaction (Chidume et al., 2023; WHO, 2022).

Out-of-pocket expenses worsen health disparities, delay treatment, and deter early care seeking. According to a panel analysis by Arhin et al. (2022) that included 34 sub-Saharan Africa nations, UHC, life expectancy and infant survival rates were found to improve with increased spending on primary healthcare. They underlined that health outcomes are directly and favourably impacted by public financing schemes that lessen the financial burden on patients (WHO, 2020).

In support of this, Anyanwu et al. (2008) discovered that increases in both public and private Healthcare spending in Sub-Saharan Africa were linked to longer life expectancies and lower rates of neonatal and child mortality. They did however issue a warning that effective allocation is crucial and that not all spending produces better results. Further evidence that financial development improves public health funding and improves mother and child health outcomes in Sub-Saharan Africa was provided by a more recent study by Asongu et al. (2025).

Despite these advancements, Sub-Saharan Africa still experience low rate of health insurance coverage (Sam et al., 2020). Only roughly 10-14% of urban residents in Sub-Saharan Africa had insurance coverage, according to a demographic health survey analysis by Ahinkorah et al (2022), with insurance uptake being strongly associated with socioeconomic position. According to a comprehensive review by Osei et al. (2023), only 62% of insured patients expressed dissatisfaction with claims processing problems, service delays and shortages of necessary medications frequently being the cause of discontent. These results suggest that unless combined with operational

efficiency in service delivery, affordability by itself does not provide access to high quality treatment.

Studies conducted at the hospital level in Sub-Saharan Africa indicate that improved operational effectiveness can yield noticeable advantages (Paul et al., 2019). Without sacrificing care for critically ill patients, quality improvement cycles in the emergency room at Tshwane district hospital in South Africa dramatically cut down on waiting times (Rauf et al., 2008). Long waiting times were found to be mostly caused by ineffective administrative procedures and poor time management which nurse managers at Gauteng community health centres suggested to be addressed by using appointment systems and digital health records (Nkosi et al., 2024).

According to a study conducted in a government hospital in Sierra Leone, lengthy waiting times have a negative effect on patient satisfaction which can undermine systemic trust and discourage future care seeking (Bangura et al., 2022).

Medicine stockouts are a recurring problem in many low-and-middle-income nations, and they have been related to poor treatment results, disrupted continuity of service, and lower patient satisfaction (Olaniran et al., 2022). According to the World Health Association (2022), frequent stockouts of essential drugs reduce the quality of healthcare and hinder the efficacy of therapies. Stockout according to studies performed in sub-Saharan Africa, led to delayed treatment, increased out of pocket expenses, and decreased trust in public health institutions (Olaniran et al., 2022; Wagenaar et al., 2021). In Zambia, shortages of necessary medications continue to be a serious operational concern for healthcare delivery in public institutions (Chama et al., 2022).

2.1.1 Hospital Waiting Time

One of the fundamental components of quality healthcare assessment is waiting time, which has a significant impact on patient satisfaction, clinical outcomes, and hospital efficacy. Dinesh et al.

(2020) define waiting time as the duration of a patient's stay in a healthcare facility, including arrival, registration and departure. Musinguzi (2021) supports this definition, emphasizing that waiting times persist as a substantial concern in both developed and underdeveloped nations despite the fact that they may differ by region. According to recent research, prolonged waiting periods may lead to patient annoyance, diminished satisfaction and in certain cases, worse therapeutic outcomes (Ochieng et al., 2022). In contrast according to Kaseje et al. (2021), healthcare systems that are characterized by shorter waiting times are frequently linked to improved patient experiences and increased efficiency.

According to O'Neill et al. (2020), prolonged hospital stays can result in poorer clinical outcomes, reduced patient retention and increased the likelihood of patient dissatisfaction. The World Health Organization (2021) suggests that the optimal waiting time for non-urgent patients should not exceed 30 minutes in order to reduce excess patient distress and enhance satisfaction. Alswatet al. (2020) noted that the utilisation of healthcare services may be reduced as a result of prolonged waiting times as patients may be discouraged from seeking treatment, thereby compromising their continuity of care. Subsequent research such as that conducted by Tomlinson et al. (2021), has confirmed that patient satisfaction and retention are improved by reducing waiting times.

Extended delays in accessing medical care can exacerbate health issues and in severe cases, result in preventable fatalities (Boateng et al., 2022). The risk of complications for trauma patients was significantly increased by delays in emergency care according to research conducted in Kenya (Wachira et al., 2021). In order to mitigate these hazards, it is essential to implement effective triaging and prioritization mechanisms.

Similarly, the psychological repercussions of extended waiting times are alarming. Akhtar et al. (2021) conducted a study that demonstrated that patients who experienced extended waiting times exhibited heightened levels of stress, anxiety, and dissatisfaction with the healthcare systems.

According to a study conducted by Obi et al. (2023) in Nigeria on outpatient services, prolonged patient waiting time may lead to discomfort and reduce the likelihood of patients returning to the same healthcare institutions. These results emphasized the necessity of optimizing waiting times to improve both clinical and psychological outcomes. Additionally, the financial sustainability of a hospital is contingent upon the reduction of waiting times. Ndungu et al. (2021) argue that the perceived value of healthcare services is diminished by prolonged waiting times, which leads to financial strain on hospitals as patients are discouraged from returning. Ayimbillah et al. (2023) found that the desire of a patient to return to the hospital is substantially influenced by their experience which includes non-medical factors such as waiting time.

There is a growing body of literature that emphasizes the disparities in waiting times between public and private healthcare systems. Wanjiru et al. (2023) have noted that patients frequently transition from public to private hospitals as a result of the latter's shorter wait periods. According to research by Sharma et al. (2021), it was discovered that patients' satisfaction is improved when they are informed of anticipated delay times. In resource constrained environments, waiting lists may be an effective method for healthcare services according to Al-Dhaafri et al. (2022). This method has a detrimental effect on the quality of care by imposing an additional psychological burden on both patients and clinicians (Abor et al., 2021).

Kaur et al. (2021) proposed that waiting times can be used as a criterion for assessing the efficacy and equity of healthcare delivery. Ahmed et al. (2022) found that waiting times are crucial indicators of the accessibility and promptness of healthcare systems. However, Muhamad et al. (2023) observed that delays were evident in numerous hospital departments such as admissions and pharmacy, thereby corroborating the notion of substandard service quality.

Despite the extensive research conducted on waiting times, there are still numerous gaps that exist. The majority of research has focused on patient experience, with only a small number of studies

investigating the impact of waiting times on healthcare workers. The psychological toll on personnel that results from prolonged patient waiting times is inadequately investigated, particularly in impoverished nations where stress levels are exacerbated by resource constraints.

2.1.2 Length of Hospital Stay

One of the critical indicators in healthcare administration and management is the length of stay (LOS) at the hospital, which is referred as the time between patient's admission until they are discharged. According to Gupta et al. (2022), the length of stay has a substantial influence on patient outcomes and hospital operations. Kim et al. (2021) substantiate this assertion by underscoring its impact on hospital administration and treatment. Accurate prediction of the duration of stay is essential for improving inpatient care, particularly given the constraints that hospitals face with respect to the availability of bed space, staffing and the services in each unit (Ahmed et al., 2023). Additionally, hospital resource management is influenced by the length of stay which in turn affects personnel levels, hospitalization costs and overall treatment outcomes (Patel et al., 2020). Singh et al. (2021) emphasized that a shorter duration of stay can reduce the incidence of adverse drug responses, hospital acquired infections and hospital costs.

According to Ali et al. (2021), the quality of treatment and the efficiency of resources are improved by the effective management of a patient's hospital duration which is indicative of the correlation between patient flow and length of stay. Improved patient outcomes, reduced healthcare expenses and enhanced service quality are all associated with a shorter length of stay when combined with quality care according to Patel et al. (2022). Alvarez et al. (2020) argue that the length of stay is a reliable proxy indicator for more complex study outcomes such as the severity of the illness and death.

Extended length of stay has been associated with numerous demographic characteristics. Tan et al. (2022) underscored that the complexity of geriatric patients' medical conditions is the primary reason for their protracted hospitalizations. Rao et al. (2021) identified a positive association between age and length of stay. However, they noted that elderly patients who did not have significant health requirements and did not experience protracted hospitalizations. Carter et al. (2023) found that prolonged hospitalizations were more common among women particularly those who were experiencing poverty, social isolation or inadequate housing. Zhang (2020) refuted this assertion by demonstrating that there is no significant correlation between the length of stay and social interactions or housing conditions.

Patel et al. (2021) emphasized that the length of stay can be influenced by a variety of risk factors such as age, gender, lifestyle choices, economic status and general health status. This suggests that it may be necessary to address more significant socioeconomic factors in order to reduce hospitalizations particularly among individuals who are more susceptible to health issues.

Literature suggests that there are significant discrepancies in the length of stay across different regions. In 2012, the average duration of stay in the United States of America was 2.5 days, with substantial variations based on patient demographics such as gender and age (Bailey et al., 2023). Geriatric patients who frequently exhibit numerous chronic conditions experienced protracted hospitalizations, accounting for 26.7% of total admissions with an average duration of 5.2 days (Adewole et al., 2022). These statistics contrast with those in Sub-Saharan Africa, where Ndlovu et al. (2021) reported an average duration of stay of 12.5 days in Nigeria. This discrepancy is attributed to factors such as inadequate medical audit systems, delayed patient presentations and lack of healthcare resources.

Owusu et al. (2022) reported that the mean length of stay at district hospitals in South Africa from 2008 to 2009 was 4 days, with some facilities reporting extended durations of up to 7 days. The

Korle-Bu Teaching Hospital in Ghana also reported a substantial prevalence of chronic conditions including hypertension, diabetes and chronic kidney disease. Nevertheless, the average duration of stay was not included in the hospital's annual report. The survey suggested that prolonged hospitalizations may be caused by factors such as patient congestion, the quality of beds and delays by medical personnel (Korle-Bu Teaching Hospital, 2012).

Recent research continues to explore methods for reducing the duration of hospital stay without compromising the quality of care. Shepperd et al. (2020) found that the duration of stay was significantly reduced for older patients with chronic ailments as a result of their adoption of hospital-at-home models. Concurrently, research conducted by Baek et al. (2022) examined the utilisation of artificial intelligence (AI) to accurately predict the length of stay, thereby improving patient flow and optimizing resource allocation. These studies emphasize the potential of technical solutions to alleviate the length of stay particularly in resource-limited environments.

In developing nations, deficiencies persist in understanding the factors that influence the duration of stay despite extensive research. Despite the fact that demographic and socioeconomic factors are frequently recognized as determinants of length of stay, the effect of healthcare policies, organization culture and medical technologies is still inadequately investigated.

2.1.3 Resource allocation

The significance of transparent and evidence-based frameworks for allocating resources that consider information on illness burden, patient volume and service utilisation trend has been highlighted by recent studies. Hospitals that use needs-based allocation models for instance are more likely to better match resources with real healthcare demands, reducing waiting list and enhancing service availability according to Osei et al. (2022).

2.1.3.1 Drug Availability

The availability of prescribed pharmaceuticals in healthcare facilities is frequently perceived as a critical indicator of high-quality care from the perspective of patients (McIntyre et al., 2020). In order to maintain patient trust in healthcare systems and achieve optimal treatment outcomes, it is essential to have access to key pharmaceuticals. The likelihood of favorable health outcomes is also significantly increased by the strict adherence to recommended pharmaceutical regimens, which are frequently monitored by pharmacists (Peltzer et al., 2021). This underscores the importance of ensuring that healthcare institutions have consistent and reliable access to drugs.

The persistent issue of pharmaceutical shortages, particularly in public healthcare institutions, has been underscored by a multitude of studies. Burger et al. (2021) conducted an analysis of data from the 2003 General Household Survey (GHS) and aggregated data from the 2002-2008 GHS, and the findings suggest that over 14% of patients in public healthcare facilities reported experiencing drug shortages. Burger (2020) noted that patients who utilized public healthcare frequently expressed dissatisfaction with the facilities' lack of essential prescribed medications. In resource-limited environment, the shortages have been attributed to a variety of factors, including inadequate finance, suboptimal supply chain management and ineffective healthcare infrastructure (Mendis et al., 2020).

Hasumi et al. (2021) observed that the absence of prescribed medication was a common concern among individuals seeking care in public healthcare institutions as evidenced by GHS data from 2010. In their investigation, 14.1% of respondents expressed dissatisfaction with the absence of medications during their most recent hospital appointment. The results suggest that drug shortages continue to be a significant concern in the healthcare systems, particularly in resource-limited environments leading to reduced treatment outcomes and patient dissatisfaction.

The critical significance of pharmaceutical availability in promoting equitable healthcare has been recently emphasized in a recent study. Mwai et al. (2021) conducted a study that examined the influence of pharmaceutical policies and the availability of critical pharmaceuticals in low- and middle-income countries. They underscored that despite the existence of regulations intended to improve access, the implementation of these policies is inconsistent, resulting in widespread drug shortages.

Access to prescribed drugs increases the likelihood of favorable health outcomes by facilitating patient adherence to treatment regimens (Omololu et al., 2020). Research has consistently demonstrated that patient healthcare satisfaction is significantly influenced by the availability of medications (Nyarko, 2021). The efficacy of healthcare interventions may be compromised, and patient satisfaction may be adversely affected particularly in public healthcare facilities due to an inadequate supply of pharmaceuticals.

Scarcity of research on remedies capable of mitigating these systematic challenges, particularly in rural and neglected areas, and insufficient exhaustive data regarding the fundamental causes of these shortages are encompassed by literature deficiencies.

2.1.3.2 Personnel in the Healthcare Sector

The health-seeking outcomes and behaviors of patients are substantially influenced by the attitude and interpersonal skills of healthcare workers (Brahmbhatt et al. 2022). According to Greenberg et al. (2021), effective healthcare delivery is contingent upon the clinical proficiency of healthcare providers and the manner in which they interact and engage with their patients. This relationship is particularly critical during vulnerable periods when individuals anticipate being regarded with respect and decency (Grinspun, 2021). Peddle-McIntyre et al. (2021) emphasize the importance of three essential soft skills for healthcare practitioners, namely attentiveness, proficient communication and amiability. These competencies are crucial for improving patient satisfaction

and overall health outcomes by enhancing patient-provider interactions (Sargeant et al. 2020). Nevertheless, the tension and anxiety that inadequate communication introduces into the treatment process can impede patient recovery or exacerbate health issues (Brady, 2001).

It is essential to have competent healthcare professionals present to offer quality healthcare services. A significant quantity of research has shown that patient outcomes can be significantly impacted by workforce shortages. Research shows that the presence of proficient personnel improves patient-reported outcomes, which are essential indicators of quality healthcare (Zhao et al. 2021). The exodus of skilled individuals may be reduced, particularly in industrialized nations like the United States by improving working conditions of healthcare professionals, such as offering enhanced incentives and mitigating burnout, according to a study conducted by Vujicic et al. (2021). Tandon (2021) emphasizes the challenge of meeting the healthcare needs of the growing population in India which has exacerbated the shortage of qualified healthcare professionals.

The immigration of skilled individuals in search of better opportunities abroad exacerbates Labour shortages in a number of emerging countries. This migration according to Holtz et al. (2022), exacerbates the challenge of providing quality healthcare in low- and middle-income countries where the demand for trained professionals is rapidly increasing. The emigration of healthcare professionals from these regions frequently results in a diminished workforce and substandard quality healthcare, which subsequently affects patient care outcomes. The exodus of qualified professionals has impeded the enhancement of healthcare systems in Sub-Saharan Africa, where this phenomenon is particularly pronounced (Chikanda et al., 2020). These studies collectively demonstrate the importance of preserving a sustainable and equitable healthcare workforce, particularly in the regions with substantial immigration rates or growing populations.

These concerns are underscored by recent research. Kinfu et al. (2009) warns of a global shortage of healthcare professionals, particularly in low-income countries where the ratio of healthcare

workers to the population is alarmingly low. This deficiency impedes the ability of health services to deliver effective care, particularly in rural and disadvantaged regions. Campbell et al. (2013) emphasized the importance of improving working conditions and providing adequate compensation to retain healthcare personnel which will lead to improved patient outcomes. However, significant gaps in the research that connects labour shortages to specific patient outcomes in a variety of hospital settings still exist. In contrast to the more general research that investigates the general consequences of labour shortages, this study investigates the specific effects of these shortages on the quality of care within a unique healthcare system particularly in low- and middle-income countries.

The accessibility of resources and institutional support is a crucial consideration in the provision of effective healthcare services. Research suggests that institutional obstacles and inadequate funding can impede improvements in quality healthcare despite the extensive training of healthcare workers. The provision of quality care was impeded by the insufficient funding that undermined the presence of a qualified workforce in southern Bangladesh, as discovered by Ullah et al. (2021). In a similar vein, Hossain et al. (2020) demonstrated that Magnet hospitals achieved superior patient and nurse outcomes in comparison to non-magnet hospitals due to improved funding and institutional support which facilitated the recruitment of more competent staff.

These findings are further supported by recent research, which indicates that healthcare systems worldwide are inadequately supported, leading to suboptimal patient outcomes. The World Health Organization (2021) reported that a significant number of healthcare systems in low-income countries are still inadequately resourced, particularly in terms of health personnel, infrastructure and medical supplies. In these situations, even the most skilled healthcare professionals are limited by inadequate institutional support.

This paper investigates these deficiencies by providing a comprehensive analysis of the determinants that influence patient satisfaction and the quality of healthcare resulting in practical suggestions for resource-limited environments.

2.1.3.3 Access to Medical Supplies and Equipment.

Efficient healthcare delivery necessitates the availability of medical supplies and equipment. Healthcare providers can administer prompt and appropriate treatment which improves patient outcomes and the overall efficacy of the system when they have proper access. Nevertheless, accessibility disparities, particularly between affluent and impoverished nations highlight significant deficiencies in healthcare infrastructure and resource allocation. According to the World Health Organization (2021), an effective healthcare system is contingent upon equitable access to essential medical supplies and equipment. It is imperative to ensure that these resources are accessible, affordable and of high quality in order to improve healthcare services and reduce health disparities. The management of a variety of diseases and ailments, such as chronic illnesses and emergency care are contingent upon the availability of essential medical supplies (Patel et al., 2022).

McIntyre et al. (2017) have shown that the accessibility of prescription medications is significantly correlated with patient satisfaction. Maintaining treatment continuity is essential for patient recovery and overall health, necessitating access to essential pharmaceuticals. Treatment delays, deteriorating health outcomes and increased patient dissatisfaction may result from the unavailability of medications or essential supplies. In addition to treatment, it is imperative to have consistent access to medical supplies for preventive care which includes vaccinations and immunizations which are essential for public health (Pillay et al., 2022).

The absence of medical equipment in a low-resource environment remains a barrier to the provision of efficient healthcare. According to Nori et al. (2022), a substantial quantity of medical

equipment in resource-limited environments is rendered inoperable by inadequate maintenance, inadequate training and the scarcity of spare parts. This issue continues to undermine the ability of healthcare systems to ensure that continuous availability and operability of critical equipment. Furthermore, a study conducted by Nkosi et al. (2023) demonstrated that the challenges of providing quality treatment are further exacerbated by the fact that over 60% of medical and Laboratory equipment in these environments is inoperable.

Reliance of imported technologies which may not be in accordance with local healthcare requirements or infrastructure is an additional accessibility problem. Mate et al. (2022) argue that the accessibility of medical equipment is inextricably linked to the efficacy of healthcare services. The optimal utilisation of medical equipment is impeded by insufficient infrastructure, inadequate funding and ineffective administration methods, particularly in underdeveloped regions. Zhou et al. (2021) underscored the importance of medical instruments in the diagnosis and treatment of diseases, particularly cardiovascular disorders. Their research demonstrates that healthcare outcomes are significantly improved by the availability of modern instruments. However, the healthcare disparity between affluent and indigent areas is further exacerbated by the fact that access to these technologies is restricted in a number of developing countries.

The research unequivocally shows that, despite the progress made in global access to medical supplies and equipment, significant deficiencies continue to exist, particularly in underdeveloped and resource-limited environments. Accessibility is restricted by persistent factors such as inadequate management, inadequate infrastructure and reliance on external donations or imports.

3.1 The effect of Service Quality on Quality Healthcare

Patient satisfaction, safety and overall quality Healthcare are all significantly impacted by service quality management in a healthcare setting, as evidenced by an increased number of empirical

research (Ruth et al., 2021). Numerous aspects of service quality such as responsiveness, clinical atmosphere and interpersonal interactions have been repeatedly linked to patient satisfaction in particular (Al-Jabri et al., 2021). According to an empirical study by Al-Jabri et al. (2021) in Finland using the revised Humane caring scale, patients who felt engaged in their care who perceived that the Staff was courteous and sympathetic expressed greater levels of satisfaction. Elective patients reported better experiences than emergency patients, and this satisfaction was connected with the assessment of the quality of healthcare. This study demonstrated how patients' perceptions of safety and happiness may be improved by structured service quality management with a special emphasis on communication and engagement.

Mohammed et al. (2019) investigated the connection between patient satisfaction, trust and service quality at Assiut General Hospital in Egypt and reported similar results. The researchers found that important characteristics including responsiveness, empathy and dependability were positively correlated with patient satisfaction and perceived quality when they used the SERVQUAL measure in conjunction with satisfaction and trust questionnaire. These findings support the empirical link between better healthcare outcomes and well managed service processes indicating that the hospitals can enhance quality by addressing service delivery gaps like inattentiveness, delays and poor communication. The SERVQUAL model was also used in another study by Rahmatia et al. (2021) in Indonesia. The results showed that the two factors that had the most effect on patient satisfaction were assurance and empathy which further supported the importance of staff behaviour and interpersonal care.

Numerous observational studies have focused on staff-patient interactions, which are crucial to patient satisfaction and safety. Griffiths et al. (2019) used the quality of interactions schedule (QUIS) to track more than 3,000 staff-patient interactions in NHS hospital wards in England. They discovered that a higher frequency of unfavourable encounters was linked to low levels of

registered nurse (RN) staffing. This not only decreased patient satisfaction but also raised concerns about safety and the quality of care. This study provides strong empirical evidence in favour of the notion that in order to promote pleasant interactions and guarantee safe, courteous care delivery, service quality management should place a high priority on having a sufficient number of employees and a diverse range of skills.

Patient outcomes are also influenced by organisational and psychological aspects of healthcare teams. Leggat et al. (2017) discovered in a path analysis study carried out in an Australian hospital that high performance work systems enhanced psychological safety, empowerment and affective commitment among employees which in turn enhanced perceived quality of care. Employees who experienced respect, involvement and support were more likely to report better patient experiences and higher quality care. This suggests that organisational variables that impact employee performance and morale should be addressed in addition to patient facing procedures when it comes to service quality management.

The extent and rigour of the measurement instruments employed in these investigations varies. According to Paul et al. (2020), one of the most popular instruments for evaluating service quality from the viewpoint of the patient is the SERVQUAL instrument, which gauges attributes such as tangibles, responsiveness, empathy and dependability. Despite its widespread use, there have been criticisms raised about its suitability for use in various clinical and cultural contexts (Amel, 2019). According to Al-Jabri et al. (2021), the revised human caring scale provides a more comprehensive perspective by encompassing elements like involvement, communication and human dignity. The HSOPS and the safety attitudes questionnaire (SAQ), which emphasise teamwork, error reporting, staffing and managerial support are the two most often used tools for assessing safety culture (Peter et al., 2020).

Additionally, patient reported safety is becoming more well-known (Samuel et al., 2020). Patients' perceptions of safety in clinical settings can be gleaned from instruments like the patient's perception of safety culture (PMOS) and the patient measure of safety (PMOS) (Alphel et al., 2019). These tools record aspects like cleanliness, feeling heard, and open communication that staff-oriented tools could miss (Alphel et al., 2019). Additionally, the quality of staff-patient interactions has been directly evaluated using observation methods such as the quality of interactions schedule (QUIS) which provides an objective assessment of communication quality by classifying interactions as good, neutral or negative (Samuel et al., 2022).

3.1.1. Safety

The World Health Organization (2022) continues to emphasize the importance of patient safety as a fundamental component of quality healthcare recognizing that millions of patients worldwide are harmed by hazardous medical procedures. Healthcare systems including primary care and hospital settings prioritize patient safety (Slawomirski et al., 2020). Patient safety has become a global concern because of the 1999 seminar publication "To Error is Human" by the Institute of Medicine which has prompted their implementation of initiatives to reduce medical errors and adverse effects (Makay et al., 2026).

According to the World Health Organization (2020), patient safety is the absence of preventable harm to a patient during healthcare delivery and the minimization of unnecessary risks associated with healthcare to earn an acceptable level. The recent initiative prioritized the development of safety cultures within healthcare organizations and the establishment of frameworks to prevent damage caused by errors of Commission or omission (Stavropoulou et al., 2022),

Healthcare institutions continue to pose substantial risks to patients despite their efforts to improve patient safety. Slawomirski et al. (2022) contend that hospitals are in a hazardous environment,

due to the prevalence of hazards such as medical errors, accident and healthcare associated infections (HAIs). HAIs are among the most prevalent occurrences in hospitals and pose substantial risk to potential safety (khan et al., 2021). Recent research has confirmed these findings indicating that the global burden of HAIs is substantial than the higher in low- and middle-income countries as a result of insufficient infection control methods and budget constraints (Allegranzi et al., 2016).

Cultivating a robust safety culture within healthcare institutions is a critical component of improving patient safety. After the 1986 Chernobyl calamity, the international nuclear safety advisory group introduced the concept of safety culture (Institute of healthcare improvement, 2021). However, it has since been widely adopted, including in the healthcare settings. According to Armstrong et al. (2022), a positive safety culture is characterized by mutual, open communication, and non-punitive approach to reporting errors. However, a multitude of studies have suggested that the establishment of a culture that is truly safely focused is a challenge, particularly in resource-limited environments (Khoshgoftar et al., 2023).

Particularly with regard to the cross-cultural implementation of safety culture frameworks, deficiencies in this domain are readily evident. Insufficient emphasis has been placed on the implementation and sustainability of safety culture in low-resource environments particularly within African healthcare systems where safety protocols are frequently undermined by infrastructure inadequacies and workforce shortages, despite the extensive research that studies western healthcare systems (Wami et al., 2021).

Nurses are crucial in ensuring the safety of patients as they are often the primary caregivers in hospital settings. Demis et al. (2021) argue that the safety of patients is significantly compromised by a shortage of skilled nurses. Mulira et al. (2023) have conducted research in Ethiopia that emphasizes the challenges faced by nurses due to inadequate resources and training, which result

in a higher percentage of medication errors and healthcare associated infections. According to De Carvalho et al. (2022), it is imperative to improve patient safety by increasing the capabilities of nurses through continuous professional development (CPD) programmes and adequate personnel levels. There is a dearth of research on specific measures that can aid nurses in the development of healthcare systems despite the acknowledged significance of nurses.

It is imperative to implement structured frameworks in order to improve patient safety. The World Health assembly adopted a resolution in 2012 that emphasized the improvement of quality healthcare and patient safety (Spath, 2021). Spath (2021) emphasizes the necessity for healthcare organizations to establish actionable patient safety frameworks that yield quantifiable results and emphasize the significance of active collaboration between clinical teams and leadership. Abulrub et al. (2020) suggested that the cultivation of safety culture is contingent upon the involvement of leadership. They suggest that patient outcomes can be significantly enhanced by the implementation of robust frameworks that are aligned with organizational objectives.

De Vries et al. (2020) have extensively promoted the six Sigma framework as an effective tool for enhancing process performance and reducing variability. Six sigma provides a strategic framework for hospitals that prioritize quality improvement, cost efficiency and time reductions in order to improve service delivery (Zhao et al., 2021). Weiss (2009) introduced the six Ps framework, which evaluates hospital safety by considering patient, personnel, policies, procedures, place and politics. This approach is analogous to this framework.

However, the implementation of these frameworks across a variety of healthcare environments is flawed, despite the potential benefits. The majority of research is focused on large, well-financed hospitals in wealthy countries, resulting in the neglect of lesser hospitals in low-resource environments. The general adoption of these techniques in underdeveloped countries may be

impeded by the lack of the necessary infrastructure for the implementation of comprehensive frameworks by smaller institutions (Pereira et al., 2022).

The integration of technology in explicit communication is a critical component of improving patient safety. Rahman et al. (2022) argue that the utilisation of digital health technology and the implementation of evidence-based procedures can significantly improve decision making processes and reduce the frequency of errors. Electronic health records (EHR) have been shown to enhance the precision of patient information, reduce prescription errors and optimize processes (Kohn et al., 2021). However, a significant number of institutions, particularly those in low-and-medium income countries, are unable to fully implement this technology. The digital divide in healthcare systems is a significant impediment to improving patient safety, particularly in impoverished regions with limited access to digital resources.

Particularly in developing nations like Ethiopia, patient safety remains a substantial concern in the healthcare sector. Recent studies suggest that the safety of hospitalized patients is frequently jeopardized by healthcare errors and medication errors are exceedingly prevalent. Recent research has indicated that prescribing errors occur at rates of 41% (Ayele et al., 2022), 53% (Meonnen et al., 2021), and 57% (Berhanu et al., 2020). Ayele et al. (2022) have documented a rate of 55.9% in medication administration errors, which highlights the significant deficiencies in the healthcare systems protocols for ensuring patient safety.

Hospital-acquired infections further compound the problem thus contributing to LOS resulting in higher mortality rates. For instance, healthcare associated infection (HAI) has an overall incidence of 20.3% and an incidence rate of 29.1 per 1,000 patient days in Ethiopian hospitals (Tesfaye et al., 2023). The urgent need for initiatives to improve medication safety protocols, infection controls practices and over patient care standards is emphasized by these statistics.

The literature emphasizes the importance of creating an environment that encourages healthcare personnel to report errors in order to improve patient safety (Mahmood et al., 2021). Instruments such as the safety attitudes questionnaire (SAQ) and the hospital survey on patient safety culture (HSOPSC) have been widely employed worldwide to assess patient safety culture (Aingh et al., 2020). However, there is a lack of comprehension regarding the safety culture in a number of developing regions, including Zambia where one in seven patients' experiences harm (Mohmood et al., 2021). This lack of information is indicative of a broader issue that is prevalent in the global healthcare sector particularly in low- and middle-income countries where there is a lack of research on patient safety culture.

According to Lee et al. (2021), collective ideas, values and perceptions within an organization that are dedicated to reducing patient injury are referred to as patient safety culture. A positive safety culture is characterized by recognition of the inherent dangers in healthcare settings, the promotion of a non-punitive environment, managerial involvement in the dissemination of safety resources and interdisciplinary collaboration to resolve issues (Johnson et al., 2020). Research suggests that healthcare organizations with positive safety cultures achieve superior clinical outcomes, such as reduced prescription errors, and workplace incidents while also improving the overall quality and safety performance (Smith et al., 2022). It is imperative to evaluate safety culture in order to identify areas that require improvement and to evaluate the effectiveness of safety measures (Anderson et al., 2021).

Limited research has been conducted on the patient safety culture in Africa. According to comparative analysis, Egypt has the lowest perception of patient safety culture (26.13%), followed by Ethiopia, Tunisia and Mozambique (Ahmed et al., 2021). The prerequisite first standardized instruments and procedures to assess safety culture across a variety of healthcare environments is emphasized by the discrepancies in these findings. Additionally, despite the fact that nurses are

crucial in ensuring patient safety as a result of their direct involvement in care (Gonzalez-Chica et al., 2022), there is a significant lack of research conducted on the effect of nurse-specific interventions on safety outcomes particularly in African countries.

Substantial research deficiencies persist particularly in emerging regions despite progress in understanding patient safety. For instance, research fails to adequately investigate the systematic impediments that prevent healthcare professionals from reporting errors or implementing evidence-based safety protocols. Additionally, there is a need for more comprehensive evidence regarding the direct impact of safety culture interventions on clinical outcomes in low-resource environments. Particularly in African contexts, there is a notable scarcity of research on the influence of healthcare technology on safety, including electronic health records and clinical decision support systems.

3.1.2 Satisfaction

Patient and employee satisfaction are indispensable indicators of quality healthcare, and they are inextricably linked. The quality of patient care is substantially influenced by employee satisfaction, as healthcare personnel are the primary providers of patient care. In contrast, patients who are satisfied with their care are more likely to provide positive feedback, which in turn improves employee morale and work satisfaction. Smith et al. (2022) and Johnson et al. (2023) have extensively documented the relationship between patient and employee satisfaction. Research indicates that the enhancement of employee well-being can lead to enhanced patient experiences and outcomes while patient satisfaction subsequently increases staff motivation and engagement (Roberts et al., 2024).

Patient satisfaction is frequently regarded as the primary metric of quality healthcare. According to Press G et al. (2020), patient satisfaction is a reliable indicator of the quality of care that

healthcare organizations provide and has a substantial impact on the performance metrics. Naik et al. (2015) have found that patients who are content are more likely to adhere to medical recommendations, engage with healthcare professionals and demonstrate loyalty to the healthcare organization. Healthcare practitioners' communication abilities, the accessibility of medical resources and their perceived proficiency have all been consistently shown to influence patient satisfaction in research (Sizmur et al., 2020).

Zhang et al. (2022) discovered a strong correlation between patient satisfaction and patient participation in decision making. Their research stated that patients who participated in the decision-making process regarding their healthcare reported higher levels of satisfaction than those who perceived themselves as marginalized in the decision-making process. This discovery underscores the significance of patient-centered treatment, which prioritizes patient engagement, honors their preferences, and enhances the overall patient experience (Chen et al., 2023). In addition, Li et al. (2021) emphasized that the therapeutic relationship, health outcomes and patient satisfaction are all improved by allowing patients to participate in their healthcare decisions.

However, there are substantial gaps in the understanding of the long-term implications of patient satisfaction on the quality of healthcare. The long-term consequences such as enduring health benefits and ongoing satisfaction have yet to be adequately investigated despite the extensive research that has concentrated on the rapid patient feedback. Kumar et al. (2022) stated that immediate satisfaction may serve as an indicator of quality care, further investigation is necessary to determine the long-term health benefits of patient satisfaction, particularly in non-western healthcare environments. Ahmed et al. (2023) underscore that the current literature has not sufficiently investigated the cultural variations in healthcare expectations and experiences which has limited the relevance of patient satisfaction frameworks in numerous global contexts.

The performance and conduct of healthcare providers are directly influenced by employee satisfaction, which is a crucial factor in the quality of healthcare. Healthcare personnel who are satisfied with their work environment are more likely to provide exceptional care, demonstrate empathy towards patients and remain loyal to their organization (Nguyen et al., 2021). Hassan et al. (2022) have demonstrated that a supportive work environment that prioritizes the well-being of healthcare personnel is associated with improved job satisfaction which in turn improves patient outcomes. Veish et al. (2021) suggest that the quality of patient treatment and the satisfaction of healthcare employees are correlated, but their relationship is influenced by a variety of factors, including work life balance, organizational culture and leadership. Generally, employees who perceive their workplace as adaptable and helpful report higher levels of job satisfaction and deliver superior patient care. In contrast, healthcare professionals who are experiencing burnout or dissatisfaction are more likely to commit medical errors, exhibit reduced patient engagement and provide substandard care (Feng et al., 2020).

Additionally, research suggests that the retention of skilled professionals in the healthcare sector is contingent upon the satisfaction of healthcare workers. Dissatisfaction with the work environment, excessive duties and inadequate managerial support are frequently linked to elevated employee turnover in healthcare environments. Thomas et al. (2021) conducted research that demonstrated that nurses reported higher levels of work satisfaction when they perceived support and empowerment in decision making related to patient care.

The literature extensively illustrates the correlation between patient and employee satisfaction. According to Lambrou et al. (2021), healthcare personnel who experienced job satisfaction are more likely to deliver higher quality, efficient and compassionate care thereby improving patient satisfaction. This relationship is frequently described as a virtuous cycle, in which satisfied

personnel fosters positive patient interactions and satisfied patients subsequently increases employee morale and job satisfaction (Jones et al., 2020).

However, there are gaps in understanding the full extent of the relationship between patient and staff satisfaction. Despite the existence of extensive research on individual components on happiness, there is a scarcity of studies that have investigated the strategic integration of these characteristics by companies to improve the overall quality of healthcare. Additional research is necessary to investigate the degree to which system factors such as healthcare regulations, resource distribution and institutional support affect the satisfaction of both patients and employees.

The importance of employee satisfaction in healthcare has been recently emphasized by research. Nguyen et al. (2022) conducted a study that emphasizes the importance of healthcare leadership in the development of environments that foster a sense of appreciation and support among employees. Sharma et al. (2023) similarly discovered that the healthcare providers that invested in staff satisfaction resulted in having enhanced patient care, demonstrating the interdependence of these elements in the improvement of overall quality healthcare.

Patel et al. (2022) conducted a study to investigate the influence of digital health instruments on the enhancement of patient and employee satisfaction. Their research demonstrated that telemedicine and digital health platforms improved communication between patient and healthcare professionals and increased patient access to treatment. These developments led to a rise in patient and healthcare professional satisfaction by reducing waiting times and improving service efficiency (Patel et al., 2022).

Studies suggest that the provision of quality care is correlated with the satisfaction of healthcare personnel which in turn leads to increased patient satisfaction (Berkowitz, 2020). Employee morale can be improved by satisfied patients, which can create a beneficial feedback loop for

healthcare organizations. Nevertheless, there are significant gaps in the understanding of the long-term effects of patient satisfaction on quality healthcare, the impact of cultural factors on patient satisfaction and the strategies that healthcare organizations can employ to more effectively coordinate these elements and improve service delivery (Nguyen et al., 2021). It is imperative to address these deficiencies to develop effective strategies for improving the performance of organizations and the quality of healthcare.

3.1.3 Doctor/Nurse-patient care

Providing high quality patient care requires contributions of both doctors and nurses, who both bring unique but complementary skills to healthcare systems. While nurses provide ongoing bedside care, monitor patient conditions, dispense drugs and provide emotional and psychosocial support, Doctors are generally in charge of diagnosing illnesses, creating treatment plans and carrying out medical operations (Raven et al., 2021). Since good communication between doctors and nurses has been associated with better clinical results and increased patient satisfaction, their cooperation is essential to guaranteeing smooth patient care (Kangasniemi et al., 2020).

The vital function nurses play outside of traditional caregiving is shown by recent studies. Nurses frequently take additional duties such as health education, basic diagnostic work, to make up for the lack of doctors in many settings especially low resource areas like Zambia's FLHs (Mutale et al., 2020). Improved chronic illness management and fewer readmissions to hospitals have been linked to nurses' holistic approach, which addresses the social, psychological, and physical aspects of health (Nyirenda et al., 2022). Furthermore, in environments with limited resources, nurse-led interventions have been successful in controlling maternal health and non-communicable diseases (Phiri et al., 2023).

In the meantime, doctors continue to play a crucial role in directing interdisciplinary teams and handling complicated clinical problems. However, heavy patient caseloads and a lack of physicians put the quality of care at risk, making nurses and other healthcare professionals more necessary to continue providing services (Chama et al., 2021). Research from Zambia and other settings shows that tight collaboration between doctors and nurses improves patient outcomes, lowers clinical errors and increases healthcare efficiency (Lusaka et al., 2022). Additionally, strong doctor leadership combined with empowered nursing staff promotes a culture of safety and accountability, all of which are essential for enhancing the provision of high-quality healthcare (Tembo et al., 2024).

It is becoming more widely acknowledged that interpersonal collaboration between doctors and nurses is essential to providing high quality healthcare. According to research, open communication, respect for one another and teamwork improve patient-centered care and lower medical errors (Mapoma et al., 2023). In contrast, it has been demonstrated that poor communication and hierarchical systems lead to unfavourable outcomes and less than ideal patient experiences (Mweemba et al., 2021). One important tactic to enhance collaborative treatment, especially in hospitals with limited resources, is to strengthen interprofessional education and practice in healthcare settings (Mwansa et al., 2022).

These earlier findings have been confirmed by recent research which underscores the importance of interpersonal skills in the healthcare sector. Fong Ha et al. (2020) conducted a study that emphasizes the significance of effective communication in patient care. The study found that proficient communication is essential for the development of trust, the enhancement of adherence to treatment regimens and the enhancement of overall patient satisfaction. Nevertheless, despite the enduring acknowledgement of the importance of communication in healthcare, there are still inconsistencies in the application of this knowledge to ordinary practice. The establishment of

mechanisms that facilitate patient centered communication in clinical environments and more organized communication training are necessary for healthcare education (Streets et al. 2022).

3.1.4 Affordability

In the context of healthcare, affordability is the capacity of people and households to acquire critical medications and health services without experiencing financial hardship (WHO, 2019). The affordability of medical services is important in low- and middle-income nations like Zambia, where many patients in need of healthcare, which frequently results in catastrophic costs and decreases service use (WHO, 2019). Several important metrics can be used to operationalize affordability in Zambia's First Level Hospitals. One of the most important of these is the measurement of out-of-pocket expenditures, which include the direct payments made by patients at the time of service, such as inpatient care, pharmaceuticals, diagnostic tests and consultations. An important way to look at financial barriers to care is to quantify these expenses per visit or treatment episode and compare them with patients' income or daily salaries (Atukunda et al., 2020; Chansa et al., 2023).

The percentage of household income devoted to medical costs is another important metric. According to Xu et al. (2023), when this percentage surpasses predetermined limits, typically between 10% and 25% of household income, this forces them to indicate catastrophic health expenditure that might push families into poverty and forgo essential medical care. This metric draw attention to the vulnerability and financial strain that patients seeking care at First Level Hospitals face. Another important factor is medication affordability, which can be determined by figuring out how many daily salaries are needed to buy a complete course of necessary medications. Because of frequent stockouts and reliance on private pharmacies with higher prices, Zambia finds it difficult to meet the WHO and health action international benchmarks on affordability of healthcare services (Atukunda et al., 2020; Hellen et al., 2021).

The frequency with which patients postponed or forgone medical care due to cost can also be used to operationalize affordability. This behavioural outcome which can be recorded by patient interviews, surveys or facility record analysis is a clear indication of how financial barriers affect health-seeking behaviour and adherence to recommended therapies (Rudasingwa et al., 2022). Consideration needs to be given to how health insurance plans contribute to greater affordability including the scope of coverage, the comprehensiveness of benefit packages and effectiveness of the reimbursement mechanisms. According to studies conducted in Zambia, insurance influences utilisation of healthcare services particularly in private facilities but its protective effect against out-of-pocket costs is frequently diminished by coverage constraints and operational inefficiencies (Osei et al., 2023; Mulenga et al., 2023).

Crucially, management practices at FLHs are also directly related to how affordable healthcare services are. Controlling expenses passed on to patients requires effective procurement processes that reduce stockouts and successfully negotiate pricing. In a similar vein, needless financial burden vulnerable populations might be spared through prudent budgeting and open free-setting procedures that take equity into account. Hospital financial audits, procurement records and key informant interviews with hospital administrators and management team can also be used to evaluate these management factors which provide important information about how operational and leadership choices affect affordability (Chansa et al., 2023; Nyirenda et al., 2022).

4.1 The effect of Leadership Factors on Quality Healthcare

In the Healthcare industry, leadership is crucial in determining the atmosphere in which treatment is provided, impacting not only staff morale and organisational culture but also patient outcomes, safety and quality (Paul et al., 2019). The complicated links between leadership styles especially transformational and transactional types, and performance metrics like staff happiness, clinical efficiency and patient safety indicators have been the subject of several quantitative research

(Alfred et al., 2023). AlFadhlah et al., (2021) conducted a study which looked at the impact of organisational culture and leadership style on quality healthcare in Six Kuwaiti public hospitals. The researchers gathered information from more than 1600 healthcare workers using the organisational description questionnaire to measure culture and the multifactor leadership questionnaire (MLQ) to evaluate leadership. Despite the prevalence of a transformative leadership style and culture, there was a positive but statistically insignificant correlation with hospital quality metrics including readmission and death rates. These results imply that although culture and leadership are related, their quantifiable influence on clinical performance might be muted by other organisational elements or take longer to manifest (Alfred et al., 2022).

The influence of leadership on employee morale and performance is further supported by quantitative data. Researchers discovered a substantial correlation between transformative leadership and job satisfaction ($r = .773$), organisational commitment ($r = .469$), and employee performance in a study that involved 139 workers at private hospitals in Nicosia Cyprus (Yildirim et al., 2021). The empirical relationship between leadership behaviour and operational outcomes was further supported by regression analysis, which showed that enhancements in leadership style directly increased employee motivation and effectiveness. The leadership practices inventory (LPI) was also used to evaluate the leadership behaviours of nurse managers in the second health cluster of Riyadh (2020). The results showed that high levels of leadership competences such as setting an example and encouraging a common goal were linked to high level of staff engagement, motivation and morale (Alqahtani et al., 2025). The study provided evidence that leadership practices have a considerable impact on staff well-being which is likely to have an impact on the quality of patient care even if clinical outcomes were not directly examined.

Another important factor that influences healthcare performance is organisational culture, which is frequently influenced by leadership (Paul, 2022). A study by Saleh et al. (2017) reviewed that

relational, transformational leadership and resonant leadership styles were most consistently linked to positive healthcare outcomes such as enhanced safety culture, increased patient satisfaction and in certain cases, lower mortality according to a systematic review by Saleh et al (2017) that examined 14 quantitative and correlational studies carried out between 2004 and 2015. On the other hand, results were consistently associated with laissez-faire leadership styles. The review noted that leadership has a good impact on quality healthcare, but it also pointed out a major drawback in the literature. It was challenging to generalise the findings due to differences in how quality was defined and measured (Mark et al., 2023). Inconsistencies in outcome measurement resulted from the fact that some studies used objective markers such as infection rates or error reporting systems, to measure quality while others used staff reported satisfaction (Mark et al., 2023).

Leadership style has been associated with team performance, decision-making quality and morale in primary care settings (Shewchuk et al. 2023). In a study on team based primary care clinics, Shewchuk et al., (2023) looked at the connections between client outcomes, staff motivation, team decision-making and leadership. Higher levels of staff satisfaction and perceived care effectiveness were predicted by transformational leaderships associated with greater participatory decision-making. Validated questionnaires on leadership style, team dynamics and motivational climate were part of the quantitative design of the study. The results of the study support a cascade effect whereby leadership influences decision-making processes which in turn affect morale and ultimately patient care outcomes. These results are consistent with organisational theories that contend inclusive, decentralise the decision-making processes to promote creativity and effectiveness (Rahu et al., 2020).

Notwithstanding these positive findings, not all research shows a clear or statistically significant correlation between healthcare performance and leadership (Andrew et al., 2023). For instance,

although numerous research attest to the fact that transformational leadership enhances employee engagement and happiness, fewer consistently demonstrate improvements in clinical outcomes such as infection control or lower readmission rates (Sam, 2018). Confounding variables like institutional resources, employee turnover or local healthcare infrastructure could be the cause of this disparity (Shewchuk et al., 2023). Furthermore, a lot of research uses self-reported data, which might be biased (Runnel et al., 2015). The capacity to infer causality is limited by the cross section on nature of the majority of the study (Ram et al., 2024).

Leadership interacts with contextual elements such as regulatory contexts, communication structures and organisational support according to quantitative research conducted in many geographies and healthcare settings (Rune et al., 2020). For example, the influence of leadership on quality healthcare may rely on leaders' capacity to mobilise scarce resources and foster a resilient culture in low- and middle-income countries (LMICs), where resource restrictions are prevalent (Runnel et al., 2023). According to research, relational leadership approaches that prioritise communication, empathy and shared decision-making are successful in preserving staff morale and care continuity in these kinds of situations (Saleh et al., 2017). These studies usually employ reliable and established measurement instruments (Saleh et al., 2017). The MLQ, which differentiates between transformational, transactional and Laissez-faire approaches, is still the most popular tool for evaluating leadership styles (Campbell, 2019). Numerous nursing leadership studies have made use of the LPI which focuses on tangible leadership behaviours. While organisational culture is evaluated using tools such as the organisational culture assessment instrument (OCAI), staff morale and satisfaction are often measured using job satisfaction surveys (Rene et al., 2019). Clinical indicators such as infection rates and readmission statistics or perception-based instruments such as the hospital survey on patient safety culture (HSOPS) or staff reported care quality are used to monitor quality performance (Rene et al., 2019).

Few studies have examined the combined effects of management practices like leadership style, service quality management and organisational culture on quality healthcare in hospitals, especially in Sub-Saharan Africa even though there is a wealth of empirical literature examining these practices in various healthcare settings worldwide (Remel et al., 2024). The impact of leadership on employee morale or service quality on patient satisfaction are two examples of management domains that are frequently isolated in existing research without considering how these interconnected practices collectively influence healthcare outcomes. Additionally, most of the research that is currently available comes from high- or middle-income nations where organisational structures and resource distribution are very different from those of public healthcare facilities in low resource environment like Zambia. There are not many empirical studies that assess how leadership style, decision-making procedures, and service quality management interact to affect patient safety, satisfaction and clinical effectiveness in Zambia and more especially in Lusaka's First level hospitals (Kangwa et al., 2024). Given the ongoing healthcare reforms and decentralisation activities aimed at enhancing frontline service delivery in Zambia, this poses a crucial information vacuum (Peter, 2023). Thus, it makes sense for this study to investigate how various management methods affect quality healthcare in Lusaka's First Level Hospitals. To close this gap, this study intends to offer context specific data that can direct hospital management plans, policy interventions and capacity building initiatives that are suited to the requirements of Zambia's Primary Healthcare systems.

4.1.1 Work Culture

The intricate definitions of organizational culture are consistently emphasized in research underscoring its critical impact on the organization's identity, success and operations. Denison et al. (2021) define organizational culture as the collective values, practices and beliefs that influence the execution of work and the decision-making process. This perspective is consistent with

Schein's (1985) fundamental definition of culture as engrained assumptions that are established through communal problem solving.

Cameron et al. (2020) underscore that culture functions as the “social glue” in organization, fostering actions that align with the organization's objectives and uniting individuals through shared standards. This viewpoint complements prior definitions such as those of Martins et al. (2003), which underscore the importance of shared values and meanings. Ashkanasy et al. (2022) investigated the behavioral aspects of culture arguing that it governs relationships within and beyond the organization, thereby emulating Robbins (2004) perspective of culture as a system of shared meanings.

The intricacy and scope of corporate culture are underscored by the diversity of definitions however, fundamental elements such as shared values, behavior norms and distinct identity remain important. Research suggests that the failure of management systems or transformation initiatives are frequently the consequence of a discrepancy between an organization's culture and its articulated principles. Cameron et al. (2020) discovered that the failure of transformation projects to achieve the objectives is frequently the result of a misalignment between organizational culture and new strategic goals or work procedures. This in turn leads to a decrease in employee morale, an increase in dissatisfaction and a loss of trust. According to Denison et al. (2021), the enduring results are contingent upon the profound congruence among an organization's culture, beliefs and the practices that are necessary for effective change programmes.

According to Gunawan et al. (2017), a robust unified company culture fosters employee empowerment that facilitates effective change thereby reinforcing this perspective. Even the most meticulously crafted initiatives may be rendered shallow, resulting in minimal outcomes if the fundamental beliefs and behaviors that influence the company are disregarded.

Job satisfaction and overall success of a company is significantly impacted by its culture. Huhtala et al. (2022) argue that firms are able to overcome creative challenges as a result of their favorable cultural attributes. In their study, Soni et al. (2021) investigated a variety of aspects of corporate culture, including internal communication, leadership style, work balance and professional development. They determined that these factors are crucial for employee satisfaction and productivity. Productivity experiences a decline when these cultural factors are undermined. Chandrasekar et al. (2023) concur with this, emphasizing that the success of an organization is influenced by the collective conduct of the diverse individuals who work together to achieve shared goals. Hofstede et al. (2021) have conducted a subsequent study that highlighted the significance of cultural resistance to change and its impact on performance and strategy.

Singh (2023) divides corporate culture into two categories, namely internal and external. Team orientation, coordination and empowerment are internal cultural components while objectives, strategic direction and client orientation are exterior focus. The culture of healthcare organizations is influenced by the ability to effectively manage human resources and address patient demands. Zarei et al. (2022) discovered that healthcare organizations that prioritize self-actualization and accomplishment and establish positive cultures also create an environment that is conducive to robust interpersonal interactions. Anderson et al. (2021) support this viewpoint, arguing that organizations that encourage innovative behaviors among health professionals are more capable of addressing the challenges of a rapidly changing healthcare environment.

Organizational culture is categorized by Cameron (2021) into seven (7) primary characteristics which are innovation and risk taking, outcome orientation, attention to detail, people orientation, aggression, stability and team orientation. These attributes indicate the extent to which organizations advance precision, collaboration, outcomes, creativity and competitiveness in their operations.

Ashkanasy et al. (2021) outlines a variety of organization or culture objectives, including conflict mitigation, coordination and regulation, reducing ambiguity, competitive advantage and motivation. A culture that is robust fosters employee loyalty, reduces ambiguity and promotes uniformity in perception of decision making. Draft (2022) found that culture plays a boundary-defining role by fostering a sense of identity and fortifying individuals' dedication to common causes. According to Cameron (2021), organizational culture fosters stability by establishing recognized practices and attitudes that influence employee behavior. In this context, corporate culture functions as a regulatory mechanism that affects the attitudes and behaviors of employees.

Recent studies have clarified the impact of organizational culture on the efficacy of an organization and the behavior of its employees. Patel et al. (2020) says that organizations with adaptive cultures are more proficient at adapting to rapid changes in their business environment, particularly during periods of innovation or crisis. According to experts, the most prosperous organizations cultivate cultures of resilience, transparency, and agility. Additionally, Tseng et al. (2022) investigated the correlation between leadership styles that are in alignment with organizational culture and their influence on organizational performance and employee engagement. Their research indicates that a positive corporate culture in conjunction with transformational leadership leads to an increase in organization commitment and work satisfaction.

Numerous deficiencies persist in spite of exhaustive investigations into corporate culture. The existing literature primarily investigates the consequences of robust organizational cultures, but it offers limited insight into the evolution of these cultures over time particularly in response to significant organizational changes such as mergers, global crisis or technological advancements. There is a scarcity of research on the relationship between employee mental health and company culture particularly in high stress industries such as healthcare. Additionally, despite the widespread recognition of the importance of culture shaping employee behavior, there has been an

inadequate emphasis on the impact of cultural diversity within organizations on business performance and decision making.

Further research is required to understand the impact of diverse cultural contexts on organizational behavior, particularly in developing nations or multinational corporations that operate within diverse cultural environments, as a substantial portion of the foundational research on organizational culture is derived from western organizations.

4.1.2 Leadership styles

Leadership is a foundational element in the successful management and delivery of healthcare services (Cummings et al., 2018). According to Wong et al. (2013), the complexity of healthcare environment which is marked by multidisciplinary teams, high patient volumes and resource constraints requires leadership that is not only directive but also adaptive, ethical and collaborative. Multiple leadership theories have been explored in healthcare literature including transformational, transactional, servant, situational, authentic and shared leadership styles (Rizwan et al., 2025; Wong et al., 2013). Each type plays a distinct role in shaping organisational culture, influencing employee behaviour and ultimately affecting patient care outcomes.

Transformational leadership is the most extensively studied and frequently praised in healthcare literature (Cummings et al., 2018). Leaders of this style inspire and motivate staff through a compelling vision, intellectual stimulation and individualised consideration. Transformational leadership has been shown to enhance job satisfaction, teamwork and innovation while also being linked to improved patient safety and quality outcomes (Cummings et al., 2018; Rizwan et al., 2025). However, critics argue that its highly idealistic nature may overlook the operational challenges of resource constrained environment particularly in low- and middle-income countries (Miller et al., 2021). Moreover, transformational leadership requires a level of emotional

intelligence and manager training that may be lacking in overburdened frontline managers (Wong et al., 2007).

In contrast, transactional leadership operates on a reward and punishment system that emphasises routine, structure and accountability (Bass, 1990). It is particularly effective in procedural environment such as surgical units or emergency departments where standardised protocols are critical (Rizwan et al., 2025). According to Longfield et al. (2007), transactional leadership has been criticised for being overly mechanistic and failing to engage staff emotionally or intellectually. In the long run, its rigid structure can suppress innovation and autonomy making it less suitable for dynamic environment that require constant adaption (Langfeld., 2007).

Servant leadership shifts the focus to the needs of employees, emphasising empathy, support and shared growth. According to research by Al-Moteri et al., (2023), their studies show that this leadership style enhances morale and reduces burnout by fostering a supportive and inclusive workplace. However, servant leadership's emphasis on empathy and relationship building maybe difficult to sustain in high-pressure environments where leaders must often prioritise performance metrics and compliance (Rathert., (2020). Furthermore, empirical evidence on its impact in healthcare is still emerging and most studies are based on qualitative data or case studies, limiting generalizability (Derkson et al., 2013).

Situational leadership introduced by Hersey et al. (1982), promotes the idea that no single leadership style is universally applicable. Instead, leaders must adapt their behaviour based on the competence and commitment of their followers. This style is particularly relevant in healthcare settings with diverse teams of varying experience levels. For example, novice nurses may require more directive supervision, whereas experienced clinicians benefit from a more delegative approach (Wong et al., 2007). The challenge with the situational leadership lies in its complexity; leaders must possess strong self-awareness, emotional intelligence and accurate assessments of

their team's readiness, the skills not always present in overburdened healthcare systems (Rathert et al., 2020).

Authentic leadership, grounded in self-awareness, ethical behaviour and transparency has been found to foster trust and psychological safety among healthcare workers (Rathert et al., 2020). This leadership style is particularly relevant in healthcare's emotionally charged environment, where ethical dilemmas are frequent and trust is essential. Studies suggest authentic leaders promote open communication and reduce workplace incivility, thus enhancing team cohesion and patient satisfaction (Wong et al., 2013). However, it has been critiqued by being more philosophical than practical; measuring authenticity is inherently subjective, and its outcomes are difficult to quantify (Derksen et al., 2013).

Shared and distributed leadership have gained momentum especially in modern healthcare systems that emphasize interprofessional collaboration. In this model, leadership responsibilities are more distributed across team members rather than centralised in one individual. This approach has been associated with higher levels of engagement, innovation and resilience in clinical teams (Greenhalgh et al., 2022). Yet, it also introduces challenges related to decision-making authority and accountability. In under resourced settings or hierarchically rigid systems, shared leadership may not be feasible due to entrenched power dynamics and lack of team training (Biffu et al., 2022).

The importance of leadership in healthcare is underscored by its direct influence on patient outcomes, staff retention, safety culture and organisational learning. A systematic review by Cummings et al. (2018) found consistent association between relational leadership styles such as authentic and transformational and improved nurse outcomes including reduced turnover, job satisfaction and better patient care. Another study conducted by Wong (2013) emphasised that empowering leadership was a key predictor of nurse engagement and reduced adverse patient

events. However, a critical gap in the literature is the underrepresentation of leadership in low resource or primary care settings such as FLHs in Zambia. Most leadership research remains forecast on tertiary or high-income settings which may limit its applicability across diverse global context (Miller et al., 2021).

In resource-limited settings, leadership effectiveness often hinges less on theoretical alignment and more on adaptability and responsiveness. For instance, the study by Bifftu et al. (2022) in Ethiopian public health institutions found that democratic leadership and emotional intelligence rather than rigid adherence to a specific theory were the strongest predictors of leadership success. This suggests that hybrid leadership models combining elements of multiple styles may be more effective in managing the diverse demands of healthcare institutions. Nevertheless, most leadership training programmes remain rooted in western centric models and there is a need for context specific leadership frameworks that reflect the cultural, economic and systematic realities of healthcare systems in the global South (Greenhalgh et al., 2022).

In summary, leadership in healthcare is multifaceted and no single style is universally superior. Transformation and authentic leadership remain the most empirically supported for improving staff and patient outcomes while transactional and situational leadership are effective for specific operational challenges. Servant and shared leadership offer promising approaches for team cohesion and morale but require significant organisational support. Critically the literature often lacks contextual sensitivity especially in under-resourced environment.

4.1.3 Responsiveness levels

The effectiveness of healthcare management, responsiveness is a key factor in determining the calibre of services provided, especially in environments with limited resources like Zambia's FLHs. In order to improve health outcomes, efficient decision-making entails making prompt,

informed decisions that maximise staffing, resource allocation and patient care procedures (Osei et al., 2022). Delays or inefficiencies on decision-making can result in less-than-ideal use of limited resources, extended waiting times for patients, shortages of necessary medications and a decline in employee morale (Mulenga et al., 2023). According to recent research, hospital administrators can enhance operational efficiency and patient satisfaction by implementing structured decision-making frameworks that are backed by real time data and stakeholder involvement (Chomba et al., 2024).

Furthermore, organizational culture and leadership philosophies are strongly associated with effectiveness of decision-making. It has been demonstrated that participatory leadership techniques that include frontline healthcare workers in decision-making processes increase ownership, enhance communication and lower errors (Phiri et al., 2023). On the other hand, responsiveness and creativity are often impeded by autocratic decision making, especially in clinical settings that undergo rapid change (Kabwe et al., 2021). According to research, enhancing managerial skills through training and digital health interventions can greatly increase decision-making speed and accuracy in Zambia's healthcare systems, which would improve service quality and affordability (Simutanyi et al., 2022).

All things considered, decision making effectiveness is a multifaceted concept that incorporates communication, organizational preparedness, leadership techniques and data accessibility. Enhancing FLH's decision-making procedures is crucial to tackling the problems of scarce resources and high patient demands which would ultimately improve patient outcomes and healthcare delivery in Zambia and comparable contexts.

4.1.4 Engagement and motivation levels

Staff Morale is widely acknowledged as a significant driver of quality healthcare and organisational effectiveness. Feelings of job satisfaction, motivation, commitment and emotional well-being are some of the indicators of high morale among healthcare workers and these elements work together to increase output, lower absenteeism and improve patient outcomes (Mutale et al., 2021; Mwansa et al., 2023). On the other hand, low morale can lead to burnout, job discontent, higher employee turnover and lower care quality which can seriously jeopardise patient safety and workforce stability (Phiri et al., 2022). According to recent studies conducted in Zambia, ongoing issues like low pay, a lack of opportunities for professional advancement and a lack of managerial support have a detrimental effect on healthcare workers' morale and make it more difficult for them to provide reliable and high-quality care (Chama et al., 2022; Kabwe et al., 2022).

Employee morale is greatly influenced by management-by-management tactics. A productive workforce where healthcare professionals feel appreciated and empowered is created by effective leadership that prioritises openness, encouraging supervision and inclusive decision making (Phiri et al., 2024). Participatory management techniques, where employees actively participate in planning and problem solving, have been associated with higher task ownership and improved job satisfaction, which in turn raise morale (Chama et al., 2022). On the other hand, careless or dictatorial management approaches frequently lead to discontent at work by undermining team cohesiveness and trust (Kabwe et al., 2022). Furthermore, the quality of communication between frontline employees and management has a big impact on morale, open lines of communication for acknowledgement and criticism help to reduce emotions of dissatisfaction and loneliness (Tembo et al., 2023).

Because health professionals who cope with chronic understaffing and resource scarcity frequently experience High levels of stress, conflict and emotional weariness, the psychological

environment of healthcare facilities also has an impact on morale (Mwansa et al., 2023). In comparable settings, support groups interventions that target these psychological issues like Peer support groups, counselling services and stress management training have shown promise in enhancing mental health and maintaining employee engagement (Nyirenda et al., 2024). Furthermore, by achieving healthcare workers goals for career advancement, opportunities for skill improvement and ongoing professional development serve to both increase competence and build morale (Mutale et al., 2021).

FLHs in Zambia have higher retention rate and better clinical performance as a result of practical measures to boost staff morale such as the implementation of recognition programmes, improved supervision systems and small financial incentives (Phiri et al., 2024). According to these results, maintaining a motivated healthcare workforce that can provide high quality care requires managing staff morale through a variety of management techniques. In the end, improving patient outcomes and advancing health system performance in context with limited resources requires creating a work environment that promotes the professional fulfilment and well-being of healthcare personnel.

4.1.5 Communication in Healthcare Facility

The quality of care and patient outcomes are significantly influenced by effective communication, which is essential for patient centered care. Research suggests that inadequate communication among healthcare practitioners and patients has a detrimental effect on quality perceptions and care outcomes (Haque et al., 2022). The delivery of effective care may be impeded by communication difficulties which can lead to misconceptions between healthcare teams and patients (Roche et al., 2023). In settings such as intensive care, dementia care, or end of life care, patients may experience communication challenges as a result of their health conditions which exacerbate the problem (Singh, 2021).

The provision of healthcare services is consistently impeded by language barriers. Recent studies suggest that the outcome of patient care may be considerably impacted by the healthcare personnel's inability to communicate effectively with patients in their domestic language. According to Al Shamsi et al. (2020), language barriers in healthcare environments hinder patient-provider communication, thereby reducing patient satisfaction and participation. Hsieh et al., (2022) emphasized that language barriers in maternity disrupt the exchange of critical information between nurses and expectant mothers, despite the fact that providers demonstrate empathy and proficient nonverbal communication. Additionally, these barriers limits patients' comprehension of treatment plans which have a detrimental effect on decision making and overall health outcomes.

The concept of patient-centered care emphasizes the significance of patient involvement and exchange of information, emphasizing the collaboration between healthcare practitioners and patients. McCormack et al. (2021) emphasized the importance of nurse-patient collaboration, information exchange and patient involvement in the provision of patient-centered care. Santana et al. (2020) also assent that communication in healthcare must be a reciprocal process, in which patients actively participate in the dialogue thereby enabling them to make informed decisions about their health. Smith et al. (2021) underscore the importance of explicit and efficient communication in order to achieve optimal health outcomes and minimize uncertainties in healthcare. He emphasizes the importance of communication in achieving the best possible health outcomes and preventing any ambiguities that may arise during the course of treatment. This is consistent with the enduring nursing principles that underscore the significance of tailoring care to the specific needs and concerns of each patient (Henly, 2016). Additionally, Smith et al. (2021) advocate for further research to clarify the potential benefits of healthcare communication, whether

it is conducted in person or through use of devices, in terms of improving patient care by reducing ambiguity and refining decision making.

For the purpose of fostering patient engagement, enhancing compliance with treatment protocols, fostering social support, enhancing safety and increasing patient satisfaction, it is imperative that healthcare providers and patients engage in effective and transparent communication (Taylor et al., 2022). This is consistent with the findings of Lee et al. (2021), who posited that patient-centered communication fosters active participation in decision making by patients and their families which leads to enhanced outcomes. Johnson et al. (2023) further substantiate this by emphasizing that patient-centered communication promotes collaborative treatment by respecting the rights and dignity of patients.

The establishment of resilient patient-clinician relationships, which are the foundation of collaborative decision making, is contingent upon effective communication (Brown et al., 2022). The transparent knowledge dissemination enables patients to comprehend their medical diagnosis, treatment alternatives and associated risks and benefits. This approach ensures that healthcare decisions are consistent with the values, preferences and life circumstances of patients and promotes patient autonomy (Smith et al., 2021). Additionally, patients who are well informed are more likely to adhere to their treatment regimens which in turn improves the health outcomes. Instructing patients and their families on the management of chronic conditions is a critical component of knowledge dissemination. According to the recent research, patients are more likely to participate in their own care when they are informed about their illness. This results in enhanced health management, a higher quality of life, and fewer hospital re-admissions (Johnson et al., 2023). The critical role of families in achieving optimal patient outcomes is underscored by their participation in patient education, which improves care coordination and provides essential emotional support.

The World Health Organization (2022) underscores the importance of providing patients and their families with the necessary information to make informed decisions. The patient engagement framework of the World Health Organization outlines that the education of patients and their families improves health outcomes and fosters trust in the healthcare systems. This approach ensures that healthcare is delivered in a manner that is responsive to the cultural preferences, requirements and expectations of patients. Johnson et al. (2023) emphasized the importance of knowledge exchange among healthcare practitioners, patients and their families in pediatric care. Their research suggests that in pediatric environments, the provision of plain and accessible information to both the child and their guardians enables families to actively participate in treatment decisions, thereby improving the overall experience and outcomes for young patients.

Despite the extensive research on the importance of communication in patient centered care, there are still gaps in understanding the practical implementation of these strategies in a variety of healthcare settings, particularly in resource limited situations. This research concentrated on the topic of how healthcare systems can more effectively address language hurdles and communication issues, a subject that requires further investigation.

4.1.6 Coaching and Mentorship availability

For healthcare personnel to maintain and improve their skills and knowledge, they must engage in continuous professional development (CPD). CPD programmes are designed to adapt to the changing healthcare environment, enabling practitioners to stay informed about advancements in medical research, technology and best practices. Consequently, this enhances the quality of patient care and the efficiency of the organization (Norries et al., 2021). The emphasis on CPD has been shown to improve healthcare outcomes by guaranteeing that personnel have the most up to date knowledge and skills (Liu et al., 2022).

Continuous professional development (CPD) is indispensable for the enhancement of quality healthcare and the protection of patient safety. Jones et al. (2020) underscore the importance of CPD in providing healthcare personnel with the opportunity to expand their knowledge and acquire new skills, which is essential in light of the continuous advancements in medical technologies and treatments. This is especially important for allied health workers, doctors and nurses who are required to stay informed about the most recent healthcare standards, advancement and treatment regimens. Healthcare professionals are capable of making informed decisions that improve patient care and outcomes by maintaining proficiency in their roles through ongoing education (Davis et al., 2023).

The importance of CPD is heightened in low- and middle-income countries as it enables the congruence between international healthcare norms and resource-limited settings. Chansa et al. (2020) note that financial and infrastructural constraints frequently restrict the opportunities for healthcare personnel in Zambia and other impoverished regions to engage in CPD. Nevertheless, the quality of healthcare services and the retention of proficient practitioners in underprivileged regions are significantly enhanced by CPD when it is accessible.

In addition to its benefits for patient care, CPD is closely linked to professional advancement and work satisfaction among healthcare professionals. Healthcare personnel who participate in CPD programmes frequently report increased job satisfaction, as they perceive themselves as more competent and empowered in providing high quality care (Sharma et al., 2021). Research suggests that healthcare professionals who are actively involved in professional development and continuous learning are more likely to maintain their employment, thereby reducing turnover rates and improving organization of stability (Ali, et al., 2022). This is particularly important in healthcare systems that are experiencing challenges such as personnel shortages and burnout, as

CPD offers opportunity for personal growth and professional advancement (Chowdhury et al., 2023).

Furthermore, CPD fosters an environment of perpetual learning within healthcare organizations. Healthcare personnel are more inclined to engage in professional development opportunities and engage in learning activities when they perceive that their institutions prioritize ongoing education (Lloyd et al., 2021). This promotes a positive work environment, enhances employee engagement and elevates morale (Khan et al., 2022).

The effective implementation of CPD in healthcare environments is impeded by significant obstacles, despite its numerous advantages. The accessibility of time and resources is a primary obstacle. Healthcare professionals are frequently required to work extended hours in difficult environments, which impedes their capacity to participate in CPD initiatives. The participation of healthcare workers in CPD is significantly impeded by time constraints, excessive responsibilities and insufficient institutional support as identified by Jones et al. (2022). Additionally, the availability of CPD opportunities is impeded by financial and logistical constraints in a number of underdeveloped regions. In the rural Zambia, healthcare personnel frequently experienced limited access to formal CPD programmes, which leads to skilled deficiencies and disparities in quality healthcare between urban and rural areas, as discovered by Mumba et al. (2021). To tackle these problems, innovative technologies including electronic learning platforms and mobile health initiatives are being investigated to enhance the accessibility of CPD (Dube et al., 2023).

Smith et al. (2021) conducted a comprehensive study that suggests that professionals who engage in CPD are more likely to adhere to evidence-based guidelines and best practices which in turn lead to improved patient outcomes. Their literature extensively documents the correlation between patient outcomes and CPD. CPD programmes that are designed to prevent and control infections

have been shown to be effective in reducing healthcare associated infections (HAIs) and enhancing patient safety (Jackson et al., 2022).

Additionally, CPD programmes that emphasize interdisciplinary through collaboration and cooperation have demonstrated improvements in communication and coordination among healthcare personnel, resulting in more comprehensive and effective patient care (Nguyen et al., 2023). These initiatives promote a collaborative approach to patient care that enhances service quality and patient satisfaction by dismantling barriers across diverse healthcare professionals (Lopes et al., 2022).

5.1 Quality Healthcare

The definition and evaluation of quality healthcare continue to be a topic of contention among experts as each individual offers their own perspective on the factors that contribute to exceptional healthcare. It is imperative to comprehend quality in the healthcare sector as patient satisfaction and outcomes are critical components of service delivery. According to the institution of medicine (2021), quality healthcare must be evaluated from the perspectives of both technical personnel and patients. This dual approach underscores the importance of adhering to the therapeutic standards while also considering the expectations and experiences of patients. Blanchard et al. (2020) stated that healthcare providers must demonstrate clinical proficiency and interpersonal abilities in order to improve the overall quality of service. This is consistent with the institute of medicine's previous research, which underscores the importance of addressing both the technical and experiential aspects of quality healthcare.

Mashadiabdol et al. (2020) noted that quality healthcare is evaluated from the perspective of a supplier (healthcare) by meeting patient expectations and perceptions, emphasizing that patient satisfaction is a critical metric of patient quality. This perspective is consistent with that of Goh et

al. (2021), who argue that patient satisfaction is delivered from perceived quality. This suggests that patients' evaluations of the quality of healthcare directly influence their overall satisfaction with treatment. Choudhury et al. (2022) define quality healthcare as the provision of services that meet patients' needs while maintaining cost effectiveness. This perspective emphasizes the challenge of balancing cost containment with quality care in a resource-limited environment.

Walters et al. (2021) emphasize the importance of understanding patient needs and expectations as a prerequisite of achieving quality. Lee et al. (2022) likewise emphasize the need for healthcare providers to consistently adjust their operations to improve patient centeredness. Rose et al. (2020) emphasizes the importance of performance metrics, healthcare elements, and organizational variables in the evaluation of quality healthcare. This model provides a broad framework; however, Haj et al. (2021) recommend a more comprehensive approach that includes three critical components namely structure, process and outcome. This model offers a comprehensive framework for evaluating the quality of healthcare encompassing all aspects including the tangible resources of healthcare facilities, care delivery and patient outcomes.

According to O'Donovan et al. (2020), quality healthcare should be understood as the effective utilisation of resources such as personnel, equipment and facilities to meet the needs of patients. Their argument is that the provision of high-quality healthcare requires a comprehensive approach that encompasses all aspects of the healthcare delivery system, in addition to technical proficiency. In resource-constrained environment, the importance of patient satisfaction in assessing quality healthcare has been underscored by recent research. Patel et al. (2023) observed that the improvement of patient satisfaction and quality healthcare remains a challenge in lower resource settings which are defined by inadequate medical supplies, a lack of personnel and extended waiting times. Sharma et al. (2021) argue that the implementation of a patient-centered approach is essential for the enhancement of patient outcomes. However, this transition necessitates a

sophisticated understanding of patient's expectations and requirements. Furthermore, while patient satisfaction is frequently used as the primary performance indicator for evaluating healthcare efficacy (McCarthy, 2021), several scholars argue that it may not adequately account for broader aspects of quality healthcare such as clinical outcomes and resource utilisation (Sinha et al., 2022).

In affluent nations, the quality of healthcare is frequently assessed using sophisticated metrics such as clinical audits, patients' safety protocols, and continuous professional development for healthcare personnel (Smith et al., 2021). These systems are designed to ensure that Healthcare is both efficient and egalitarian, with a focus on the needs of the patient. In contrast, the provision of quality healthcare services is impeded by significant impediments such as insufficient infrastructure, inadequate personnel and financial constraints in developing nations. Lweis et al., (2022) found that the resolution of these challenges and the reduction of unnecessary fatalities and care delays necessitate the implementation of innovative service delivery methods and managerial innovation. These results emphasized the importance of innovative strategies for improving the quality of healthcare and resource-limited environment.

Although patient satisfaction is a frequently used metric for evaluating the quality of healthcare, there is a lack of understanding regarding the influence of resource constraints in underdeveloped countries on the provision of high-quality care (Charkraborty et al., 2021). This discrepancy is particularly evident in research that investigates the integration of operational efficiency, therapeutic outcomes and patient satisfaction in resource constrained environments. The importance of innovative resource management in enhancing healthcare outcomes has been emphasized by research (Ronca et al., 2020). According to Narang, (2011) and Mu et al. (2020), underdeveloped countries may need to prioritize improvements in fundamental service delivery and patient accessibility while developed nations typically prioritize modern technology and therapeutic outcomes. There is a dearth of research on the measurement of advancement on quality

healthcare, particularly in context with constrained access to care despite the fact that numerous studies have emphasized the significance of equitable healthcare. It is imperative to conduct further research on initiatives that aim to provide healthcare equity in developing countries (Okpala, 2021).

6.1 Management

The concept of management has undergone significant transformation, as a result of the diverse viewpoints that numerous researchers have expressed regarding its definition and implementation. The definition of management remains ambiguous and intricate, lacking a commonly acknowledged interpretation despite the extensive research conducted (Miller et al., 2020). In the early days of management, the primary focus was on the optimization of efficiency and the alignment of worker production with corporate objectives as demonstrated by Taylor's (1911) scientific management. Fayol (1949) broadened this perspective by integrating factors such as planning, organizing, directing and regulation. Recent research suggests that traditional management paradigms, which are based on industrial contexts must be adjusted to accommodate the technology driven and dynamic environments that are prevalent in contemporary businesses (Johnson and Lee, 2023; Schilling & Cheng, 2021). This transition emphasizes the importance of management strategies that are more adaptable and innovative-centric in order to meet the needs of modern enterprises.

Massie et al. (1977) in collaboration with Griffin (1987) explained management as a methodical process that prioritizes efficiency and organization. The challenge of managing information and human resources in the fast-paced ever evolving environment of today has been increasingly recognized in contemporary research. Researchers such as Draft (2020) and Lussier al et. (2020) emphasized the importance of managers being able to respond promptly to change and demonstrate adaptability. In Hellriegel's (2005) article, he argued that executives must integrate all management

functions including planning, organizing, leading and controlling. Hamel (2007) and Kotter (2021) are among the contemporary experts who argue that traditional management paradigms including Fayol's classical frameworks are insufficiently equipped to accommodate the need for elasticity and reactivity in the face of rapid technological advancements and market fluctuations. The authors advocate for a leadership approach that is innovation-oriented and adaptable which is essential for addressing the challenges of the modern business environment.

In contrast to previous process-oriented perspectives, contemporary scholars emphasize management as the intentional allocation of resources in response to rapidly changing environments. Despite the fact that DuBrin (1995) and Bateman et al. (2002) conceptualized management as a resource allocation function, contemporary research such as McDaniel et al. (2021) underscores the importance of adapting resource management to change in technical and market dynamics. This evolving perspective emphasizes the importance of enterprises effectively managing external transformations. Initially, London (1988) underscored the significance of change management in the context of organizational development. However, more recent research by Kotter, 2020 and Teece, 2021 have explored the role of managers as catalysts for change, promoting innovation and digital transformation to maintain competitiveness.

The challenge that managers face in reconciling operational tasks and leadership obligations is underscored by Allen's (1973) distinction between technical and managerial work. However, this conceptual framework may be less pertinent in light of current managerial trends. Contemporary managers are anticipated to not only coordinate and lead but also to integrate digital technologies and foster innovation into their operations, according to recent research conducted by McKinsey et al. (2021). Additionally, Allen's paradigm fails to recognize the collaborative nature of contemporary leadership, which is exemplified by the prevalence of shared leadership models and cross functional teams (Anderson et al., 2022; Hartley & Maxwell, 2023). These trends suggest a

shift in managerial roles toward a more inclusive, team-centric approach that adapts to the changing characteristics of modern enterprises.

Donnelly et al. (1987) clarified management levels by associating strategic, managerial and operational functions with upper, and first-line management respectively. Many contemporary firms have adopted flatter and more agile management methods, transitioning to more fluid, less hierarchical structures (Laloux, 2020). Griffin's (1987) description of competency is necessary for effective management in the contemporary global and digital business environment. According to Deloitte, (2021), contemporary managers are required to possess competencies such as emotional intelligence, digital literacy, and remote team management.

McDaniel et al. (2008) stated that organizations are unable to operate in isolation and must proactively adjust to internal and external changes. Howells (2005) supports this concept, who suggested that scanning the environment is important and indispensable as it allows organizations to comprehend the factors that affect their operations. This viewpoint aligns with contemporary strategic management ideologies which underscore the importance of external analysis in the development of corporate strategies (Porter, 2020). The literature on the effective implementation of such practices by managers of small and medium sized firms (SMEs) is significantly gapped, given the more constrained resources of SMEs in comparison to major corporations (Bercovitz & Mitchell, 2021; Kee, 2022).

Backman et al. (2003) emphasized the significant challenges that managers face when attempting to implement organizational changes, particularly in environments where entrenched habits and cultures impede transformation. This continues to be a fundamental issue in management research as recent research has underscored the critical role of leadership in facilitating change particularly in the context of digital transformation (Sia et al., 2020; Westerman et al., 2021). These issues are

particularly relevant in light of the ongoing technological advancements that require managers to reconcile traditional methods with the demands of digital integration (Deloitte 2020).

Literature on management primarily emphasizes traditional models. However, there are substantial deficiencies in its ability to address contemporary organizational dynamics such as the rapid evolution of technology, fluctuations in global markets, and the increasing need for agile and adaptive management strategies (Schwab, 2021; Ghoshal et al., 2021). The necessity of further research into the methods by which contemporary management can adapt for the evolving corporate environment is emphasized by these gaps.

7.1 Healthcare Management

In recent years, the examination of quality healthcare has expanded to include not only patient perspectives but also managerial practices and institutional frameworks. This research has underscored the importance of quality healthcare management from the perspective of a variety of stakeholders, such as management, healthcare providers, patients and external entities. The purpose of this literature review is to analyze these dimensions, compare industrialized and underdeveloped nations, and identify gaps in the current research.

Recent research suggests that quality healthcare administration is a multifaceted concept that affects all aspects of an organization such as strategic planning, operation or procedures, regulations and infrastructure. Healthcare institutions are accountable for evaluating the effectiveness of components such as patient care, administrative procedures and service delivery (Goddard et al., 2021). According to Nash et al. (2020), to enhance service delivery, healthcare management must integrate internal components including staff, technology and service quality with external factors, including regulatory mandates, demand and accreditation criteria. This is consistent with Koteen's (1997) concept which emphasizes the importance of achieving a balance

between internal and external factors to improve the quality of healthcare. Additionally, Williams et al. (2022) have conducted research that supports the notion that patient satisfaction is frequently achieved through the systematic implementation of effective management techniques, prompt information systems and faultless processes.

In industrialized nations, healthcare management strategies are increasingly emphasizing the utilisation of patient feedback to influence operational procedures. Decentralized healthcare systems have been implemented in countries such as Sweden and Denmark which allow local administrations to more effectively manage healthcare delivery and customize services to meet patient need (Svedberg et al., 2021). These countries have optimized operations and improved the quality of healthcare by employing technology-driven approaches resulting in increased patient satisfaction (Johnson et al., 2021). In contrast according to Kacak et al., (2020), a number of underdeveloped countries face significant challenges in healthcare management due to resource constraints, inadequate infrastructure and insufficient training of healthcare professionals and these factors lead to a compromised quality of care and reduce patient satisfaction. Furthermore, healthcare administration in these countries frequently demonstrates a lack of technological integration and innovation in comparison to more developed countries which impedes the effective response to patient needs (Mu et al., 2020).

Parasuraman et al., (1985) identified 5 critical components of service quality namely, reliability, assurance, responsiveness, empathy and tangibility. Recent research, for instance Garcia et al., (2022) have emphasized the importance of these parameters in healthcare environments, and have further noted that reliability, civility, and competence are critical factors that influence service quality as well as patient satisfaction and trust in healthcare personnel.

Healthcare institutions in affluent nations strive to preserve these dimensions by optimizing service delivery systems employing highly qualified personnel and implementing advanced technologies.

In order to enhance patient outcomes, the Swedish healthcare institutions have implemented patient-centered development strategies that prioritize technological innovation and service enhancements (Lindahl et al., 2021). This proactive strategy emphasizes the consistent efforts of management in industrialized countries to improve the quality of healthcare by implementing innovative approaches. In contrast, even the most basic healthcare service standards are exceedingly difficult to attain in underdeveloped countries. According to Lemay et al. (2020), service quality is hindered by financial constraints, inadequate infrastructure and restricted access to modern medical equipment and training. Prolonged waiting times, inadequate resources and elevated medical expenses are the norm in these environments which lead to a decrease in patient satisfaction and a reduced ability to meet the growing needs of patients (Kacak et al., 2021).

According to Zepeda et al. (2021), healthcare administrators are required to identify critical areas for improvement, allocate resources efficiently, and effectively guide both healthcare providers and patients. Healthcare leadership involves overseeing daily operations and guaranteeing that healthcare facilities adapt to the changing needs of patients and advancement in medical technology (Zepeda et al., 2021). Healthcare executives in industrialized nations prioritize patient engagement and continuous quality improvement. For example, in Sweden, healthcare executives prioritize patient participation in decision making which is achieved through transparent processes that foster trust and communication (Olsson et al., 2020). By aligning health practices with patient requirements and expectations, patient-centered care models improve health outcomes and patient satisfaction (Taylor et al., 2021).

According to Njoku et al. (2020), healthcare facilities can improve patient satisfaction and health outcomes by prioritizing patient-centered care. Political instability, resource scarcity, and inadequate training frequently impede healthcare leadership in developing nations. Healthcare leaders in these regions must confront these challenges while simultaneously endeavoring to

perceive patient satisfaction and service quality (Lomax et al., 2021). Inefficiencies, diminished patient trust, and health outcomes are frequently the result of the absence of robust leadership in healthcare administration.

Despite advancements in healthcare management research, there are still deficiencies particularly in developing countries. A substantial amount of the literature prioritizes operational efficiency and patient perspectives while neglecting the impact of healthcare professionals and regulations on management practices (Kang et al., 2021). Additionally, despite the fact that the centralized healthcare systems have been shown to be effective in affluent nations, there is a dearth of research on the adaptation of these models to the unique challenges facing impoverished regions. The social-cultural and economic contexts of healthcare in developing countries are frequently disregarded in research which results in an inadequate examination of the culture aspects that influence healthcare management (Ali et al., 2020).

According to recent studies, the healthcare systems in Zambia faces challenges that are common to other developing nations, particularly in terms of the availability of medical resources, competent personnel, and modern facilities. Nevertheless, the healthcare system is affected by a scarcity of staff and inadequate facilities which leads to low patient satisfaction and variable service quality, despite ongoing efforts to enhance quality healthcare (Jibu et al., 2021). Malama et al. (2022) emphasized that the literature is significantly deficient in Zambia due to the absence of extensive data on patient satisfaction, which impedes the implementation of targeted improvements in healthcare administration and service delivery.

Studies suggest that healthcare facilities could benefit from improved resource management and superior quality control systems however, the managerial dimension of quality healthcare in Zambia is not adequately investigated. According to Zulu et al., (2020), Zambia's healthcare systems could be significantly improved through improved resource allocation and enhanced

leadership. Additionally, it is imperative to implement management interventions that are tailored to the unique healthcare needs of the country to fill the existing gaps (Chirwa et al., 2023).

Management of quality healthcare is a complex issue that requires a multidimensional approach that considers both patient perspectives and managerial practices. Healthcare organizations in industrialized nations have successfully implemented innovative methodologies to improve patient satisfaction and service quality (Kibicho et al., 2021). However, resource scarcity, inadequate infrastructure, and leadership deficiencies continue to impede progress in underdeveloped nations like Zambia (Kalungia et al., 2020). Additional research is required to resolve these challenges with a particular emphasis on the influence of healthcare legislation and cultural variables on management strategies in these regions (Pillay et al., 2021).

Despite extensive research on healthcare management, significant gaps remain regarding the implementation and effectiveness of management practices in resource-limited settings such as Zambia's First Level Hospitals (Samuel et al., 2023). Most existing studies focus on management strategies intentionally or high-income healthcare systems emphasising operational efficiency, technological integration and traditional managerial frameworks. These findings may not be directly applicable to lower income countries such as Zambia where managers contend with constraints such as limited free structure, inadequate staffing and high patient volumes.

There is little empirical data on how management strategies affect patient outcomes, employee performance and service delivery in primary care settings with minimal resources (Paul et al., 2024). Most of the research are theoretical or forecast on case studies from affluent nations offering little guidance on the real-world strategies that could enhance FLHs operational effectiveness, resource allocation, decision-making and supervision. Despite having a significant impact on management effectiveness, context specific issues like organisational leadership, inadequate

managerial training and inadequate communication methods are frequently disregarded (Neval et al., 2022).

Furthermore, there is little research on the connection between management practices and important outcomes in FLHs such as patient satisfaction, staff morale and service quality. Context sensitive frameworks that consider the organisational, culture and economic realities of primary care institutions in Zambia are also lacking (Febby et al., 2024).

To create workable, flexible management methods that maximise resource utilisation, enhance employee performance and has patient outcomes in healthcare settings with limited resources, these gaps must be filled.

8.1 Summary

The literature on healthcare management emphasizes the critical role of management techniques in achieving high quality healthcare outcomes. The reduction of hospital waiting times and the minimization of hospital stays are closely associated with patient satisfaction, among the critical factors that are considerably influenced by efficient healthcare administration. Organizational culture is an essential component as it fosters collaboration, support and continuous improvement among health personnel, which in turn affects patient care. The quality of patient treatment and the safety of patients are contingent upon the availability and accessibility of medical supplies, pharmaceuticals and essential equipment. Extending waiting periods and ineffective care can be the consequence of insufficient resources, which can undermine patient satisfaction and healthcare outcomes. Furthermore, the literature emphasizes the importance of effective communication in healthcare settings to guarantee seamless care transitions, reduce errors and maintain a high level of patient safety.

It is acknowledged that healthcare professionals must engage in continuous professional development in order to maintain a proficient and engaged workforce. Continuous training programmes improve critical competence by prioritizing safety, effective communication and patient centered care, all of which are associated with improved patient satisfaction and quality healthcare.

The literature suggests that a healthcare institution that is well managed is more likely to deliver high quality healthcare and have favorable patient outcomes. This is defined by a supportive organizational culture, competent staff, adequate resources and patient centered management practices.

CHAPTER THREE

THEORETICAL AND CONCEPTUAL FRAMEWORK

3.0 Introduction

While chapter two provided a comprehensive literature review, this chapter analyzes the theoretical framework and articulates the effects of management on the quality of healthcare. Additionally, this chapter clarifies the conceptual framework that was implemented in the study.

3.1 Theoretical Framework

Theories play a critical role in the advancement of knowledge as they enable a thorough understanding of facts and challenges and also broaden existing perspectives within predetermined boundaries. According to Barker (2022), theoretical frameworks serve as research guidelines and offer structured support to the theoretical methodology of a study. Theoretical frameworks clarify the fundamental theory of the research subject being investigated (Smith et al., 2021). The framework according to Barker (2022), delineates the epistemological, philosophical, analytical and methodological approaches that researchers employ in their investigations. Thompson et al. (2023) argue that theoretical frameworks aid researchers in contextualizing and integrating their ideas into their investigations thereby situating their findings within scholarly and academic discourse.

The research problem is linked to the data analysis strategy and research design by the theoretical framework. According to Smith et al. (2022), a theoretical framework enables researchers to select the appropriate methodologies and the instruments for analysis and directing the data collection process for a specific study. This ensures that the results are relevant and applicable. Miller et al. (2020) argue that research that lacks a theoretical framework that is appropriate may lead to a weak literature review and academic discourse surrounding the study's findings. The theoretical

framework provides a common view for academicians to evaluate data and analyse the subject matter (Williams, 2023). In addition, the theoretical framework is essential in research, as it provides a systematic understanding of all aspects of a study such as problem formulation, literature review, methodology, result analysis, and conclusions (Smith et al., 2023). It ensures that the research is founded on established concepts, directs the design of the study and guides the interpretation of the results.

Theoretical frameworks must possess a profound understanding of the ideologies that are relevant to the research topic and be connected to the broader contexts of the information being considered. Fisher et al. (2022) suggest that a theoretical framework is necessary to investigate the interactions of these factors under varying conditions and to emphasize the essential components that influence an occurrence. Effective theories in social science are significant in that they aim to clarify the nature, significance, and challenges of unresolved events, thereby enabling researchers and practitioners to apply this knowledge to more informed and effective decision making. This section outlines the theoretical foundation that gives guidance on relationships among key variables of this research.

3.2 Systems Theory

The exhaustive framework that systems theory provides for the examination of complex and interrelated systems makes it particularly relevant in healthcare environment. The theory, which was initially developed by Ludwig Von Bertalanffy in 1968, Conceptualizes organizations as interconnected networks, with each component having an impact on the others and it is essential for the analysis of healthcare settings. Systems theory in healthcare elucidates the interactions among a variety of components such as hospital personnel, patients, technologies and policies to establish a cohesive system. McGill et al. (2021) emphasized the importance of adaptability and cooperation in achieving optimal operational efficiency and patient outcomes. It offers a critical

framework for addressing the challenges presented by complex healthcare systems, particularly in the context of evolving patient needs and ongoing technological advancements.

According to systems theory, healthcare organisations are open systems that are in a perpetual state of engagement with both their internal and external contexts (Von Bertalanffy, 1968). These organizations are composed of subsystems such as administrative activities, medical personnel, and patient care divisions, each of which contributes to the system's overall effectiveness. Alterations or disturbances in a single domain, such as personnel shortages or the introduction of new technology, can have a ripple effect on the system and impact other subsystems (Thompson, 2021; Zolnierek et al., 2022).

Systems theory is extensively employed in the healthcare sector to improve the efficiency of organizations and the quality of patient treatment. The concept of a learning organization in systems theory as introduced by Senge (2006), has been further developed to emphasize the importance of hospitals and healthcare providers continuously adapting, acquiring knowledge and enhancing their operations. This approach underscores the importance of feedback mechanisms and communication within healthcare subsystems to reduce errors, improve quality, and strengthen organizational resilience (Martin et al., 2021; Rossi et al., 2020).

Complex adaptive systems (CASs) are frequently used to describe healthcare organizations which are a subset of systems theory. CAS are composed of dynamic agents, including healthcare personnel and patients who interact with a multifaceted environment and adapt to changes (Harrison et al., 2021). In this framework, healthcare professionals at all levels are able to engage with patient care and problem solving due to the decentralized nature of decision making. The broader system, which encompasses resource allocation and patient flow, can be influenced by a nurse's decision at the bedside (Martinez et al., 2020).

Smith et al. (2023) argue that healthcare organizations, viewed as CASs, must transcend linear management paradigms and implement flexibility and creativity. This transition is essential for addressing the obstacles posed by the changing requirements of patients, governmental modifications and rapid technological advancements. The decentralized decision-making structure of CAS fosters a climate that is conducive to innovation in care delivery and management thereby enhancing organizational responsiveness (Brown et al., 2021).

It is imperative to understand and improve the quality of healthcare through the application of systems theory. In contemporary healthcare systems, the importance of Donabedian's foundational approach is underscored by recent studies which emphasize the interrelationship between structure, process and outcome. Ultimately, quality patient outcomes because of improvements in structural components, including workforce capacity, technology integration and infrastructure which promptly improve care procedures such as diagnostics and patient monitoring (Lee et al., 2022; Carter et al., 2021). Systems theory provides healthcare organizations with a comprehensive framework to perceive these factors as interrelated and mutually reinforcing, thereby facilitating a comprehensive approach to quality improvement.

Greenhalgh et al. (2022) emphasized the importance of a comprehensive perspective on healthcare systems in order to improve quality. Murphy et al. (2021) argue that the sole focus on specific processes or results, without consideration for the entire system may lead to inefficiencies or unforeseen consequences. For instance, while technology enhancements may optimize diagnostic procedures, they may also increase the burden of personnel if they do not receive adequate training, leading to burnout or errors. As a result, systems theory assists healthcare organizations in the coordination and harmonization of improvements across all aspects of the system.

Systems theory offers a comprehensive framework for understanding healthcare administration by analyzing the interdependence of numerous subsystems such as finance, patient care, technology,

and personnel. Managers are encouraged to evaluate the influence of decisions made in one area or another. Johnson (2023) notes that the introduction of new technology may improve operational efficiency, but it may also inadvertently increase staff workloads or decrease patient satisfaction if proper training and support are not provided.

In the study on hospital management by Shaw et al. (2021), they discovered that Systems thinking enabled hospital administrators to improve their integration of electronic health records (EHR). Administrators could anticipate the cascading effect of EHR deployment on processes, communication and staff responsibilities by viewing the hospital as an integrated system. That more synchronized and facilitated the perspective of efficient approach to addressing the complexities of EHR adoption. As a result, systems theory offers a critical framework for addressing complex, interconnected healthcare challenges, thereby enabling the seamless and sustainable implementation of reforms.

Systems theory is essential for understanding the manner in which healthcare organizations manage change. The entire system must adjust when implementing modifications, such as the adoption of new clinical guidelines or the reorganization of teams. According to McDaniel et al. (2021), leaders' ability to manage change can be improved by understanding these cascading effects. Systems theory advocates for a comprehensive, iterative change management methodology that involves consistent collection of utilisations of feedback from a variety of organizational components to enhance the change process.

Senge (2020) underscores the significance of system thinking in the cultivation of a culture of continuous learning within healthcare organizations. Institutions that incorporate systems thinking are more adept at adapting to external challenges such as changes in patient demographics or regulatory modifications. This adaptability is crucial for maintaining high standards of patient care and workforce satisfaction during periods of transition.

Although systems theory is extensively employed, there are gaps in the literature regarding its practical application in the clinical setting. The application of systems thinking by frontline healthcare workers in routine patient care is frequently overlooked, as numerous research has concentrated on systems theory from a managerial or policy perspective (Robinson et al., 2022). Additionally, even though systems theory has been successfully implemented in extensive healthcare systems, further research is necessary to examine its implications in primary care environments or smaller clinics where personnel and resources may be limited (Miller et al., 2021). Additionally, there is a scarcity of research on the implementation of systems theory to reduce disparities in healthcare access and quality, particularly in under-resourced environments. In order to improve patient outcomes and organizational efficacy in a variety of healthcare settings, it is important for this research to explore the adaptation of systems thinking to numerous contexts.

3.3 Scientific Management Theory

Scientific management theory that was developed by Frederick Winslow Taylor in the early 20th century sought to improve efficiency and productivity through systematic observation and analysis of work. Taylors main proposition was that which could be studied scientifically to determine the most efficient way to perform tasks thereby reducing waste, increasing productivity and promoting predictable outcomes (Taylor, 1911). Although the theory originated within the industrial and mechanical settings, its principles have increasingly found the relevance in complex service-oriented sectors such as healthcare, where efficiency and standardised quality of care are essential.

The complexity of modern healthcare which is characterised by high patient volumes, resource constraints and regulatory oversight has created a demand for efficient workflows and measurable outcomes (Runnel., 2022). This has led healthcare administrators to adopt principles from Taylor's scientific management theory to streamline operations (Patrick et al., 2020). Hospitals and clinics regularly standardize procedures to ensure consistency in patient care for instance, standardised

care pathways are developed for chronic disease management, Surgical interventions and emergency care (Marquis et al., 2017). These pathways guide healthcare providers through evidence-based decision-making, reducing variation and aligning with Taylor's vision of identifying the one best way to perform a task (Marquis et al., 2017).

Moreover, hospitals now rely on data analysis and performance dashboards to track clinical outcomes, staff productivity and operational metrics (Mary et al., 2020). This aligns with Taylor's emphasis on quantitative assessment of performance. For example, hospitals monitor indicators such as average patient length of stay, waiting times in the emergency department, readmission rates and operating room turn over times and these data are used not only to enhance productivity but also to inform training, staffing decisions and policy updates (Toussaint et al., 2013).

Taylor's principle of division of labour is evident in the way modern healthcare systems structure clinical roles (Sam et al., 2015) and job specialisation ensures that healthcare professionals perform tasks that align with their training and licensure. For example, nurse practitioners are tasked with performing advanced procedures and patient assessments while nursing assistant focus on routine care such as hygiene and mobility assistance (Marquis et al., 2017). This ensures that highly trained professionals are not underutilised on basic tasks, thereby optimising both cost and efficiency (Marquis et al., 2017).

Additionally, interdisciplinary care teams are now common in hospitals and the long-term care facilities (Karl., 2015). Each team member has a clearly defined role, and their responsibilities align the true maximise patient outcomes and reduce redundancy (Samuel et al., 2020). While this collaborative model may seem at odds with Taylor's rigid hierarchy, it actually supports his core objective of optimising each workers contribution to the overall process (Henry et al., 2016).

One of Taylor's key tools was the time and motion study which remains influential in modern healthcare efficiency research according to Paul (2012). Paul further mentioned that time and motion studies are used to analyse how nurses, doctors and allied health professionals spend their time during shifts. For instance, Al-Moteri et al. (2023) conducted a time and motion study in a general ward in Saudi Arabia and discovered that nearly 94 minutes of each nurse's shift were spent on non-valuable-added activities such as searching for supplies or completing redundant documentation. Based on these findings, recommendations were made to improve workflow, reduce waste and redirecting nurse time to patient care illustrating the practical application of scientific management principles in a clinical setting.

A similar study in the UK NHS system found that digitising endoscopy documentation saved an average of 43 seconds per procedure amounting to a total of 26 workdays saved annually across a single hospital (Hicks et al., 2024). This timesaving also contributed to improved staff morale, further validating Taylor's argument that efficiency can enhance worker satisfaction when well implemented.

And emerging extension of scientific management in healthcare is the use of predictive analytics and machine learning models to anticipate patient needs and optimise resource allocation (Paul et al., 2021). A 2025 study by Chowdhury et al. (2019) proposed a hybrid model to predict inpatient length of stay based on patient demographics, diagnosis and treatment history. Accurate prediction enables hospital administrators to better manage bed availability, staffing and discharge planning which are outcomes directly aligned with Taylor's objective of scientifically managing operations to reduce variability and increase predictability According to Sam et al. (2020).

Despite its advantages, the application of scientific management in healthcare has limitations (Remmy et al., 2018). Healthcare is inherently a human-centred profession where emotional intelligence, clinical judgement and adaptability are essential (Ruth et al., 2020). Rigid

standardisation if taken too far can affect professional autonomy and creativity and it can also depersonalise care, leading to reduced patient satisfaction and provider burnout (Morgan, 2006).

Moreover, critics argue that Taylor's separation of spanning and execution where managers think and workers do is not suited to modern healthcare where shared governance and participatory leadership are encouraged (Longfield Smith, 2007). Nurse, physicians and allied health staff are now regularly involved in quality improvement projects, strategic planning and policymaking (Sui et al., 2021). This shift represents a move away from Taylor's hierarchical structure towards a more inclusive team-based model that values frontline insight and collective problem-solving (Longfield Smith, 2007).

Scientific management theory has evolved and integrated into newer models such as Lean healthcare, six Sigma and Total Quality Management (TQM) (Aguin, 2024). These models retain Taylor's emphasis on data, efficiency and process improvement while addressing human factors like teamwork, communication and continuous feedback (Banks et al., 2020). Lean methods for example focus on eliminating waste without compromising quality, echoing Taylor's drive for operational excellence but with a more holistic and sustainable approach (Berry et al., 2013).

Scientific management theory remains highly relevant to contemporary healthcare management (Jane et al., 2021). From standardising clinical protocols to using data-driven decision-making and optimising workflows through time and motion studies, Taylor's principles continue to enhance efficiency, reduced waste and improved care delivery (Bate et al., 2015). However, successful application of these principles requires a careful balance, and efficiency should not come to the expense of patient centred care or clinical autonomy (Tom et al., 2012). The future of healthcare management lies in combining the precision of scientific management with the flexibility and empathy the mandate by human-centred care (Pauline et al., 2021).

3.4 SERVQUAL Theory

The SERVQUAL theory, Formulated by Parasuraman et al. in the 1980s, serves as a vital framework for measuring and improving service quality through the lens of customer expectations and perceptions (Parasuraman et al., 1988). In healthcare, this theory has gained importance due to the sector's increasing shift toward patient centred care (Sarih, 2021). Patients today are not just passive recipients of medical treatment, but they are active participants whose experiences and satisfaction significantly influence health outcomes and organisational success (Saghafi et al., 2020). SERVQUAL's five dimensions which are reliability, tangibles, assurance, responsiveness and empathy offer a structured approach for healthcare managers to assess and bridge gaps between what patients expect and what they actually experience (Cleary et al., 2018).

The tangible aspects of healthcare encompass not only the physical environment such as cleanliness, equipment and staff appearance but also extend to modern digital tools like patient portals and telehealth platforms (Al-Rubaish, 2021). These elements shape patient's First impressions and impact their overall confidence in the care provided (Al-Rubaish, 2021). For example, a well-maintained hospital environment can reduce anxiety and foster trust while an intuitive and reliable digital interface can improve access and convenience, especially as telemedicine becomes more prevalent (Kruse et al., 2020). This dimension underlines the importance of creating a healing environment that supports both physical and psychological well-being (Sam et al., 2020).

Reliability often considered the cornerstone of quality in healthcare, involves delivering promised services accurately and consistently (Andaleeb, 2017). Patients rely heavily on healthcare providers for correct diagnosis, effective treatment and timely follow-up care and failure in these areas can lead to diminished trust, poor health outcomes and dissatisfaction (Alexander et al., 2021). For healthcare managers, ensuring reliability means not only maintaining Clinical

Excellence but also optimising operational aspects such as appointment scheduling, medication availability and Laboratory result accuracy (Benson et al., 2021). Studies have consistently shown that patients who perceive high reliability in healthcare services are more likely to adhere to treatment regimens and maintain long term engagement with healthcare providers (Rathert et al., 2020).

Responsiveness highlights the healthcare provider's ability to promptly and attentively address patient needs and concerns (Lucy et al., 2020). This dimension is particularly critical in healthcare due to the often urgent and sensitive nature of patient issues (Al-Abri et al., 2014). Quick responses to patient calls, clear communication regarding waiting times and efficient handling of emergencies can substantially elevate the patient's experience (Ricky et al., 2013). In modern healthcare settings, responsiveness also involves the adoption of communication technologies that facilitate timely interactions such as virtual consultations and the real time messaging systems (Runnel, 2020). By enhancing responsiveness, healthcare organisations can reduce patient anxiety and improve satisfaction which can affect recovery and retention rate (Ristevski et al., 2021).

Assurance refers to the confidence and trust that healthcare providers inspire through their competence, courtesy and professionalism (Wellington, et al., 2021). Patients frequently face vulnerability when seeking care, making it imperative that healthcare workers demonstrate not only technical skill but also their ability to communicate effectively and compassionately (Benedetti et al., 2018). According to Warren et al. (2020), assurance builds through transparent information sharing, respect for patient privacy and consistent demonstration of clinical expertise. It also involves educating patients to empower them in the decision-making processes which improve compliance and health outcomes (Warren et al., 2020). In essence, assurance in healthcare fosters a safe and supportive environment where patients feel valued and secure (Al-Abri et al., 2014).

Empathy, the final dimension of SERVQUAL, encompasses understanding and caring for patients' individual circumstances and emotions (Warren et al., 2020). This dimension has profound implications in healthcare where personal connection can influence patient satisfaction, adherence to treatment and even physiological responses (Derksen et al., 2013). Empathy is expressed through attentive listening, personalised care plans and sensitivity to cultural and emotional factors (John et al., 2020). Healthcare managers who cultivate a culture of empathy encourage their staff to engage with patients as whole people rather than mere clinical cases according to Larson et al. (2005). Empathy Also plays a crucial role in patient provider communication, mitigating feelings of isolation and fear that often accompany illness (Larson et al., 2005).

Despite the clear benefits of SERVQUAL framework, its application in healthcare is not without challenges. One major critique lies in its reliance on subjective patient perceptions, which can be influenced by individual expectations, cultural backgrounds and transient emotions (Andaleeb, 2017). This subjectivity may sometimes lead to inconsistent or skewed evaluations of service quality (Rian et al., 2020). Furthermore, healthcare services are complex and multifaceted, often involving various providers, department and stages of care and capturing this complexity within the five SERVQUAL dimensions can be difficult, necessitating adaptations or complementary tools to achieve a comprehensive quality assessment (Cleary et al., 2018).

Recent years, healthcare organisations have sought to overcome these limitations by integrating SERVQUAL assessments with objective clinical quality metrics and operational data (Elton et al., 2020). This combined approach offers a more balanced view of performance, linking patient experiences with tangible outcomes like readmission rates, infection control and treatment effectiveness (Saghafi et al., 2020). Moreover, as healthcare evolves, SERVQUAL itself has been adapted to new contexts such as telemedicine where traditional tangibles give way to digital

interface, quality and network reliability while assurance and responsiveness gain heightened importance (Kruse et al., 2020).

Technological advancements have further transformed how service quality is monitored and improved (Paul et al., 2021). The rise of real time patient feedback systems, mobile health apps and wearable health devices allows healthcare providers to collect ongoing dynamic data on patient experiences rather than relying solely on post-visit surveys (Ristevski et al., 2021). This continuous feedback loop empowers healthcare managers to make swift adjustments, personalise care and enhance overall service delivery (Joseph et al., 2021). Additionally, the concept of patient co-creation where patients actively participate in designing and evaluating services has gained traction, aligning well with SERVQUAL's emphasis on understanding and meeting patient expectations (Bate et al., 2007).

In summary, SERVQUAL remains a foundational tool for healthcare managers aiming to improve service quality and patient satisfaction (Philp et al., 2022). By focusing on tangible environments, reliable service delivery, timely responsiveness, trustworthy assurance and compassionate empathy, the model helps identify critical areas for enhancement. While it requires thoughtful adaptation to healthcare's unique complexities and ongoing evolution, SERVQUAL's patient centred approach is essential in fostering effective, efficient and empathetic healthcare systems (Kenneth, et al., 2019).

Out of the three theories discussed, systems theory offers a comprehensive and adaptable framework that aligns directly with the study's focus on management practices in healthcare. By viewing hospitals as open systems, the theory emphasises the interdependence of various components such as staffing, technology, communication and administrative processes (Von Bertalanffy, 1968; Senge, 2006). This approach is particularly useful for evaluating how managerial decisions influence healthcare delivery across subsystems, reinforcing the idea that changes in one

area can produce ripple effects throughout the organisation (Thompson, 2021; Zolnierek et al., 2022). Systems theory also integrates Donabedian's structure-process-outcome model, which allows healthcare organisations to improve quality by linking improvements in structural elements like training or equipment to better processes and ultimately to improve the patient outcomes (Lee et al., 2022; Carter et al., 2021).

In the context of FLHs in Lusaka, Zambia, systems theory proves especially relevant due to the complex and resource constrained nature of this environment. These facilities function as complex adaptive systems (CAS) where even minor adjustments by frontline staff can significantly affect service delivery (Martineze et al., 2020; Miller et al., 2021). Unlike scientific management theory which emphasises standardisation and hierarchical control, systems theory accounts for non-linear challenges, adaptability and decentralised decision-making (Mark et al., 2020). Additionally, unlike SERVQUAL, which focuses on patient perceptions, systems theory emphasizes systemic coordination and managerial processes, making it more suited to a study centred on internal operational effectiveness (Peter et al., 2020). Thus, systems theory not only supports change management and innovation (McDaniel et al 2021; Shaw et al., 2021) but also aligns best with the study's dual emphasis on management practices and quality healthcare improvement.

3.5 Conceptual Framework

Conceptual frameworks provide a systematic arrangement of variables and their interconnections, which direct the investigation, thereby establishing the foundation of research. According to Smith et al. (2021), conceptual frameworks are the structures that researchers use to clarify and analyze the phenomena they are studying. They serve as a theoretical foundation for the development of hypothesis and the direction of research procedures. Delineating the specific concept to scrutiny and their interrelations is essential and conceptual frameworks serve this purpose. Conceptual frameworks enable researchers to organize their ideas logically, highlighting the interconnections

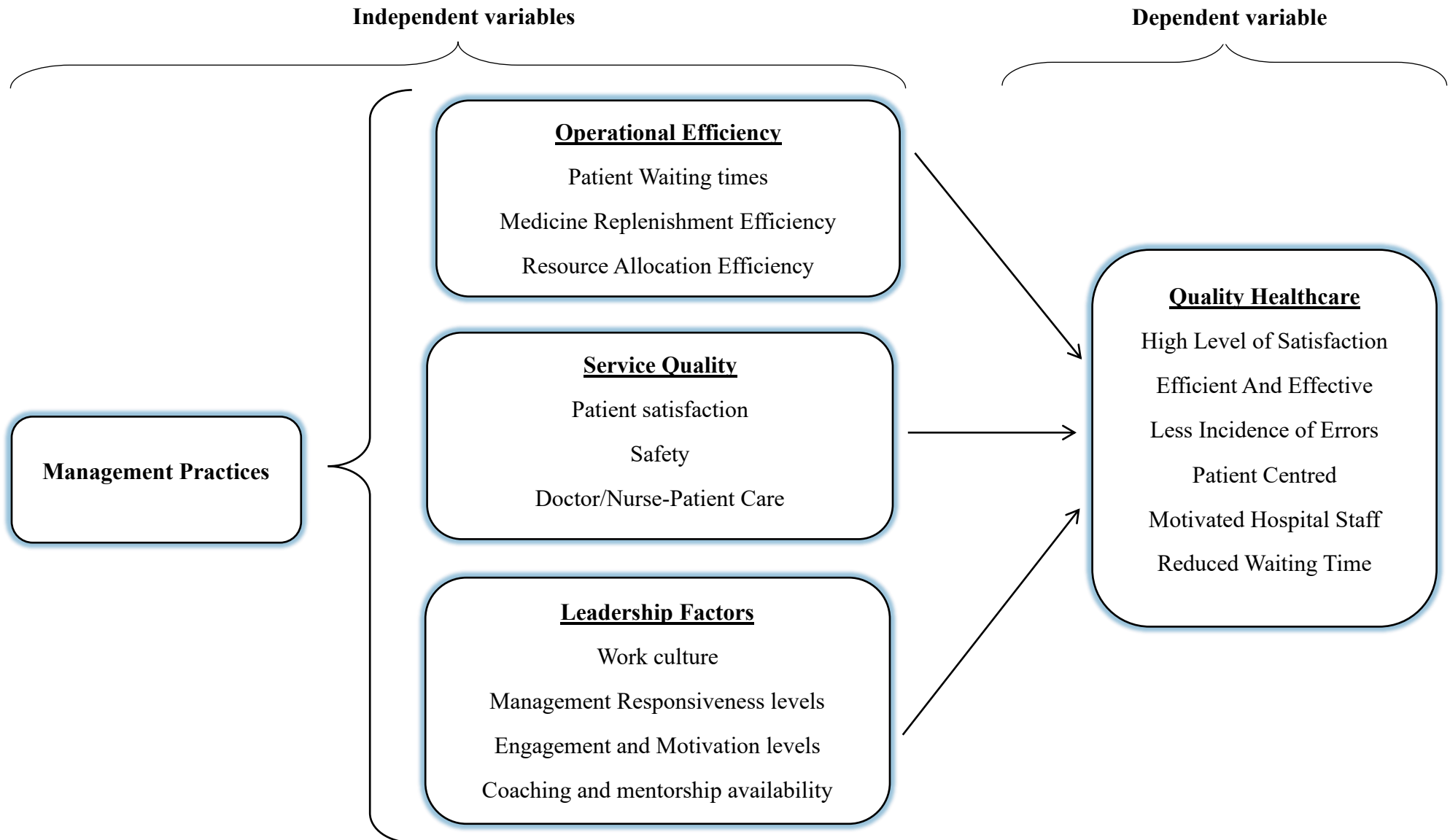
between variables and guiding the investigation of these connections (Williams et al., 2022). This organization aids researchers in their refinement of research questions and the formulation of informed decisions regarding data collection and analytical methodologies.

The adaptability of the conceptual framework to a variety of study contexts is one of its primary advantages. Scholars may adapt frameworks to the unique characteristics of their research by incorporating established concepts and available knowledge and theories. Conceptual frameworks facilitate the design of studies and offer a systematic approach to the delineation of problem concepts, thereby strengthening the theoretical foundation and emphasis of the research (Harrison et al., 2020).

Additionally, frameworks are not restricted to a single format. The visualization of relationships between variables and constructs is facilitated by the ability of researchers to present them in either a narrative or visual format. This adaptability in representation enables the simplification of complex concepts and improves comprehension (Ratten et al., 2022). In order to illustrate theoretical concepts and outline the connections between dependent and independent variables, researchers implement conceptual frameworks (Al-Mamary et al., 2021).

The evolving role of conceptual frameworks in research across a variety of disciplines is the subject of recent literature. Adam et al. (2020) contend that frameworks are beneficial in bridging theoretical gaps and facilitating the organization of ideas, thereby assuring a more comprehensive analysis. They argue that the integration of multiple concepts into a unified conceptual framework allows researchers to investigate more complex inventions that may otherwise be overlooked.

Figure 1: Conceptual Framework



3.5.1 Operational Efficiencies

Operational efficiency in healthcare particularly FLHs, involves the optimization of resources and processes to ensure that care is delivered promptly and is easily accessible (Jane et al., 2015). Essential components that improve operational efficiency include the following.

3.5.1.1 Patient waiting times

Patient wait time refers to the duration between a patient arrival and the delivery of care which is a critical indicator of operational efficiency with implications of satisfaction and care quality (Dape et al., 2012). The duration of time that patients endure while anticipating services such as consultations, testing and treatment is referred to as waiting time and prolonged waiting periods can lead to patient dissatisfaction and delays in the provision of care (Graham et al., 2020). It is imperative to reduce waiting times in order to optimize operations, ensure prompt medical care and improve patient satisfaction (Martin et al., 2020). Adverse consequences such as enhanced patient anxiety and postponed diagnosis may arise as consequences of waiting period delays (Robinson et al., 2021).

A recent study in BMC Nursing demonstrated that applying lean methodology in a post pandemic emergency department significantly reduced waiting times and improved both patient and staff satisfaction (Hussein et al., 2025). Building on this, Morale et al. (2024) introduced a hybrid decision support framework combining predictive modelling (multiple linear regression) and simulation achieving substantial reduction in waiting times for registration, vitals and doctor consultations up to 25% in some phase is resulting in an average of 22.5 minutes of total system time saved.

3.5.1.2 Medicine Replacement Efficiency

The promptness with which healthcare institutions replenish necessary medications to guarantee continuous service delivery is referred to as medicine replenishment efficiency. In order to prevent stockouts and overstocking, a health system must be able to estimate demand, manage supply chains, and maintain ideal inventory levels (Kumar et al., 2021). Effective drug replenishment systems are important for maintaining ongoing availability to necessary medications and enhancing the functioning of the healthcare system as a whole according to WHO (2022). Inadequate forecasting, poor supply chain coordination and procurement delays are some of the replenishment process inefficiencies that might result in frequent stockouts and jeopardise patient care results (Munyanga et al., 2020)

3.5.1.3 Resource allocation efficiency

Resource allocation refers to how effectively healthcare systems distribute and utilise critical assets such as staff, beds and equipment (Urich et al., 2020). Resource allocation is the process of distributing resources, personnel, including cash and technology among various departments or initiatives within an organization according to Choudhury (2023). The successful execution of strategic objectives and organizational efficiency are guaranteed by effective allocation (Urich et al., 2020). Inefficiencies, or inefficient personnel may result from suboptimal resource allocation, which can have a detrimental impact on organizational performance (Vasquez et al., 2022). Real time analytics frameworks have been theoretically proposed to dynamically optimise resource distribution across networks using data-driven allocation models to respond to changing them and minimise costs (Machiredy, 2023).

3.5.2 Service Quality

3.5.2.1 Patient satisfaction

Patient satisfaction pertains to patients' evaluation of how well healthcare services meet their expectations (Dube et al., 2020). A SERVQUAL-based Cross-sectional Study in prosthetics and orthotics reviewed that dimensions of service quality namely responsiveness, tangibility, reliability and empathy directly and indirectly influence patient satisfaction with patient experience acting as a mediator (BMC Health Services Research, 2025).

3.5.2.2 Safety

Safety in healthcare involves minimising harm, and adverse events (Remmy et al., 2020). Safety is the term used to describe the measures that are implemented to prevent injury to patients during their treatment (Blessed et al., 2020). These strategies include the prevention of medical errors, the management of infections and the establishment of a secure healthcare environment (Lee et al., 2020). The disregard of safety protocols may lead to detrimental outcomes and diminished patient satisfaction, while the emphasis on safety mitigates patient injury and nature's trust in healthcare practitioners (Brown et al., 2023).

The “Making healthcare safer” white paper (2025) draws from expert panels to summarise best practices in patient safety such as patient monitoring systems, supply chain interventions and high reliability organisation strategies.

3.5.2.3 Doctor and Nurse Patient Care

This domain centres on the interpersonal dynamics of clinical care and includes empathy, communication, assurance and professionalism, affecting both perceived and actual care quality (Matome et al., 2020). The doctor-patient interaction is the communication and relational dynamics between a healthcare professional and a patient which influences patient satisfaction,

trust and adherence to treatment (Chen et al., 2021). Improved patient outcomes, increases satisfaction and heightened trust in healthcare providers are the outcomes of effective communication between physicians and patients (Smith et al., 2020). Noncompliance with treatment protocols, the lower satisfaction levels and misconceptions may result from inadequate communication (Lee et al., 2022).

Nurse-patient care is the direct support and assistance that nurses provide to patients which includes providing emotional support, monitoring and delivering medication (Williams et al., 2021). Quality nurse-patient interactions enhance patient satisfaction, expedite recuperation and improve the overall healthcare experience (Browning, 2021). Patient dissatisfaction and a decline in the quality of healthcare can be the consequences of substandard care (Johnson et al., 2023).

3.5.3 Leadership Factors

3.5.3.1 Work Culture

Organisational culture and leadership styles shape the environment in which care is delivered (Paul et al., 2015). The methodology that leaders employed to guide, inspire and supervise personnel is referred to as management style (Rick et al., 2022). Organizational culture is the set of collective values, conventions and behaviors that influence decision making and interactions within an organization (Khan et al., 2021). Inflexible management styles can impede employee morale and productivity, while effective management styles foster a constructive company culture that encourages collaboration and innovation (Zhao et al., 2020). A global scoping review published in BMJ global health (2025) highlight and their representation of female leaders in healthcare despite women comprising 70% of the workforce and they only hold about 25% of leadership positions.

3.5.3.2 Management Responsiveness levels

Efficient decision making in healthcare is often shaped by high responsiveness levels, yet empirical exploration remains sparse (Tom et al., 2023). BMC nursing published a cross-sectional study by Hossny et al. (2024) which found that nursing managers with high responsiveness levels exhibited high creativity, suggesting that structured decision making can enhance problem-solving in clinical settings.

3.5.3.3 Engagement and motivational levels

Staff morale encompasses engagement, motivation and well-being, is profoundly affected by leadership dynamics (Steven et al., 2021). Pattali et al. (2024) found that transformational and authentic leadership in private hospitals in Saudi Arabia significantly decreased the nurses turn overs' intentions particularly when perceived organisational support was high.

3.5.3.4 Coaching and Mentorship availability

Staff development involves the cultivation of skills, career progression and supportive environment for professional growth (Turne et al., 2020). Yadav et al. (2022) define staff training and development as initiatives that aim to improve their skills, knowledge and competencies of employees through educational programmes and experiential learning opportunities. Employee performance and retention are enhanced through consistent training, which guarantees that personnel are informed about industry advancements and optimal procedures (Jim et al., 2020). Skewed deficiencies may arise as a consequence of inadequate training which can have a detrimental impact on service quality and overall efficiency (Patel, 2021).

3.5.4 Quality Healthcare

In order to provide patient centered, secure and expedient medical services, it is essential to provide quality healthcare. Quality healthcare in FLHs is achieved by emphasizing several fundamental components such as;

3.5.4.1 Increased Level of Satisfaction

The quality of service is accessed from the patient's perspective through patient satisfaction (Nali et al., 2018). It comprises a variety of components such as outcomes of medical care, service provision and communication (Harrison et al., 2022). Increased patient satisfaction is essential for healthcare organizations to maintain a positive reputation and increase patient retention. Nguyen et al. (2023) have demonstrated that favorable encounters can enhance organizational performance and improve patient outcomes.

3.5.4.2 Efficient and Effective

Efficiency refers to the provision of healthcare services with minimal waste while effectiveness pertains to the achievement of intended health outcomes (Maui et al., 2020). The quality of care is significantly improved by the inclusion of both components (Li et al., 2021). Improved patient outcomes and reduced healthcare expenses by the outcomes of efficient and effective healthcare, which ensures that patients receive the most appropriate treatments and minimizes resource waste (Jones et al., 2023).

3.5.4.3 Decreased Error Frequency

The safety and precision of healthcare procedures which incorporate diagnosis and treatment are indicated by a reduced frequency of errors (John et al., 2015). It is imperative to reduce errors such as pharmaceutical errors and misdiagnosis, in order to improve the quality of healthcare (Smith,

2022). The overall quality of service is simultaneously enhanced by the reduction of errors, which also enhances patient safety and confidence in healthcare personnel (Taylor et al., 2021).

3.5.4.4 Patient-Centered

The importance of respecting and addressing the distinctive choices, requirements and values of each patient is emphasized by patient centered care (Paul et al., 2021). It involves involving patients in the decision-making process (Brown et al., 2020). According to Mitchell et al. (2022), patient centered methodologies yield superior health outcomes, increased patient satisfaction and promote adherence to treatment regimens.

3.5.4.5 Motivated Health Workers

The level of commitment and enthusiasm that healthcare professionals exhibit in their responsibilities is referred to as motivation (Mwamba et al., 2020). Providing exceptional treatment necessitates personnel who are motivated (Robinson et al., 2023). Healthcare personnel who are motivated are more likely to provide compassionate care, adhere to best practices and cultivate a positive work environment which ultimately benefits patients (Johnson et al., 2021).

3.5.4.6 Reduced Waiting Time

Reduction in waiting time refers to the reduction of the amount of time the patient must wait for services, including consultations, tests and treatments (Sally et al., 2020). Patient satisfaction is substantially determined by waiting times (Graham et al., 2020). Singh et al (2023) assert that decreased waiting times improve patient satisfaction, improve the efficacy of healthcare delivery and alleviate the burden of hospital resources.

3.6 Chapter Summary

According to the conceptual framework, operational efficiency, service quality and leadership factors are the three main management practice dimensions that affect quality healthcare. By

increasing service accessibility, lowering treatment delays, and guaranteeing the best use of available resources, operational efficiency is expected to positively influence quality healthcare (WHO, 2021).

Quality healthcare is also seen to be affected by service quality as determined by patient satisfaction, patient safety, and doctor/nurse-patient care (Institute for Healthcare Improvement, 2022). It is anticipated that improved clinical outcomes, better patient experiences, and greater trust in healthcare services will result from improved service quality levels (Organization for Economic Co-operation and Development, 2020; WHO, 2023).

Leadership factors such as work culture, management responsiveness, employee engagement and motivation, access to coaching and mentorship is also expected to influence the quality healthcare (WHO, 2021). According to other studies, effective leadership creates a positive work atmosphere, boost employee performance, promote accountability and improve service delivery (WHO, 2021; Organization for Economic Co-operation and Development, 2020).

The importance of theories in understanding complex processes and informing research is also emphasized by the theoretical framework. It underscores the importance of systems theory, particularly its application in healthcare as a comprehensive approach to the management of interrelated elements within healthcare organizations. The dynamics of healthcare organizations which are considered Complex Adaptive Systems (CAS), are better understood through the application of systems theory (Samuel., 2020). In these systems, decentralized decision-making fosters adaptability and innovation.

CHAPTER FOUR

METHODOLOGY

4.0 Introduction

Chapter four includes the philosophical foundation of this research, research methodology, research strategy, sample size, design and study demographic. It also includes information on the evaluation of validity and reliability, data collection instruments, data analysis and ethical considerations.

4.1 Research Methodology

The research methodology is a methodical approach to the investigation of research subjects which encompasses the philosophies and methods that guide the design and execution of the study. According to Creswell et al. (2021), research methodology provides the fundamental framework for understanding how research can effectively achieve its objectives and purposes. The framework encompasses data collection and analysis methodologies that are structured according to systematic philosophies, which facilitate scientific inquiry (Flick, 2020; Saunders et al., 2023). The ideologies and logical frameworks that are employed during the study are fundamentally related to the study technique, which enables a systematic and coherent analysis of the research problem (Saunders et al., 2023).

The methodology chapter of this study outlines the various research tactics and techniques that were employed thereby enabling readers to comprehend the rationale and procedures that underline each methodological decision. This highlights the research design's ability to effectively integrate theoretical foundations with practical application, thereby facilitating the attainment of study objectives (Creswell et al. 2021; Flick, 2020). This chapter clarifies the precise

methodologies for data collection and analysis thereby improving understanding of the study strategy and its alignment with research objectives.

4.2 Research Philosophy

According to Saunders et al. (2023), research philosophy is a set of beliefs and assumptions that direct the advancement of knowledge. Although the knowledge generated may not always result in revolutionary discoveries, it offers valuable insights by addressing specific issues within a particular context. The assumptions, whether explicitly acknowledged or not, include epistemological assumptions regarding the essence of human knowledge, ontological assumptions regarding the nature of reality and axiological assumptions regarding the impact of researcher's value on their work (Saunders et al., 2023; Alvesson et al., 2021). The methods of formulating questions, selecting methodologies and analyzing results are significantly influenced by their foundational assumptions (Bryman, 2021).

Research philosophy requires a thorough examination of the methodologies employed and the overarching ontological framework that governs the investigations. Saunders et al. (2023) emphasizes that no single philosophy is inherently ideal for all research endeavors, despite the importance of selecting a suitable research philosophy. The challenge is the potential mismatch between the philosophy that is most applicable for a particular study and the researchers' intrinsic views and assumptions. Another issue is the absence of a consensus among business and management researchers regarding a specific philosophical stance (Alvesson et al., 2021). Consequently, it is essential to comprehend philosophical discourses in order to develop a rigorous research philosophy. Each perspective provides a distinctive framework for examining organizational realities, thereby improving the field of business and management (Bryman, 2021).

Furthermore, Saunders et al. (2023) emphasized the importance of researchers identifying their distinctions and potential conflicts among philosophical perspectives in order to effectively support their chosen approach. The selection of the study approach requires a meticulous differentiation of varieties of philosophical approaches, necessitating a comprehensive examination of their foundational assumptions. This method requires an understanding of the distinctions in axiology, epistemology and ontology which are critical for delineating research philosophies. In the subsequent sections of this study, these components will be further investigated in detail in relation to the research context.

4.3 Philosophical Underpinning of This Research

4.3.1 Ontology

The ontology of this study is predicted on the positivist paradigm, which asserts that reality is objective, quantifiable and exists independently of human perception (Saunders et al. 2023). This ontological perspective posits that tangible phenomena, such as the effect of management on quality healthcare in FLHs in Lusaka, Zambia, can be quantified through empirical observation and objective measurement (Bryman, 2021; Bell et al., 2022). In order to evaluate the influence of operational efficiency, service quality and management practices on healthcare outcomes, the study employed a positivist ontology, which regarded these variables as distinct entities that could be systematically assessed.

Additionally, the positivist ontology is consistent with the methodological framework of the study, which emphasizes quantitative research methodologies for data collection and analysis (Saunders et al., 2023), and this alignment ensures a coherent study design, in which the selection of appropriate measurement instruments and statistical methods is guided by ontological assumptions to objectively assess the connections between management issues and quality healthcare (Bryman,

2021). The research underscores the importance of observable and quantifiable components of healthcare delivery, emphasizing its commitment to the production of generalizable and credible findings that contribute to the field of healthcare management (Bell et al., 2022).

The study's ontological foundation as a positivist paradigm facilitates a systematic and objective assessment of the influence of management on the quality of healthcare in FLHs. This perspective ensures that the research is focused on quantifiable outcomes, which in turn enhances the reliability and validity of the findings and contributes to the overarching goal of improving healthcare service delivery in Zambia (Bryman, 2021; Saunders et al., 2023).

4.3.2 Epistemology

The epistemology of this study is predicated on positivism, which asserts that knowledge is objective, quantifiable and can be determined through empirical observation and quantifiable facts (Saunders et al., 2023). This epistemological perspective posits that the systematic collection of data and the subsequent comprehensive analysis of the correlation between management practices and quality healthcare in FLHs in Lusaka, Zambia, can result in the acquisition of credible knowledge. Positivism emphasizes the utilisation of scientific methodologies and statistical instruments to identify patterns, linkages and causal connections in data (Creswell et al., 2022).

This research, which is founded on positivist epistemology, emphasizes objectivity, reliability and rigor in the collection and examination of data concerning operational efficiency, service quality and management practices that influence healthcare outcomes. This methodology is distinct from constructivist or interpretivist epistemologies which prioritize social constructs and subjective meanings (Bryman, 2016; Saunders et al., 2023). The quantitative instruments employed in the study are guided by the positivist approach which ensures that the results are generalized and

replicated. This methodological choice assists in the development of evidence-based recommendations to enhance healthcare management practices.

Additionally, the positivist epistemology of this study is consistent with its ontological conviction that an objective word can be quantifiable regardless of the beliefs or values of the researchers (Saunders et al., 2023). This alignment facilitates a methodical examination of healthcare factors with an emphasis on the production of impartial, objective insights into the influence of management on quality healthcare (Pillay et al., 2022).

In summary, the studies epistemology is to generate scientifically validated knowledge that is applicable in broader contexts with the ultimate objective of enhancing the quality of healthcare in the Zambian public health sector.

4.3.3 Axiology

The axiology of this study underscores the importance of maintaining objectivity and value neutrality throughout the research process, as well as positivist framework. Axiology is a field that examines the impact of value and ethics on research including how ethical considerations are addressed and the management of biases (Yilmaz, 2021). The researcher was responsible for assessing the effect of management practices on quality healthcare in FLHs in Lusaka, Zambia while simultaneously mitigated personal biases and maintained objectivity. The research emphasizes objectivity to produce findings that are both credible and morally sound. The findings can be used to inform evidence-based communications that optimize healthcare management in Zambia.

The researcher emphasizes the generation of data that is free of personal biases and social effects, in accordance with positivist ideas. This dedication to objectivity ensures that the study's conclusions regarding operational efficiency, service quality and management practices are solely

deduced from empirical evidence and are not influenced by the researchers' personal values (Blaikie, 2020). In order to facilitate evidence-based recommendations for enhancing quality healthcare, this axiological perspective necessitates the meticulous selection of research methodologies that facilitate replicability and reliability (Smith et al., 2021).

Transparency, confidentiality and respect for participant autonomy are essential ethical considerations in this study. These criteria illustrate commitment to the protection and participants rights and welfare, which is in accordance with positivist research principles that prioritize ethical research practices and scientific integrity (Smith et al., 2021).

The axiology of this study is based on a value neutral, objective framework, which prioritized ethical rigor and scientific neutrality in the investigation of the effects of management on quality healthcare.

4.2.4 Methodology

In order to assess the effects of management practices on the quality of healthcare in FLHs in Lusaka, Zambia, this research implemented a quantitative methodology. The objective is to generate reliable statistical data that can be analyzed to understand the relationship between healthcare outcomes, operational efficiency, service quality and management practices. In this research, quantitative methodology was particularly appropriate due to its ability to facilitate the acquisition of extensive datasets which can be analyzed using statistical methods to identify patterns and correlations (Creswell et al., 2020).

This research implements a positivist research theory, which maintains that reality is quantifiable and objective regardless of the researcher's beliefs or principles (Saunders et al., 2020). Its survey-based data collection approach was implemented in the study which involved the distribution of structured questionnaires to healthcare professionals and patients in FLHs. This approach

facilitated the efficient acquisition of considerable data volumes while simultaneously guaranteeing the consistency and dependability of responses across a wide range of participants (Creswell et al., 2020).

To ensure that the sample accurately represented the population of healthcare staff and patients at FLHs, this research employed random sampling (Saunders et al., 2022) and the generalizability of the findings was thereby enhanced. Descriptive statistics were implemented to summarize the data, while inferential statistics were implemented to investigate the correlation between management strategies and Quality healthcare outcomes (Field, 2021).

Reliability and validity are both emphasized by the research methodology. Validity is the evaluation of whether the study accurately evaluates the intended constructs, while reliability is the consistency of measurements over time ensuring the reproducibility of results (Cohen et al., 2020). It is essential that the data collection methods used in the study are both valid and reliable in order to maintain the credibility of the findings (DeVellis, 2021).

To investigate the influence of management on quality healthcare, this research implemented a quantitative research methodology that included structured questionnaires, statistical analysis and a positivist mindset.

4.3 Study Area

The current research was conducted in the Lusaka district of Zambia, specifically in the regions of Matero and Chilenje. Figure 2 illustrates the exact location of the two FLHs in Lusaka district. Matero FLH is situated in the northwest, while Chilenje FLH is situated in the southeast of Lusaka.

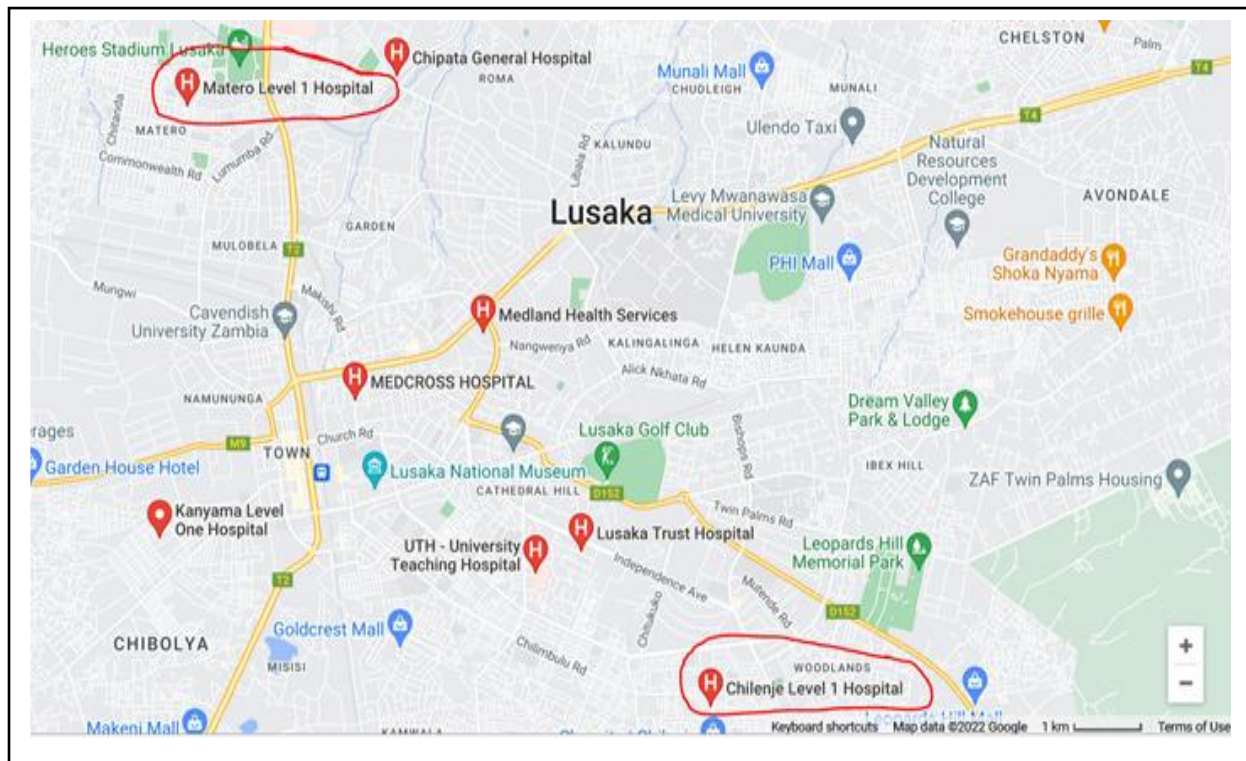


Figure 2: Location of Matero and Chilenje First Level Hospitals (Google Maps,2024)

Lusaka, the capital and largest urban city of Zambia is situated in the South-Central region of the nation. It serves as the primary metropolitan framework for the nation, Housing 32% of the country’s urban population (UN-HABITAT, 2007). Figure 3 shows the estimated population of Lusaka which was approximately 3,042,000 (UN, 2022). According to projections, Lusaka’s population is expected to reach 4,000,000 by 2030 as a consequence of annual population growth.

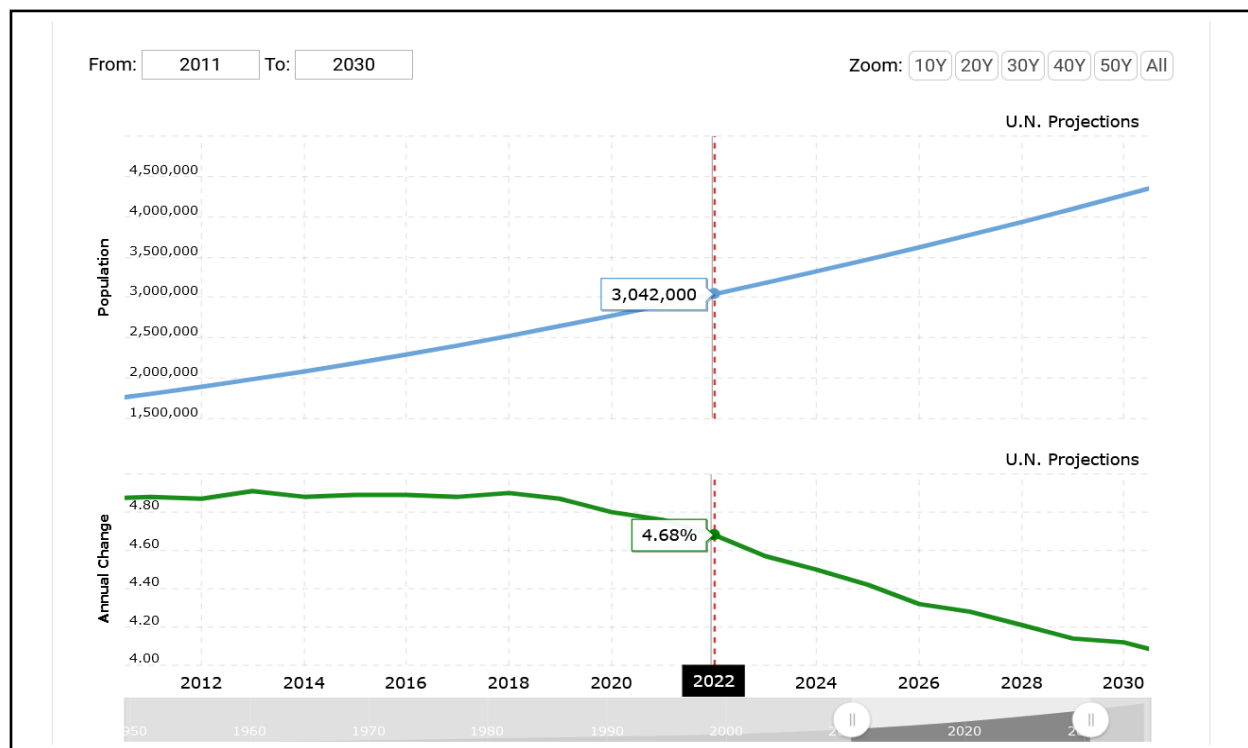


Figure 3: World Population Prospects – Lusaka (United Nations, 2022)

The study sites were selected based on the differences in population composition, structure and economic activities.

4.3.1 Matero First Level Hospital

Matero FLH was established as a FLH in 2017 and is situated in the Matero residential district of Lusaka, Zambia. The workforce at this facility comprises radiologists, clinical officers, physicians, nurses, dentists, ophthalmologists, tuberculosis specialists, dietitians, counselors, physiotherapists and public health specialists. Also included are the general workers. Matero FLH serves an estimated catchment population of 356,462 people, according to the IFRC (2022). Matero FLH is comprised of numerous departments that offer a wide range of services such as in-patient, out-patient, radiography, maternity, dental, Laboratory, voluntary counseling and testing (VCT), environmental health, physiotherapy, theatre, labour ward, pharmacy and security among others.

Matero FLH was selected as a study site as a result of the recent upgrade to FLH status, with the expectation that the quality of treatment would have improved. Matero is one of the most densely populated regions in Lusaka city which may facilitate the collection of supplementary data for the study, due to the facility's large catchment area. Matero FLH is depicted in Figure 4 below.



Figure 4: Matero First Level Hospital (ZANIS, 2020).

4.3.2 Chilenje First Level Hospital

In 2017, Chilenje FLH was also established as a FLH and is located in the Chilenje residential area of Lusaka Zambia. Clinical officers, physicians, nurses, dentists, ophthalmologists, tuberculosis experts, dietitians, counselors, physiotherapists, radiologists, general workers and public health specialists comprise the workforce at Chilenje FLH, which is comparable to that at Matero FLH (Musonda et al., 2021). The catchment population of Chilenje FLH is 130,000 people (Musonda, 2021).

In the same year as Matero FLH, Chilenje FLH is another health facility that was recently modernized. In comparison to Matero, Chilenje residential areas have individuals with a slightly higher level of educational attainment and income than Matero (Callois et al., 2007). The image of Chilenje FLH is depicted in figure 5 below.



Figure 5: Chilenje First Level Hospital (Author, 2024)

4.4 Study Population

A population is defined by Hungler et al. (1999) as the sum of all subjects, objects or individuals that meet a specific set of criteria.

4.4.1 Matero

Matero Township is home to an estimated 55,629 residents, with 27,500 males and 28,129 females (ZSA, 2020). Matero FLH, the major public hospital in the northern section of Lusaka, draws individuals from neighboring communities including Zengalume, and Chunga who are in need of medical care. Matero FLH has a catchment population of 356,462 (IFRC, 2022).

4.4.2 Chilenje

The estimated population of Chilenje residential area is 52,220 with 10,330 homes (ZSA, 2010).

The catchment area of Chilenje FLH, which serves 130,000 individuals, includes adjacent communities whose residents benefit from Chilenje FLH (Musonda et al., 2021).

The study investigated the dynamics of quality healthcare and management from the perspectives of three critical groups within the healthcare systems, namely, patient, non-management hospital personnel and hospital administrators/management. The healthcare processes at the two FLHs are significantly illuminated by the distinctive experiences and functions of each cohort.

4.4.3 Study Population Details

a. Patients

In order to acquire a comprehensive array of experiences, the research included both inpatients and outpatients.

- i. Out-patient: Their feedback provided valuable insights into the services and care they encountered during hospital visits, with a particular emphasis on critical factors such as access to healthcare resources, service quality and waiting period.
- ii. In-patient: This group provided insights into the extended hospital stays, highlighting the quality of care, staff attentiveness and the adequacy resources and facilities of the hospitals.

This dual methodology ensured a comprehensive understanding of patient experiences at a variety of touch points within the healthcare systems.

b. Non-Management Staff

A comprehensive perspective on healthcare delivery from the providers' perspective was provided by a variety of healthcare professionals and support personnel and the following subsequent teams were included:

- i. Clinical staff included clinical officers, doctors, nurses, dentists, ophthalmologists, TB specialists, dietitians, counselors, physiotherapists and radiologists.
- ii. General workers and public health professionals are comprised of support personnel.

Responses were crucial for understanding the relationship between management and service delivery, resource sufficiency and operational issues.

c. Healthcare administrators

In order to acquire a deeper understanding of the decision-making process, resource allocation, staffing and policy implementation, hospital administrators and management personnel were involved, their perspectives reconciled the objectives of institutions with the actual experiences of healthcare providers and patients.

The study included three distinct groups, which allowed for a comprehensive examination of the delivery of healthcare services, management strategies and healthcare quality outcomes in the two FLHs. This comprehensive approach ensured that all principal stakeholders involved had an equitable perspective on the factors that influence quality healthcare.

4.5 Sample Size

The process of establishing a sample size involves the identification of a representative subset of the population to serve as the study's subject. According to Croswell et al. (2018), the sample size ensures that the study findings are statistically reliable and representative while maintaining its

representativeness. To preserve the quantitative nature of the investigation, this study implemented probability sampling. Probability sampling guarantees that each unit in the population has a predetermined probability of selection (Babbie, 2021). The likelihood of obtaining a sample that accurately represents the diversity and attributes of the total population is significantly increased by this strategy, which also reduces the probability of sampling error. Kumar (2020) states that the selected research sample sufficiently reflects the entire population in order to enable the generalization of the results. To ensure sound statistical conclusions, the investigation implemented probability sampling methodologies, including random sampling.

Matero and Chilenje FLHs each have a fluctuating total population as they serve individuals from areas beyond their respective localities. The Cochran formula was employed to calculate the sample size due to the fluctuation and the absence of a constant population size. This approach is particularly advantageous in situations where the population size is uncertain, as it ensures that the sample size is statistically valid and appropriate for drawing conclusions.

The objective of this methodology was to guarantee that the selected sample comprises a variety of perspectives, taking into account differences in gender and age. Consequently, the insights accurately represent the broader population that the FLHs serve. The formula employed is as follows;

$$n_0 = \frac{z^2 p(1 - p)}{c^2}$$

Where:

n_0 = sample size from an unknown population

z = Selected critical value of desired confidence level

p = Estimated proportion of an attribute that is present in the population

c = the desired level of precision

The Cochran formula was modified by Ott and Longnecker (2015) to accommodate finite population, with the implication that the sample size may be reduced when addressing smaller populations. This modification is the result of the realization that larger populations typically produce proportionally more information than smaller populations. Consequently, the need for an excessively large sample size is reduced when the population is finite and clearly defined.

$$n = \frac{n_0}{1 + \frac{(n_0 - 1)}{N}}$$

Where:

n_0 = Sample size from an unknown population

N = Population Size

Therefore:

$$n_0 = \frac{(1.96)^2(0.5)(0.5)}{(0.05)^2} = 385$$

$$n = \frac{385}{1 + \frac{385 - 1}{486,462}} = 385$$

Therefore, the sample size of this study was 385 and the breakdown of the respondents is in the table below.

Type	Number		TOTAL
	Matero	Chilenje	
Patients	88	80	168
Non-management staff	101	88	189
Hospital Administrators	13	15	28
Total	202	183	385

Table 4.6: Sample size composition – Source : Author (2024)

Table 4.6 above shows the sample distribution of this study. Sampling was conducted using stratified random sampling across the two study areas (Matero and Chilenje FLHs). Within each location, participants were categorised into three distinct strata: patients, non-management staff and hospital administrators. Individuals were then randomly selected from each stratum within both hospitals. This approach ensured balanced representation of key stakeholder groups in each location, enhancing the precision of between group comparisons and minimising sampling bias (Lohr, 2021; Bala et al., 2017).

The slight variation in sample sizes between Matero (n = 202) and Chilenje (n = 183) reflects natural differences in the population size, facility workload and availability of eligible participants within each site (Bryman, 2021). Matero FLH serves a larger and more densely populated catchment area, which explains the high participation of patients and non-management staff from that location (Zambia Ministry of Health, 2020). As Singh et al. (2014) note, random sampling within strata may lead to small differences in sample sizes across sites especially when strict proportional quotas are not applied.

Sampling relatively large numbers of participants particularly patients (n = 168) and non-management staff (189) was necessary to enhance statistical power, account for variability in

perspectives and ensure reliable subgroup analysis (Kadam et al., 2010; Taherdoost, 2017). These groups are expected to differ widely in their experiences with healthcare delivery, making large samples essential for detecting meaningful patterns and associations. Additionally, in health systems research, sufficiently large and diverse samples improve the generalizability of findings across similar settings (Acharya et al., 2013). A smaller sample of hospital administrators (n = 28) was deemed adequate due to the limited number of individuals in this role. This group included senior level hospital administrators and departmental heads, whose inclusion was critical to understand institutional perspectives on healthcare management and operations.

4.6 Data Collection Instruments

Structured questionnaires are frequently employed methods for collecting primary data in formal quantitative research as emphasized by Patel et al. (2021). This study used structured questionnaires to collect primary data from the respondents and were meticulously designed with the assistance of the literature that was reviewed and also contained a variety of essential components. Respondents' satisfaction with healthcare services, organizational culture, access to pharmaceuticals and medical supplies and healthcare management methods were all examined in each component of the study.

The questionnaires were administered by the researcher in person at the study locations, utilizing a practical methodology. Although this approach extended the duration of data collection, it was advantageous in that it facilitated personal engagement with respondents, clarified questionnaire items and translated questions where necessary, which then necessitated the enhancement of accurate and comprehension of responses.

To ensure ethical compliance, informed consent was obtained from all participants. A consent form was included in each questionnaire, which participants were required to review and sign before participating in the study.

4.7. Type of Research Questions

The study developed the following type of questions based on the findings of the literature review.

4.7.1 Questions with a Likert scale

The study used Likert scale questions to acquire opinion-based responses, which are acknowledged by their effectiveness in evaluating attitudes, perceptions and disagreements of agreement or intensity. Respondents were presented with a series of ranked choices on Likert scales, which provided a comprehensive understanding of their perspectives. The severity of the issue was evaluated, and a vast amount of opinion data was collected through the use of a scale ranging from 1 (very low severity) to 5 (very high severity) in this study (Dillman et al., 2020).

This study occasionally employed rating scales that necessitated participants to evaluate their level of agreement or disagreement with specific assertions. In order to evaluate the intensity of their opinions, respondents were assigned standardized ratings that ranged from 1 (strongly disagree) to 5 (strongly agree). While maintaining the simplicity and clarity of response alternatives, this methodology facilitated the measurement of subjective opinions (Joshi et al., 2020).

To ensure uniformity and minimize ambiguity, the response categories were consistently oriented throughout the questionnaire, as recommended by Dillman et al. (2020). This method improved the reliability of the responses and reduced the likelihood of errors. Furthermore, the inclusion of both positively and negatively worded statements in the questionnaire encouraged respondents to examine their questions more critically, thereby preventing them from responding in a manner that was either automatic or negligent.

In this study, the judicious application of liked skills was employed to establish a robust framework for the analysis of opinion-based data, ensuring data quality and preserving respondent engagement (Fink, 2019).

4.7.2 Closed Ended Questions

Respondents were required to select from a predetermined list of variable responses using closed-ended questions that were implemented in this study. The objective of these questions was to generate quantitative data that could be:

- i. Easily quantified into scores, percentages or statistics.
- ii. Examined for patterns and trends.
- iii. Employed to evaluate patterns among a variety of respondent groups.

Closed-Ended questions were an effective tool for gathering objective data that aligns with the quantitative methodology of this study, as they provided uniformity and clarity (Lavaraks, 2020).

4.8 Validity and Reliability

This quantitative study was evaluated on the basis of its reliability and validity as is the case with other social sciences. These two components were indispensable for guaranteeing that the results accurately represented the research objectives and could be considered reliable for future application.

4.8.1 Reliability

This study's reliability was guaranteed by methodological replicability and uniformity in data collection practices. The study's replicability was supported by the use of a systematic probability sampling techniques to improve the sample's representativeness. A systematic questionnaire with

closed-ended and Likert-scale items was used to gather data, making it easier to produce standardised answers (Saunders et al., 2020).

The questionnaire was pre-tested before the main data collection stage to increase clarity and reduce ambiguity. The reliability of the data collection process was strengthened by this process, which also helped to improve the instrument and guarantee that respondents understood it consistently (Hair et al., 2021).

Additionally, Cronbach's alpha was used to evaluate the measurement scales' internal consistency. The reliability and consistency of the items used to measure each variable were demonstrated by all constructs achieving coefficients above the suggested criterion of 0.70.

All things considered, these steps guaranteed that the study yielded reliable and credible results for analysing the effect of management practices on quality healthcare in FLHs.

4.8.2 Validity

The validity of this study was determined by the degree to which the data collected addressed research questions regarding quality healthcare, operational efficiency, service quality and management practices in FLHs in Lusaka District. Validity is the extent to which the data accurately reflects the research objectives as identified by Saunders et al. (2019). The validity of the study was achieved through the use of meticulously prepared questionnaires that were informed by literature analysis. These questionnaires focused on critical areas including patient satisfaction, organizational culture, access to medical supplies and healthcare administration. A structured questionnaire was employed to ensure that the data accurately evaluated the specified variables as outlined by Silverman (2020). Additionally, the study's findings were analyzed using rigorous statistical methods to ensure precise interpretation and enhance their relevance. To enhance the

validity of the study, the investigation implemented numerous validity strategies, including construct, content, face and criterion validity (Bryman, 2021).

4.8.2.1 Construct Validity

To ensure that the assessment instruments accurately reflect the intended constructs such as operational efficiency, service quality and managerial practices, construct validity was crucial in this study. Creswell (2021) defines construct validity as the degree to which an instrument accurately measures the theoretical constructs it is designed to assess. The significance of construct validity was underscored in this study to guarantee the reliability and accuracy of the findings, ensuring that the study items were directly aligned with the concepts being investigated (Bryman, 2021). This study provided a more accurate and dependable understanding of the connections between quality healthcare and management aspects by developing assessment methods that effectively capture pertinent components.

Factor analysis was employed to evaluate construct validity by examining the relationship between survey items and the designated constructs. Factor analysis is a statistical technique that is used to identify patterns in data by clustering associated variables. The objective of this investigation was to determine whether the survey items for critical variables were consistent with their anticipated characteristics. For instance, the survey items that were intended to evaluate management procedures were consistently clustered, thereby validating that these items represented the desired construct. Patient satisfaction, staff responsiveness, and healthcare accessibility were evaluated in accordance with the service quality framework resource utilisation, waiting times and workflow processes were accurately represented by their respective survey items (Pallant, 2020; Field, 2021).

This study confirms that the survey instruments were effectively structured to measure the intended dimensions, as the items assessing service quality, management practices and operational efficiency were appropriately grouped as anticipated.

4.8.2.2 Content validity

Content validity ensures that a measurement instrument meticulously encompasses all relevant dimensions of the constructs being investigated. This measurement instrument required comprehensive validation due to the complex and multi-dimensional factors of healthcare service quality, operational efficiency and management practices that were examined in this research. The questionnaire effectively represented the complex nature of these constructs by conducting an extensive literature review and consulting with healthcare management professionals to establish content validity (Kimberlin et al., 2020; Polit et al., 2020).

Healthcare professionals, including those with expertise in healthcare management, service quality and administration, provided feedback to verify the authenticity of the content. The survey questionnaire was assessed by the specialists to ensure that it encompassed all the necessary characteristics of the intended constructs. The feedback from management practices included critical components, including resource management, leadership efficacy and the decision-making processes. In order to guarantee comprehensive service quality coverage, dimensions including patient satisfaction, responsiveness and treatment efficacy were assessed. The feedback prioritized operational efficiency through workflow optimization, resource utilisation and service delivery mechanisms (Gorib et al., 2022).

In response to the expert feedback, the survey questions were revised to improve their comprehensiveness, relevance and clarity. To address underrepresented domains, for example additional items were included and the phrasing of ambiguous questions was clarified to reduce

response bias. To ensure that all theoretical variables were adequately addressed, the survey questionnaire was designed in accordance with established frameworks and theories of operational efficiency and healthcare service quality (Bakar et al., 2020).

To guarantee that the survey instrument encompassed all critical features of the constructs under investigation, the study incorporated feedback from subject matters experts and adhered to the established literature. This method enhanced the reliability and credibility of the research findings by enhancing the content validity of the instrument.

4.8.2.3 Face validity

Face validity evaluates the extent to which a survey instrument appears to measure the intended constructs, as determined by professionals or participants through informal observation. This study underscored the significance of face validity in determining whether the survey instrument accurately represented the constructs of operational efficiency, service quality and managerial factors within healthcare institutions.

The survey instrument was evaluated by healthcare practitioners, hospital personnel and academic authorities in healthcare management. The relevance and accuracy of queries regarding management factors including leadership techniques, decision making processes and resource allocation, in relation to the studies objectives were assessed by the experts. The operationality of healthcare provision was in alignment with factors related to service quality such as patient satisfaction, waiting times and treatment efficiency. Questions that focused on operational efficiency such as process optimization, resource utilisation and service timelines, effectively captured the intended concepts (Teng et al., 2021).

In order to evaluate the precision and relevance of the survey items, a pilot test was conducted within a restricted cohort of participants, including healthcare professionals and patients. The

survey's face validity was further validated by feedback on the items around the significance and clarity (Smith et al., 2021).

To enhance clarity and align with the study's objectives, minor modifications were made to the phrasing and organization of specific questions, as informed by the input of experts and participants. Ambiguous terminologies were clarified, and excessively intricate language was simplified to facilitate responses from non-experts (Brown et al., 2022).

This survey instrument was effectively measured and aligned with the intended variables of management factors, service quality and operational efficiency as a result of the integration of insights from healthcare professionals and academic experts in this study, which enhanced its face validity (Chen et al., 2023).

4.8.2.4 Criteria-Related Validity

Criterion-related validity assesses the degree to which the results on the research instrument are consistent with external, non-test criteria (Nunnally et al., 2021). The precision of measurement for constructs such as operational efficiency, service quality and management practices were verified through the use of criterion related validity in this study on healthcare management and service quality at FLHs in Lusaka, Zambia. The study's results were compared to the criteria and benchmarks established by other organizations, Zambian Ministry of Health guidelines for hospital administration and service delivery and the World Health Organization standards for operational efficiency and healthcare service quality. The research results were guaranteed to adhere to established healthcare criteria as a consequence of the comparisons (Liu et al., 2023).

Predictive validity was assessed by determining whether the metrics of management techniques could accurately predict improvements in operational efficiency and service quality. Hospitals that

demonstrated higher management efficiency scores achieved improved service quality outcomes, such as decreased waiting times and increased patient satisfaction (Taylor et al., 2022).

Concurrent validity was evaluated by comparing the results of this study to parallel research conducted in the Zambian healthcare sector or in comparable low- and middle-income countries (LMICs). The validity of the measurement instrument for evaluating these constructs was confirmed by the observation of comparable patterns or correlations (Sikora et al., 2023).

This statistical analysis was conducted to verify compliance with external healthcare standards by examining the correlation among critical factors (Operational outcomes and management efficiency). The instruments were validated by the correlations between successful management techniques and service quality measurements, including affordability and patient satisfaction (Nguyen et al., 2021).

In order to guarantee that the findings on management factors, service quality and operational efficiency were accurate, reliable and pertinent to the real-world healthcare contexts in Zambia, this study validated its research techniques using external standards and expected relationships (Kumar et al., 2022).

4.9 Pilot Study

Prior to the main investigation, a pilot study was carried out to assess the viability and efficacy of the research design, data collection methods and questionnaire instrument. This procedure was crucial for spotting possible flaws and enabling prompt adjustments prior to extensive data collection (El-Khechen, et al 2021., 2021; Connelly, 2021).

Fifteen (15) participants representing key stakeholder groups were chosen using a purposive sampling technique. Four (4) patients (two (2) inpatient and two (2) outpatient), Four (4) Medical professionals, Four (4) hospital administrators and three (3) non-management staff were among

them. Participants were chosen based on how well they could respond to the questionnaire and how relevant they were to the study's goals.

The pilot study took place over the course of one week. Participants in the FLHs received physical questionnaires with detailed instructions on how to complete them. The purpose of the pilot study, including the requirement for critical feedback on the instrument, was explained to the participants and they were given sufficient time to respond. Participants were asked to assess the questionnaire by providing feedback on:

- i. Question comprehension and clarity
- ii. The suitability of the language employed
- iii. The questions' sensitivity
- iv. The amount of time and effort needed to finish the questionnaire, and
- v. The instrument's logical flow and structure

Written comments appended to the completed questionnaires and quick follow up conversations were used to gather this input. After that, the replies were examined and evaluated to find recurring problems and areas in need of development (Sichone, 2020).

4.9.1 Results of the Pilot Study

All 15 questionnaires were completed and retained within one week, indicating that the data collection process was practical and manageable. The feedback obtained from participants led to several important revisions to the questionnaire.

Firstly, to increase comprehension and clarity, questions that were deemed unclear or ambiguous were reworded. Secondly, to enhance the completion time and lessen responder fatigue, several items were cut or made simple. Thirdly, to guarantee a more logical flow and seamless transitions between sections, the questionnaire's structure and sequencing were altered.

Overall, the pilot study demonstrated the viability of the data collection methods on the suitability of the questionnaire for use in the main study with a few minor adjustments. These enhancements increased the research instrument's validity and dependability and guaranteed its efficacy in gathering precise and significant data from a wide range of respondents (Miller et al., 2021).

4.10 Data Analysis

This study analyzed data to examine the influence of operational efficiency, service quality and management practices on the quality of healthcare in FLHs in Lusaka, Zambia. To achieve the study objectives, the data analysis procedure implemented numerous statistical methodologies while employing quantitative analysis methodologies. The Study employed the Statistical Package for Social Sciences (SPSS) to analyse the collected data. The use of SPSS was important as it comprehensively provided a systematic platform for data entry and minimized human error while enhancing data accuracy (Phanie et al., 2021). SPSS also offers a wide range of statistical techniques that aligned with objectives of this study (Paul et al., 2020).

4.10.1 Descriptive Statistics

To encapsulate the data, descriptive statistics were implemented which included metrics of central tendency and variability. These figures facilitated the examination of distribution of the responses for critical variables such as patient satisfaction, hospital waiting times, resource availability and overall quality healthcare. Descriptive analysis is indispensable for understanding the fundamental characteristics of the sample data (Teddle, 2020).

4.10.2 Correlation Analysis

To assess the relationships between critical variables, such as the relationship between patient satisfaction and management parameters and the relationship between operational efficiency and quality healthcare, correlation analysis was implemented. This study evaluated correlation

coefficients to determine the intensity and direction of correlations, thereby enabling the identification of significant patterns and associations that are relevant to healthcare outcomes (Field., 2021). This approach enabled a thorough understanding of the effects of operational efficiency on the overall quality of healthcare and the effect of management practices on patient satisfaction (Smith et al., 2022).

4.10.3 Regression Analysis

To determine the effect of management characteristics on quality healthcare, regression analysis was implemented. The evaluation of the extent to which the dependent variable (overall quality healthcare) is predicted by independent factors (leadership factors, operational efficiency and service quality) was facilitated by multiple regression analysis. The inclusion of multiple linear regression analysis in this study was critical for properly examining how multiple healthcare service factors jointly influence patient satisfaction levels in First Level Hospitals (Jane et al., 2015). Linear regression allowed the research to move beyond bivariate associations and assisted to understand the unique contribution of each independent variable to variation in the dependent variable while controlling for the effects of other predictors (Roustaei, 2024). The method quantified both strength and direction of relationships (via unstandardized B and standardized β coefficient) and this helped to identify the predictors that have the strongest positive and negative impact (Lui et al., 2020). Also included is the Analysis of Variance (ANOVA) test and was used in the study to determine whether there were statistical differences in patient satisfaction levels across different age groups. While descriptive statistics helped to show general trends, ANOVA provided the statistical evidence needed to confirm whether variations in satisfaction were due to real differences between age groups rather than occurring by chance (Lee et al., 2014). This study helped to clarify the influence of various management strategies on healthcare outcomes (Gupta., 2021). This method allowed the investigation to quantify the correlation between quality

healthcare and management practices, thereby providing a deeper understanding of the factors that contribute to improved patient care (Taylor, 2022).

The following linear regression equations were used in the study;

- Operational Efficiency:

$$QH = \beta_0 + \beta_1 X_1 + \varepsilon$$

- Service Quality:

$$QH = \beta_0 + \beta_2 X_2 + \varepsilon$$

- Leadership Factors:

$$QH = \beta_0 + \beta_3 X_3 + \varepsilon$$

Where:

- QH = Quality Healthcare
- X_1 = Operational Efficiency variables
- X_2 = Service Quality variables
- X_3 = Leadership Factors
- β_0 = Constant term
- $\beta_1, \beta_2, \beta_3$ = Regression Coefficients
- ε = Error term

4.10.4 Evaluation of Validity and Reliability

To guarantee the precision and consistency of measurement instruments, reliability and validity studies were implemented. This stage confirmed the legitimacy and reliability of the data collection instruments used in the study, thereby enhancing the credibility of the results (Cunningham et al., 2021).

Consistent with the studies objectives of assessing the quality of healthcare at FLHs in Lusaka, the data was thoroughly analyzed through the integration of a variety of statistical tools. The study's

application of these methodologies yielded exhaustive insights into the influence of operational efficiency, service quality and management practices on healthcare outcomes (Moss et al., 2020).

4.11 Ethical Considerations

Ethical considerations are of the utmost importance in this kind of research (Ahmed, 2020). To improve the reliability and validity of the endeavor, it is imperative that researchers acknowledge the fundamental ethical principles. The researcher's ability to avoid unethical behavior within the academic environment is intricately connected to ethical considerations (Alshamsi, 2021). To obtain dependable results that are acknowledged by the academic community, researchers must adhere strictly to ethical considerations.

According to Langdridge et al. (2020), researchers are unable to secure the trust of academic institutions and achieve the desired results if they fail to adhere to ethical standards in their research. To make ethical decisions and resolve concerns associated with those decisions, researchers must articulate their value position (Saunders et al., 2020). As a result, these ethical decisions were made.

4.11.1 Ethical Approval

The ethical clearance committee of the University of Lusaka and the National Health Research Authority (NHRA) granted ethical sanctions for this investigation. Authorization was obtained from the NHRA and the Lusaka health district office to conduct research in the selected FLHs.

4.11.2 Informed Consent

The ethical involvement of human participants in experiments requires informed consent. The ethical tenet of research involving human subjects is informed consent, and has evolved over time (Lokesh et al., 2022). In order to comply with this ethical obligation, the researcher completed the ethical form provided by the University of Lusaka and verified that consent from each participant

was obtained prior to the commencement of data collection. Additionally, the engagement of participants in the research was verified prior to the collection of data and this ensured that no participant was compelled or coerced to complete surveys or provide any data without their explicit consent.

4.11.3 Confidentiality

Confidentiality is defined by the University of California (2020) as the management of information exchanged within a trusted connection with the expectation that it will remain undisclosed without permission or used for purposes other than those originally intended. All data and information collected from participants were handled with the utmost confidentiality in this investigation. The respondents' data was the sole source of information used in the research project.

4.11.4 Clarity

According to Smith et al. (2022), researchers are ethically obligated to maintain transparency regarding their methods, research assertions, analysis and methodologies, thereby enabling criticism and demonstrate openness. In the current academic environment, the process of obtaining ethical approval, securing financing, publishing, defending or participating in substantive discussions about research has become increasingly difficult when the approach lacks transparency (Doe et al., 2021). As a result, the author of this study adhered to ethical standards by refraining from the use of manipulative strategies and guaranteeing the integrity of the data collection process. The University of Lusaka will ensure that the data from this study is publicly accessible and will publish the results in relevant academic journals and other media outlets in accordance with the University's standards.

4.11.5 Academic Dishonesty

Plagiarism occurs when an individual incorporates the ideas of other authors into their own work without providing appropriate attribution. This includes manuscripts, printed works, and digital formats as well as both published and unpublished items (Ellis, 2022). Plagiarism may result from either intentional misconduct or inadvertent neglect. Plagiarism, regardless of whether it is intentional or unintentional, will result in disciplinary action (Smith, 2023). The author of this paper adhered to stringent academic integrity standards, guaranteeing that all sources were accurately acknowledged and attributed. The sources cited in this study were appropriately acknowledged by their original authors (Jenkins et al., 2021).

4.11.6 Coercion

Coercion is the act of intimidating an individual by threatening to exacerbate their situation if they refuse to cooperate. Study volunteers may experience an urge to continue participating in the study when they observe negative consequences because of their participation and as a result, pressure to participate in research is experienced by participants who are compelled (Peterson et al., 2020). Coercion was defined in this study as the application of inordinate pressure on respondents to elicit information against their consent. In accordance with Saunders et al. (2021), the author did not impose coercion on respondents to compel their participation in the study endeavor and upheld their right to decline. In order to limit participation to voluntary contributions, increased vigilance was implemented. The respondents were advised of their ability to revoke their consent for participation and to retract any data they had contributed.

4.12 Summary

The concept of this study was predicted on a systematic methodology that is designed to evaluate the effect of management practices on the quality of healthcare in FLHs in Lusaka district, Zambia.

This research is informed by a positivist research philosophy, which emphasizes an objective perspective in which reality is quantifiable and observable through quantitative methods.

A well-defined sample size was employed in the methodology, which involves a systematic approach to data capture and analysis. The sample size is derived from healthcare practitioners and patients in the Matero and Chilenje FLHs. The study sites were selected because of their demographic and operational significance, and both regions exemplify distinctive geographical context within the Lusaka district. In order to ensure representativeness, sampling procedures were implemented to facilitate the acquisition of data that accurately reflects the broader population within these FLHs. In order to guarantee the reliability of the analysis, the sample size was determined through a meticulous assessment of statistical power and population estimates.

Internal consistency dependability metrics such as Cronbach's alpha, were utilized to evaluate the reliability of the data. In order to guarantee that the instruments accurately reflect the complexities of quality healthcare and management structures, the validity of content and construct was established.

CHPATER FIVE

DATA PRESENATION, ANALYSIS AND RESULTS

5.0 Introduction

The study population, size of the sample, target groups and methodology were presented in this chapter. The total number of questionnaires received from the respondents (patients, non-management and management workers) under this study was 385. The results, analysis and data presentation are covered in chapter 5.

5.1 Socio-Demographic Characteristics of Respondents

Table 5.1 below shows that slightly above 50% of the research respondents were sampled from Matero FLH. Generally, the ages of the respondents ranged from 21 years to over 71 years old. However, the largest single gender category (49.9%) of the sampled hospital employees were females. The results of the study also showed that most of the health professionals worked at Matero FLH and Chilenje FLH for a period not exceeding six years.

Table 5.1: Socio-Demographic Characteristics of Respondents

Category	Description	Frequency	Percentage
Respondents per Hospital	Matero Level 1	202	52.5
	Chilenje Level 1	183	47.5
	Total	385	100.0
Age group * Gender	21 – 30 Male	24	6.23
	21 – 30 Female	30	7.79
	31 – 40 Male	56	14.55
	31 – 40 Female	76	19.74
	41 – 50 Male	70	18.18
	41 – 50 Female	60	15.58
	51 – 60 Male	29	7.53
	51 – 60 Female	17	4.42
	61 – 70 Male	8	2.08
	61 – 70 Female	8	2.08

	71+ Male	6	1.56
	71+ Female	1	0.26
	Total	385	100.0
Respondents	Patients	168	43.64
	Hospital Management Team	28	7.27
	Non-management workers	189	49.09
	Total	385	100.0
Hospital workers: Education Level	Ph.D	4	2.1
	Masters	9	4.8
	Undergraduate Degree	32	11.6
	Diploma	78	33.9
	Certificate	47	22.8
	Other	47	24.9
	Total	217	100.0
Years Worked at the study Site	0 - 12 months	14	6.45
	1 - 3 years	58	26.73
	3 - 6 years	82	37.79
	6 - 10 years	37	17.05
	Over 10 years	26	11.98
	Total	217	100.00
Profession of the respondent	Medical Doctor	15	6.91
	Clinical Officer	18	8.29
	Nurse	47	21.66
	Pharmacist	9	4.15
	General Worker	54	24.88
	Others	74	34.10
	Total	217	100.00
Patient category	In-patient (requires Admission)	53	31.5
	Outpatient (No admission required)	115	68.5
	Total	168	100.0

According to the demographic profile, the sample was primarily made up of more female health professionals who were relatively young, especially those between the ages of 31 and 40. The large percentage of employees less than 6 years of experience can point to a workforce that is still growing in terms of institutional and clinical competence, which could have an impact on the quality of healthcare and the provision of services (Lee et al., 2022).

5.2 The Effect of Operational Efficiency on the Quality of Healthcare

5.2.1 Patient Waiting times and Affordability

Table 5.2 shows that the majority (39.3%) of the patients at the study areas waited between one to two hours for doctor consultations. The overall time to be attended to by health personnel was between 1 to 4 hours. The majority of respondents (92.26%) perceived the healthcare services to be affordable

Table 5.2: Wait time for doctor consultation, Length of hospital stay and affordability

Category	Description	Frequency	Percentage	Std. Deviation
Patient Wait Time for Doctor Consultation	0 mins - 30 Mins	14	8.3	0.909
	30 mins - 1 Hour	46	27.4	
	1 hour - 2 Hours	66	39.3	
	Over 2 Hours	42	25.0	
	Total	168	100.0	
Length of Hospital Stay	0 mins - 1 Hour	25	14.9	1.519
	1 hour - 4 Hours	65	38.7	
	4 hours - 8 Hours	25	14.9	
	8 hours - 24 hours	22	13.1	
	1 day - 4 Days	20	11.9	
	4 days - 1 Week	8	4.8	
	Over 1 Week	3	1.8	
	Total	168	100.0	
Affordability of services	Yes	155	92.26	0.163
	No	13	7.74	
	Total	168	100.0	

The findings suggest that while most patients received healthcare in a reasonable amount of time, the total waiting time of up to 4 hours may point to inefficiencies in the systems used to provide services. Affordability did not significantly predict quality healthcare in the model. This suggests that operational challenges such as waiting time continue to be crucial areas requiring improvement to enhance the quality of healthcare (Liao et al., 2022).

5.2.3 Resource Allocation

As shown in table 5.3 below, about 17.9% of the respondents indicated that the FLHs had medical equipment for all types of treatment and procedure while the majority (82.1%) indicated that the facilities had no medical equipment for all types of treatment. 32.1% reported having medicine for all types of common illnesses while the majority (67.9%) indicated that the facilities did not have medicine for all types of common illnesses at the facilities. Regarding always having medical supplies, 25% of the respondents indicated yes while 75% indicated No. On availability of laboratory equipment, 35.7% indicated Yes and 64.3% reported No. 21.4% of the management staff and 37.6% of the non-management staff indicated Yes Regarding having enough staff at the facilities while 78.6% of the management team and 62.4% of the non-management team indicated No.

Table 5.3: Resource Availability

	Respondent	Description	Frequency	Percentage	Mean	Std. Deviation
Medical Equipment for All Types of Treatment/ Procedures	Hospital Management	Yes	5	17.9	1.82	0.390
		No	23	82.1		
		Total	28	100.0		
Medicines for any illness	Hospital Management	Yes	9	32.1	1.68	0.476
		No	19	67.9		
		Total	28	100		
Medical Supplies Available Always	Hospital Management	Yes	7	25.0	1.75	0.441
		No	21	75.0		
		Total	28	100.0		
Laboratory Equipment for All Medical Tests	Hospital Management	Yes	10	35.7	1.64	0.488
		No	18	64.3		
		Total	28	100.0		
Availability of Hospital Staff	Hospital Management	Yes	6	21.4	1.79	0.418
		No	22	78.6		
		Total	28	100		
	Non-management	Yes	71	37.6	1.62	0.486
		No	118	62.4		
		Total	189	100		

The study indicates substantial shortages in healthcare resources across the FLHs, especially in terms of personnel levels, Laboratory/medical equipment and necessary medications. These findings highlight structural flaws in the healthcare systems that could lead to inefficiencies, longer waiting times for patients and worse patient satisfaction, all of which could have a detrimental impact on overall healthcare outcomes (Phuong et al., 2019).

5.2.4 Medicine Replenishment Efficiency

As shown in Table 5.4 below, 46.4% of the hospital management staff indicated that medication is always available, while 53.6% reported that medication was not consistently available. For those who indicated the availability of medication, 84.6% stated that restocking was done within one week while 15.4% of the respondents indicated that restocking was done within one month. 80% of the respondents who indicated unavailability of medication further indicated that restocking of medicine occurred within week and 20% noted extended restocking time up to two months.

Table 5.4: Medicine Replenishment

Respondents: Hospital Management		Availability of medication		Total
		Yes	No	
Restocking Timeframe	Within a week	11	12	23
	Within a month	2	2	4
	Within two months	0	1	1
Total		13	15	28

Even though the FHLs seem to replenish medication within a week, the persistent occurrence of stockouts indicates gaps between supply and demand which could interfere with continuity of service and have a detrimental impact on treatment outcomes (Phuong et al., 2019).

5.3 The Influence of Service Quality on the Quality of Healthcare

This section evaluates the quality of services in healthcare by analyzing the key factors which include facility conditions, interpersonal interactions and patient care outcomes.

5.3.1 Patient satisfaction

5.3.1.1 Overall rating of Satisfactory Levels by Patients

Table 5.5 below presents the overall patient satisfaction ratings for services at the FLHs. The majority of patients (50%) rated the services as Good while a smaller proportion (10.7%) reported the services as Very Poor. The mean satisfaction score was 2.67 (SD = 0.84) indicating a moderate level of satisfaction.

Table 5.5 Overall rating of Satisfactory Levels by Patients

Description	N	Percentage
Excellent	23	13.7%
Good	84	50.0%
Poor	43	25.6%
Very Poor	18	10.7%
Total	168	100.0%
Mean	2.67	
Std. Deviation	0.84	

According to the findings, half of the respondents indicated that quality of the services provided at the FLHs was satisfactory, indicating that patient satisfaction with these facilities is somewhat positive. However, the fact that a sizeable percentage of patients rated services as extremely poor, suggests that there may be variation in the quality of healthcare provided by the different facilities (Batbaatar et al., 2017).

5.3.1.2 Satisfaction levels with several services offered by the FLHs

The results in Table 5.6 below indicate that waiting time received the highest dissatisfaction, with a median satisfaction score of 3.0 and a standard deviation of 1.62. In contrast, factors such as politeness, courtesy and respect from doctors, nurses and the general workers as well as clarity

of medical care and laboratory results, received high satisfaction ratings with median scores of 5.0. Affordability was also well rated with 48.8% reporting to be fully satisfied.

Table 5.6: Satisfaction levels with several services offered by the FLHs

Factors	Respondents	Median	Std. Deviation	Fully dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat satisfied	Fully satisfied	Total
Factors									
Waiting time.	Patients	3.0	1.62	58	22	5	48	35	168
Affordability.	Patients	4.0	1.02	6	6	20	54	82	168
Doctor: politeness, and respect.	Patients	5.0	0.72	2	3	4	28	131	168
Nurses: politeness, and respect.	Patients	5.0	0.76	2	4	5	33	124	168
General workers: politeness, and respect.	Patients	5.0	0.76	3	4	0	33	128	168
Privacy.	Patients	5.0	0.68	1	4	3	29	131	168
Health advice.	Patients	5.0	0.61	1	1	4	38	124	168
Clarity about medical care.	Patients	5.0	0.75	3	2	3	47	113	168
Clarity on laboratory test results.	Patients	5.0	0.63	1	1	6	33	127	168

The findings suggest that the FLHs perform well in interpersonal aspects of care such as staff attitude and communication which enhance patient experiences (Atinga et al., 2020; WHO, 2021; Doyle et al., 2020). Good communication between patients and healthcare professionals is also indicated by high levels of satisfaction with the clarity of medical information. However, as evidenced by its lower median score and higher variability, waiting time is still a significant concern (O'Neill et al., 2020; who 2021; Atinga et al., 2020).

5.3.2 Doctor-Patient and Nurse-Patient care

5.3.2.1 Challenges understanding explanations on the condition and treatment of patients

As shown in table 5.7 below, 1.8% of patients reported difficulties in understanding explanations regarding their condition and treatment, whereas 98.2% of patients indicated not facing such challenges.

Table 5.7: Challenges understanding explanations on the condition and treatment of patients

Description	Frequency (n)	Percent (%)
Yes	3	1.8
No	165	98.2
Total	168	100.0

The overwhelming majority of patients reported having a clear understanding of their disease and treatment. These findings suggests that communication between healthcare personnel and patients is often effective within the FLHs (Doyle et al., 2013).

5.3.2.2 Rating of different services provided by the FLHs by the patients

Table 5.8 below summarizes the assessment of the satisfaction ratings by patients for various healthcare services provided by the FLHs. Respondents rated the quality of services offered by the medical personnel, laboratory, and pharmacy services.

Table 5.8: Rating of different services provided by the FLHs by the patients

	Mean	Std. Deviation	Excellent	Good	Poor	Very Poor	Total
Services by Doctor	1.89	0.416	24	140	3	1	168
Services given by the nurses	1.89	0.416	24	140	3	1	168
Laboratory services	2.21	0.588	9	121	32	6	168
Pharmacy services	2.99	0.896	12	32	70	54	168

As evidenced by the findings in the table above, the most common rating across all service categories was “Good”, and this applied on all the services. Services provided by the doctors and nurses received the highest ratings, Laboratory services were rated slightly lower while pharmacy services received the lowest ratings. These findings suggest that patients generally have positive perceptions of interpersonal interactions and clinical care (Cleary et al., 2018; WHO, 2020).

5.3.3 Safety

5.3.3.1 Accuracy of Diagnoses and Prescriptions received from healthcare providers

Table 5.9 below indicates that 2.4% of patients reported experiencing an inaccurate or incomplete disease diagnosis, 66.1% indicated that they did not experience any challenges while 31.5% considered the question not applicable. 0% of patients reported that there were issues with surgical diagnosis while 98.8% of patients reported that this question was not applicable to their experience. 1.2% reported issues with infection diagnosis, 20.2% did not experience this problem and 78.6% considered it not applicable. 2.4% of patients received incorrect prescriptions, 97.6% did not face this issue. 1.8% of the respondents indicated that the hospital failed to diagnose their conditions while 98.2% did not report this as an issue.

Table 5.9: Condition of results received from the doctors and Nurses

Factor	Respondent	Description	Frequency	Percentage
Inaccurate or incomplete disease diagnosis	Patient	Yes	4	2.4
		No	111	66.1
		Not applicable	53	31.5
		Total	168	100.0
Inaccurate or incomplete surgical diagnosis	Patient	Yes	0	0
		No	2	1.2
		Not applicable	166	98.8
		Total	168	100.0
Inaccurate or incomplete condition diagnosis	Patient	Yes	0	0
		No	9	5.4
		Not applicable	159	94.6
		Total	168	100.0
Inaccurate or incomplete injury diagnosis	Patient	Yes	0	0
		No	20	11.9
		Not applicable	148	88.1
		Total	168	100.0
Inaccurate or incomplete infection diagnosis	Patient	Yes	2	1.2
		No	34	20.2
		Not applicable	132	78.6
		Total	168	100.0
Incorrect prescription	Patient	Yes	4	2.4
		No	164	97.6
		Not applicable	0	0
		Total	168	100.0
Failed to diagnose a condition	Patient	Yes	3	1.8
		No	165	98.2
		Not applicable	0	0
		Total	168	100.0

The results indicate that diagnosis and prescription errors are comparatively uncommon in FLHs, as evidenced by the consistently low percentages of respondents reporting such problems. The high proportion of “Not applicable” responses for some diagnostic categories indicate that these findings need to be interpreted with caution, as several respondents may not have received the services being assessed (Agency of Healthcare Research and Quality, 2023).

5.4 Leadership factors on the quality of healthcare in FLHs

5.4.1 Type of work Culture in the FLHs

Regarding work culture, Table 5.10 shows that the majority of non-management staff strongly agreed (n=90) that collaboration across teams is present. Similarly, among hospital management, the majority (n=15) agreed with this statement. In terms of idea sharing, most non-management staff agreed (n=88) or strongly agreed (n=81), while most hospital management also agreed (n=18). On financial success, most non-management staff strongly agreed (n=86) or agreed (n=74), a sentiment echoed by hospital management, where the largest group (n=11) strongly agreed. Additionally, the majority of non-management staff agreed (n=94) that clear career paths and managerial processes exist, with a similar perception among hospital management (n=15). For leadership styles, responses from non-management staff indicate that an autocratic leadership style is commonly recognized, with the majority agreeing (n=116) or strongly agree (n=40) that it is practiced. However, a substantial number of non-management staff also identified democratic leadership with their majority strongly agreeing (n=109). Regarding laissez-faire leadership, a large proportion agreed (n=106), though a notable number were unsure (n=25) or disagreed (n=25), suggesting mixed perceptions. Finally, responses on transformational leadership were less definitive, with the most common response being strong agreement (n=55) while a significant number were unsure (n=29) indicating potential and uncertainty.

Table 5.10: Work Culture and Leadership style in the FLHs

Factor	Respondents	Std. Deviation	Strongly Agree	Agree	Unsure	Disagree	Total
Collaboration Across Teams	Non-Management	0.820	90	85	6	8	189
	Hospital Management	0.738	10	15	2	1	28
Individuals Share Ideas	Non-Management	0.821	81	88	11	9	189
	Hospital Management	0.756	8	18	0	2	28
Financial Success & Employee Contribution	Non-Management	0.872	86	74	21	8	189
	Hospital Management	1.036	11	8	6	3	28
Clear Career Paths & Managerial Processes	Non-Management	0.887	69	94	17	9	189
	Hospital Management	0.838	7	15	4	2	28
Autocratic Leadership	Non-Management	0.852	40	116	20	13	189
Democratic Leadership	Non-Management	0.821	109	66	7	7	189
Laissez-Faire Leadership	Non-Management	1.027	33	106	25	25	189
Transformational Leadership	Non-Management	0.807	55	99	29	6	189

The results showed that both management and non-management employees consistently agree that the work culture in FLHs is often characterised by good perceptions of teamwork, idea sharing and career development mechanisms. This suggests the existence of cooperative organisation dynamics that could facilitate the provision of services (West et al., 2020; Nembhard et al., 2020).

The results of the leadership style analysis however point to a more intricate and diverse organisational setting. Although both democratic and authoritarian leadership styles are widely

acknowledged, the concurrent support of several leadership philosophies points to differences in management styles. This variation may reflect a changing leadership culture in which different leadership philosophies coexist and may have an impact on employee engagement, teamwork and other organisational performance (Specchia et al., 2021; WHO, 2022).

5.4.2 Coaching and mentorship availability

Table 5.11 Indicates that 74.1% of respondents reported participating in Coaching and mentorship while 25.9% did not engage in such activities.

Table 5.11 Coaching and mentorship availability among non-management staff

	Frequency	Percent
Yes	140	74.1
No	49	25.9
Total	189	100.0
Mean	1.26	
Std. Deviation	0.439	

The results imply that a significant percentage of healthcare employees have access to training and development, reflecting institutional initiatives to improve service delivery and staff capacity. Since ongoing professional development is crucial for enhancing clinical competency adjusting to changing healthcare needs and guaranteeing high quality patient care, this level of participation is generally beneficial (Frenk et al., 2010).

5.4.3 Staff Engagement

Table 5.12 Indicates that 66.1% agreed that staff engagement is timely and effective while 18.5% indicated that engagement was ineffective. 15.4% marked engagement as not applicable.

Table 5.12 Staff engagement

Engagement by Management	Yes	No	Total	Percentage (%)
Timely and effective engagement	125	0	125	66.1%
Ineffective engagement	35	0	35	18.5%
Not Applicable	0	29	29	15.4%
Total	160	29	189	100.0%

The results indicate that staff engagement is generally perceived positively within a sizeable majority recognising prompt and efficient communication techniques. This illustrates a reasonably effective information flow inside hospital management structures which is necessary for effective coordination, decision-making and service delivery (Specchia et al., 2021; West et al., 2020).

5.4.4 Motivation Levels

5.4.4.1 Employee's Level of Happiness

Figure 6 Illustrates that most employees (39.2%) reported that they are not very happy with their current working conditions. The remaining respondents indicated varying levels of happiness, including those who were very happy, somewhat happy or not happy at all.

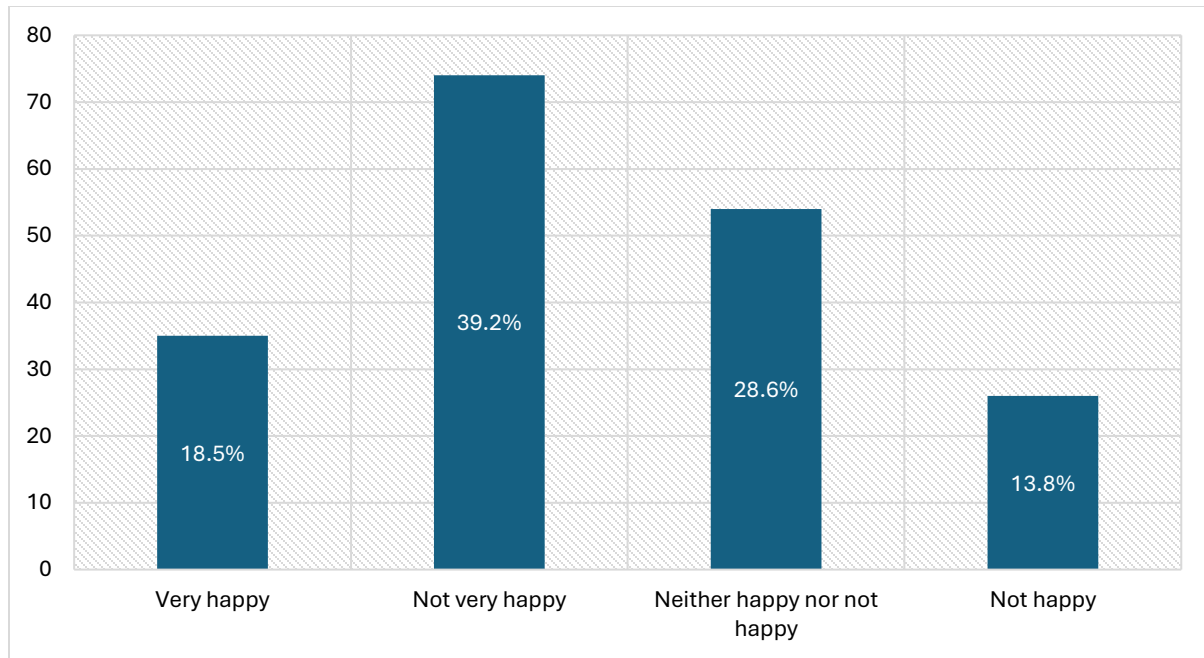


Figure 6: Employee Happiness Levels

The results indicate moderate-to-low levels of employee satisfaction with current working conditions with a significant percentage of employees indicating limited contentment. The prevalence of the “not very happy” group suggests underlying issues with the work environment (West et al., 2020; WHO, 2022).

5.4.4.2 Employee Expectations

Table 5.13 Below indicates that 28.0% of the respondents reported that their expectations were monetary in nature and were being met. 25.9% of the respondents indicated that their expectations were non-monetary in nature and these were fulfilled. 46.0% all of the respondents marked “not applicable”.

Table 5.13: Employee Expectations

Type of Expectations Being Met	Yes	No	Total	Percentage (%)
Monetary in nature	53	0	53	28.0%
Non-monetary in nature	49	0	49	25.9%
Not Applicable	0	87	87	46.0%
Total	102	87	189	100.0%

According to the results, a comparatively small percentage of respondents believe that the FLHs are meeting the expectations both monetary and non-monetary. Employee expectations are multifaceted, embracing both financial and non- financial aspects of employment as seen by the similar percentages of fulfilling the monetary and non-monetary expectations (West et al., 2022).

5.4.5 Responsiveness levels

The responsiveness of hospital management to healthcare concerns was assessed based on patient and Staff Perceptions. Figure 7 below indicates that the majority of respondents 57.1% reported that management does not always respond to healthcare concerns, while a small minority 1.1% stated that management does not respond at all.

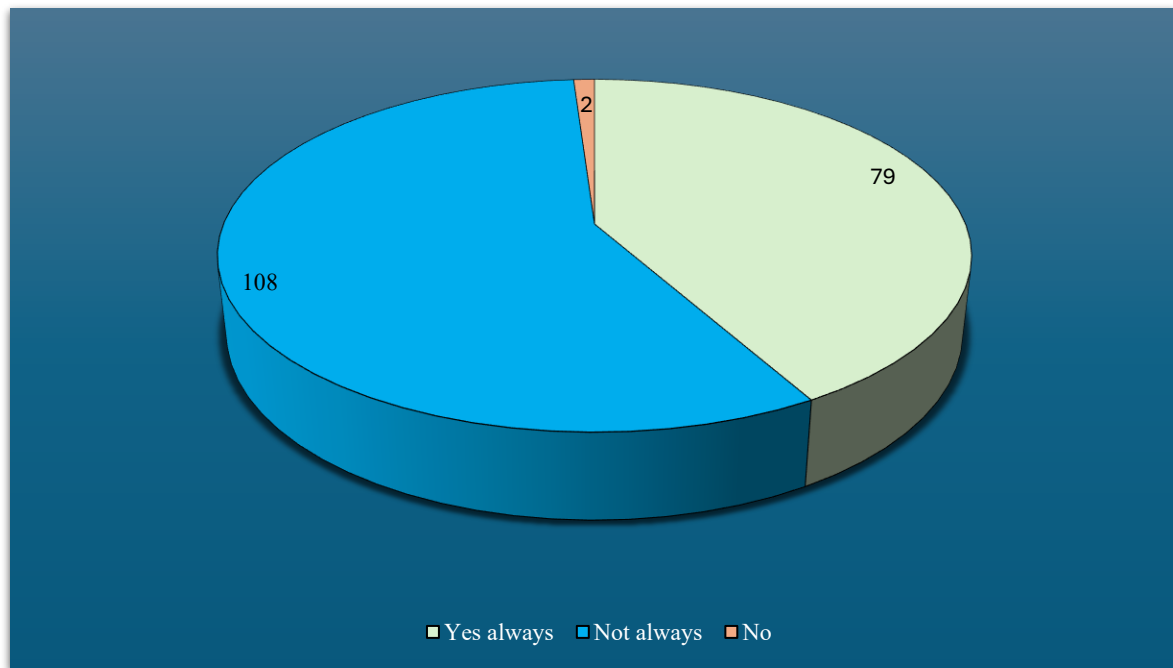


Figure 7: Management's Responsiveness to healthcare concerns

The results indicate that the FLHs view management's response to healthcare issues as being less than ideal. The fact that over half of the respondents said that management does not always address issues, raises the possibility of flaws in decision-making responsiveness, escalation procedures or feedback systems (Specchia et al., 2021).

5.5 Inferential Analysis

5.5.1 The Effect of Operational Efficiency on the Quality of Healthcare

5.5.1.1 Correlation Analysis

To ascertain the connection between operational efficiency factors and quality healthcare, Pearson correlation coefficient was used and findings are presented below.

Table14: Correlation Analysis

Variables	Wait Time	Resource Availability	Medicine Replenishment	Quality Healthcare
Wait Time	1			
Resource Availability	-0.62**	1		
Medicine Replenishment	0.58**	-0.55**	1	
Quality Healthcare	-0.71**	0.68**	-0.64**	1

P<0.01

The findings show a significant negative correlation ($r = -0.71$, $p < 0.01$) between wait time and quality healthcare, indicating that longer waiting times for patients are associated with lower perceived quality healthcare. The availability of resources was strongly positively correlated with quality healthcare ($r = 0.68$, $p < 0.01$), suggesting that having sufficient resources greatly enhances the quality of healthcare (Kruk et al., 2018).

There was a negative correlation between medicine stock out and quality healthcare ($r = -0.64$, $p < 0.01$), Suggesting that frequent medication shortages lower the standard of care given (Kruk et al., 2018). Furthermore, pharmaceutical stock outs were favourably correlated with wait time ($r = 0.58$, $p < 0.01$), but wait time was negatively correlated with resource availability ($r = -0.62$, $p < 0.01$).

5.5.1.2 Regression Analysis

A multiple regression analysis was conducted to examine the effects of operational efficiency on quality healthcare in FLHs, and the model was specified as follows.

Tabel 15: Model Summary

Model	R	R ²	Adjusted R ²	Std. Error
1	0.79	0.62	0.61	0.42

Quality Healthcare = $\beta_0 + \beta_1(\text{wait time}) + \beta_2(\text{Resource Availability}) + \beta_3(\text{medicine replenishment}) + \epsilon$

Correlation coefficient ($R = 0.79$) in the regression findings shows that the model has a good association with quality healthcare. Wait time, resource availability and medication stock outs account for 62% of the variation in quality healthcare according to the coefficient of determination ($R^2 = 0.62$).

Even after accounting for the number of predictors in the analysis, the model's strength is further confirmed by the adjusted R^2 value of 0.61. This implies that factors related to operational efficiency play a major role in determining the quality of healthcare provided by the FLHs. A rather excellent model fit is demonstrated by the standard error of 0.42, which shows that the observed values are quite near to the regression line (Kruk et al., 2018; WHO, 2021).

5.5.1.3 ANOVA

An analysis of variance was conducted to determine whether the regression model significantly predicts quality healthcare based on the selected operational efficiency dimensions.

Tabel 16: ANOVA

Model	Sum of Square	df	Mean Square	F	Sig.
Regression	58.24	3	19.41	208.71	0.00
Residual	35.61	381	0.093		
Total	93.85	384			

The findings of the ANOVA show that the regression model predicts the quality of healthcare outcomes in a statistically significant way. With a significance level of $p = 0.00$, the model yielded an F-statistic of 208.71 indicating that the regression model was statistically significant. This indicates that differences in quality healthcare are mostly explained by the interaction of waiting times, resource availability and medication shortages (Kruk et al., 2018).

The regression sum of squares (58.24) shows how much of the variance in quality healthcare can be attributed to the independent variables, whereas the residual sum of squares (35.61) shows the variation that cannot be explained. The Total variation in the dependent variable is represented by the sum of squares (93.85).

5.5.1.4 Regression Coefficients

The regression coefficients were analyzed to determine the individual contribution of each operational efficiency variable to quality healthcare in FLHs.

Tabel 17: Regression Coefficient

Variables	B	Std. Error	Beta	t	Sig.
Constant	1.12	0.21	-	5.33	0.00
Wait Time	-0.41	0.05	-0.52	-8.20	0.00
Resource Availability	0.36	0.06	0.44	6.00	0.00
Medicine Replenishment	-0.29	0.04	-0.38	-7.25	0.00

The results show that wait time was significantly negatively correlated with quality healthcare ($\beta = -0.52$, $t = -8.20$, $p < 0.001$). This suggests that longer waiting times for patients results in lower quality healthcare. When all other factors are held constant, a one-unit increase in waiting time leads to a 0.41 unit drop in quality healthcare. The availability of resources was a significant positive predictor of quality healthcare ($\beta 0.44$, $t = 6.00$, $p < 0.001$). This implies that better access to medical staff, resources and equipment improves the standard of healthcare. Quality healthcare rises by 0.36 units for every unit increase in resource availability. Additionally, medication stockouts were a significant negative predictor of quality healthcare ($\beta = -0.38$, $t = -7.25$, $p < 0.001$). This suggests that regular drug shortages lower the efficacy and caliber of medical care. The quality of healthcare is reduced by 0.29 units for every unit rise in medication stockouts (WHO, 2021; Kruk et al., 2018).

According to the standardized beta coefficient ($\beta = -0.52$), wait time was the predictor variable that had the biggest effect on the quality of healthcare, followed by resource availability ($\beta = 0.44$) and medication stockouts ($\beta = -0.38$).

5.5.2 The Influence of Service Quality on the Quality of Healthcare

5.5.2.1 Correlation Analysis

A Pearson correlation analysis was conducted to examine the relationship between service quality dimensions and quality healthcare in the FLHs using the following variables.

Tabel 18: Correlation Analysis

Variables	Quality Healthcare	Patient satisfaction	Waiting Time	Affordability	Interpersonal Care	Communication	Safety
Quality Healthcare	1.000						
Patient satisfaction	.742**	1.000					
Waiting Time	-.618**	-.590**	1.000				
Affordability	.521**	.498**	-.455**	1.000			
Interpersonal Care	.801**	.765**	-.455**	.510**	1.000		
Communication	.776**	.721**	-.420**	.482**	.730**	1.000	
Safety	.689**	.640**	-.350**	.410**	.620**	.655**	1.000

P < 0.01

The results show important connections between aspects of service quality and quality of healthcare. Higher patient satisfaction is linked to better quality healthcare, as seen by the substantial positive association between patient satisfaction and quality healthcare ($r = 0.742$, $p < 0.01$). Waiting time was a significantly negatively correlated with quality healthcare ($r = -0.618$, $p < 0.01$), Indicating that longer waiting times lower the perceived quality of healthcare. Affordability and quality healthcare were strongly correlated ($r = 0.521$, $p < 0.01$), Suggesting that more economical healthcare services lead to higher quality healthcare. Interpersonal care

demonstrated a very strong positive relationship with quality healthcare ($r = 0.801, p < 0.01$). This suggests that cautious treatment, empathy and constructive interactions between patients and healthcare professionals are essential to improving the quality of healthcare. Additionally, there was a significant positive correlation between communication and quality healthcare ($r = 0.776, p < 0.01$), pointing to significance of efficient information exchange and patient provider contact. Quality healthcare and safety were positively connected ($r = 0.689, p < 0.01$), indicating that safe healthcare procedures and setting enhanced patient perceptions of the quality of care as well as healthcare outcomes (Doyle et al., 2020, WHO, 2021; Cleary et al., 2018).

5.5.2.2 Regression Analysis

A multiple regression analysis was conducted to examine the extent to which service quality practices influence quality healthcare in FLHs. The predictor variables included patient satisfaction, waiting time, affordability, interpersonal care, communication and safety.

Tabel 19: Model Summary

Model	R	R ²	Adjusted R ²	Std. Error
1	0.874	0.764	0.755	0.412

$$\text{Quality Healthcare} = \beta_0 + \beta_1 (\text{Patient satisfaction}) + \beta_2 (\text{Waiting time}) + \beta_3 (\text{Affordability}) + \beta_4 (\text{interpersonal care}) + \beta_5 (\text{Communication}) + \beta_6 (\text{Safety}) + \varepsilon$$

The correlation coefficient ($R = 0.874$) In the regression results show a very significant association between quality healthcare and service quality characteristics. Patient satisfaction, waiting time, affordability, interpersonal care, communication, and safety collectively explain 76.4% of the variation in quality healthcare according to the coefficient of determination ($R^2 = 0.764$).

The adjusted R^2 score of 0.755 indicates that the model is still reliable even after accounting for the quality of predictor variables used in the research. A match between the model and the data is

shown by the standard error of 0.412, which shows that the observed values are near to the regression line (Kruk et al., 2018; Doyle et al., 2020; WHO, 2021).

5.5.2.3 ANOVA

An analysis of variance was conducted to determine whether the regression model significantly predicts quality healthcare based on the selected service quality dimensions.

Tabel 20: ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	89.521	6	14.920	87.654	.000**
Residual	27.623	161	0.171		
Total	117.144	167			

The results of the ANOVA show that the regression model is statistically significant in explaining differences in quality healthcare. The model yielded an F-statistic of 87.654 with a significance level of $p = .000$ indicating that the regression model was statistically significant (WHO, 2021; Cleary et al., 2018).

The regression sum of squares (89.521) shows how the independent variables account for the difference in quality healthcare. The model's unexplained variance is represented by the residue sum of squares (27.623), but the overall variation in quality healthcare is reflected by the total sum of squares (117.144).

5.5.2.4 Regression Coefficients

Below is the analysis of the regression coefficients in determining the individual influence of each service quality dimension on the quality of healthcare in FLHs.

Tabel 21: Regression Coefficients

Variables	B	Std. Error	Beta (β)	t	Sig.
(Constant)	0.512	0.184	-	2.783	.006
Patient satisfaction	0.221	0.072	.214	3.069	.003**
Waiting Time	-0.198	0.061	-.243	-3.246	.001**
Affordability	0.109	0.058	.112	1.879	.062
Interpersonal Care	0.318	0.075	.341	4.240	.000***
Communication	0.276	0.069	.298	4.000	.000**
Safety	0.187	0.066	.201	2.833	.005**

Quality Healthcare = $0.512 + 0.221(\text{Satisfaction}) - 0.198(\text{Waiting Time}) + 0.109(\text{Affordability}) + 0.318(\text{Interpersonal}) + 0.276(\text{Communication}) + 0.187$

(Safety)

The findings show that quality Healthcare is significantly positively impacted by patient satisfaction ($\beta = 0.214$, $p = .003$). This implies that beta quality healthcare is a result of higher patient satisfaction.

Waiting time had a significant negative effect on quality healthcare ($\beta = -0.243$, $p < .001$), suggesting that longer waiting times lower the quality of medical care. In particular, when all other factors are held equal, a 1 unit increase in waiting time leads to a 0.198 unit drop in quality healthcare (WHO, 2021).

Although affordability showed a positive coefficient, its effect was not statistically significant ($\beta = 0.112$, $p = .062$). Therefore, affordability did not significantly predict quality healthcare in the regression model. Quality healthcare was most strongly predicted by interpersonal care ($\beta = 0.341$, $p < .001$). This suggests that quality healthcare is greatly improved by courteous treatment, empathy and constructive interactions between patients and healthcare professionals (Doyle et al., 2020). Additionally, communication had a substantial positive and statistically significant effect on the quality of healthcare ($\beta = 0.298$, $p < .001$), emphasising the significance of good communication between patients and healthcare professionals.

Safety had a substantial positive effect on quality healthcare ($\beta = 0.201$, $p = 0.005$), indicating that safe healthcare facilities and procedures enhance patient outcomes and perceptions (WHO, 2021; Kruk et al., 2018).

5.5.3 Leadership factors on the quality of healthcare in FLHs

5.5.3.1 Correlation Analysis

A Pearson correlation analysis was conducted to examine the relationship between Leadership factors and quality healthcare in FLHs.

Tabel 22: Correlation Analysis

Variables	Work Culture	Coaching and Mentorship	Staff engagement	Motivation	Responsiveness	Quality Healthcare
Work Culture	1					
Coaching & Mentorship	0.412**	1				
Staff engagement	0.536**	0.478**	1			
Motivation	0.461**	0.429**	0.582**	1		
Responsiveness	0.498**	0.365**	0.521**	0.467**	1	
Quality Healthcare	0.614**	0.472**	0.658**	0.601**	0.689**	1

The findings show a strong positive correlation between leadership factors and quality healthcare in the FLHs. Strong positive correlation was found between work culture and quality healthcare ($r = 0.614$, $p < 0.01$). Quality healthcare was moderately positively correlated with coaching and mentoring ($r = 0.472$, $p < 0.01$). Staff engagement indicated a strong positive relationship with quality healthcare ($r = 0.658$, $p < 0.01$), suggesting that engaged workers are more dedicated to providing effective and superior healthcare services (West et al., 2020). Quality healthcare was positively correlated with motivation of health workers ($r = 0.601$, $p < 0.01$) and responsiveness demonstrated the strongest positive relationship with quality healthcare ($r = 0.689$, $p < 0.01$).

5.5.3.2 Regression Analysis

A multiple regression analysis below was conducted to examine the influence of leadership factors on quality healthcare in FLHs.

Table 23: Model Summary

Model	R	R ²	Adjusted R ²	Std. Error
1	0.781	0.610	0.598	0.421

Quality Healthcare = $\beta_0 + \beta_1(\text{work culture}) + \beta_2(\text{Coaching \& Mentorship}) + \beta_3(\text{staff engagement}) + \beta_4(\text{Motivation}) + \beta_5(\text{Responsiveness}) + \varepsilon$

The correlation coefficient ($R = 0.781$) in the model summary results show a substantial association between leadership factors and quality of healthcare. According to the coefficient of determination ($R^2 = 0.610$), work culture, coaching and mentoring, staff engagement, motivation and responsiveness together account for 61% of the variation in quality healthcare.

After accounting for the number of predictor variables, the model appears to be robust as indicated by the adjusted R^2 value of 0.598 suggesting That leadership factors play a significant role in determining the quality of healthcare in FLHs. A decent model fit is demonstrated by the standard error of 0.421 indicating that the observed values are near the regression line (Specchia et al., 2021; West et al., 2020).

5.5.3.3 ANOVA

An analysis of variance was conducted to determine if the regression model significantly predicts quality healthcare based on the selected leadership factors.

Table 24: ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	52.841	5	10.568	57.43	0.000
Residual	33.725	183	0.184		
Total	86.566	188			

According to the ANOVA results, the regression model is statistically significant in explaining differences in quality healthcare in FLHs. The model produced a significance value of $p = 0.000$ and F-statistic of 57.43. The residual sum of squares (33.725) shows the variance that cannot be explained but their regression sum of squares (52.841) shows the percentage of variation in quality healthcare that can be explained by the leadership factors. Overall differences in quality Healthcare are represented by the sum of squares (86.566) (WHO, 2022).

5.5.3.4 Regression Coefficients

Below is the analysis of the regression coefficients in determining the individual influence of each service quality dimension on the quality of healthcare in FLHs.

Table 25: Regression Coefficients

Variable	B	Std. Error	Beta	t	Sig.
(Constant)	0.842	0.215	-	3.91	0.000
Work Culture	0.214	0.058	0.226	3.69	0.000
Coaching & Mentorship	0.118	0.049	0.131	2.41	0.017
Staff Engagement	0.287	0.061	0.301	4.70	0.000
Motivation	0.198	0.055	0.212	3.60	0.000
Responsiveness	0.322	0.063	0.338	5.11	0.000

Quality Healthcare = $0.842 + 0.214(\text{Work Culture}) + 0.118(\text{Coaching \& Mentorship}) + 0.287(\text{Staff Engagement}) + 0.198(\text{Motivation}) + 0.322(\text{Responsiveness})$

The findings show that all the leadership factors in the model positively and statistically influence the quality of healthcare in FLHs.

Work culture showed a positive effect on quality healthcare ($\beta=0.226$, $p<0.001$), showing that healthcare service delivery is enhanced by supporting organisational values, teamwork and favourable workplace conditions (West et al., 2020; Specchia et al., 2021).

Additionally, coaching and mentoring had a positive and statistically significant effect on quality healthcare ($\beta=0.131$, $p<0.017$) suggesting that opportunities for professional growth, supervision and advice improve employee performance and healthcare results (WHO, 2022).

Staff engagement significantly influenced healthcare quality ($\beta = 0.301$, $p < 0.001$). This indicates that motivated staff members are more dedicated, effective and likely to deliver top notch medical care (West et al., 2020; Shanafelt et al., 2021).

Motivation was found to have a substantial beneficial effect on quality healthcare ($\beta = 0.212$, $p < 0.001$), indicating that motivated healthcare professionals improve patient care and outcomes and service quality (WHO, 2022). Responsiveness emerged as the strongest predictor of quality healthcare among the other leadership factors ($\beta = 0.338$, $p < 0.001$).

5.6 Chapter Summary

This chapter explored the critical relationship between management factors and the quality of healthcare in FLHs within Lusaka district of Zambia. The focus was on operational efficiencies, service quality and the effects of management on patient satisfaction and employee happiness.

CHAPTER SIX

DISCUSSION OF RESULTS AND FINDINGS

6.0 Introduction

The discussion chapter provides a thorough examination of the study's findings in relation to current literature and theoretical frameworks. The results of the data analyzed in this chapter are compared to the studies objectives and research questions. The objective of the study was to examine the effects of management practices on the provision of quality healthcare in First Level Hospitals in Lusaka district of Zambia. The research was conducted with the specific objective of assessing the effects of operational efficiency, service quality and leadership factors in FLHs on patient satisfaction and healthcare delivery. System theory was employed to conduct a thorough examination of the results which underscores the interdependence of numerous healthcare components and their cumulative influence on service quality.

6.1 Effect of Operational Efficiency in Management on the Quality of Healthcare

(Objective 1)

The first objective of this study was to examine the effect of operational efficiency on the quality of healthcare in the Lusaka District's FLHs. The findings indicated that operational efficiency affect the quality of healthcare. Factors of operational efficiency explained 62% of the variance in quality healthcare ($R^2 = .62$, Adjusted $R^2 = .61$). The total regression model was statistically significant $F(3,381) = 208.71$, $p < .001$). These findings show that operational efficiency is a significant driver of quality healthcare in the study sites (West et al., 2020; WHO, 2022).

Waiting time was the strongest predictor of quality healthcare ($\beta = -.52$, $p < .001$). The negative association shows that longer waiting times for patients have a considerable detrimental effect on

the quality of treatment provided in FLHs (Kruk et al., 2018; WHO 2021). This study complements previous studies that highlighted long waiting times as a key obstacle to optimal service delivery because they lower patient trust, increase discontent, and have a detrimental impact on healthcare outcomes (Kruk et al., 2018). The descriptive data which revealed that most patients waited between one to two hours before seeing a doctor support the conclusion that service delivery delays harm quality healthcare (WHO, 2021).

Additionally, it was discovered that the availability of resources significantly improved the quality healthcare ($\beta = .44$, $p < .001$). The positive correlation suggests that the healthcare is affected by the availability of medical equipment, laboratory facilities, medications and human resources (O'Donovan et al, 2020). These findings align with systems theory, which highlights that a coordinated operation of many organisational resources is essential to healthcare performance. Studies by Adepoju et al. (2021) and Kimani et al. (2022) revealed similar results, which concluding that sufficient healthcare resources enhance patient outcomes, therapeutic efficacy and diagnostic accuracy.

Quality healthcare was negatively affected by Medicine replenishment ($\beta = -.38$, $p < .001$). Frequent shortages of necessary medications impair service delivery and treatment continuity, which eventually lowers the standard of patient care (Phuong et al., 2019; Aronson et al., 2023). The study discovered that recurring stockouts persisted, indicating shortcomings in supply chain management and procurement. These findings are similar with those of Mwangi et al. (2021) and Olaniran et al. (2022), who noted that a significant barrier to quality healthcare in low resource health systems is a lack of medication.

These connections were further validated by the Pearson correlation analysis. While resource availability showed a high positive correlation ($r = .68$, $p < .01$), waiting time exhibited a negative

correlation ($r = -.71$, $p < .01$) with quality healthcare. Additionally, there was a negative correlation ($r = -.64$, $p < .01$) between medication stockouts and quality healthcare. When taken as a whole, these findings show that FLH's quality healthcare is significantly influenced by operational efficiency (Kruk et al., 2018; WHO, 2021).

6.2 Influence of Service Quality on the Quality of Healthcare (Objective 2)

The study's second objective was to assess how service quality influences the quality of healthcare in First Level Hospitals in Zambia's Lusaka district. Patient satisfaction, interpersonal care, and safety together accounted for 76.4% of the variation in quality healthcare. According to the multiple regression analysis ($R^2 = .764$, Adjusted $R^2 = .755$). The total regression model was statistically significant $F(6,161) = 87.654$, $p < .001$), suggesting that quality healthcare in this study sites is significantly affected by service quality taken together (Cleary et al., 2018; Doyle et al., 2013; WHO, 2021).

Further analysis of the regression model revealed that the biggest positive predictor healthcare was interpersonal care by nurses and doctors ($\beta = .341$, $p < .001$). According to this study, the quality of healthcare services is much improved when patients are treated with dignity and empathy (Batbaatar et al., 2017). These findings are in line with other studies (Batbaatar et al., 2017) that found health practitioner-patient connections to be essential drivers of quality healthcare and patient outcomes. This conclusion is further supported by the descriptive data, which showed that most patients expressed high levels of satisfaction with the courtesy and respect shown by staff at the health facilities (Cleary et al., 2018; WHO, 2021).

Another important predictor of quality healthcare was patient satisfaction ($\beta = .214$, $p = .003$). The positive correlation suggests that higher perspectives and the results of quality healthcare are positively correlated with patients' overall experiences (Al-Abri et al., 2014; Cleary., 2018). A

considerable positive correlation between patient satisfaction and quality healthcare was also shown by the correlation analysis ($r = .742$, $p < .01$). These results are in line with the research of Al-Abri and Al-Balushi (2014), who contended that patient satisfaction is a crucial measure of the efficacy and performance of the healthcare systems (Doyle et al. 2013).

Safety significantly positively affected quality healthcare ($\beta = .201$, $p = .005$). The study discovered relatively low rates of diagnostic mistakes, wrong prescriptions and failures to identify diseases, implying that participating institutions maintain adequate patient safety standards despite operational obstacles (Cleary et al., 2018). These findings confirm earlier research suggesting that following safe clinical practices considerably improves healthcare outcomes and patient trust (WHO, 2021). In addition, effective communication was significantly positive with quality healthcare ($\beta = .298$, $p < .001$). Effective communication between healthcare providers and patients promotes comprehension of diagnoses, treatment plans and test findings, boosting patient trust and adherence to medical guidance (WHO, 2023). The study discovered that most respondents fully comprehended descriptions of their diseases and treatments, indicating good communication in the health facilities between physicians and patients. This conclusion is consistent with prior studies demonstrating that effective communication enhances patient experiences and overall quality healthcare (Batbaatar et al., 2017).

Despite the fact that affordability was positively correlated with quality healthcare, the regression model did not find this relationship statistically significant ($\beta = .112$, $p = .062$). This indicates that cost by itself does not independently predict quality healthcare in the study after adjusting for other aspects of service quality (Batbaatar et al., 2017; Clearly et al., 2018). The results suggest that interpersonal care, communication, patient safety and prompt service delivery have a stronger effect on patients' overall opinion on quality healthcare even if economical services are still crucial for healthcare access (WHO, 2021; Kruk et al., 2018).

These findings are further supported by the Pearson correlation model. Quality healthcare was most positively correlated with interpersonal care ($r = .801, p < .01$), followed by communication ($r = .776, p < .01$), patient satisfaction ($r = .742, p < .01$), and safety ($r = .689, p < .01$). Together, these results show that the quality of treatment given in FLHs is significantly influenced by service quality management procedures.

Overall, the study shows that quality healthcare in FLHs in the Lusaka district is significantly and favourably affected by service quality management practices. In particular, longer waiting times lower the quality of healthcare, whereas advances in interpersonal care, communication, patient satisfaction and patient safety raise the quality of healthcare (Doyle et al., 2013). These results are in line with systems theory, which holds that better organisational outcomes result from efficient interactions between organisational processes and service delivery components (Bertalanffy, 1968).

6.3 Leadership Factors on the Quality of Healthcare (Objective 3)

The study's third objective was to investigate how leadership factors affect the quality of healthcare in FLHs in Zambia's Lusaka district. The findings indicate that leadership factors have a significance effect on the quality of healthcare in the FLHs under this study. Work culture, coaching and mentoring, staff engagement, motivation and management responsiveness collectively explained 61% of the variance in quality healthcare, according to the multiple regression model ($R^2 = .610$, Adjusted $R^2 = .598$). Additionally, the total regression model was statistically significant $F(5,183) = 57.43, p < .001$, indicating that leadership behaviours influence the quality of healthcare (Specchia et al., 2021; WHO, 2022).

The strongest predictor of quality healthcare among the leadership factors analysed was management responsiveness ($\beta = .338, p < .001$). These results indicate that prompt and efficient

hospital management responses to clinical and operational issues enhance the quality of healthcare. By facilitating timely decision making, effective resource allocation, and quick resolution of service delivery issues, responsive leadership improves patient care (Specchia et al., 2021). This was further reinforced by the correlation analysis which indicated a significant positive correlation ($r = .689$, $p < .01$) between responsiveness and quality healthcare. These results are in line with other studies (Al-Ahmadi, 2018) that found responsive leadership to be a significant factor in determining organisational success and healthcare efficacy.

Additionally, quality healthcare was shown to be significantly positively predicted by staff involvement ($\beta = .301$, $p < .001$). The findings indicate that healthcare employees are more dedicated to providing quality treatment when they actively participate in organisational procedures and communication. This finding is supported by the significant positive correlation ($r = .658$, $p < .01$) between staff engagement and quality healthcare. These results corroborate with previous research indicating that motivated workers exhibit increased output, enhanced collaboration, and a stronger dedication to patient-centred care (Skyttner, 2024).

Quality healthcare was positively affected by work culture in a statistically significant way ($\beta = .226$, $p < .001$). The results suggest that cooperative settings with open communication, cooperation, and shared organisational ideas provide the circumstances necessary for efficient healthcare delivery. The study's descriptive findings revealed that both management and non-management employees had favourable opinions of teamwork and idea exchange, indicating the existence of an organisational culture that supports quality enhancement. Systems theory, which highlights that productive organisational relationships improve overall system performance, is consistent with this result (Skyttner, 2024). Similar findings were reported by Smith et al. (2021) and Banda et al. (2023), who found that supportive organisational culture enhance patient outcome and service delivery.

Additionally, employee motivation significantly affected quality healthcare ($\beta = .212$, $p < .001$). According to the findings in this research, motivated healthcare professionals are more likely to deliver effective, sympathetic and patient-centred treatment. The regression analysis results imply that increases in staff motivation would probably result in quality healthcare even if descriptive studies showed that many employees were unhappy with their existing working conditions. These results are in line with other studies showing that motivated workers are more dedicated, experience less burnout, and provide better customer service (Johnson et al., 2023; Carter et al., 2020).

Despite having the lowest standardised effect of all the leadership factors, coaching and mentoring also had a statistically significant effect on quality healthcare ($\beta = .131$, $p = .017$). This study shows that by boosting staff competence and confidence, chances for professional growth, ongoing education and encouraging supervision improve quality healthcare (Filipe et al., 2014; WHO, 2022). A favourable association between coaching and mentoring and quality healthcare was also shown by the correlation analysis ($r = .472$, $p < .01$). These findings corroborate those of Patel et al. (2022) and Williams et al. (2023), who found that ongoing professional development improves organisational efficacy and clinical performance.

Significant positive correlations between all aspects of leadership and quality healthcare were shown by the Pearson correlation analysis. The strongest correlation was found in responsiveness, which was followed by motivation, work culture, staff involvement, coaching and mentoring. Together, these results show that rather than through discrete management acts, leadership practices affect quality healthcare through a variety of interrelated organisational factors (WHO, 2022; Specchia et al., 2021).

6.4 Summary

This chapter provided a critical analysis and discussion of the results regarding the effects of management on the quality of healthcare in FLHs in Lusaka, Zambia. According to the findings, Operational efficiency, quality service management practices and leadership factors significantly affects the Quality of healthcare services in the FLHs under the study.

CHAPTER SEVEN

CONCLUSION AND RECOMMENDATIONS

7.0 Overview

The objective of this study was to examine the influence effect of Management practices on the Quality of Healthcare in First Level Hospitals in Lusaka district, Zambia with a particular emphasis on Matero and Chilenje FLHs. Despite the ongoing support of the government of the Republic of Zambia and donors in the health sector, there are persistent allegations of substandard care in public hospitals. Additionally, the extent to which healthcare systems and management practices have affected service delivery remains unclear, which has led to concerns regarding the extent to which the current healthcare landscape adequately meets the needs of the patient population (Chanda et al 2021). The study was primarily motivated by this concern, with the objective of assessing the extent to which management has affected the provision of quality healthcare services in the selected FLHs.

This study is essential because of the potential consequences of insufficient service delivery, which may impede patients' access to appropriate medical care. The nation's progress towards achieving Universal Health Coverage by 2030 may be jeopardized if these challenges persist, as donor confidence and support for Zambia's health sector may erode (WHO, 2021). This study examined the potential repercussion of declining quality healthcare by examining the influence of management related variables such as operational efficiency and service quality on the overall quality of healthcare provided by the FLHs. The causal relationships between independent and dependent variables were examined using quantitative research design. The data was collected using a structured questionnaire and analyzed using regression analysis and descriptive statistics in SPSS version 26.

7.1 Implication

The implications of the study are outlined in this section, which correlates the logical conclusions drawn from the data presented in the previous chapters with the fundamental problem that the study aimed to resolve. Additionally, it provides a concise examination of the extent to which the study's findings and conclusions are in agreement with or divergent from the existing literature on the primary topics that were investigated. This dialogue is structured in accordance with the research concerns that guided the investigations.

7.2 Operational Efficiency on The Quality of Healthcare

The quality of healthcare given in FLHs in Zambia's Lusaka district has shown to be significantly correlated with operational efficiency in hospital administration. The empirical results indicated that a key factor in determining the quality of healthcare is operational efficiency, as measured by patient waiting times, resource availability and medicine stockouts. Regression analysis revealed that these operational parameters together accounted for a significant amount of the variation in quality healthcare, demonstrating the importance of good management systems in the provision of healthcare.

Patient waiting time emerged as the strongest predictor of quality healthcare among the operational efficiency factors evaluated. The results show that extended waiting times lower overall satisfaction with healthcare services and have a negative effect on patients views of service quality. Additionally, descriptive data revealed that many patients had to wait one to two hours before obtaining medical care, indicating that service delivery delays continue to be a major operational problem in FLHs.

The quality of healthcare was also shown to be positively affected by the availability of resources. The study showed that better diagnosis, treatment and overall patient outcomes are facilitated by

the availability of critical healthcare resources such as medical equipment, Laboratory facilities, medications and sufficient human resources.

Medical stockout was found to significantly reduce healthcare quality. Regular shortages of necessary medications interfere with continuity of care and lower the efficacy of patient treatment services (Phuong et al., 2019). The frequency of stockouts suggests flaws in supply chain management and procurement that need ongoing attention, even though institutions reported replenishing medications in very short amount of time (Yadav, 2015; USAID, 2021).

Overall, the results show that a key factor in determining the quality of healthcare provided in FLHs is operational efficiency. Reducing patient waiting times, bolstering the availability of resources, and guaranteeing ongoing access to necessary medications will significantly improve the quality of healthcare and help Zambia achieve sustainable development goal three (3) and Universal Health Coverage (United Nations, 2023).

7.3 Service Quality on the Quality of Healthcare

The study's conclusions offer compelling proof that service quality management practices influence the quality of healthcare provided in Lusaka's district FLHs. Patient-centred service delivery is essential to improve healthcare outcomes, as the regression analysis indicated that service quality characteristics taken together explained a significant percentage of the variation in quality healthcare (Donabedian, 1988; Doyle et al., 2013).

Interpersonal care emerged as the strongest predictor of quality healthcare among the service quality factors analysed. Patients' evaluations of service quality and their entire healthcare experience were much improved by courteous treatment, empathy and good interactions between healthcare workers and patients (Bleich et al., 2009). The significance of interpersonal interactions

in the provision of healthcare is further supported by the large percentage of patients who reported being treated with respect.

Additionally, it was discovered that communication significantly improved the quality of healthcare. The results show that patients' comprehension, trust in healthcare professionals, and adherence to treatment recommendations are all enhanced by clear explanations of diagnosis, treatment methods and drug usage. In a similar vein, patient safety and happiness were shown to be important factors in quality healthcare, highlighting the significance of upholding self-clinical procedures while guaranteeing satisfying patient experiences (Street et al., 2009; Doyle et al., 2013; WHO, 2020).

On the other hand, extended waiting times considerably lowered the quality of healthcare, demonstrating that patient satisfaction and opinions of efficiency medical treatment are negatively impacted by service delivery delays. After adjusting for the other aspects of service quality, affordability did not independently predict quality healthcare, despite having a positive correlation with it. This suggests that patients prioritise timely services, effective communication, respectful care and patient safety over cost considerations alone (Bleustein et al., 2014; Thiels et al., 2015; Kruk et al., 2020).

7.4 Leadership Factors on the Quality of Healthcare

The study found that quality of healthcare given in the FLHs in Zambia's Lusaka district is significantly influenced by leadership factors. A significant amount of the variance in the quality healthcare was explained by work culture, coaching and mentoring, staff engagement, employee motivation and management responsiveness according to the regression analysis. This underscores the crucial role that effective leadership plays in boosting organisational performance and service delivery (West et al., 2015; Braithwaite et al., 2018; Kruk et al., 2020).

The strongest predictor of quality healthcare among the leadership factors evaluated was management responsiveness. The results show that by enhancing coordination and responsiveness to staff and patient demands, quick decision-making, quick resolution of operational issues and strong management support improved healthcare delivery (Braithwaite et al., 2018; West et al., 2015; Kruk et al., 2020).

The quality of healthcare was also found to be significantly enhanced by staff engagement through promoting employee commitment, teamwork, accountability and patient-centred service delivery. Healthcare professionals who actively participate in organisational procedures and decision-making are more dedicated to providing patient centred care and enhancing organisational performance (West et al., 2015). Similarly, an atmosphere that fosters quality improvement and efficient service delivery is created by a good work culture that is marked by cooperation, teamwork, open communication (Schein, 2010). Quality healthcare was discovered to be significantly enhanced by employee motivation, suggesting that motivated healthcare workers are more likely to deliver effective, caring and patient centred treatment. Additionally, although its effect was somewhat less than that of the other leadership factors, coaching and mentoring strengthened staff competence, professional growth and ongoing learning all of which improved quality healthcare (Kirkpatrick et al., 2006, West et al., 2015, WHO, 2020).

According to the descriptive results that revealed the coexistence of democratic, autocratic and laissez-faire leadership styles within the FLHs, different leadership philosophies may influence employee experiences and organisational performance. However, the study's empirical findings suggest that employee motivation, a supportive of organisational culture, active staff participation, responsible management and continuous professional development all directly improve quality healthcare.

7.5 Contribution to The Field of Knowledge, Policy and Practice

This research makes a substantial contribution to the fields of healthcare administration and service delivery, particularly in the context of FLHs in Lusaka district of Zambia. The findings offer substantial insights into the influence of operational efficiency, service quality and management strategies on healthcare outcomes. These findings have immediate implications from the practical enhancement of healthcare services, policy development and academic research.

7.5.1 Contribution to The Field of Knowledge

This research contributes to the existing body of literature on healthcare service delivery in low resource environments by providing empirical evidence regarding public hospitals in Zambia. The study provides empirical evidence on the influence of service quality components, operational efficiency and leadership factors on quality of healthcare in FLHs. In contrast to more generic evaluations of quality healthcare, this forecast analysis improves understanding of the service variables that most significantly affect patient experiences in the public healthcare sector. The implication of multiple regression analysis improves methodological rigor, enabling examination of the connections between patient impressions and service delivery elements. This statistical procedure enhances the reliability of the results and contributes substantial empirical data to the research corpus on quality healthcare in Sub-Saharan Africa.

By incorporating Complex Adaptive Systems (CAS) frameworks and systems theory, the investigation improves theoretical comprehension. It emphasizes the interdependence of service components demonstrating how inefficiencies in one area such as extended waiting periods can have adverse ripple effects throughout the patient experience. This system-oriented perspective emphasizes that public healthcare facilities operate as interconnected ecosystems, necessitating

coordinated efforts across multiple service aspects to achieve sustainable improvements rather than isolated solutions.

The study significantly challenges the widely held belief that patient satisfaction is primarily determined by cost. The results indicate that patient satisfaction in Zambia's public hospital is not statistically significantly influenced by affordability, in contrast to research conducted in commercial healthcare environments. Service efficiency, pharmacy response and Laboratory assistants are operational factors that are more critical. This discovery offers a novel perspective on the priorities of patients in government funded healthcare systems and underscores the importance of prioritizing performance and experience over affordability when evaluating service quality in similar situations.

7.5.2 Policy Contribution

The study offers data-driven insights to inform healthcare policy reforms particularly those that are intended to enhance operational efficiency in FLHs. These findings are consistent with the objectives outlined in Zambia's National Health strategic plan, (NHSP), which emphasizes the improvement of patient satisfaction and quality of services. The institutionalization of continuous quality improvement through enhanced training and performance evaluation, particularly in the pharmacy and Laboratory sectors is a critical policy consideration. This study also underscores substantial deficiencies in hospital administration procedures, including medicine stockouts, prolonged waiting time, inadequate resource availability, weaknesses in leadership responsiveness and communication challenges.

These findings could be utilized by regulatory authorities to improve the quality assurance frameworks and accountability systems in public hospitals. The measures being suggested include;

- i. Establishing efficient hospital workflow protocols

- ii. Consistently evaluating patient satisfaction metrics
- iii. Establishing explicit accountability frameworks for service managers and hospital administrators

These policy initiatives will guarantee that healthcare services continue to be patient-centered and efficient.

7.5.3 Practical Contribution

The study offers hospital administrators practical suggestions for improving operational efficiency and service delivery. Critical areas for intervention include the reduction of patient waiting times and the improvement of patient throughput. Additionally, this study emphasizes the critical role of effective communication among healthcare professionals in shaping patient satisfaction and experiences.

The importance of data analytics in healthcare administration is underscored by research. Statistical modeling can be implemented by hospital administrators to make decisions that are based on real-time performance data and are supported by evidence. Practical applications include;

- i. Identifying and mitigating bottlenecks for monitoring delay times.
- ii. Monitoring patient waiting times, resource utilization, medicine availability, and staff responsiveness.
- iii. Conducting routine patient satisfaction surveys to facilitate quality improvement initiatives.

The investigation suggests that public hospitals may enhance their service delivery by establishing partnerships with private sector organizations. Potential benefits include;

- i. Ensuring the consistent availability of essential pharmaceuticals through robust supply chain agreements
- ii. The utilisation of private sector technologies and resources to improve diagnostic capabilities
- iii. Employing service efficiency frameworks that have been established by exceptional private healthcare providers

These observations provide hospital administrators with a framework to implement enduring improvements in patient care and service delivery.

7.6 Recommendations for First Level Hospitals and Other Healthcare Providers

7.6.1 Effect of Operational Efficiency in Management on The Quality of Healthcare

- i. The immediate priority should be the implementation of digital inventory and supply tracking systems to minimise stockouts of essential medicines and medical supplies. This initiative should be led by the Zambia Medicines and Medical Supplies Agency (ZAMMSA) in collaboration with the Ministry of Health (MoH) of Zambia.
- ii. In the short run, the government should introduce biometric attendance and workload tracking systems to ensure optimal staffing levels, reduce absenteeism and promote accountability among healthcare personnel. The MoH, Public Service Management Division (PSMD) and Lusaka District Health Office (LDHO) should spearhead this intervention.
- iii. Another short-term priority is to strengthen recruitment and retention mechanisms for healthcare workers. MoH Human Resource Directorate and LDHO should collaborate to design and implement these retention schemes.
- iv. In addition, the MoH should establish routine facility-based operational efficiency audits focusing on medicine stockouts, waiting times, resource utilization, and service delivery

bottlenecks. This initiative should be led by the MoH planning directorate, in partnership with LDHO and FLH management.

- v. In the long term, the modernisation of diagnostic and Laboratory infrastructure should be prioritised to strengthen clinical decision-making and service quality. This can be achieved through Public-Private Partnerships (PPP) focused on equipment procurement, maintenance and training of technical staff. The MoH in collaboration with the Ministry of Finance, cooperating partners and the private sector should lead this initiative.

7.6.2 Influence of Service Quality Management Practice on the Quality of Healthcare

- i. The immediate priority should be the introduction of electronic structured appointment systems and triage models to minimise long patient waiting times and improve patient flow. This initiative should be implemented by the Ministry of Health (MoH) in collaboration with the LDHO and FLH Management.
- ii. In the short-term, it is essential to establish digital patient feedback systems to capture real-time patient experiences and identify service delivery gaps. The FLH's Quality Assurance Committees, supported by LDHO and the Smart Zambia Institute should spearhead this effort.
- iii. Another short-term priority involves conducting regular patient satisfaction surveys and integrating findings into facility performance reviews and service redesign processes. This should be implemented by the MoH Quality Assurance Directorate, working jointly with the LDHO and FLHs management.
- iv. Furthermore, improving the interpersonal communication skills of healthcare providers is essential for fostering empathy, trust and patient-centred care. To achieve this, the Health Professions Council of Zambia (HPCZ), Health Training Institutions and FLH managements should implement regular communication and interpersonal skills training programmes.

- v. In the long term, the MoH should develop and monitor service quality standards for FLHs aligned with the World Health Organisation's Quality of Care framework. This initiative should be undertaken collaboratively by the MoH, Zambia Agency for Quality Healthcare (ZAQHC) and cooperating partners.

7.6.3 Effect of Leadership Factors on the Quality of Healthcare

- i. In the short run, the Ministry of Health in partnership with the Lusaka district health office and FLH Managements should set up formal accountability and feedback mechanisms that guarantee prompt resolution of staff and patient concerns, as management responsiveness was found to be the greatest predictor of quality healthcare. To enhance organisational responsiveness and service delivery, this may involve holding frequent management review meetings, staff feedback mechanisms and performance monitoring frameworks.
- ii. Another short-term priority is that FLH management should provide workers with organised opportunity to participate in decision making, quality improvement efforts, and operational planning, given the substantial beneficial effect of staff involvement on quality healthcare. To increase ownership, cooperation and dedication to organisational objectives, staff advisory committees, interdisciplinary team meetings and regular consultation forums should be formalised.
- iii. In the long term, hospital administrations should improve departmental cooperation, open communication and teamwork as work culture has been shown to have a substantial effect on quality healthcare. To foster an atmosphere that fosters ongoing quality improvement and patient-centred care, policies that promote information exchange, respect for one another and group problem solving should be put into place.
- iv. The Ministry of Health and FLH management should implement strategies targeted at enhancing staff motivation through recognition programmes, transparent performance

appraisal systems, career progression opportunities and improved working conditions as employee motivation has a significant effect on quality healthcare. Resolving employee discontent is likely to increase dedication, output and the grade of healthcare services rendered.

- v. To improve staff competency, confidence and professional development, FLHs should institutionalise organised mentoring programmes and ongoing professional development initiatives. To make sure that these programmes are in line with organisational needs and quality improvement goals, hospital administrations, training facilities and Health Professionals Council of Zambia (HPCZ) should work together and implement these initiatives.

7.7 Recommendations for Future Research

The results of this study suggest that there are numerous potential avenues for future research that could improve the understanding of healthcare administration and service quality in First Level Hospitals and similar healthcare environments. Given the constraints, subsequent research should concentrate on the following:

- i. To determine the generalizability of the findings of this study to other contexts, subsequent research should focus on assessing the operational efficiencies and quality healthcare of a variety of healthcare facilities in Zambia, including the tertiary hospitals, rural clinics and private healthcare institutions.
- ii. It is recommended that subsequent studies explore strategies to reduce bias and recall inaccuracies in self-reported data. This may involve the use of third-party evaluations, electronic health records (EHR), or observational studies to obtain more objective information about patient outcomes and healthcare delivery.

- iii. Conduct longitudinal studies as they may enable the monitoring of temporal changes, demonstrate the causality and the extraction of more comprehensive data regarding the enduring effects of operational inefficiencies, personnel shortages and leadership styles on quality healthcare.
- iv. Subsequent research should increase the sample size to include a wide range of healthcare facilities in Zambia thereby ensuring a more comprehensive representation of a variety of patient demographics, staff experience, and facility types to provide more comprehensive insights
- v. Examine methods to encourage healthcare personnel to provide more candid responses, such as the establishment of a secure environment that enables them to express their opinions without fear of retribution or the implementation of anonymous surveys.
- vi. In order to understand the effect of these broader influences on the quality and delivery of healthcare services in Zambia, future research should examine external factors such as policy changes, budget constraints and socioeconomic determinants of healthcare access.

7.8 Research Limitations

This study offers valuable insights into the administration and delivery of healthcare services at First Level Hospitals in Lusaka Zambia. However, it is important to acknowledge the presence of several limitations which may affect the generalizability and interpretation of the findings.

The study was restricted to two First Level Hospitals, namely Matero and Chilenje, which are situated in the Lusaka district. Although this enabled exhaustive research, it may not accurately represent the diversity of management methods and service quality found in other FLHs and other healthcare institutions in Zambia. The generalizability of the results would be enhanced by including hospitals from other regions in future research.

Self-reported information from healthcare professionals and patients was the primary source of data collection. This raises the possibility of biased responses as individuals may have provided responses that were socially desirable or influenced by their personal perceptions and experiences. Although self-reporting offers substantial subjective insight, the utilisation of objective indicators such as clinical outcome data or incident reports in future studies would result in a more thorough evaluation of quality healthcare.

Access to specific organizational documents, particularly those related to financial information, resource allocation and staffing levels, was restricted. This restricted the study's ability to conduct a comprehensive quantitative assessment of resource management and operational efficacy. Access to internal data could strengthen future studies and have more precise evaluations of hospital resource utilisation.

Cultural contexts serve as an additional constraint. The study's setting within the Zambian healthcare systems suggests that the generalizability of the findings to non-African settings may be limited by the local norms and values that may be embodied in specific management strategies and patient expectations. Comparative studies conducted in a variety of cultural environments may help to clarify the distinctions between universal and context specific factors that influence quality healthcare.

The study encountered measurement difficulties as a result of the subjective characteristics of several categories, such as perceived service quality and healthcare despite the use of validated survey instruments. These characteristics can vary considerably among individuals which can affect the reliability and consistency of the data. The integration of objective metrics such as recovery durations, readmission frequencies or medical error occurrences would result in a more rigorous quantifiable assessment of service quality.

Additionally, the research encountered constraints surrounding the healthcare workforce. The continuous shortages of staff and high workloads made it challenging to secure participation from health workforce and administrators, which potentially limited the depth and breadth of perspectives captured.

The COVID-19 pandemic posed significant obstacles. Data collection activities and participant's availability were negatively affected by disruptions in healthcare service delivery, transportation limitations and increased pressure on healthcare systems. The interactions with healthcare professionals were restricted and their responses may have been influenced by the effects of the pandemic.

The data acquisition method was further impeded by technological constraints. The efficacy and precision of data collection were compromised, and the comprehensive and systematic data analysis was impeded by insufficient access to digital infrastructure including electronic health records and online survey instruments.

Finally, the acquisition of candid and precise feedback was impeded by linguistic disparities between healthcare personnel and patients, particularly when respondents lack fluency in the language used during interviews or surveys. This may have influenced the validity of specific conclusions and the clarity of responses.

Addressing the above challenges or limitations in future studies could help to enhance the dependability, depth and application of the findings, and have more comprehensive understanding of the influence of hospital management strategies on service quality in diverse contexts.

7.9 Summary

The conclusions and recommendations of this study provide practical solutions to address the primary findings of the study on quality healthcare and management in First Level Hospitals in

the Lusaka district of Zambia. The recommendations were given to address challenges regarding quality of service, operational efficiency and leadership factors in FLHs. By employing these techniques, healthcare institutions in Zambia can achieve improved patient outcomes, increased staff satisfaction and alignment with the sustainable development goals (SDGs). The implementation of these recommendations requires the collaboration of all stakeholders such as healthcare providers and policymakers.

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APPENDICES

APPENDIX 1: Introductory Letter



UNIVERSITY
of
LUSAKA

Plot No. 37413, Off Alick Nkhata Mass Media, P. O. Box 36711, Lusaka
Phone: +260 211 233407, 258409, Fax: +260 211 233409, E-mail: vicechancellor@unilus.ac.zm, registrar@unilus.ac.zm
Website: www.unilus.ac.zm

All correspondence should be addressed to the Vice Chancellor

19th September, 2023

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

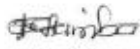
RE: DATA COLLECTION REQUEST: THE EFFECTS OF MANAGEMENT ON QUALITY HEALTHCARE IN LEVEL ONE HOSPITALS IN LUSAKA

This letter serves to introduce **BUBALA NAMAKOBO**, Identity Number **PHDMGT22217024** as a bona fide student of the University of Lusaka pursuing Doctor of philosophy in Management.

BUBALA NAMAKOBO is required to submit a Dissertation as part of the requirements for the award of a Doctor of Philosophy in Management and therefore seeks to collect data from your institution. His Dissertation title is stated above. The data will be used solely for Academic purposes and a copy of the final document can be availed to you upon request.

Any assistance given to him will be greatly appreciated.

Yours sincerely,


Mwamba Chanda (Mr.)
DEPUTY REGISTRAR



Passion for Quality Education! Our Driving Force

APPENDIX 2: Approval Letter from The National Health Research Authority



NATIONAL HEALTH RESEARCH AUTHORITY

Lot No. 18961/M off Kasama Road, Chalala, P.O. Box 30075, LUSAKA

Tell: +260211 250309 | Email: nhrasec@nhra.org.zm | www.nhra.org.zm

Ref No: NHRA0005/05/10/2023

Date: 5th October, 2023

The Principal Investigator,
Bubala Namakobo,
University of Lusaka,
School of Post Graduate Studies, Lusaka,
Zambia.

Dear ~~Mr~~ Namakobo,

Re: Request for Authority to Conduct Research

The National Health Research Authority is in receipt of your request for authority to conduct research titled **“The Effect of Management on Quality Healthcare in Level One Hospitals in Lusaka District, Zambia.”**

I wish to inform you that following submission of your request to the Authority, our review of the same and in view of the ethical clearance, this study has been **approved** on condition that:

1. The relevant Provincial and District Medical Officers where the study is being conducted are fully appraised;
2. Progress updates are provided to NHRA bi-annually from the date of commencement of the study;
3. The final study report is cleared by the NHRA before any publication or dissemination within or outside the country;
4. After clearance for publication or dissemination by the NHRA, the final study report is shared with all relevant Provincial and District Directors of Health where the study was being conducted, University leadership, and all key respondents.

Yours sincerely,

Prof Victor Chalwe,
Acting Director/Chief Executive Officer
National Health Research Authority

APPENDIX 3: Research Ethics Approval Letter



UNIVERSITY
of
LUSAKA

Plot No. 37413, Off Alick Nkhata Mass Media, P. O. Box 36711, Lusaka
Phone: +260 211 233407, 258409, Fax: +260 211 233409, E-mail: vicechancellor@unilus.ac.zm, registrar@unilus.ac.zm
Website: www.unilus.ac.zm

All correspondence should be addressed to the Vice Chancellor

SCHOOL OF MEDICINE AND HEALTH SCIENCES RESEARCH ETHICS COMMITTEE

Ref no: FWA00033228-0109/23

Date: September 8th, 2023

STUDENT NAME: BUBALA NAMAKOBO

**THE EFFECTS OF MANAGEMENT ON QUALITY HEALTHCARE IN LEVEL
ONE HOSPITALS IN LUSAKA, ZAMBIA**

The above research was submitted to the research ethics committee for review. The study has no major ethical problems and is approved subject to the following:

1. The study cannot be changed without express permission of the UNILUS research ethics committee.
2. Approval from the necessary authority should be sought.

Congratulations and the committee wishes you success in your work.

Prof Kasonde Bowa
MSc(Glasgow), M.Med(UNZA), FRCS(Glasgow), FACS, FCS, DPH(LSTMH), MPH(UCL)
Chairman- UNILUS REC
Professor of Urology and Consultant Urologist
Executive Dean
University of Lusaka and University Teaching Hospital
School of Medicine and Health Sciences.

Passion for Quality Education! Our Driving Force

APPENDIX 4: Approval Letter from The Lusaka District Health Office

*All correspondences should be
addressed to the District Health
Director*

Tel: +260-211-235554
Fax: +260-211-236429



REPUBLIC OF ZAMBIA

MINISTRY OF HEALTH

In reply please quote:

No. LDHO/RN/12147.....

LUSAKA DISTRICT HEALTH OFFICE
P.O. BOX 50827
LUSAKA

12th October, 2023.

Bubala Namakobo
University of Lusaka
School of Post Graduate Studies
P. O. Box 50110
LUSAKA

RE: AUTHORITY TO CONDUCT RESEARCH IN LUSAKA DISTRICT

We are in receipt of your letter over the above subject.

Please be informed that Lusaka District Health Office has no objection for you to conduct research entitled, **“The Effect of Management on Quality Healthcare in Level One Hospitals in, Lusaka District, Zambia.”**

Kindly ensure that your findings are shared with the health facility and District Health Office and that while research is going on, operations must continue with no interruption.

By copy of this letter, the Public Health Specialist and Medical Superintendent for Chilenje and Matero 1st Levels Hospital are kindly requested to facilitate accordingly.

Dr. Astridah Kona Yihemba Maseka
District Health Director
LUSAKA DISTRICT HEALTH OFFICE

C.C: Medical Superintendent – Chilenje and Matero 1st Level Hospitals
C.C: Public Health Specialist – Chilenje and Matero 1st Level Hospitals

APPENDIX 5: Feedback Letter from Chilenje FLH

*Address All correspondence to the
Medical Officer in Charge and not to individuals
P.O. Box 50827, Lusaka
Telephone: + 260 954044519*



In reply please quote

REPUBLIC OF ZAMBIA MINISTRY OF HEALTH Chilenje Level 1 Hospital

2nd November, 2023.

Bubala Namakobo
University of Lusaka
School of Post Graduate Studies
P.O. Box 50110
Lusaka.

RE: AUTHORITY TO CONDUCT RESEARCH

We are in receipt of your letter over the above subject.

Be informed that Chilenje Sub District 6 has no objection for you research entitled, **“The Effect of Management on Quality Health in Level One Hospitals in Lusaka District, Zambia.”**

Kindly ensure that your findings are shared with the health facility and District Health Office and that while is going on, operations must continue with no interruption.

pp

Dr. Miyanda Simwaka
Public Health Specialist
CHILENJE SUB DISTRICT 6





APPENDIX 7: Consent Form

Informed written consent form for study participants



Consent Form

School of Post-Graduate Studies

Topic: The effect of management practices on quality healthcare in level one hospitals in Lusaka district, Zambia

Dear Study Participant,

My name is Bubala Namakobo, I am a postgraduate student from the University of Lusaka, School of Post-Graduate Studies pursuing a Doctor of Philosophy (Ph.D.) in Management. I am conducting a study entitled: The effect of management on quality healthcare in level one hospitals in Lusaka district, Zambia.

Purpose of the Study

The purpose of this study is to obtain information on the effects that management has had in offering quality healthcare to community members at this Level One Hospital. Community members who agree to participate in the study will be required to answer a questionnaire in the

best possible way about their experience(s). The data that will be collected shall be analyzed and used to improve any gaps to do with offering quality healthcare services.

Participant's Rights

Participation in this study is voluntary and thus participants have a right to say no and withdraw from the study at any time. In this regard, participants who feel that they cannot continue in the study will be free to withdraw from the study without consequences. In addition, the participant has the right to skip any of the questions from the questionnaire that they feel uncomfortable responding to.

Anonymity and Confidentiality

The data to be collected using this questionnaire is intended to be used for academic purposes only and it will also be treated confidentially. The information and data that will be gathered will not reflect the opinions and/or views of the individual respondents but shall be presented in an aggregated manner. The names of the people who will participate in the study will not be disclosed. Only number codes will be used to identify the data and only the investigator shall have access to the identity of the participants.

Benefits

The benefit to the participants will be having an opportunity to give feedback regarding healthcare services at the hospital. This information shall be documented and presented to the decision-makers to help in providing quality healthcare.

Contacts of the Principal Investigator and the Ethical Committee

In case of any issues that may arise from the study, kindly contact the following.

Principal investigator: Bubala Namakobo
The University of Lusaka
School of Post-Graduate Studies
P.O. Box 36711
Cell: +260 979 403 734 / +260 969 403 734
Email: namakobob@gmail.com

The Chairperson: Ethical Committee
University of Lusaka
Mass Media, Lusaka
P.O. Box 36711
Phone: +260 211 258 505
Email: academic@unilus.ac.zm

Informed Consent

Your signature below will mean that you have voluntarily agreed to participate in this research study.

Signature of the participant:

Signature of the Researcher:

Place:

Date:

APPENDIX 8 : Questionnaire For Patients



SCHOOL OF POST GRADUATE STUDIES

**TOPIC: THE EFFECT OF MANAGEMENT PRACTICES ON
QUALITY HEALTHCARE IN LEVEL ONE HOSPITALS IN
LUSAKA DISTRICT**

QUESTIONNAIRE FOR PATIENTS

SECTION 4 : INTRODUCTION QUESTIONS

1. What is your gender?

Male ☐ Female ☐

2. What is your age group?

- a. 0 – 10 ☐
- b. 11 – 20 ☐
- c. 21 – 30 ☐
- d. 31 – 40 ☐
- e. 41 – 50 ☐
- f. 51 – 60 ☐
- g. 61 and above ☐

3. Is this your first time visiting this hospital?

Yes ☐ No ☐

4. What category of patient do you fall under?

- a. In-patient cases (requires Admission) ☐
- b. Outpatient (No admission required) ☐

SECTION B: TIMELINESS

Waiting time

5. On average, how long did it take for you to be attended to by the doctor after your first arrival at this hospital?

Within 30 Minutes ☐ Within 1 Hour ☐ Within 2 Hours ☐ After 3 Hours ☐

6. How long have you been at this hospital since you came during your current visit?

Within 1 hour ☐ within 4 hours ☐ Within 8 hours 1 day ☐ Within 4 days ☐ within
1 week ☐ within 2 weeks ☐ within 3 weeks ☐ 1 Month ☐ 2 months ☐ 3months ☐
over 3 months ☐

Length of hospital stay.

7. Have you been admitted at this hospital before?

Yes ☐ No ☐

8. If yes, how long did the admission take before being discharged?

Within 1 hour ☐ within 4 hours ☐ Within 8 hours ☐ 1 day ☐ Within 4 days ☐
 within 1 week ☐ within 2 weeks ☐ within 3 weeks ☐ 1 Month ☐ 2 months ☐
 3months ☐ Over 3 months ☐

SECTION C: EFFICIENCY

Referrals

9. During any of your visits to this hospital, have you ever been referred to another hospital for treatment?

Yes ☐ No ☐

10. During any of your visits to this hospital, have you ever been referred to another Laboratory (either private or public) for any medical tests?

Yes ☐ No ☐

Hospital services

11. How do you rate the quality of services below

	Excellent	Good	Poor	Very Poor
Attending Doctor				
Clinic				
Pharmacy Support				
Attendance Nurse				
Laboratory Services				

12. Were you satisfied or dissatisfied with the items below: On a scale of between 1 to 5 with 1 being fully dissatisfied and 5 being very satisfied, how much were you satisfied (or dissatisfied) with the items below:

- Fully dissatisfied
- Somewhat dissatisfied
- Neither satisfied nor dissatisfied
- Somewhat satisfied
- Fully satisfied.

	Fully dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat satisfied	Fully satisfied
Waiting time since arrival at the hospital					
Laboratory services					

Affordability of health services					
----------------------------------	--	--	--	--	--

Availability of medicine.

13. During any of your visits to this hospital, is there medicine the pharmacy at this hospital did not have that had been prescribed by the doctor?

Yes ☐

No ☐

SECTION D: CARE COORDINATION

Transitions of care.

14. Were you satisfied or dissatisfied with the items below: On a scale of between 1 to 5 with 1 being fully dissatisfied and 5 being very satisfied, how much were you satisfied (or dissatisfied) with the items below:

- a. Fully dissatisfied
- b. Somewhat dissatisfied
- c. Neither satisfied nor dissatisfied
- d. Somewhat satisfied
- e. Fully satisfied.

	Fully dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat satisfied	Fully satisfied
Politeness, courtesy, and respect shown by doctors					
Politeness, courtesy, and respect shown by nurses					
Politeness, courtesy, and respect shown by general workers					

15. Do you think the hospital staff share the same values and understanding of what needs to be done according to your experience at the hospital?

☐

Yes ☐ No

16. Were you satisfied or dissatisfied with the items below: On a scale of between 1 to 5 with 1 being fully dissatisfied and 5 being very satisfied, how much were you satisfied (or dissatisfied) with the items below:

- a. Fully dissatisfied
- b. Somewhat dissatisfied
- c. Neither satisfied nor dissatisfied
- d. Somewhat satisfied
- e. Fully satisfied.

	Fully dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat satisfied	Fully satisfied
Cleanliness in the ward					
Availability of beds in the ward					
Sanitary facilities (water, toilets, bathrooms) in the ward					

17. Do you have any close relatives or friends who died at this hospital due to the following?

	YES	NO
Negligence of the Medical personnel		
Mismanagement of an illness or injury		

Diagnosis and treatment

18. Have you ever received any treatment on the following from this facility?

	YES	NO
Disease		
Surgical		
Syndrome		
Injury		
Any Infection		

19. Have you ever received an inaccurate or incomplete diagnosis on the following?

	YES	NO	Not applicable
Disease			
Surgical			
Syndrome			
Injury			
Any Infection			

20. Have you ever gone to another hospital to get a second medical opinion after getting results from this hospital?

Yes ☐ No ☐

21. If yes, were the results similar to the ones obtained from this hospital?

Yes ☐ No ☐

22. During any of your visits to this hospital, have you ever received medical results that belong to someone else?

Yes ☐ No ☐

23. Have there been cases where the doctor prescribed the wrong medication to you at this hospital?

Yes ☐ No ☐

24. Have there been any instances where the medical personnel at this hospital could not diagnose an illness to you, any close relative, or a friend?

Yes ☐ No ☐

Sharing of knowledge and aiding the patient and family

25. Were you satisfied or dissatisfied with the items below: On a scale of between 1 to 5 with 1 being fully dissatisfied and 5 being very satisfied, how much were you satisfied (or dissatisfied) with the items below:

- a. Fully dissatisfied
- b. Somewhat dissatisfied
- c. Neither satisfied nor dissatisfied
- d. Somewhat satisfied
- e. Fully satisfied.

	Fully dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat satisfied	Fully satisfied
Privacy maintained by the health staff during the care					
Medical facilities in the ward (drugs, equipment, etc.)					
Health advice is given by the hospital health staff					
The opportunity given to you to clarify doubts about the care					
The opportunity given to you to clarify doubts about the Laboratory test results					

26. Did you have any challenges in understanding what the health workers were explaining to you when receiving medical treatment?

Yes ☐

No ☐

APPENDIX 9: Questionnaire For Non-Management Staff



SCHOOL OF POST-GRADUATE STUDIES

**TOPIC: THE EFFECT OF MANAGEMENT PRACTICES ON QUALITY
HEALTHCARE IN LEVEL ONE HOSPITALS IN LUSAKA DISTRICT, ZAMBIA**

QUESTIONNAIRE FOR NON-MANAGEMENT STAFF

SECTION A: INTRODUCTORY QUESTIONS

27. What is your gender?

Male ☐ Female ☐

28. What age group are you?

☐ 0 – 10 ☐ 11 – 20 ☐ 21 – 30 ☐ 31 – 40 ☐ 41 – 50 ☐ 51 and Above

29. How long have you worked at this hospital?

☐ Within last 1 year ☐ Within the past 3 years ☐ Within the past 6 years ☐ Within 10 years
Over 10 years ☐

30. What is the highest level of education that you have completed?

☐ Ph.D. ☐ Master's ☐ Undergraduate Degree ☐ Diploma ☐ Certificate ☐ Other:

31. What category of health worker do you fall under at this hospital?

- c. ☐ Medical Doctor
Field of Specialization:
- d. ☐ Clinical Officer
Field of Specialization:
- e. ☐ Nurse
Field of Specialization:
- f. ☐ Pharmacist
Field of Specialization:
- g. ☐ General worker
Field of Specialization:
- h. ☐ Other:
Field of Specialization:

SECTION B: WORK CULTURE

32. Indicate using a Scale of 1 to 5 to provide your opinion on whether the work culture at the hospital promotes the following. 1 is a symbol for Strongly agree, 2 is a symbol for agree, 3 is a symbol for Unsure, 4 is a symbol for Disagree, and 5 is a symbol for Strongly disagree.

	Strongly agree 1	Agree 2	Unsure 3	Disagree 4	Strongly Disagree 5
Emphasizes collaboration across teams and a horizontal structure					
Allows individuals to share ideas and encourages to take risks					
Focuses on financial success and how each employee contributes to revenue.					
Emphasizes career paths and provides clear managerial processes.					

SECTION C: MANAGEMENT'S PERFORMANCE - Employee feedback

Employee Expectations

a. Does the health facility fully meet your expectations as an employee?

Yes ☐

No ☐

33. If yes, what type of expectations below are being met?

Monetary in nature ☐

non-monetary in nature ☐

34. If no, what type of expectations below are not being met?

Monetary in nature ☐

non-monetary in nature ☐

Communication

35. Does management communicate any changes in the health system to its staff members?

Yes ☐

No ☐

36. If yes, is the communication done timely?

Yes ☐

No ☐

37. If yes, is the communication effective?

Yes ☐

No ☐

38. Have you ever experienced communication breakdowns from fellow health workers at this hospital?

Yes ☐

No ☐

39. If yes, how often does communication breakdown occur?

☐ Daily ☐ Weekly ☐ Bi-weekly ☐ Monthly ☐ Other (Specify):

40. Does management give response to concerns regarding healthcare at the hospital? (Tick one)

Yes always	Not always	No

41. How quick is management at responding to any concerns from health workers and other stakeholders apart from patients? *(Select one)*

Within one month	After one month has passed	No Response

42. How quick is management at responding to concerns or feedback from patients regarding healthcare at the hospital? *(Select one)*

Within one month	After one month has passed	No Response

Performance Management

43. Is there any type of performance management tool that is used?

Yes ☐ No ☐

44. If YES, do you understand the performance management tool that is used?

Yes ☐ No ☐

Health Workforce

45. In your opinion, do you think the hospital has enough medical workers to meet the demand for healthcare within the shortest possible time?

Yes ☐ No ☐

Training and personal development

46. Have you participated in any of the training programmes organized by either the hospital management or the Ministry of Health?

Yes ☐ No ☐

47. Do you have any personal development goals about your field of study?

Yes ☐ No ☐

48. Do you have any personal development goals about your line of work?

Yes ☐ No ☐

Style of Management

49. Indicate in your opinion on the type of management style at this hospital.

	Strongly agree 1	Agree 2	Unsure 3	Disagree 4	Strongly Disagree 5
Autocratic					
Democratic					

Laissez-faire					
Transformational					

SECTION D: Additional Information

50. The Ministry of Health recently launched the 2022 – 2026 National Health Strategic Plan, are you aware of the following regarding the strategic plan?

	YES	NO
The vision		
Mission		
Overall goal		
The health sector's principles and values		
National health priority areas		

51. If YES, how well do you understand your selections above?

- 1) Fully understand.
- 2) Partially understand.
- 3) Not applicable

	Fully understand	Partially understand	Not applicable
The vision			
Mission			
Overall goal			
The health sector's principles and values			
National health priority areas			

SCHOOL OF POST-GRADUATE STUDIES



**TOPIC: THE EFFECT OF MANAGEMENT PRACTICES ON QUALITY
HEALTHCARE IN LEVEL ONE HOSPITALS IN LUSAKA DISTRICT, ZAMBIA**

QUESTIONNAIRE FOR THE HOSPITAL ADMINISTRATORS

SECTION A: INTRODUCTORY QUESTIONS

52. What is your gender?

Male ☐ Female ☐

53. What is your Age group?

☐ 1 – 10 ☐ 11 – 20 ☐ 21 – 30 ☐ 31 – 40 ☐ 41 – 50 ☐ 51 and Above

54. How long have you worked at this hospital?

☐ Within last 1 year ☐ Within the past 3 years ☐ Within the past 6 years ☐ Within 10 years
☐ Over 10 years

55. What category of health worker do you fall under at this hospital?

- i. ☐ Medical Doctor
Field of Specialization:
- j. ☐ Clinical Officer
Field of Specialization:
- k. ☐ Nurse
Field of Specialization:
- l. ☐ Pharmacist
Field of Specialization:
- m. ☐ General worker
Field of Specialization:
- n. ☐ Other:
Field of Specialization:

SECTION B: WORK CULTURE

56. Indicate using a Scale of 1 to 5 to provide your opinion on whether the work culture at the hospital promotes the following. 1 is a symbol for Strongly agree, 2 is a symbol for agree, 3 is a symbol for Unsure, 4 is a symbol for Disagree, and 5 is a symbol for Strongly disagree.

	Strongly agree 1	Agree 2	Unsure 3	Disagree 4	Strongly Disagree 5
Emphasizes collaboration across teams and a horizontal structure					

Allows individuals to share ideas and encourages to take risks					
Focuses on financial success and how each employee contributes to revenue.					
Emphasizes career paths and provides clear managerial processes.					

SECTION C: EFFICIENCY

Health workers

57. In your opinion, do you think the hospital has enough medical workers to meet the demand for healthcare within the shortest possible time?

Yes ☐ No ☐

58. Does the hospital have a timetable showing when a health worker is supposed to work?

Yes ☐ No ☐

59. If yes, how often is the timetable revised?

☐ Daily ☐ Weekly ☐ Bi-weekly ☐ Monthly ☐ Other (Specify):

60. Is the work schedule (timetable) made available to every health worker?

Yes ☐ No ☐

61. Do all health workers report for work during their working shifts?

Yes ☐ No ☐

62. If NO, how many times on average does one health worker miss work in a week?

Once ☐ Twice ☐ Three Times ☐ Four Times ☐ One week ☐

63. When an in-service health worker misses work, is someone assigned to cover up the colleague?

Yes ☐ No ☐

64. If yes, is the person covering up also an in-service health worker?

Yes ☐ No ☐

65. Does the hospital have health workers working as volunteers?

Yes ☐ No ☐

66. If YES, are the volunteers included on any work timetable prepared by the hospital?

Yes ☐ No ☐

Availability of equipment, and medical supplies.

67. Does the hospital have all kinds of medical equipment needed to operate and carry out any type of treatment or procedure?

Yes ☐ No ☐

68. Does the hospital have medical supplies all the time?

Yes ☐ No ☐

69. Does the hospital have all the necessary equipment in the Laboratory to conduct any type of medical tests?

Yes ☐ No ☐

Availability of medicine

70. Does medicine in the hospital pharmacy run out of stock?

Yes ☐ No ☐

71. If yes, how long does it take to restock a particular medicine that is out of stock?

Within a week ☐ a month ☐ within two ☐ hths ☐ After two m ☐ s ☐

Feedback

72. How quick is management at responding to any concerns from health workers and other stakeholders apart from patients? (*Select one*)

Within one month	After one month	No Response is given
☐	☐	☐

73. How quick is management at responding to concerns or feedback from patients regarding healthcare at the hospital? (*Select one*)

Within one month	After one month	No Response is given
☐	☐	☐

SECTION D : ADDITIONAL INFORMATION**Patient management/Attendance system**

74. Does the hospital use any form of patient management/attendance system during operating hours?

Yes ☐ No ☐

75. If yes, is the patient management/attendance system manual or automated?

Yes ☐ No ☐

Performance Management

76. Is there any type of performance management tool that is used?

Yes ☐ No ☐

77. If YES, do members of staff understand the performance management tool that is used?

Yes ☐ No ☐

Hospital Operating Time

78. Does the health facility operate for 7 days in a week?

Yes ☐ No ☐

79. On the days the health facility is open to the public, does it operate for 24 hours?

Yes ☐ No ☐

80. Are there training programmes for health workers in place?

Yes ☐ No ☐

National Health Strategic Plan

81. The Ministry of Health recently launched the 2022 – 2026 National Health Strategic Plan, are you aware of the following regarding the strategic plan?

	YES	NO
The Vision		
Mission		
Overall Goal		
The health sector's principles and values		
National health priority areas		

82. If YES, how well do you understand your selections above?

1. Fully understand.
2. Partially understand.
3. Not applicable

	Fully understand	Partially understand	Not applicable
The vision			
Mission			
Overall goal			
The health sector's principles and values			

National health priority areas			
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