



Thesis for Masters in Marketing (BUS5000W)

A holistic investigation into healthcare service quality using a multi-stakeholder approach:

The case of Parirenyatwa Hospital.

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Abstract

Service quality is a matter of concern for everyone. As such, understanding the differences in perceptions about service quality provision becomes pertinent, especially under the conditions of the COVID-19 pandemic. One of the questions at stake is whether patients' perceptions should be given equal weight with those of healthcare practitioners, given that patients may not be able to comprehend the technical aspects of healthcare service quality. This study explored the perspectives of both parties in healthcare service delivery, in a multispecialty hospital setting of the Parirenyatwa Group of Hospitals. A cross-sectional research design, encompassing the collection of quantitative data using a questionnaire, was used. Convenience sampling was used to select participants to complete the online questionnaire. The respondents (patients and healthcare practitioners) received a pop-up message prompting them to click and complete the online questionnaire on Qualtrics. The results show that the perspectives of healthcare practitioners and patients differed on four of the five dimensions of the HEALTHQUAL scale, namely, efficiency of healthcare service, improvement of care service, tangible evidence, and safety. The improvement of care and efficiency of healthcare service dimensions both had a large effect size, whilst the tangible and safety dimensions both had a medium effect size. This study was a novel attempt to simultaneously assess healthcare service quality from the perspectives of both patients and healthcare practitioners who are directly involved in the treatment of patients. The research, therefore, provided a holistic view of healthcare service quality in a particular context.

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CHAPTER ONE: INTRODUCTION AND BACKGROUND

1.1 Introduction

Quality has become an increasingly predominant part of our lives as people are constantly looking for quality products and services (Mosadeghrad, 2013). The concept of quality has, however, been one of the most debated subjects on services because of a lack of consensus on how to measure it (De Keyser & Lariviere, 2014).

Service quality is a construct with two dimensions, namely, technical quality, which includes the outcome of the production process, and functional quality, which refers to the way technical quality is transferred to the user (Grönroos, 1984). For years, research on service quality has been focused on the SERVQUAL instrument (Parasuraman, Zeithaml & Berry 1985, 1988). Although commonly cited in the literature, several authors have critiqued the instrument as it focuses mainly on the service delivery process but omits the service encounter outcomes (De Keyser & Lariviere, 2014; Mangold & Babakus 1991). Resultantly, several authors have tried to identify different service quality dimensions (Kang, 2006; Kang & James, 2004). For example, Lee (2017) propounded the HEALTHQUAL model. This model comprises five dimensions, namely, tangible evidence, efficiency of healthcare service quality, safety, improvement of care service, and empathy (Lee & Kim, 2017), and this study was premised on this model.

The core of healthcare service delivery, especially hospital service, encompasses the welfare of human beings and as such, it is important to carry out research in this area (Tangsoc & Bautista 2016). However, healthcare's complexity and multi-dimensionality make research exploring healthcare quality methodically difficult as there are many participants involved in healthcare delivery, each having their own interests and concerns (Mosadeghrad, 2013). Quality assessment therefore cannot be carried out by one stakeholder, either a healthcare practitioner or patient. A multi-perspective approach that integrates the perceptions of all key stakeholders becomes crucial (Mosadeghrad, 2013).

Given the acknowledgement of the importance of continuously upholding and improving healthcare service quality, research has been carried out on healthcare service quality despite the challenges. However, studies on healthcare service quality and its measurement have been conducted primarily from the patient's perspective, overlooking the healthcare practitioner's

perspective (Upadhyai, Jain, Roy & Pant, 2019, 2020). Ali, Basu, and Ware (2018) also put forward that whilst numerous studies have been conducted on healthcare services, very few studies have performed an analysis of patients' perspectives and healthcare practitioners' perspectives of healthcare service quality. Previous studies can therefore be deemed too narrow, overemphasising the quality of healthcare only as far as the patients' viewpoints are concerned whilst ignoring the viewpoints of the healthcare practitioners (Endeshaw, 2019). It is for this reason that this study analysed the perspectives of both stakeholders, the patients, and the healthcare practitioners.

An effective analysis of healthcare service quality requires an approach that encompasses the viewpoints of both patients and healthcare practitioners (Mosadeghrad, 2013). Overlooking healthcare practitioners who are crucial in establishing the hospital's service quality can lead to long-term healthcare challenges for the hospital as unmotivated and dissatisfied healthcare practitioners can gradually decline the overall healthcare service quality of the entire hospital (Tangsoc & Bautista, 2016). As such, having supportive and caring healthcare practitioners is essential for the provision of quality healthcare services in hospitals (Mosadeghrad, 2013). Thus, their perception of hospital service quality is indeed important, given the first-hand insight and involvement in how services can be better improved not only for their patients' sake but also for their ease in the delivery and management of services (Piligrimienė & Buciuniene, 2008).

In seeking to fully understand healthcare service quality, it is vital to examine both patients and healthcare practitioners, and evaluate the healthcare service quality and satisfaction of the service encounter (Upadhyai *et al.*, 2020). A multi-perspective assessment not only addresses the constant inefficiencies of the process that are often perceived by the patients but also evaluates service dimensions from the perspective of the healthcare practitioners as they respond to the needs of their patients (Tangsoc & Bautista, 2016). As such, the paucity of a balanced measure of integrated views of both patients and healthcare practitioners necessitates the analysis of healthcare service quality from a multi-stakeholder perspective that is appropriate for modern healthcare service (Lee, 2016). This study used the HEALTHQUAL scale by Lee (2016) to address this dearth in a holistic healthcare service quality assessment. All five dimensions of the HEALTHCARE scale, which include tangible evidence, efficiency

of healthcare service quality, improvement of care service, safety, and empathy, were used in formulating hypotheses to be tested in the study.

1.2 Problem statement and importance of the study

Despite the large body of literature in the field of healthcare marketing, there is an acute shortage of literature that provides a comprehensive and integrative synthesis of the healthcare marketing literature. Some authors in service marketing opine that to solve healthcare problems in healthcare service quality, there is a need to focus on patient viewpoints about different quality dimensions and act on their comments (Aagja & Garg, 2010; Izadi *et al.*, 2017). This study argues that such a strategy is not adequate as there is a need to double down on the idea of patient centrality by fully embracing patient participation. This will create opportunities for patients to participate in co-creation. These opportunities are essential in fully addressing the gap in the holistic participation of all stakeholders in healthcare delivery. This study, therefore, aimed to address ‘people’ as one of the 7 Ps of the services marketing mix, which plays a part in healthcare service delivery and thus influences healthcare perceptions. As such, the crux of the research problem that this study aimed to address was the absence of a holistic assessment of healthcare service quality by using a multi-stakeholder viewpoint that embraces the perceptions of both healthcare practitioners and patients in the healthcare system.

Tangsoc and Bautista (2016 p.32) posit that “a unified assessment process and instrument can all together consider the needs of each stakeholder and pave the way to find that compromise on how healthcare service dimensions should be in place to cater to the different expectations of everyone.” Such an assessment exposes the shortcomings of a healthcare service system in the eyes of both patients and healthcare practitioners who contribute to and benefit from different aspects of the system (Tangsoc & Bautista, 2016). More so, the high credence attributes that are endemic in healthcare services make it imperative that instruments be developed for public hospitals to measure healthcare service quality from a multi-stakeholder perspective (Upadhyai *et al.*, 2019). This would serve to improve healthcare service quality (Mosadeghrad, 2013).

The need for a multi-stakeholder perspective was also necessitated by the fact that the healthcare service quality construct and its dimensions have been done from the patient's viewpoint and the healthcare practitioner's perspective has not been taken into consideration

(Upadhyai *et al.*, 2019). This is compounded by the unique characteristic of healthcare service quality, that of intangibility, which makes the healthcare service quality reliant on the patients' and healthcare practitioners' interactions (Mosadeghrad, 2013). The above literature shows that indeed the viewpoints of both the patients and healthcare practitioners need to be taken into consideration when identifying the key healthcare dimensions that would be used to assess healthcare service quality (Endeshaw, 2019).

This research used the HEALTHQUAL scale by Lee & Kim (2017) to investigate the existence of differences in healthcare perceptions at Parirenyatwa Group of Hospitals (PGHs) in Zimbabwe. PGHs is a group of government-owned hospitals. This group was selected because most people in developing countries rely on public hospitals, which provide relatively cheaper healthcare services (Aagja & Garg, 2010). Additionally, PGHs consist of a cluster of hospitals with different specialities. This sought to address the limitation of previous research by Lee (2016) which only used one hospital for data collection thus making it difficult to generalise study results. Moreover, the study by Lee and Kim (2017) was conducted in a hospital in Seoul, the capital city of South Korea. As such, it became necessary to conduct the study in a developing country to investigate if it can be replicated in a different setting. This helped to address the notion that most studies originate from developed countries in which perceptions and economic contexts may be incongruent with those of developing countries (Endeshaw, 2019).

Healthcare practitioners, who comprise nurses and doctors, are directly involved in the treatment of patients in hospitals. As such, they are better informed about healthcare service quality that impacts patients. Hence including the viewpoint of practitioners inevitably helps to close the gap of the difference in the perceptions of healthcare service quality between healthcare practitioners and patients as both views are considered (Al-Damen, 2017). Healthcare practitioners often rely on the technical aspects of quality, which includes the professional work content within a given area (Mosadeghrad, 2013), and patients focus more on functional aspects of healthcare service quality, which is the actual manner and circumstances of how service is delivered (Ali, Basu & Ware, 2018). As a result, when devising strategies that ensure there is an optimum level of healthcare service, healthcare marketers are confronted with a situation whereby patients lack access to medically sound information that would enable them to rationally weigh the benefits and drawbacks of medical procedures (Kay,

2017). This is mostly due to the inability of patients to evaluate technical aspects of healthcare service quality (Ali, Basu & Ware, 2018). Therefore, it is pertinent to analyse healthcare challenges from both the patient's and the healthcare practitioner's perspectives as integrated health delivery systems (Kay, 2017).

Ultimately, the principal thrust of this research is on ensuring that hospitals deliver an optimum level of healthcare service not only to their patients but also to healthcare practitioners. Achieving the desirable level of healthcare service quality, however, is complicated by the unique characteristics of healthcare service quality which require both the patients and healthcare practitioners to be present during service provision (Endeshaw, 2019). More so, the unprecedented Coronavirus pandemic conditions make the need for both healthcare practitioners and patients to reach a compromise even more urgent. (Gavin *et al.*, 2020). Since all stakeholders are equally affected by the Coronavirus pandemic, strategies to deal with the pandemic effectively require a holistic approach and wider consultative forums with various stakeholders involved in healthcare delivery - as was the case with this study (Murewanhema & Makurumidze, 2020).

1.3 The HEALTHQUAL model and the research objectives

This research sought to assess the differences in perceptions between healthcare practitioners and patients in terms of the healthcare dimensions of the HEALTHQUAL model propounded by Lee 2016. The HEALTHQUAL model is based on the SERVQUAL model, a well-established service quality model which is widely used to measure service quality (Lee & Kim, 2017). The HEALTHQUAL scale was initially developed to evaluate the hospital care services and results after treatments (Lee, 2016). Lee and Kim (2017) opine that healthcare service quality can be measured according to the researcher's viewpoints of patients and healthcare practitioners. Thus, they posit that the HEALTHQUAL model, through its five dimensions, can be used as an integrated scale to measure healthcare service quality from a multi-stakeholder viewpoint. Healthcare practitioners can use the HEALTHQUAL scale for internal self-evaluation of their services (Lee, 2016) and patients can use the HEALTHQUAL scores in selecting the best healthcare service provider for treating their current medical issues (Lee & Kim, 2017). A comparative analysis of these two sets of evaluations (patients and healthcare practitioners) can provide much insight into how best to improve healthcare quality to respond to patients' needs (Lee, 2015).

To address the earlier mentioned paucity of healthcare service quality research, the objectives of this study were as follows:

- *To determine the differences in the perceptions of the empathy dimension between patients and healthcare practitioners.*
- *To determine the differences in the perceptions of the improvement of care service dimension between patients and healthcare practitioners.*
- *To determine the difference in the perceptions of the tangible evidence dimension between patients and healthcare practitioners.*
- *To determine the difference in the perceptions of the efficiency of healthcare service quality dimension between patients and healthcare practitioners.*
- *To determine the perceptions of the safety dimension between patients and healthcare practitioners.*

1.4 Theoretical framework

This section provides a brief overview of the theoretical framework that was used in this study. Ngulube (2020) posits that theories help to explain reality, which is the subject of any research process. As such, theories need to be relevant to their context to contribute to the production of progressive and transformative knowledge. Ngulube, Mathipa, and Gumbo (2015) note that the development and employment of theoretical and conceptual frameworks are not straightforward, hence the researcher needs to simplify using existing literature. The problem of comprehending theoretical and conceptual frameworks is further complicated by the fact that there is a dearth of accepted language concerning the notions of theoretical and conceptual frameworks (Ngulube, 2018). In this study, the theoretical framework of healthcare service quality was premised on the HEALTHQUAL model. The HEALTHQUAL model is a multi-dimensional quality measurement scale for analysing modern healthcare service quality (Lee, 2016). It constitutes five dimensions of healthcare service quality, namely, the efficiency of healthcare service quality, empathy, safety, improvement of care service, and tangible evidence (Lee & Kim, 2017).

1.4.1 Empathy

Empathy includes the attitude of a healthcare practitioner towards a patient that depicts elements of utmost care and emotions (Ampaw, Chai, Liang & Tsai, 2020; Frempong, 2020). Similarly, Lee and Kim (2017 p.4) define empathy as “an attitude of the provider to better serve patients by actively listening and reflecting patients’ emotions while providing care services.” This includes aspects of how perceptions of healthcare practitioners equal those of patients in need of healthcare service quality (Lee, 2016). The attitude embraces the commitment to understanding and addressing the patient's needs as well as personalised sympathy for patients (Ampaw *et al.*, 2020). Whilst research has shown that healthcare practitioners acknowledge the importance of personal contact with the patient, healthcare practitioners have not been making sure that patients get individualised attention (Lee, 2016). This study endeavoured to establish whether there are differences in the perception of empathy between healthcare practitioners and patients (Lee and Kim, 2017).

1.4.2 Improvements in care services

Improvement of care services, in the context of quality, includes the set of activities, such as communication and efforts to achieve effective treatment and to improve the result of care treatment (Lee & Kim, 2017). “The improvement of care services as a goal of healthcare service includes continuous improvements of care performance for disease treatment and prevention through efforts of medical staff” (Lee, 2016 p.404). Improvement in care services is a pivotal point of entry for strengthening healthcare systems as there are gaps in terms of differences between healthcare practitioners and patients, which can potentially lead to enhanced healthcare service quality (World Health Organisation, 2018). Literature has suggested that when assessing the discrepancies between patients and healthcare practitioners, their perceptions may differ in terms of the care treatment rendered (Lee & Kim, 2017). As such, this study focused on assessing differences in the perception of improvement of care services between healthcare practitioners and patients.

1.4.3 Tangible evidence

Tangible evidence includes the use of advanced medical equipment and the physical environment to provide proper healthcare to patients (Lee & Kim, 2017). The physical atmosphere of the hospital impacts tremendously on patients’ satisfaction and ultimately on the delivery of healthcare services (Ampaw *et al.*, 2020). Thus, the appearance of physical

facilities, equipment, communication materials, and technology provides enough hints about the quality of the service rendered (Ramya, 2019). Previous studies show that skilled and knowledgeable healthcare practitioners may have different perceptions from those of patients, most of whom have little or no technical skills and knowledge of healthcare service quality (Lee, 2016). This study, therefore, sought to establish the difference in perception between healthcare practitioners and patients in terms of the tangible evidence dimension at PGHs.

1.4.4 Efficiency of healthcare service quality

“The quality aspect of efficiency refers to how efficiently the provider makes efforts to utilise medical resources when delivering patient care services for the medical costs associated” (Lee & Kim, 2017 p.4). It includes supporting activities of the hospital’s departments, and improvement programs that provide more convenient healthcare services (Lee, 2016). Improved efficiency leads to savings in healthcare budgets, and money from the savings can be spent on less accessible services, which is important in healthcare institutions with limited budgets to provide care for their patients (Sorato, Asl & Davari, 2020).

Lee (2015) opines that to achieve efficiency, hospitals need to reduce costs, which is only achievable when the difference in perception between healthcare practitioners and patients is addressed, which can potentially lead to enhanced efficiency. The efficiency of healthcare service quality dimension in this study sought to address the existence of efficiency gaps by assessing the difference in perceptions between patients and healthcare practitioners.

1.4.5 Safety

Safety includes the hospitals’ capacity to maintain a comfortable and safe environment for patients and healthcare practitioners (Lee & Kim, 2017). Although patients may have only limited choices in hospitals, healthcare institutions should endeavour to provide healthcare services with modern facilities in a safe environment (Lee, 2016). Safety in healthcare institutions can be achieved by providing a comfortable and safe environment to patients, potential consumers, and healthcare practitioners in the healthcare system (Lee, 2015). Lee, Lee, and Olson (2012) posit that healthcare practitioners can help to create and promote a culture of patient safety by ensuring that they align their perceptions of how best they can provide a safe environment in hospitals with the perceptions of patients in need of healthcare services. This study, therefore, sought to establish the difference in perception between healthcare practitioners and patients in terms of the safety dimension.

1.5 Development of the hypotheses

This study addressed the dearth of holistic healthcare service quality research by formulating the hypotheses below based on the HEALTHQUAL measurement scale, which is based on the type of care service (healthcare practitioner) and the patient (Lee & Kim, 2017).

H1: There is a difference in the perceptions between patients and healthcare practitioners in terms of the empathy dimension.

H2: There is a difference in the perceptions of service quality between patients and healthcare practitioners in terms of the improvement of care services dimension.

H3: There is a difference in the perceptions between patients and healthcare practitioners in terms of the tangible evidence dimension.

H4: There is a difference in the perceptions between patients and healthcare practitioners in terms of the efficiency of healthcare service quality dimension.

H5: There is a difference in the perceptions between patients and healthcare practitioners in terms of the safety dimension.

1.6 Research design and methodology

The section below summarises the research design and methodology chosen to best address the research objectives of this study. These aspects of the study are covered in more depth in Chapter 3.

1.6.1 Research paradigm

For this study, a positivist research paradigm was used, which includes a philosophy of language and logic consistent with an empiricist philosophy of science (Malhotra & Birks, 2017). Consequently, a quantitative research approach was used. Malhotra and Birks (2017 p.150) define the quantitative research approach as “research techniques that seek to quantify data and, typically, apply some form of measurement and statistical analysis”.

1.6.2 Research design

A descriptive cross-sectional design was used for this study. As is required by this research design, the problem statement, theoretical framework, and hypotheses used in this study were clearly defined and structured and data was collected only once (Malhotra & Birks, 2017). The cross-sectional design is by far the most used descriptive design in marketing research

(Creswell, 2014). Cross-sectional designs can either be singular in which one sample of respondents is selected from the target population or multiple cross-sectional designs in which there are two or more samples of respondents. In either case, information from each sample is obtained only once thus giving a snapshot of the population at the given time, unlike in a longitudinal design where data is collected and analysed over a long period (Malhotra & Birks, 2006).

1.6.3 Data collection

An online questionnaire based on the HEALTHQUAL scale was used to collect data from both patients and healthcare practitioners at PGHs. Malhotra *et al.* (2017 p.374) define a questionnaire as “a structured technique for data collection consisting of a series of questions, written or verbal, that a participant answers.”

1.6.4 Target population

A population includes a group of individuals with some common defining attributes that the researcher can identify (Creswell, 2014). The target population for this study consisted of nurses, doctors, and patients at PGHs from March 14 to April 15, 2021.

1.6.5 Sample size

The research did not include the whole population due to time constraints and resource limitations. As such, the sample size was calculated using the n in Slovin's Formula as follows: $n = N / (1 + Ne^2)$, where n =sample size, N =population size, and e =the margin of error (Sarkaw, 2019). The population (N) for this study was 5530 (Appendix 3) and the desired margin of error (e) is 0.05, given a 95% confidence level. Therefore, a sample size (n) of 373 ($5530 / (1 + 5530 * 0.05^2)$) was required. Thus, the sample size for this study was 373, which comprised both healthcare practitioners and patients.

1.6.6 Sampling

Sampling includes the selection of research participants from a population and involves decisions about which people, settings, events, behaviour, and social process to include in the sample (Marutha & Ngulube, 2012). The researcher used convenience sampling, a non-probability sampling method. Creswell (2014 p.145) defines non-probability sampling as a data collection method in which “the researcher selects individuals because they are available, convenient, and represent some characteristic the investigator seeks to study.” The sample, in

this case, included healthcare practitioners and patients who were working or received treatment at PGHs between 14 March 2021 and 15 April 2021, and whose email addresses were registered with the hospital.

1.7 Scope and organisation of study

This study sought to establish the difference in healthcare service quality between healthcare practitioners and patients using the HEALTHQUAL model. The study comprised five chapters, organised as follows:

Chapter 1 provide the *introduction and background* for this study. In this chapter the introduction, statement of the problem, and research question were presented. The problem statement and importance of the study were highlighted in the significant subsection and the theoretical framework was presented.

Chapter 2 is a *literature review* where literature on service quality, particularly in the healthcare sector was critically presented. Gaps and shortfalls in studies were also highlighted.

Chapter 3 presents the *research design and methodology* which were chosen to carry out this study well.

Chapter 4 contains the *presentation, analysis, and interpretation* of all the collected data. This data was processed using Statistical Package for the Social Sciences (SPSS) version 28.

Chapter 5 presents the study *conclusions and recommendations*. In drawing up the conclusions, findings from this study were compared to findings in previous studies to give meaningful insights into the difference in perceptions between healthcare practitioners and patients. The value of the research and recommendations were also presented in this chapter, whilst also acknowledging the limitations of the study.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

Chapter two focuses on extant literature in the field of social marketing services. This chapter also contextualised the definitions of healthcare service for the current study. After an in-depth analysis of various definitions of healthcare service quality, a comprehensive definition of healthcare service quality is presented. Literature on healthcare service quality was also reviewed to identify gaps that needed to be addressed from previous studies on healthcare service quality.

2.2 Service Quality

Mosadeghrad (2014) opines that a competitive advantage can be sustained through the use of quality as a strategic differentiator tool. Furthermore, attending to structures and processes to improve quality leads to a reduction of waste, rework, and delays, as well as lower costs, higher market share, and a positive company image (Mosadeghrad, 2014). It is therefore imperative to define, measure, and improve service quality. Service quality, however, is difficult to define and measure due to its distinctive nature (Mosadeghrad, 2013). The distinct service characteristics, which include heterogeneity, intangibility, and simultaneity make it difficult to define and measure healthcare service quality (Ladhari, 2009). A different approach to defining quality is, therefore, needed in the service sector to accommodate all these characteristics (Alzaydi *et al.*, 2018). Such a broader perspective was offered by Garvin (1984) who recognised that quality can be interpreted in a variety of ways, according to the industry or service in question, and the interests of the stakeholders. Therefore, the unique features of service which include heterogeneity, intangibility, and simultaneity were evaluated in great depth.

2.2.1 The nature and characteristics of service quality

A service is an act of benefit or performance that one person offers to another, that is essentially intangible and does not result in ownership. This includes healthcare, which is a people-processing service in which benefits are difficult to evaluate (Upadhyai *et al.*, 2020). As such, services are strongly linked to quality and are assessed on various parameters (Upadhyai *et al.*, 2019). In addition, the unique features of heterogeneity of services and simultaneity of production and consumption which implies that services are generated and consumed within

the same time frame (Adedeji, 2014), reflect the interdependent links between the patient and healthcare practitioner (Haddad, Mssassi & Makkaoui, 2020). Consequently, the separation of healthcare practitioners and patients during production becomes difficult (Maiyaki, Halliru & Yakubu, 2018). This implies that ensuring an optimum healthcare quality that satisfies patients and ensures continued patronage of the healthcare institution needs to be considered by healthcare managers. The simultaneity of production and consumption, intangibility, and heterogeneity characteristics make it imperative that both the service provider (healthcare practitioner) and the user (patient) be present at the production of the service.

The heterogeneity or inconsistency in service quality can occur because different healthcare practitioners (doctors and nurses) deliver the service to patients with varying needs (Mosadeghrad, 2014). Hence, there is variability in terms of consistency, from one service transaction to another (Haddad *et al.*, 2020). Thus, quality standards are more difficult to establish in healthcare service operations.

2.2.2 Measuring service quality

Quality in service industries cannot be objectively measured as it can with manufactured goods as the unique features of services make it difficult for service quality to be measured objectively (Alzaydi *et al.*, 2018). Measuring quality in service industries, therefore, remains a relatively elusive and abstract concept fraught with many complexities (Akbaba, 2006; Khan & Shaikh, 2011; Alzaydi *et al.*, 2018).

Producing tangible goods allows for quantitative measures of quality since they can be sampled and tested for quality throughout the production process and in later use (Mosadeghrad, 2014). Service quality, on the other hand, particularly healthcare service quality, depends on intangible service processes and customer and service-provider interactions (Maiyaki *et al.*, 2018). Parasuraman *et al.* (1988) measured service quality in terms of the gap, which is the difference between customers' expectations and their perceptions of the actual service provided. They developed the SERVQUAL scale, a survey instrument that is intended to measure the service quality in any kind of service organisation based on five dimensions, namely: reliability, tangible evidence, assurance, responsiveness, and empathy (Hartwig & Billert, 2018).

2.3 Healthcare service quality

The healthcare service can be divided into two quality dimensions, namely: technical quality (internal demand: healthcare practitioners) and functional quality (external demand: patients) (Yesilada & Direktor, 2010). While technical quality in the healthcare industry is defined primarily based on the technical accuracy of the medical procedures and diagnoses, functional quality refers to how the healthcare service quality is delivered to the patients, such as tangible evidence and empathy (Yesilada & Direktor, 2010).

Ali, Basu, and Ware (2018) posit that whilst technical quality and functional quality are both important for defining healthcare service quality, patients only understand the functional aspects of service quality. Therefore, a multi-stakeholder definition that integrates the viewpoints of all stakeholders by having an inclusive definition of healthcare service quality, common to all stakeholders becomes necessary. Such a definition can help to bridge the misunderstanding between the two main stakeholders of healthcare quality, the healthcare practitioners, whose focus is more on technical quality, and patients whose preoccupation is more on functional quality (Endeshaw, 2019).

Mosadeghrad (2014 p.3) states that “healthcare service is an intangible product and cannot physically be touched, felt, viewed, counted, or measured like manufactured goods.” This feature primarily differentiates a healthcare service from a product, and it poses a unique challenge to those engaged in marketing a service as they need to attach tangible attributes to an otherwise intangible offering (Maiyaki *et al.*, 2018). As a result of this intangibility feature, defining healthcare service quality becomes a challenge as definitions vary depending on whose perspective is taken and within which context it is considered. In addition, Vargo and Akaka (2013 p.207) assert that services are ecosystems with “relatively self-contained, self-adjusting systems of resource-integrating actors connected by shared institutional logics and mutual value creation through service exchange.” As such, healthcare services also need to be analysed as interaction and value co-creation among multiple service systems, which include patients and healthcare practitioners. Based on the definitions of healthcare service and service ecosystems (Mosadeghrad, 2014; Vargo & Akaka, 2013), healthcare service quality in the context of this study was therefore defined as the efficient and timely response to patients’ needs by healthcare practitioners (doctors and nurses) in a collaborative manner that ensures the existence of a healthcare ecosystem in which both parties equally contribute.

2.3.1 Benefits of healthcare service quality

The analyses of healthcare service quality are crucial due to the relationship between healthcare service quality and health outcomes. Mosadeghrad (2014) asserts that healthcare service quality is related to healthcare outcomes as he points out that the quality healthcare service goal is to increase the likelihood of achieving desired health outcomes for the patient. Leebov *et al.* (2003) also share the same view that healthcare service quality is defined according to the healthcare outcome. Lee (2013) argues that healthcare service quality mandates that healthcare practitioners do things right the first time around, make continuous improvements, obtain the best possible clinical outcome, satisfy patients, retain healthcare practitioners, and maintain sound financial performance. This is essential as it enables healthcare institutions to achieve the simultaneous improvement of patient experience and health status while reducing the cost of healthcare (Stokes, 2020).

Thus, healthcare service quality, through continuous improvement initiatives results in the improvement of the individual experience of care (including quality and satisfaction), an improvement in population health, and a reduction in per capita cost of care for populations (Merry, Majumder, Brown & Dobrow, 2017). This is achievable when patients and healthcare practitioners work in unison to achieve optimum healthcare quality. This depicts that satisfaction of patients' needs and healthcare service quality remain two distinct yet strongly related constructs (Zarei *et al.*, 2012). While healthcare service quality does not automatically translate into satisfaction, satisfaction cannot be achieved without healthcare service quality. Therefore, healthcare service quality emanates from the healthcare practitioner's effort in satisfying patients through adherence to the patient's needs. This means that both patients and healthcare practitioners' points of view need to be considered to achieve optimal healthcare service quality outcomes (Piligrimienė & Buciuniene, 2011).

2.3.2 Different perspectives on healthcare service quality

Whilst achieving an optimal level of healthcare service quality is crucial, it is pertinent to note that each stakeholder group in healthcare service quality emphasises different healthcare aspects, which, however, does not mean that they are not concerned about other care aspects (Mosadeghrad, 2013). Most patients tend to evaluate healthcare service quality according to the responsiveness to their specific needs (Piligrimienė & Buciuniene, 2008). As such, most patients define healthcare service quality in terms of the efforts of healthcare practitioners in

doing everything possible for a patient. Talib, Azam, and Rahman (2015) posit that serious deficiencies are likely to occur if there is any attempt to achieve quality without fully understanding patients' requirements and expectations. To remain patient-focused, stakeholders in the healthcare industry, particularly healthcare practitioners, need to begin by defining patients' problems, needs, and priorities.

Focusing solely on patients' needs, however, is not enough, as healthcare practitioners in the service system also establish hospital service quality and correspondingly give way to significant service attributes that will strengthen service quality assessments in healthcare (Tangsoc & Baustista, 2016). Their perception of healthcare service quality is important given the first-hand insight into how services can be better improved not only for their patients' sake but also for their ease in delivery and management of healthcare services (Tangsoc & Baustista, 2016).

2.3.3 Healthcare service ecosystem

Gambarov *et al.* (2017) posit that healthcare practitioners should not consider healthcare as an isolated system but rather as an ecosystem where the involved parties (patients and healthcare practitioners) can survive together by co-creating value and integrating the respective resources. The concept of value co-creation articulates the idea that value is created through interaction and mutually beneficial relationships (between patients and healthcare practitioners), within and among service systems, as they integrate and apply resources for and with each other, and exchange services (Akaka, Vargo & Lusch, 2013). Thus, stakeholders in a hospital setup can interact to exchange resources to create value for themselves and others through the provision of mutually beneficial healthcare services.

2.3.4 Healthcare service quality in different settings

Value creation through interaction and mutually beneficial relations between healthcare practitioners and patients is increasingly getting traction in some healthcare settings as evidenced by the adoption of quality improvement practices that benefit all stakeholders (Shabbir, Malik & Janjua, 2017). This is evidenced by the shift from traditional healthcare practices aimed at delivering care to patients, to increasingly dynamic institutions which actively involve patients in building patient-centered approaches to healthcare solutions (Gambarov *et al.*, 2017). This shows the change from viewing value as something created by a single participator in relative isolation, toward seeing value as a co-creative endeavour, with

all participants (healthcare practitioners and patients) playing an essential role (Ng & Vargo, 2018).

2.3.5 Needs for a holistic view of healthcare service quality

Having balanced perspectives that elicit patient-centered care and that healthcare practitioners perceive as meaningful and rewarding patient focus is essential (Vogus *et al.*, 2020). Failure to have a balanced view that also focuses on the patients can be costly as it can result in the inability to retain patients, therefore leading to calls for more expenditures to attract new patients, who would have otherwise gone to healthcare institutions that they perceive to be more patient-centered (Kessler & Mylod, 2011). Thus, ensuring a sustained healthcare delivery through the provision of better service quality, driven by the balanced support of healthcare practitioners is essential as these healthcare practitioners reciprocate the favour by ensuring that patients are also supported, which ultimately leads to improved service quality (Fatima *et al.*, 2018). Over time, the low perceptions of patients compared to those of healthcare practitioners may subsequently improve. This may result in improved healthcare service quality which can motivate these healthcare practitioners (Fatima *et al.*, 2018) whose needs are equally taken into consideration when working towards enhancing patients' needs (Vogus *et al.*, 2020). However, neglecting to equally consider the perspectives of both stakeholders, especially by haphazardly increasing workloads for healthcare practitioners (Vogus *et al.*, 2020), may lead to dissatisfaction for both patients and providers. It is thus pertinent for healthcare practitioners to spend time with patients to better understand them (NASEM, 2019), which can help both stakeholders have a balanced view of the healthcare service quality that the management of hospitals can use to enhance healthcare service quality and ultimately, satisfaction for all the stakeholders.

2.4 Development of the theoretical framework

A healthcare service quality model that is based on integrated views of patients, and healthcare practitioners, can be more objective (Lee, 2016). This study was therefore premised on the HEALTHQUAL model, a multidimensional quality measurement model that incorporates patients' and healthcare practitioners' perceptions of their service quality experience at healthcare institutions. It is, however, important, to note that one of the first service quality models used to measure service quality was the SERVQUAL model by Parasuraman *et al.* (1988) which was intended to measure the service quality in any kind of service, including

the healthcare sector (Alzaydi *et al.*, 2018). Although the SERVQUAL model by Parasuraman *et al.* (1988) has been widely used in service fields to measure service quality, many studies also pointed out its limitations (Iacobucci *et al.*, 1994; Kahneman & Miller 1986). For example, as the customer's expectations are usually high, the difference between expected and perceived performance is often difficult to obtain (Babakus & Boller 1992; Parasuraman, Berry & Zeithaml, 1991). Also, the performance measurement is difficult to derive because expectations are realised simultaneously with consumption (Iacobucci *et al.*, 1994; Kahneman & Miller 1986).

Indeed, a major concern with the use of SERVQUAL is whether expectations and perceptions should be measured separately, before and after the experience of the service, or whether it is acceptable to collect both sets of data at a single administration (Alzaydi *et al.*, 2018). The SERVPERF model was introduced to supplement the limitations of performance measurement (Cronin and Taylor 1992). The SERVPERF model evaluates processes of service delivery, which was pointed out as another limitation of the SERVQUAL model, as it does not include results after service is provided (Buttle, 1996). Evans and Lindsay (2009) elaborated on the difficulty of using the appropriate measurements because healthcare service quality items are modified based on the researcher's viewpoints, and the dimensions of quality used are also different. Considering the limitations of previous models, Lee (2016) developed HEALTHQUAL which is based on the SERVQUAL model and the six dimensions by the Institute of Medicine (IOM) (2001) which include safety, effectiveness, patient orientation, timeliness, efficiency, and equity.

2.5 Literature on healthcare service quality

Numerous studies are available on healthcare, focusing on various healthcare aspects and related issues such as service quality dimensions and service quality models (Talib *et al.*, 2015). Some of studies have been undertaken to measure the perceptions of patients/beneficiaries of hospital services regarding service quality (Sohail, 2003). Healthcare delivery, however, still faces increasing pressure to move from a healthcare practitioner-centered approach to becoming more patient-centered (Vogus *et al.*, 2020). This change toward patient-centered care demands a holistic approach to designing new healthcare products and services (Pereno & Erikson, 2020). There are, however, gaps that preclude healthcare institutions, particularly hospitals from moving towards this patient-centered approach. As such, there is a need to

unravel the various gaps in the literature, to achieve a comprehensive understanding of healthcare service quality (Vogus *et al.*, 2020).

Despite the urgent need to seriously consider patients' perspectives when making decisions, studies have shown that most healthcare providers, especially those with the least patient contact, disregard patients' perspectives as they are out of touch with patients' priorities (Abuosi, 2015). A study by Miranda *et al.* (2010) found that healthcare providers' perceptions of the services provided in the health centers were quite distant from the views of patients, with the healthcare providers being too optimistic about the services they provide. Roohi *et al.* (2011) therefore opine that research studies involving healthcare providers and patients should be interpreted with caution, considering that some of the healthcare providers' members, such as accounts and general administration staff, are non-clinical and have less contact with patients, which often results in a wider gap between their perceptions and patients' expectations of quality care. Additionally, those in management often underestimate patients' expectations (Abuosi, 2015). Similarly, findings by Piligrimiene and Buciuniene (2011) suggest that healthcare providers are more concerned about the healthcare center infrastructure, regarded as the weakest factor of their organisation, fighting with the administration to improve it, and therefore overestimate its real situation and underestimate the rest of the elements that have to do with the center staff and other efficiency measures. Thus, mistakenly, healthcare providers focus on tangible aspects, such as infrastructure, where its influence is minimal, rather than focusing on other factors, such as efficiency and service improvement, where their decisions may have greater effectiveness (Piligrimienė & Buciuniene, 2008).

To try and rectify this, Aagja and Garg (2010) propounded the PubHosQual model which measured service quality in hospitals and developed five dimensions which include admission, medical service, overall service, discharge, and social responsibility. This study, however, focused solely on the patients' perspectives (Endeshaw, 2019). Subsequent studies by Deshwal *et al.* (2014) and Itumalla *et al.* (2014) also had the same shortcomings as they only focused on the patient's perspectives. This shift towards patients' perspectives is problematic as it is affected by a myriad of challenges which are exacerbated by challenges around how to appropriately engage patients (Nickel *et al.*, 2018). Furthermore, healthcare practitioners are expected at times to deliver patient-centered care without being provided with the necessary resources (Vogus *et al.*, 2020), leading to their reduced well-being (Bodenheimer and Sinsky,

2004), and high burnout levels reported by significant proportions of physicians and nurses (Adriaenssens, De Gucht & Maes, 2015). Achieving this patient-centered care, which requires healthcare workers to work to their full abilities in delivering care to patients, is even more challenging to implement in a pandemic such as COVID-19 as healthcare workers are forced to work with scant resources (Murewanhema & Makurumidze, 2020). Thus, the implementation of patient-centered care is fraught with challenges that can potentially affect healthcare service quality (Vogus *et al.*, 2020). As such, there is a need to identify the service quality dimensions from the service practitioner’s side (Upadhyai *et al.*, 2019).

Indeed, current studies on healthcare service quality have not managed to holistically incorporate the viewpoints of all stakeholders, and fall into one of the three identified literature gaps, namely, the holistic gap, the healthcare practitioners’ gap, and the patient-centeredness gap. There is recognition that whilst a multi-stakeholder analysis, which encompasses the viewpoints of all stakeholders is essential, virtually all the studies only went as far as simply mentioning the importance of a multi-stakeholder approach without conducting an empirical study (Endeshaw, 2019; Mosadeghrad, 2013; Singh, 2019). This results in the holistic gap as the views of both healthcare practitioners and patients are not fully and comprehensively investigated and discussed. Studies by prominent authors in healthcare literature (Aagja & Garg, 2010; Deshwal, Ranjan & Mittal, 2014; Itumalla, Acharyulu & Shekhar, 2014; Lee, 2016) focused only on the patients’ perspectives, yet healthcare services require high experience and credence properties (Zeithaml, 2000), as such, they need to be evaluated from the supply side as well, that is the healthcare practitioner (Choi *et al.*, 2000). The overlooking of healthcare practitioners’ perspectives, result in the healthcare practitioners’ gap. These gaps are crucial in comprehensively understanding the differences in perceptions between healthcare practitioners and patients.

Table 1 shows some of the prominent authors of healthcare service quality and is grouped according to the three gaps resulting from areas that still need further research.

Table 1: Literature on healthcare service quality

Study	Objective
Studies confirming the holistic gap	

Guedes & Araujo (2022)	To develop a conceptual model that jointly examines the perception of doctors and patients regarding the quality of services provided by public and private hospitals in Rio de Janeiro. The sample for this study excludes nurses despite their direct involvement in the treatment of patients.
Abuosi (2015)	To find out whether there are any significant gaps in perceptions of quality of care between patients and healthcare providers in Ghana's hospitals. The respondents for this study's sample constituted hospital managers who are not directly involved in the treatment of patients.
Studies with a patient-centeredness gap	
AL-Mugheed, Bayraktar, Al- Bsheish, AlSyouf, Jarrar, AlBaker & Aldhmadi (2022)	To investigate patient safety attitudes among doctors and nurses and explore associations between workload, adverse events, and experience with patient safety attitudes. Participants for this study included doctors and nurses but did not include the viewpoints of patients which are crucial in having a holistic perspective.
Pilgrimienė & Buciuniene (2011)	To reveal the similarities and differences between the opinions of managers and professionals on what is important when talking about healthcare service quality. Emphasis was put on two groups within healthcare organisations: managers and healthcare professionals but did not include the viewpoints of patients.
Studies with a healthcare practitioners' gap	
Lee (2016)	To examine the measurement dimensions of healthcare service quality proposed in previous studies, quality awards, and service quality accreditation and/or certification systems in the international community. Only patients and members of the public were included as respondents, but the perspective of healthcare practitioners was completely ignored.

<p>Itumalla, Acharyulu, & Shekhar (2014)</p>	<p>To identify the critical factors of inpatient service quality and develop the HospitalQual theoretical model to measure inpatient service quality. The HospitalQual theoretical model was developed using a sample of 126 patients. Healthcare practitioners were however not included as respondents.</p>
<p>Deshwal <i>et al.</i> (2014)</p>	<p>To identify the service quality dimensions that play an important role in patient satisfaction in campus clinics in Delhi, India, and assess student satisfaction with service, and suggest ways to improve areas of dissatisfaction. Whilst the sample from this study constituted students who used the clinic’s facilities, it did not include healthcare practitioners.</p>
<p>Aagja & Garg (2010)</p>	<p>To develop a scale for measuring perceived service quality for public hospitals from the patient’s perspective at a multi-specialty hospital in India. This study only measured perceived service quality for public hospitals from the patient’s perspective, but it did not consider the viewpoint of the healthcare practitioner.</p>

2.6 The research gap

While healthcare delivery continues to face increasing pressure to move from a healthcare practitioner-centered approach to becoming more patient-centered, many of the actions taken by doctors, nurses, patients, and healthcare managers fail to achieve that aim (Vogus *et al.*, 2020). A patient-centered perspective requires that healthcare institutions holistically consider the views of the patient to understand the patient as a unique human being before forming a diagnosis of the patient’s illness (Eklund *et al.*, 2018). Healthcare practitioners’ perspectives are equally important in coordinating holistic care for patients (Mosadeghrad, 2013). Vogus *et al.* (2020) argue that healthcare providers are expected at times to achieve the highest possible patient care without being provided the necessary resources, which has led to their reduced well-being. In addition, both stakeholders (healthcare practitioners and patients) have different and competing goals which may result in tension on how to offer the best healthcare service (Mosadeghrad, 2013). This research, therefore, explored these differences in perspectives between patients and healthcare practitioners to understand how best to achieve the ultimate goal of patient satisfaction.

2.6.1 Holistic view gap

The holistic view gap as depicted in Table 1 shows that studies by different authors did not conduct a comprehensive analysis of the differences between healthcare practitioners and patients because their studies were too generic, encompassing stakeholders who are not directly involved in the treatment of patients. This is crucial because healthcare practitioners, who include nurses and doctors, are better informed about healthcare service quality that impacts patients and that helps to achieve a balanced viewpoint (Vogus *et al.*, 2020). Hence the inclusion of perspectives of healthcare practitioners (doctors and nurses), who are directly involved in the treatment of patients, inevitably helps to narrow the gap of the difference in the perceptions of healthcare service quality between healthcare practitioners and patients as both views are equally considered (Al-Damen, 2017).

Additionally, many models for measuring the quality of healthcare in developing countries were developed by the Western world and as a result may not necessarily be congruent with healthcare services in developing countries (Endeshaw, 2019). This is because most of the studies on healthcare that were conducted in the developed world have been adopted and implemented on the African continent without any modification, which exacerbates the problem (Gaur *et al.*, 2011). This is aggravated by considerable limits and barriers to their successful implementation in developing countries, which emanates from variations in cultural and economic influences (Endeshaw, 2019). As a result, developing countries in Africa have missed the opportunity to learn from the mistakes made in the developed world as they adopt and implement research from the Western world without testing and modifying it (World Health Organisation, 2009; Endeshaw, 2019).

In order to improve patients' satisfaction and increase their loyalty to the medical service providers, management in African countries should evaluate their healthcare practitioners' performance not only in terms of their technical proficiency but also their ability and willingness to effectively communicate with their patients during interactions (Gaur *et al.*, 2011). To overcome the communication barrier caused by the use of technical terms by healthcare professionals, Jing *et al.* (2020) emphasise the need for healthcare practitioner-patient communication as it has the potential to help ease patient's emotions, facilitate patient's comprehension of medical information and improve in identifying the patient's needs, perceptions, and expectations.

To achieve this cordial relationship between healthcare practitioners and patients, healthcare managers need to invest in training healthcare practitioners to equip them with a high level of interactive and professional communication skills, which enable them to gain a competitive advantage in their target markets (Gaur *et al.*, 2011). To enhance this cordial relationship between healthcare practitioners and patients, healthcare marketing managers need to ensure that trust between patients and healthcare practitioners is developed (Miranda, Chamorro, Murillo & Vega, 2010). Trust can be achieved by managing the tangible aspects of service quality. Highlighting the important affiliations of healthcare practitioners on the clinic's website and posting positive comments left by patients about the healthcare practitioners on the website can help to realise this goal (Miranda *et al.*, 2010). Additionally managing the following areas of healthcare can enhance the perceived healthcare quality: the ease of making an appointment, level of bureaucracy, waiting times before entering the consulting room, speed of complementary tests, complaints resolution, time to focus on each patient, and the health center's timetable (Miranda *et al.*, 2010). In conclusion, quality in healthcare is a production of cooperation between the patient and the healthcare provider in a supportive environment (Mosadeghrad, 2014). To achieve optimum healthcare service quality, incorporating the viewpoints of both patients and healthcare professionals becomes necessary.

2.6.2 Patient-centeredness gap and the healthcare practitioners' gap

In trying to address the holistic gap and include patients' perspectives, some authors have, as shown under the patient-centeredness gap in Table 1, attempted to incorporate the viewpoints of patients. In doing so, healthcare institutions shifted their focus toward a patient-centered care system (Victoor *et al.*, 2012). This is referred to as the Triple Aim of healthcare – better patient experiences, improved population health, and reduced costs (Berwick, Nolan & Whittington, 2008). The Institute of Medicine (IOM) has defined patient-centered care as “providing care that is respectful of and responsive to individual patient preferences, needs, and values” (Institute of Medicine (IOM), 2001 p.6), and as such, is seen as an ethical and tailored approach that produces higher-quality care. Subsequently, many healthcare organisations adopted missions, policies, and practices directed at improving the patient-centeredness of their care.

The Triple Aim has played a key role in accelerating interest in “consumerism,” intending to enable patients to become wholly involved in their healthcare decisions (Victoor *et al.*, 2012).

Consistent with the Triple Aim, two major forces behind consumerism include the desire to control spending on and utilisation of healthcare services and to create a more patient-centered approach to care (Fors, Ulin & Ekman, 2016; Lewandowski, 2020). Although healthcare experts are converging on the technical, administrative, and patient-centeredness concepts that define quality at a high level, patients and healthcare practitioners must reach a common understanding of what defines quality in the daily practice of medicine if quality improvement and value-based purchasing are to work well for all parties (Levine *et al.*, 2012).

A change from a traditional medical model to one where the patient has a voice in their care to work together as a team needs to be embraced by all stakeholders in the healthcare system (Lewandowski, 2020). This is because patients' involvement and cooperation are needed, as they affect the quality of healthcare service and the clinical outcomes that are achieved. The quality of healthcare service and clinical outcomes are further also dependent on the ability of patients to provide information to and cooperate with clinicians (Victoor *et al.*, 2012). Thus, although, there is increasing awareness of patient-centeredness approaches which have a positive impact on adherence to treatment, self-management, and patient satisfaction, there is a paucity of literature on the gap in perception of patient-centered care among patients and healthcare service providers (Bhoomadevi *et al.*, 2019). Conversely, most studies that have incorporated the viewpoints of patients, have completely ignored the perspectives of healthcare practitioners as shown in the healthcare practitioners' centeredness gap in Table 1. As such, virtually all studies of healthcare service quality have not incorporated the viewpoints of healthcare practitioners even though the examination of both parties' evaluation of service quality of the service encounter is necessary for gaining an understanding of the evaluation process (Brown & Swartz, 1989). Evaluating the difference in healthcare service quality from a multi-perspective viewpoint is crucial because it affects the following aspects of healthcare service quality: communication, the ability to make rational choices, trust in healthcare practitioners, and the understanding of technical aspects within healthcare service quality.

2.6.2.1 Communication

Differences in perceptions between healthcare practitioners and patients are important firstly for practising healthcare practitioners, as the traditional approach to treating patients only with medicines will no longer suffice to meet their patients' needs (Gaur *et al.*, 2011). Efforts to include patients' perspectives are gaining support from healthcare practitioners, who are

advocating for patients to take their rightful place at the center of care, whilst also acknowledging the importance of partnership between the care team and patients to improve healthcare and reduce harm (Nickel, Weinberger & Guze 2018). This relationship can be realised through effective and inclusive communication, which leads to the creation, development, and retention of long-term relationships between patients and healthcare practitioners. McColl-Kennedy *et al.* (2017) assert that when patients and healthcare providers listen and communicate with each other, they are likely to develop a shared understanding that may improve future decision-making and the quality of care that patients receive. Thus, communication and cooperation between patients and healthcare practitioners result in a shared understanding that may improve future decision-making and the quality of care patients receive (Bhoomadevi, Ganesh & Panchanatham 2019). As such, management can formally introduce in-service training programs aimed at equipping all healthcare practitioners with the knowledge and interaction skills needed for professional communication with patients, which ultimately helps to improve efficiency and quality of care services (Gaur *et al.*, 2011).

2.6.2.2 Ability to make rational choices

Robertson and Burge (2011) assert that the inclusion of healthcare practitioners' perspectives is important as few patients actively choose their healthcare provider. This is because the degree of choice for some patients is limited (Dixon, Robertson & Bal, 2010) and the available information is not enough or unsuitable to base decisions on (Hibbard, Greene & Daniel, 2010). More so, the difference between the characteristics that patients state as being important and the characteristics they act upon in a real choice situation also makes it pertinent to include the viewpoints of healthcare practitioners (Victoor & Rademarkers, 2012). Consequently, most patients are presumed to be unable and/or unwilling to make a completely rational choice. Instead, choices are based on only some of the healthcare practitioners' perspectives and patients choose a healthcare practitioner that they consider to be good enough (Kooreman & Prast, 2010). Patients however compensate for their inability to assess technical aspects by forming an attitude towards the experiences with people, processes, and the physical environment in which the service is delivered (Upadhyai *et al.*, 2020). As a result, dimensions of the HEALTHQUAL model which include tangible evidence and empathy, are used by patients to assess and evaluate healthcare services. This, therefore, calls for a dyadic approach

to healthcare service quality evaluation rather than measuring service quality from one perspective.

2.6.2.3 Trust in healthcare practitioners

Most patients rely on healthcare practitioners to make informed choices about their health (Robertson & Burge, 2011). It is thus important to note that it is the healthcare practitioners (doctors and nurses) who are responsible for implementing decisions to do with healthcare service quality, as such, their contribution needs to be equally put into consideration. Mosadeghrad (2013) argues that though patient perspectives are important, the healthcare practitioners' perspectives, when combined with the patient's perspective, can provide additional insight into areas where change is needed.

2.6.2.4 Technical aspects

Zarei *et al.* (2012) argue that most patients are often unable to comprehend the technical side of service quality, which is the diagnosis rendered by healthcare practitioners, meaning that the perspectives of healthcare practitioners are also important in formulating attributes of healthcare services (Upadhyai *et al.*, 2019). However, a few of the studies conducted on healthcare service quality included patients' perspectives and managers' perspectives, who are non-clinical, such as accounts and general administration staff (Miranda *et al.*, 2010). Whilst these non-clinical managers may believe that they deliver good service quality, after analysing some set of attributes of that service, the patients may evaluate these attributes differently (Nashrath *et al.*, 2011). Perspectives of these non-clinical managers may distort the views about healthcare service quality provided in their healthcare setting (Abuosi, 2015). As such, this research sought to establish the perceived healthcare service quality using a multi-perspective approach that includes both patients and healthcare practitioners.

After an extensive review of the above literature on healthcare service quality, it is apparent that research on the differences in terms of healthcare practitioners' and patients' perspectives is still scant. In conclusion, the shift to more patient-centered healthcare and the attendant demands placed on organisations, healthcare practitioners, and patients, necessitates analysis, conceptual development, and empirical research that match its complexity (Vogus *et al.*, 2020). Indeed, within that complexity lies a coherence that can drive further empirical work, theory development, and interventions in practice thereby striking a balance between patients' and healthcare practitioners' perspectives.

2.7 Originality/value

Virtually all previous studies on healthcare measurement scales have not incorporated the perspectives of healthcare practitioners or have emphasised the need to focus only on patients' centeredness healthcare system (Upadhyai *et al.*, 2020). This study was a novel attempt to simultaneously capture the perspectives of both healthcare practitioners (doctors and nurses) as well as patients, thus presenting a holistic view of healthcare service quality.

The patients' centeredness approach which disregards the perspectives and needs of healthcare practitioners is not adequate in addressing the healthcare service quality challenges in hospitals (Endeshaw, 2019; Victoor & Rademakers, 2012; Vogus *et al.*, 2020). Thus, there is a need to look deeper into the dyadic exchanges taking place between the participants of the healthcare delivery process rather than from a single stakeholder's perspective (Upadhyai *et al.*, 2020). This research attempted to close this gap by conducting an empirical study into healthcare service quality using a multi-stakeholder approach. The inclusion of perspectives of all stakeholders is crucial because it can result in improved productivity, through the employment of strategies such as task-shifting, which increases productivity within the existing workforce through reassigning of roles (Friebel *et al.*, 2018). This entails traditional doctor roles being reassigned to other staff members, who include nurses, which can potentially enhance staff morale, and patients are empowered to improve their self-care abilities, which ultimately results in patient satisfaction (Friebel *et al.*, 2018).

2.8 Conclusion

This chapter gave a comprehensive definition of healthcare service quality after an analysis of the literature from different authors in healthcare service quality literature. Several studies by prominent authors in healthcare service quality were reviewed by highlighting their contributions to the study, methodology used, major findings and gaps identified, which this study sought to address.

CHAPTER THREE: RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

This chapter describes the research methodology that guided this study. The researcher discusses the research paradigm, the research design, data collection, and the target population used for this research purpose. The elimination of bias, as well as the ethical considerations, were also discussed.

3.2 Research paradigm

All scientific research is based on certain underlying philosophical assumptions about what constitutes valid research and which research technique or method is applicable to the development of knowledge in a given study (Abdulkareem, Ismaila, and Jumare, 2017). These philosophical assumptions are embodied in research paradigms. “Research paradigms entail the body of knowledge, methods, and practices adopted and cherished by a research community and include disruptive elements of novelty and change” (Munar & Jamal, 2016 p.17). In simple terms, a research paradigm is an approach to thinking about and doing research that provides a lens that guides the choice of theory and methods in research. For this research, a positivist research paradigm was used. This paradigm uses a deductive approach in which the theory drives almost all phases of the research cycle, thus the theory becomes a funnel into which data must be poured (Ngulube, Mathipa & Gumbo, 2015). This implies that quantitative research designs make use of theory and underlying concepts, in this case, the HEALTHQUAL scale, was used to formulate hypotheses.

3.3 Research design

A descriptive cross-sectional design was used for this study as data was collected at one point in time (Creswell, 2012). A cross-sectional method enables the measuring of current attitudes or practices in a short amount of time, such as the time required for administering the questionnaires and collecting the information (Creswell, 2012). A cross-sectional design was used because a similar study by Abuosi (2015) on patients’ versus healthcare practitioners’ perceptions used a cross-sectional design.

Descriptive cross-sectional studies provide detailed and organised information about the prevalence of one or more phenomena and preclude the inference from causation (Raimundo, Echeimberg & Leone, 2018). This design was suitable for this study as the research focused on

investigating the prevalence of differences in service quality perceptions between healthcare practitioners and patients. In addition, this research study used a quantitative research design, which aligns with the positivist paradigm. Quantitative research makes use of questionnaires to gather data that is revised and tabulated in numbers, which allows the data to be characterised using statistical analysis (Antwi, 2015). This study involved the use of tables to describe the characteristics of the respondents, the response rate, and the *t*-tests to calculate the p-value, which is synonymous with quantitative research.

3.4 Research method

Research methods include all the techniques that are used for conducting research (Malhotra & Birks, 2006). A questionnaire was used to collect data for this study. Roopa and Rani (2012 p.273) define a questionnaire as “a list of mimeographed or printed questions that are completed by or for a respondent to give his opinion.” A similar study by Abuosi (2015) which compared the perceptions between healthcare practitioners and patients used a questionnaire to collect data, as such, this study also used a questionnaire for collecting data.

In addition, a questionnaire was chosen because this research involved the collection of data from a sample size of 373 which is synonymous with questionnaires as they favour large sample sizes, in the range of about 100-400 respondents for most studies (Lund, 2021).

3.5 Target population

Stangor (2011 p.110) defines a population as “the entire group of people that the researcher desires to learn about.” A target population includes a group of individuals with some homogeneous characteristics that the researcher can identify and study (Creswell, 2012). Within this target population, researchers then select a sample, which is a subgroup of the target population that the researcher plans to study for generalising about the target population (Creswell, 2012). The population for this research included all healthcare practitioners in the form of doctors and nurses, as well as patients at PGHs.

3.6 Sampling

For this research purpose, a non-probability sampling technique, in the form of convenience sampling, was used. Convenience sampling involves selecting participants because they are readily and easily available (Taherdoost, 2016), and this was the case for this study as participants were those who were available and willing to participate. This sampling technique

was used because a similar study by Abuosi (2015) used the same method in establishing differences in perceptions between patients and healthcare practitioners. Participants for this study included both patients and healthcare practitioners at PGHs during the period of 14 March 2021 to 15 April 2021. These participants were able to self-select and take part in the research because they could choose if they wanted to click on the link to complete the online questionnaire. As a result of this self-selection, those who agreed to complete the online questionnaire may have not represented the views of others who might have had information that they did not want to reveal to the researcher.

3.7 Data collection

To collect data, the researcher downloaded the link to the online questionnaire on Qualtrics and requested for the Human Resources department of PGHs to email the link to the healthcare practitioners and patients who fit into the desired timeframe and whose email addresses were registered with the hospital. This method of sending emails with the online link to the survey was chosen because of the feasibility and convenience of online data collection at PGHs given the COVID-19 restrictions which prevailed at that time.

The Qualtrics platform was used as it is a fast and efficient way of collecting data, and a similar study by Materla and Cudney (2020) evaluated patient service quality using the same platform. Additionally, UCT provides its students with access to the paid features of this platform, which has several benefits over other platforms. In order to complete the questionnaire, patients and healthcare practitioners were prompted, through an email, with the words “kindly complete this short research survey”, to follow the link and complete the online questionnaire on Qualtrics.

3.8 Research instrument

The first part of the questionnaire as shown in Appendix 1 was the cover page of the questionnaire, containing the research purpose, the researcher and supervisors’ contact details, an anonymity guarantee, the approximate time it would take to complete the questionnaire, and a statement confirming that the research was authorised by the Faculty of Health Sciences Human Resources Ethics Committee of the University of Cape Town.

The second part of the questionnaire contained all the questions to be completed by the respondents and was split into three sections as shown in Appendix 1. Question 1 asked

whether the respondent is a healthcare practitioner (doctor or nurse). Question 2 was the demographic section which asked the respondents to indicate their appropriate gender. Questions 3 to 24 contained questions to do with dimensions of service quality on which the respondents rated the given statements, with each statement representing a particular dimension. Each of the statements was rated using a five-point scale from 1 to 5, with 1 indicating strongly disagree and 5 indicating strongly agree. The number of items measuring each construct and the question numbers on each construct in the questionnaire are shown in Table 2.

Table 2: Measurement of items

Construct name	Measurement variables	Question numbers in the questionnaire
Empathy	Likert scale type 5-point scale 1=strongly disagree to 5=strongly agree Source: (Abuosi, 2015) -Know what the patient wants (EM3) -Understand the patients' problems (EM4) -Listen to the patient (EM5) -Employees are polite (EM6)	3, 4, 5, and 6
Tangible evidence	-PGHs have advanced equipment (TA7) -PGHs employs staff with advanced knowledge (TA8) -PGHs premises are always clean (TA9) -PGHs have convenient facilities (TA10)	7, 8, 9, and 10
Safety	-PGHs provide a safe environment for patients (SA11) -Nurses and doctors at PGHs take all precautionary measures to avoid mistakes (SA12) -Patients have confidence in the proficiency of PGHs (SA13) -PGHs make every effort in ensuring that nurses and doctors work in a safe environment (SA14) -PGHs' environment is safe from infections (SA15)	11, 12, 13, 14, and 15

Efficiency of healthcare service quality	<ul style="list-style-type: none"> -Doctors and nurses at PGHs prescribe the appropriate medication for patients (EF16) -The bills/costs at PGHs are appropriate for medical services provided (EF17) -PGHs make every effort in reducing unnecessary procedures (EF18) -PGHs have reasonable medical expenses (EF19) 	16, 17, 18, and 19
Improvements of care service	<ul style="list-style-type: none"> - Health conditions of patients at PGHs improve after receiving treatment (DI20) -PGHs make every effort to help prevent the prevalence of diseases in the community (DI21) -Healthcare workers at PGHs give the appropriate care service to the patients (DI22) -PGHs make every effort to help prevent the prevalence of diseases in the community (DI23) -PGHs have an excellent service quality (DI24) 	20, 21, 22, 23 and 24

3.9 Elimination of bias

“Bias is any trend or deviation from the truth in data collection, data analysis, interpretation and publication which can cause false conclusions” (Šimundić, 2012 p.12). Pannucci and Wilkins (2011) assert that bias occurs when a systematic error is introduced into sampling or testing by selecting or encouraging one outcome or answer over the other. Four types of biases were considered, and these are selection bias, self-selection bias, data collection bias, and analysis bias.

3.9.1 Selection bias

Selection bias may occur during the identification of the study population “if some potentially eligible individuals are selectively excluded from the study because the investigator knows the group to which they would be allocated if they participated” (Yale & Kumar, 2016). Selection bias can be reduced by recruiting participants who meet the study aims (Smith & Noble, 2014). To ensure the elimination of the selection bias, only patients and healthcare practitioners who constitute this research’s target population were included as respondents to the questionnaire.

3.9.2 Self-selection bias

Under-selection bias is also a special type of bias called self-selection bias. Self-selection bias occurs when respondents in a study are allowed to decide entirely for themselves whether or not to participate in a survey (Lavraks, 2008). As a result, respondents who choose to participate in a study will not represent the entire target population well. To reduce this bias, only the specified patients and healthcare practitioners at PGHs received the email from the Human Resources department at PGHs to follow and complete the questionnaire. However, bias may still have existed to a certain extent as participants still had to choose to click on the link and complete the survey.

3.9.3 Data collection bias

Data collection bias can occur when the personal beliefs of the researcher influence the way information or data is collected and in quantitative studies, measurement bias can occur if a tool or instrument has not been assessed for its validity or reliability (Smith & Noble, 2014). Reliability and internal consistency for each of the constructs were evaluated using Cronbach's Coefficient Alpha to eliminate data measurement bias.

3.9.4 Bias in data analysis

A researcher can introduce bias in data analysis by analysing data in a way that gives preference to the conclusions in favour of research hypotheses (Šimundić, 2012 p.13). Thus, when analysing data, the researcher may look for data that confirm their hypotheses or personal experience, overlooking data inconsistent with personal beliefs (Smith & Noble, 2014). To eliminate bias in data analysis, statistically significant data ($p < 0.05$) was used to reject the null hypothesis and therefore, accept the alternate hypothesis, and conversely, statistically insignificant data, $p > 0.05$, was used to accept the null hypothesis and reject the alternate hypothesis.

3.10 Ethical considerations

Govil (2013) posits that ethics includes the moral principles of guiding conduct, which are held by a group or even by a professional. Usually, ethical review boards (ERBs) assess the ethical robustness of academic research (Brittain *et al.*, 2019). It is the researcher's responsibility to consider whether any type of harm could occur because of their research and to put in place appropriate mitigation measures before requesting ethics approval. The researcher requested and obtained ethics approval from the University of Cape Town Faculty of Health Sciences

Human Research Ethics Committee, to acknowledge compliance with all the ethical requirements before proceeding with data collection. The clearance letter from the ethics committee at the University of Cape Town is shown in Appendix 2.

3.10.1 Informed consent

Informed consent requirements for conducting research with human participants are set by institutional review boards (IRBs) following established guidelines (Nakkash, Qutteina & Nasrallah, 2017). “The essence of the principle of informed consent is that the human subjects of research should be allowed to agree or refuse to participate in the light of comprehensive information concerning the nature and purpose of research” (Govil, 2013 p.18). Informed consent includes the provision of voluntary authorisation given by an individual who can comprehend the research protocol and decide whether to participate in the research (Cacchione, 2011). The cover page of the questionnaire for this research included an explanation of the purpose of this research to the participant. This enabled the participants to conduct informed decision-making before completing the questionnaire.

3.10.2 Ensuring no harm

Researchers have moral, pragmatic, and legal obligations to protect participants from harm, and should always consider the potential effects of their activities during and after research (Brittain *et al.* 2019). In terms of this study, there were no expected physical, psychological, or social injury risks to participants. More so, the questionnaire for this research did not require participants to disclose sensitive information to make sure that no harm comes to the participants.

3.10.3 Ensuring confidentiality

Ethics review boards need to ask for detailed information about how the confidentiality of personal data would be maintained, and how data will be recorded, stored (for how long), and accessed (by whom) by the researcher (Johnson, 2014). The participants have the right to maintain privacy and if the information obtained from the participants requires confidentiality, it should be maintained at any cost (Govil, 2013). This study did not require participants to review confidential information such as their ages and marital statuses. More so, the questionnaire for this research included a statement guaranteeing the confidentiality of the participants.

3.11 Data cleaning and coding

Different codes were used to convert the information obtained from each subject or case into a format that SPSS understands. The codes used for data in this research are as follows:

Question 1: Are you a healthcare worker?

Yes-1 and No-2.

Question 2: Demographic information

Male-1, Female-2, Transgender male-3, Transgender female-4, Gender variant/Non-conforming-5, and Prefer not to answer-6.

Questions 3 to 24: Likert scale

Questions were ranked using a 5-point Likert scale coded as follows:

1-Strongly disagree, 2-Disagree, 3-Neutral/Not sure, 4-Agree, 5-Strongly agree.

Since Qualtrics was used to collect the data, the researcher downloaded the SPSS version of the data in which there were no missing values, and no responses were deleted.

3.12 Conclusion

This chapter outlined the research paradigm which this study was premised on. As a result, a descriptive cross-sectional design, which entails the collection of quantitative data using a questionnaire was discussed. It was also revealed that a non-probability sampling technique in the form of convenience sampling was used in the collection of data. Lastly, the ways to eliminate bias as well as the ethical considerations were discussed.

CHAPTER FOUR: PRESENTATION, ANALYSIS AND INTERPRETATION OF DATA

4.1 Introduction

This chapter describes the response rate and the characteristics of respondents and presents, analyses, and interprets the data. Reliability and validity tests were performed to ensure internal consistency and validity of the data before performing t-tests. Reliability was tested using Cronbach's values and only constructs with Cronbach's Alpha values exceeding the threshold of 0.7 were considered for further analysis. As for the validity test, principal component analysis was used to identify the most meaningful basis for similarities and differences in the data.

Kaiser-Meyer-Olkin (KMO) and Bartlett's tests were used to determine the sampling adequacy and interrelationships of the data. After satisfying the condition of normality and confirming the most appropriate statistical test for the comparison of means through the Kolmogorov-Smirnov normality test and Levene's test for equality of variances respectively, independent sample t-tests were used to test the five hypotheses of this study.

4.2 Response rate

The response rate in terms of gender was as follows; males-173, females-174, gender variant-12, transgender males-3, transgender females-3, and those who preferred not to disclose gender were 8. Table 3 shows the breakdown of responses to the 373 online questionnaires completed by both patients and healthcare practitioners at PGHs. The response rate was 100% as everybody who received the email completed the online questionnaire, as shown in Table 3.

Table 3: The breakdown of patients and healthcare practitioners

	Total	Percentage (%)
Patients	187	50.13
Healthcare practitioners	186	49.87
Grand total	373	100

4.3 Reliability

Reliability was tested using Cronbach's alpha value. The Cronbach's alpha values across all samples (healthcare practitioners and patients) were between 0.89 and 0.84, which are above the recommended threshold value of 0.70 as shown in Table 4. As such, they were all retained for further analysis (Taherdoost, 2016).

Table 4: Reliability test

Dimension	Number of items	Cronbach Alpha values
Empathy	4	0.89
Tangible evidence	4	0.86
Safety	5	0.85
Efficiency of healthcare service quality	4	0.87
Improvement of care service	5	0.84

4.4 Kaiser-Meyer-Olkin (KMO) and Bartlett's tests

Kaiser-Meyer-Olkin (KMO) and Bartlett's tests were applied to determine the sample adequacy and interrelationships of the data. As shown in Table 5, the result for the KMO test was 0.88. This indicated that sampling was adequate as 0.88 lies within the acceptability range of 0.8 and 1.0 (Shrestha, 2021).

The result of Bartlett's Test of Sphericity was significant which suggested that the results showed no evidence of multicollinearity and that the correlation between the items was sufficient to perform the factor analysis, where $p < 0.05$ (Rahman, 2017).

Table 5: Kaiser-Meyer-Olkin (KMO) coefficient and Bartlett's test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.88
Bartlett test analyses	Significance.	0.00

4.5 Discriminant validity and convergent validity

Discriminant validity refers to the extent to which the constructs differ from one another empirically and is a must in any research that involves latent variables for the prevention of multicollinearity issues (Ab Hamid, Sami & Sidek, 2017). Convergent validity is the assessment to measure the level of correlation of multiple indicators of the same construct that are in agreement, and the factor loadings of the indicator. Composite reliability and the average variance extracted must be considered to establish convergent validity. Discriminant validity and convergent validity tests were performed using the Correlation matrix and Average variance extracted (AVE). Table 6 presents the construct reliability (CR) and average variance extracted (AVE) from latent variables, while the off-diagonal elements are the correlation between latent variables. For adequate discriminant validity, the square root of the AVE of any latent variable should be greater than the correlation between this particular latent variable and other latent variables (Pavlou & Fygenon, 2006). Given that the construct reliability of ≥ 0.7 and the average variance extracted of ≥ 0.5 was desirable, the convergent validity of the variables in this study was established as all five dimensions showed construct reliability values greater than 0.75 and average variance extracted values greater than 0.5, as shown in Table 6. Consequently, discriminant validity and convergent validity were supported. The adherence to the requirement of discriminant validity, specifically that of having a correlation between each pair of latent exogenous constructs less than 0.85, as shown in Table 6, was crucial as it showed that there were no multicollinearity issues (Ab Hamid, Sami & Sidek, 2017; Ahmad, Zulkurnain & Khairushalimi, 2016).

Table 6: Correlation matrix and average variance extracted (AVE)

Constructs	Empathy	Tangible evidence	Safety	Efficiency of healthcare service quality	Improvement of care service
Empathy	(0.82)				
Tangible evidence	0.52	(0.77)			
Safety	0.52	0.62	(0.80)		
	0.45	0.58	0.612	(0.78)	

Efficiency of healthcare service quality	0.56	0.59	0.63	0.66	(0.77)
Improvement of care service					
Construct reliability	0.84	0.76	0.78	0.77	0.79
Average Variance Extracted	0.68	0.59	0.64	0.61	0.60

CR (construct reliability) = $\sum (\text{factor loading}^2) / [\sum (\text{factor loading}^2) + \sum (\text{error})]$: more than .7

AVE = $\sum (\text{factor loading})^2 / [\sum (\text{factor loading})^2 + \sum (\text{error})]$: more than .5

*The elements on the diagonal (values in parentheses represent the square root of the average variance extracted (AVE))

4.6 Kolmogorov-Smirnov normality test

Hypothesis: There is no statistically significant difference between the dimensions and normal distribution

As shown in Table 7, the p-values were above 0.05, meaning the data for this research satisfied the condition of normality (Kim & Park, 2019). This shows that there were no statistically significant differences between the dimensions. As such, the normality in distribution, which is a condition for conducting t-tests, was adhered to.

Table 7: Kolmogorov-Smirnov normality test

Dimension	Statistic	DF	Significance
Empathy	0.06	373	0.06
Improvement of care services	0.08	373	0.08
Tangible evidence	0.04	373	0.06
Efficiency of healthcare service quality	0.06	373	0.07
Safety	0.07	373	0.08

4.7 Levene's test for equality of variances

Hypothesis: The variance is equal across patients and healthcare practitioners

- The equality of variances test was performed as a preliminary test to inform the most appropriate statistical test for a comparison of means. As the significance level values were above 0.05, we failed to reject the null hypothesis. This means that the variances for the two groups (healthcare practitioners and patients) did not violate the assumption of equal variance (Pallant, 2011).

4.8 Independent sample t-test

Independent sample t-tests were used to test the statistical differences between the means of healthcare practitioners and patients to determine the differences in terms of the healthcare service quality using the five dimensions of the HEALTHQUAL scale. These five dimensions included: empathy, safety, efficiency of healthcare service quality, tangible evidence, and improvement of care service. Table 8 shows the results of the independent sample t-test of the mean differences regarding these five dimensions of the HEALTHQUAL scale.

Table 8: Independent sample *t*-test of mean values of healthcare practitioners and patients

Hypotheses	Stakeholder	<i>t</i> -statistic	Mean	Cohen's <i>d</i>	<i>p</i> -value	Conclusion
H1-Empathy	Healthcare practitioners	3.81	2.93	0.23	0.25	Reject H1
	Patients		2.92			
H2-Improvement of care service	Healthcare practitioners	4.72	2.80	0.89	0.00	Accept H2
	Patients		2.30			
H3-Tangible evidence	Healthcare practitioners	4.60	2.72	0.65	0.00	Accept H3
	Patients		2.34			
H4-Efficiency of healthcare	Healthcare practitioners	4.55	3.26	1.00	0.00	Accept H4

service quality	Patients		2.56			
H5-Safety	Healthcare practitioners	4.78	3.59	0.61	0.00	Accept H5
	Patients		2.75			

Hypothesis 1

H1: There is a difference in the perceptions between patients and healthcare practitioners in terms of the empathy dimension.

The insignificant p-value indicates that H1 is not supported, thus the perceptions of healthcare practitioners (M=2.93) and patients (M=2.92) do not differ on the empathy dimension. The effect size (0.23) was small, suggesting a limited practical significance.

Hypothesis 2

H2: There is a difference in the perceptions of service quality between patients and healthcare practitioners in terms of the improvement of care services dimension.

The significant p-value indicates that H2 is supported, thus the perceptions of healthcare practitioners (M=2.80) and patients (M=2.30) differ on the improvement of care dimension. The effect size (0.89) was large, suggesting practical significance.

Hypothesis 3

H3: There is a difference in the perceptions between patients and healthcare practitioners in terms of the tangible evidence dimension.

The significant p-value indicates that H3 is supported, thus the perceptions of healthcare practitioners (M=2.72) and patients (M=2.34) differ on the tangible evidence dimension. The effect size (0.65) was medium, suggesting practical significance.

Hypothesis 4

H4: There is a difference in the perceptions between patients and healthcare practitioners in terms of the efficiency of healthcare service quality dimension.

The significant p-value indicates that H4 is supported, thus the perceptions of healthcare practitioners (M=3.26) and patients (M=2.56) differ on the efficiency of healthcare service quality dimension. The effect size (1) was large, suggesting practical significance.

Hypothesis 5

H5: There is a difference in the perceptions between patients and healthcare practitioners in terms of the safety dimension.

The significant p-value indicates that H5 is supported, thus the perceptions of healthcare practitioners (M=3.59) and patients (M=2.75) differ on the safety dimension. The effect size (0.61) was medium, suggesting practical significance.

4.9 Conclusion

All the Cronbach's alpha values across all samples (healthcare practitioners and patients) were above the recommended threshold value of 0.70, as such, there were retained for further analyses. To determine the appropriate test to be used, the Kolmogorov-Smirnov normality test was used. Since all the p-values were above 0.05, data for this study satisfied the condition for normality. Independent sample t-tests were, therefore, used to test the statistical differences between the means of healthcare practitioners and patients.

Hypothesis 1, which was about the differences in the perceptions in terms of the empathy dimension, had a p-value above 0.05 thus we failed to reject the null hypothesis. As for the remaining four hypotheses, their p-values were below 0.05, the null hypotheses were rejected, and the alternatives were accepted. Cohen's d was used to determine the effective size of the findings from the t-test to show the practical significance of the findings in the real world. All the dimensions, except for the empathy dimension, had practical significance as their effect sizes were either medium or large. Chapter five focuses on the recommendations, conclusions, and limitations of the study.

CHAPTER FIVE: CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter focuses on the discussion of the findings, the theoretical contribution of this study as well as the limitations of the study. Recommendations to healthcare practitioners and healthcare marketers are also presented. Whilst all the results from the five hypotheses were discussed, particular attention was given to the results of the effect sizes of the research findings. This is crucial because the effect sizes help the reader to appreciate the magnitude or importance of the study's findings (Fritz, 2011). The results of the effect sizes for the improvement of care service dimension and the efficiency healthcare service quality dimension were both large. The tangible evidence dimension and the safety dimension on the other hand had a medium effect size. These effect sizes form the basis of the recommendations.

5.2 Discussion

5.2.1 Hypothesis 1: There is a difference in the perceptions between patients and healthcare practitioners in terms of the empathy dimension.

Based on the results there was no statistically significant difference between patients and healthcare practitioners in terms of the empathy dimension. This means that both healthcare practitioners and patients equally understood the need for individualised and personalised attention in healthcare service quality. This finding was unexpected as patients were perceived to be the ones who weigh empathy more than the healthcare practitioners, which was due mainly to the fact that empathy is not a technical aspect of healthcare service quality and hence was considered to be easy to evaluate (Cavallone, Magno; Upadhyai *et al.*, 2019 & Zucchi, 2017). Consequently, patients weigh the empathy and support provided by the health professional rather than the outcomes of the treatment or the technical knowledge of the service provider (McKinsey, 2015; Upadhyai *et al.*, 2019). In this case, healthcare professionals were seemingly not more or less concerned by the empathy dimension than patients. Thus, both parties viewed healthcare service quality as a personal-interactive service, in which all stakeholders perceived the need to consider each other's needs through interaction and engagement with one another as crucial.

The results of the empathy dimension may be due to the COVID-19 period, during which both the healthcare practitioners and the patients were equally adversely affected by the scourge.

Healthcare practitioners, most of whom were directly involved in the care of patients with COVID-19 had limited personal protective equipment, worked for excessively long hours, and may have experienced significant work-related psychological pressure and frequent somatic symptoms (Gavin *et al.*, 2020). This may have subsequently resulted in emotional distress as evidenced by suboptimal patient care and professional inefficiencies (Panagioti *et al.*, 2018). Ultimately, these overworked healthcare practitioners at PGHs were demotivated, thereby resulting in a reduced ability to actively listen to and reflect on patients' emotions while providing care services. This, therefore, inevitably resulted in both healthcare practitioners and patients having equally low perceptions about the perceived healthcare service quality at PGHs. As such, parties recognised that empathy is an integral part of healthcare service quality and could potentially be used to enhance communications and relations between healthcare practitioners and patients as it was a point of convergence in terms of perceptions.

5.2.2 Hypothesis 2: *There is a difference in the perceptions between patients and healthcare practitioners in terms of the improvement of care services dimension.*

The results indicate that there were statistically significant differences between healthcare practitioners and patients in terms of the improvement of care service dimension. Healthcare practitioners' perception of the improvement of care services was higher than that of patients. Such findings were expected as the improvement of care service is to some extent dependent on technical quality, which as a result, is highly specific to the healthcare practitioners' profession (Upadhyai *et al.*, 2019). Since the improvement of care service quality occurs when there is a common understanding of what constitutes quality healthcare service (Lee & Kim, 2017), there is, therefore, a need for both parties to have a common understanding of how best to improve healthcare service delivery to enhance speedy recovery of patients.

5.2.3 Hypothesis 3: *There is a difference in the perceptions between patients and healthcare practitioners in terms of the tangible evidence dimension.*

The results of hypothesis 3 showed that there was a statistically significant difference in perceptions between patients and healthcare practitioners in terms of the tangible evidence dimension. The stakeholders had different perceptions of how they perceived the tangible evidence dimension as healthcare practitioners' rating of this dimension was higher than that of patients. Such difference may be a cause of concern because physical evidence comprises

tangible aspects that increase trust in the structure (i.e., hospital institution), which, in turn, influences initial trust in the professional, thereby corroborating previous findings about the importance of institution-based trust (Hooper, Coughlan & Mullen, 2013). The fact that patients and healthcare practitioners differed on how they perceived the tangible evidence dimension suggests that there was a lack of understanding and trust between the two parties. This was so because most patients compensate for their inability to assess technical aspects of healthcare service quality by forming an attitude towards the physical environment in the service delivery (Upadhyai, 2020). This implies that to have a common understanding with patients, healthcare practitioners must also focus their efforts on enhancing the tangible aspects.

5.2.4 Hypothesis 4: *There is a difference in the perceptions between patients and healthcare practitioners in terms of the efficiency of healthcare service quality dimension.*

Findings from the fourth hypothesis indicated that there was a statistically significant difference between patients and healthcare practitioners in terms of the efficiency of healthcare service quality dimension. This implied that both parties differed in their perceptions of the efficiency of the healthcare service quality dimension. This may be because the concept of quality in terms of efficiency requires rationalism and mass production of services; contrary to this view, patient-centered care requires an individualistic approach with attention to the specific needs of the patients (Vogus *et al.*, 2020). As a result, increased financial pressures, resource constraints, time constraints, and increasing patient expectations can undermine both efficiency and quality (Dyrbye & Shanafelt, 2016). As such, healthcare practitioners are in a state of dilemma and tension to ensure a trade-off between quality and efficiency (Farr & Cressey, 2015). Indeed, shifting to more patient-centered care results in tensions between the healthcare practitioner's preferences to maintain control and efficiency and the patient's preferences for tailoring and customising to meet their distinct needs and preferences (Vogus *et al.*, 2020). Striking the right balance offers an opportunity to appeal to both the healthcare practitioner and the patient, such that efficient and optimal outcomes can be achieved across the continuum of care (Upadhyai *et al.*, 2020).

5.2.5 Hypothesis 5: *There is a difference in the perceptions between patients and healthcare practitioners in terms of the safety dimension.*

The results of hypothesis 5 indicated that there was a statistically significant difference in perceptions between patients and healthcare practitioners in terms of the safety dimension. Consequently, healthcare practitioners' rating of the safety dimension was higher than that of patients. This was because patients were unable to know, understand and evaluate the safety protocols. As such, the highly specific and technical nature of healthcare service quality made it difficult for patients to comprehend safety protocols and hence a difference in perception between these two stakeholders existed (Upadhyai *et al.*, 2020). In addition, the issue of standardisation was critical to the safety component of the healthcare experience, while customisation was critical to the patient engagement and co-production component (Vogus *et al.*, 2020). Thus, both elements were necessary for quality improvement, and there was a need to balance standardisation (from the healthcare practitioner's perspective) and customisation (from the patient's perspective) to achieve an optimum level of healthcare service quality.

This study, therefore, adequately addressed the dearth in healthcare literature by conducting an empirical study that ascertained that there were differences in perceptions between patients and healthcare practitioners (doctors and nurses) in terms of four dimensions (efficiency of healthcare service quality, safety, improvement of care service and tangible evidence). The multi-stakeholder analysis of service quality was important because healthcare service quality is not an isolated system but rather an ecosystem where patients and healthcare practitioners are important in ensuring that all stakeholders involved survive together by co-creating value and integrating the respective resources (Gambarov *et al.*, 2017). This contributes to service marketing literature as it showed that to attain an optimum service ecosystem, all relatively self-contained, self-adjusting systems of resource-integrating actors (healthcare practitioners and patients) needed to be connected by shared institutional logic and mutual value creation through service exchange (Vargo & Akaka, 2013).

5.3 Theoretical contribution of research

Whilst numerous studies on healthcare service quality have been conducted from patients' viewpoint, there has been no definitive or decisive conclusion on how a study on service quality that includes both healthcare practitioners and patients, could be measured and analysed (Abuosi, 2015; Roohi *et al.*, 2011). This is because no agreement had been reached on how to measure the quality of service from a multi-stakeholder viewpoint even though most healthcare researchers agreed that healthcare service quality is a complex and multidimensional concept

(Endeshaw, 2019; Pilgrimienė & Buciuuene 2011). However, there had been suggestions that since healthcare service quality is a professional service, it is important to look deeper into the dyadic exchanges taking place between all participants (healthcare practitioners and patients) of the delivery process rather than a single stakeholder's perspective (Upadhyai *et al.*, 2020). As such, this study conducted a holistic investigation which found that differences in perceptions exist between healthcare practitioners and patients on four dimensions of the HEALTHQUAL scale namely, safety, efficiency of healthcare service quality, tangible evidence, and improvement of care services, except for the empathy dimension. Healthcare practitioners need to focus their effort on the direction of enhancing service quality by addressing the differences in perception of healthcare service quality dimensions as indicated by these four dimensions. When it comes to technical aspects of healthcare, which include dimensions such as safety and efficiency of healthcare service quality, healthcare practitioners' points of view should be given more weight. This is because technical quality is highly specific to the healthcare practitioners' profession, as such, most patients are often unable to comprehend this technical aspect of service quality (Upadhyai *et al.*, 2019; Zarei *et al.*, 2012). Since patients mostly only understand the functional aspects of service quality, their perspectives on the functional aspects of healthcare quality, such as tangible evidence, need to be given more weight (Ali, Basu, and Ware, 2018; Endeshaw, 2019). Manimay (2014) proposed that giving powerful training to attendants, specialists, and supporting staff on interpersonal abilities and viable correspondence stimulates patient satisfaction. Consequently, the arrangement of service quality is of great significance to the administration of all service associations, and hospitals ought to especially be interested in giving excellent medical consideration and quality support to their patients, who are deemed to be incapable of assessing the technical aspects of healthcare quality (Mosadeghrad, 2013; Johnson *et al.*, 2006).

5.3.1 Technical and functional aspects of healthcare service quality

Upadhyai *et al.* (2020) assert that from the patient's perspective, healthcare is a reflection of functional quality, which includes the physical environment and infrastructure, and this is also echoed by customer-centric perspectives of healthcare service quality. In professional healthcare services, however, quality is a subjective, complex, and multi-dimensional concept (Mosadeghrad, 2013). Patients alone may not be comfortable to evaluate healthcare service quality, mainly because it is highly technical. This is in line with the findings from this study

which showed statistically significant differences in the perceptions towards safety, efficiency of healthcare service quality, tangible evidence, and improvement of care service between patients and healthcare practitioners. Therefore, it is of interest to explore other aspects of service quality that drive patients' perceptions of quality in healthcare. As a result, it was suggested that patients in a healthcare setting tend to rely on functional attributes such as facilities, cleanliness, and personnel attitudes rather than technical attributes because they typically do not have technical medical expertise (Babakus & Mangold, 1992; Lanning & O'Connor, 1990; Lee, 2013.). Indeed, technical aspects of healthcare service quality include the physicians' knowledge, attention to detail, efficiency of healthcare service quality, descriptions of clinical skills, follow-ups, perceptions of decisions making, and the degree of improvement of care service (López *et al.*, 2012), which a patient would not normally be able to comprehend. Consequently, when providing healthcare services, a focus on technical quality is not sufficient, as patients' perceptions are shaped to a large extent by functional and image quality components (Cavallone, Magno & Zucchi, 2017).

Despite their inability to evaluate and comprehend technical quality, patients still desire technically knowledgeable, skilful, experienced, and capable healthcare practitioners who can accurately diagnose and treat them effectively (Mosadeghrad, 2013). Thus, patients want healthcare practitioners who not only provide healthcare services in a technically competent manner but also in an empathetic way.

Literature from prior studies is generally dominated by two main opposing views which are the healthcare-centeredness view and the patient-centeredness view (Vogus *et al.*, 2020). On one hand, healthcare services focused on characteristics and features which meet predetermined specifications and standards (effective treatment of patients) and thus focused on technical quality (Mosadeghrad, 2013). On the other hand, healthcare service quality faced enormous pressure to move from healthcare practitioner-centered care to patient-centered care (Vogus *et al.*, 2020), and hence focus was on the patients' perspectives. This study provided a multi-perspective analysis that balanced the point of view of both healthcare practitioners and patients.

5.4 Service Marketing

Both marketing (Elg *et al.*, 2012; Sharma & Conduit, 2016; Sweeney *et al.*, 2015) and healthcare literature (Anderson, Rayburn & Sierra, 2018) have shown increased attention to

patients' participation in healthcare service quality. To achieve this, a professional service setup such as a hospital, calls for dyadic exchanges between the patient and the healthcare practitioner, which require understanding and responding to any differences which help to foster the mutual exchange of ideas (Upadhyai *et al.*, 2020). As such, determining the existence of differences in perceptions between healthcare practitioners and patients become crucial as there has been a dearth of service marketing literature on how to measure and analyse healthcare service quality from a multi-stakeholder viewpoint (Abuosi, 2015; Upadhyai *et al.*, 2020). This research addressed this dearth in healthcare literature by conducting an empirical study that ascertained that there is a difference in perceptions between patients and healthcare practitioners (doctors and nurses) in terms of these four dimensions (efficiency of healthcare service quality, safety, improvement of care service and tangible evidence) of service quality. Indeed, a multi-stakeholder analysis of service quality is important because healthcare service quality is not an isolated system but rather an ecosystem where all parties mutually interact thereby ensuring that all stakeholders involved survive together by co-creating value and integrating the respective resources (Gambarov *et al.*, 2017).

Similarly, Beirão *et al.* (2017) points to the value of co-creating factors that facilitate actors' efforts to integrate resources in dynamic interactions, involving both the population's well-being (patients' view) and ecosystem viability (healthcare practitioners' view). Such a holistic perspective contributes to service marketing literature as it shows that to attain a service ecosystem, all relatively self-contained, self-adjusting systems of resource-integrating actors (healthcare practitioners and patients) need to be connected by shared institutional logic and mutual value creation through service exchange (Vargo & Akaka, 2013). In conclusion, through the inclusion of a multi-stakeholder perspective, this study found the existence of differences that impeded the delivery of quality service in a particular healthcare service delivery context, which, could also be used as a potential starting point for improving and enhancing healthcare service delivery.

5.5 Recommendations to healthcare practitioners

5.5.1 Empathy

To address the equally low perceptions in terms of the empathy dimension for both patients and healthcare practitioners, which was most likely due to working under the extreme condition of COVID-19, PGHs need to urgently support healthcare workers who are at higher risk of

negative health consequences. This can be achieved through providing timely counselling services and support systems to mitigate the massive negative impact of this emergency on their actual and future well-being (Barello, Palamenghi & Graffigna, 2020). In addition, interactive computer-assisted training for healthcare practitioners needs to be undertaken as it can facilitate improvement in psychological variables that predict resilience to the stress of an outbreak such as the COVID-19 pandemic (Maunder *et al.*, 2010). Aspects of this training may be very useful in the future stress-proofing of healthcare practitioners, and the computer-assisted delivery model would facilitate widespread provision in a climate that is likely to be marked by even more severely limited resources than before (Gavin *et al.*, 2020). Thus, healthcare practitioners who are well-trained and equipped are better positioned to timely and promptly treat patients during a pandemic, which enhances their confidence and enables them to treat all patients with utmost care.

5.5.2 Safety

Overworked healthcare practitioners may suffer from professional burnout which is characterised by high levels of emotional exhaustion, cynical attitudes, and a diminished sense of personal accomplishment at work (Salyers *et al.*, 2017). Burnout can adversely affect healthcare quality and safety as overworked and exhausted healthcare practitioners may be disoriented, rendering them unfit and unable to follow prescribed safety precautions when treating patients. This can result in costs to healthcare practitioners, particularly when resources are low (Ahola, 2008; Boyd *et al.*, 2011 & Hakanen, Schaufeli, & Ahola, 2008). As healthcare practitioners become exhausted, they withdraw emotional energy from work, leading to depersonalisation. This can subsequently lead to providers spending less time with patients, and potentially becoming more directive than collaborative and patient-centered (Hakanen *et al.*, 2008). To enhance safety at the hospitals, the management at PHGs needs to work on improving the hospital working environment, which is a relatively low-cost strategy that can be used to improve safety and quality in hospital care, and to increase healthcare service quality (Aiken *et al.*, 2012).

5.5.3 Tangible evidence

The management at PGHs needs to address the difference in perceptions between healthcare practitioners and patients in terms of the tangible evidence dimension by managing the tangible aspect of service quality. To ensure that the physical environment which includes

infrastructure, medical apparatus, and medical staff presentations are sustained, there is a need to focus on orderliness, hygiene, and environmental tranquillity, which are vital for the patient's healthcare situation (Fatima *et al.*, 2018). Modernising and acquiring crucial infrastructure and medical equipment requires substantial investments. As such, the management at PGHs may need to lobby the government to ensure that it adequately finances the hospitals' infrastructure by allocating at least 15% of its total budget towards healthcare service quality as clearly stated by the Abuja Declaration. The Abuja Declaration is a pledge by African Union countries to strengthen their responses to healthcare needs and challenges by allocating at least 15% of their total budget to public health initiatives (UNAIDS, 2013).

5.5.4 Improvement of care service

The differences in the perceptions between healthcare practitioners and patients in terms of the improvement of care services dimension mean that there is a need to invest in a set of activities, such as communication and efforts to achieve effective treatment and to improve the result of care treatment (Lee & Kim, 2017). The ideal communication between the healthcare practitioner and the patient is that in which there is a balanced exchange of information, ideas, and preferences, and in which each plays a complementary role during the interaction (Osuna *et al.*, 2018). This is important because interaction and communication during the relationship generate a degree of trust that impacts positively on the levels of patient and healthcare practitioner satisfaction (Barth, 2015; Riess & Kraft-Todd, 2014) which contributes to improving care quality and health-related results (Anhang, Elliot & Zaslavsky, 2013; Apker *et al.*, 2018). Thus, good communication skills improve medical care (and reduce liability exposure) and assist healthcare practitioners in understanding patient expectations, and regulating patients' feelings (Ahmed, Burt & Roland, 2014; Rea & Griffiths, 2016).

5.5.5 Efficiency of healthcare service quality

The statistically significant p-value of the efficiency of the healthcare service quality dimension means that there is a distinction in the perceptions between healthcare practitioners and patients in terms of the efficiency of the healthcare service quality dimension. As such, the management at PGHs needs to adopt patient-centered care and healthcare promotion strategies that increase quality and contain costs while maintaining and even improving the quality of medical services (Fors *et al.*, 2017; Lewandowski, 2020). This is crucial because patient-centered care has shown a decreased need for hospital attention (Brannstrom & Boman, 2014), increased use of

adherence to prescribed medication (Markgren, *et al.*, 2016), and a significant cost reduction. Patient-centered care is achievable when there is a transfer of person-centered ethics into practice that highlights the importance of knowing the patient also as a person, and a capable human being with resources and needs, to engage the person to be an active partner in his or her care and treatment (Ekman *et al.*, 2011).

5.6 Recommendations to healthcare marketers

Healthcare marketing managers can foster a cordial relationship between healthcare practitioners and patients (Miranda, Chamorro, Murillo & Vega, 2010) to enhance healthcare service quality at healthcare institutions. This involves adopting the patient-centered care strategy in which a patient is equally involved in decision-making, which is a core component of sustainable care of high quality (Ahmad *et al.*, 2014). However, to achieve an optimum level of healthcare service in which both healthcare practitioners and patients are equally involved in the value co-creation process, there is a need to look beyond the co-creation of value in healthcare by introducing the concept of concordance (Chatterjee, 2003; Stevenson *et al.*, 2004). Concordance includes a negotiated and shared agreement between provider and patient regarding treatment, patient behaviours, and outcomes (Chatterjee, 2003). It represents a more collaborative relationship than one based on compliance or noncompliance (Anderson *et al.*, 2018). Concordance eschews paternalism in favour of a shared approach to decision-making (Stevenson *et al.*, 2004); thus, concordance is demonstrated when power is shared in the provider-patient relationship. In a healthcare set-up, for example, concordance values the patients' point of view by acknowledging their high level of expertise regarding their response to and ability to comply with a prescribed treatment (Anderson *et al.*, 2018). Therefore, both the healthcare practitioners' expertise (e.g., treatment selection) and the patient's expertise (e.g., response to and ability to adhere to the prescribed treatment) are equally relevant and valuable. In addition, concordance focuses on provider-patient interaction rather than patient behaviour (Anderson *et al.*, 2018).

Healthcare marketers, instead of promoting compliance, which refers to specific patient behaviours (for example, asking if the patient takes his/her medicine as prescribed), need to shift their approach to that of concordance in which interactions between healthcare providers and patients are constantly and consistently encouraged and promoted (for example, asking how best the interaction be designed to increase the likelihood the patient will take his/her

medicine as prescribed). Concordance can also be used by healthcare marketers in addressing the difference in the tangible evidence dimension, which is a functional aspect of healthcare service quality (Upadhyai *et al.*, 2020). To fully understand and improve healthcare quality, understanding patients' perceptions is crucial. This can be achieved by equality involving and interacting with patients in discussing how best to enhance design, upgrade infrastructure and modernise equipment to their preference and liking.

5.7 Conclusion

This study investigated the differences in perceptions between healthcare practitioners and patients using the five dimensions of the HEALTHQUAL model which are tangible evidence, efficiency of healthcare service quality, improvement of care service, empathy, and safety. Generally, the study concludes that differences that exist between patients and healthcare practitioners relate to the technical knowledge of healthcare which includes; tangible evidence (use of advanced equipment); efficiency of healthcare service quality (utilisation of medical resources); safety (the hospitals' capacity to maintain a comfortable and safe environment); and improvement of care service (includes continuous improvements of care performance for disease treatment and prevention through efforts of medical staff). However, there was no statistically significant difference between patients and healthcare practitioners in terms of the empathy dimension, which includes the attitude of the healthcare practitioners to better serve patients by actively listening to and reflecting on patients' emotions. These conclusions are further explained by the results of the effect size which showed that the differences between patients and practitioners in terms of improvement of care service, tangible evidence, efficiency of healthcare service quality, and safety are practically significant as their effect sizes were either large or medium. Addressing these differences in perceptions in that order will have a substantial and real impact on enhancing healthcare service quality as shown by their large and medium effect sizes. However, addressing the differences in terms of the empathy dimension, which are not statistically significant, will not have a substantial impact in the real world as evidenced by the small effect size.

The findings from this study is a first step towards assessing whether the discrepancy in perceptions of healthcare service quality between patients and healthcare practitioners are due to a lack of direct contact with patients (Abuosi, 2015; Miranda *et al.*, 2010; Roohi *et al.*, 2011). This is due to previous studies including non-clinical management members who had less

contact with patients, which could have potentially resulted in a wider gap between patients' and healthcare practitioners' perceptions of service quality. The findings from this study suggest that significant differences in healthcare service quality also exist between healthcare practitioners (doctors and nurses), who are directly involved in the treatment of patients, and the patients themselves, specifically in the technical aspects of service quality. Rectifying these differences is, however, complicated by the inherent inseparability of the healthcare practitioner and the patient in the provision of care in professional services like healthcare (Upadhyai *et al.*, 2020).

5.8 Limitations and scope for future research

One of the limitations of this study was that it was prone to common method bias. Common method bias occurs in survey research when all data, which includes independent variables and dependent variables, is collected using the same method, potentially resulting in the artificial inflation of relationships (Jordan & Troth, 2019). The high possibility of the presence of common method bias could not have been avoided due to the nature of the industry in which this study was conducted, which is the healthcare industry. The incredible time constraints in the healthcare industry, particularly PGHs, made it difficult to collect data for both variables (independent variables and dependent variables) separately.

In addition, this study used convenience sampling, a non-probability sampling technique to collect data. Non-probability sampling techniques do not guarantee representation of the whole population as they rely on voluntary participation which makes it difficult to generalise the findings to the whole population (De Beuckelaer & Wagner, 2012). Convenience sampling is nonetheless appropriate in some situations, as in this study, where the participants self-select in deciding whether or not to participate in the study (Abuosi, 2015). Future studies can try and incorporate convenience sampling with other probability sampling techniques.

It is also important to note that the assessment of the quality of care is based on perceptions and these are largely subjective. However, perceptions of quality have been increasingly accepted as valid and important measures of healthcare service quality (Abuosi, 2015; Blendon *et al.*, 2007). Future studies need to incorporate both perceptions and expectations of healthcare service quality to be able to measure and manage when there is service failure.

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Appendix 1: Questionnaire



Dear participant,

Your participation in this research is voluntary. You can choose to withdraw from the research at any time.

The questionnaire will take approximately 4 minutes to complete

You will not be requested to supply any identifiable information, ensuring anonymity of your responses.

This research is conducted by a Master of Business Science (Marketing) student at the University of Cape Town. The purpose of this research questionnaire is to investigate and improve the competitiveness of hospitals in Zimbabwe using a multi-stakeholder approach.

Question 1 asks if you are a healthcare health worker (doctors and nurses)

Question 2 asks questions do with gender, whether you are a male/female or prefer not to answer

Question 3 asks the extent on which you think Parirenyatwa Group of Hospitals (PGHs) has the features of healthcare service quality described using a scale of 1 to5 (1-Strongly disagree 2-Disagree 3-Neutral/Not sure 4-Agree 5-Strongly agree).

Should you have any questions regarding the research please feel free to contact

The researcher

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+263774229667
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The Research supervisors

Jeandri Robertson
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ferreira.caitlin@gmail.com

Please take a moment/few minutes to complete the following questionnaire,

Please note that all the questions are related to Parirenyatwa Group of Hospitals (PGHs)

Please select the most appropriate answer to the below questions.

1. Are you a healthcare worker?

Yes	No

2. Demographic information

Gender	Male	Female	Transgender male	Transgender female	Gender variant/Non-conforming	Prefer not to answer

Please show the extent to which you think Parirenyatwa Group of Hospitals (PGHs) has the feature described in the statement by **selecting the most appropriate response** below:

1-Strongly disagree 2-Disagree 3-Neutral/Not sure 4-Agree 5-Strongly agree

	1	2	3	4	5
3. PGHs know what the patient wants					
4. PGHs understand the patient's problems					
5. PGHs listen to the patient					
6. PGHs employees are polite					
7. PGHs has advanced equipment					
8. PGHs employs staff with advanced knowledge					
9. PGHs premises are always clean					
10. PGHs has convenient facilities					
11. The PGHs provide a safe environment for patients					
12. Nurses and doctors at PGHs take all precautionary measures to avoid mistakes					

13. Patients have confidence in the proficiency of PGHs					
14. The PGHs make every effort in ensuring that nurses and doctors work in a safe environment					
15. PGHs' environment is safe from infections					
16. Doctors and nurses at PGHs prescribe appropriate medication for patients					
17. The bills/costs at PGHs are appropriate for medical services provided					
18. PGHs make every effort in reducing unnecessary procedures					
19. PGHs has reasonable medical expenses					
20. Health conditions of patients at PGHs improve after receiving treatment					
21. PGHs make every effort to help prevent the prevalence of diseases in the community					
22. Healthcare workers at PGHs give the appropriate care service to the patients					
23. PGHs make effort to explain ways to prevent diseases					
24. PGHs has an excellent service quality					

Appendix 2: UCT ethics approval letter



UNIVERSITY OF CAPE TOWN
Faculty of Health Sciences
Human Research Ethics Committee



Room 650- Old Main Building
Groote Schuur Hospital
Observatory 7925
Telephone (021) 406 6192
Email: hrec_enquiries@uct.ac.za

Website: www.health.uct.ac.za/fhs/research/humanethics/forms

08 March 2021

HREC REF: 060/2021

Dr S Dlamini
School of Management Studies
Faculty of Commerce -Upper Campus UCT
Email: Siphwe.dlamini@uct.ac.za
Student: Mbyfra001@myuct.ac.za

Dear Dr Dlamini

PROJECT TITLE: AN INVESTIGATION INTO THE PERCEIVED HEALTHCARE SERVICE QUALITY AT PARIRENYATWA HOSPITAL USING A MULTI-STAKEHOLDER APPROACH-MASTERS CANDIDATE-MR. FRANK MUBAYIWA

Thank you for your response, addressing the issues raised by the Faculty of Health Sciences Human Research Ethics Committee (HREC).

It is a pleasure to inform you that the HREC has **formally approved** the above-mentioned study, subject to all local Zimbabwe approvals.

This approval is subject to strict adherence to the HREC recommendations regarding research involving human participants during COVID -19, dated 17 March 2020 & 06 July 2020.

Approval is granted for one year until the 30 March 2022.

Please submit a progress form, using the standardised Annual Report Form if the study continues beyond the approval period. Please submit a Standard Closure form if the study is completed within the approval period.
(Forms can be found on our website: www.health.uct.ac.za/fhs/research/humanethics/forms)

The HREC acknowledge that the student: - Mr Frank Mubayiwa will also be involved in this study.

Please quote the HREC REF 060/2021 in all your correspondence.

Please note that the ongoing ethical conduct of the study remains the responsibility of the principal investigator.

Please note that for all studies approved by the HREC, the principal investigator **must** obtain appropriate institutional approval, where necessary, before the research may occur.

HREC/REF 060/2021:xx

Appendix 3: Letter from PGHs statistics department

Telephone: 79 261/79 124
Telefax: (263)-4-790881
Email: parirenyatwastats@parihosp.org
Website: <http://www.parihos.org>



Parirenyatwa Group of Hospitals
P.O Box CY 198
Causeway
Harare

Statistics of patients and employees (doctors and nurses)

REF: MRCZ/B/1720

13 May, 2021

Frank Mubayiwa
2274 Rogers Mangena
Ruwa

Re: Statistics of patients, nurses and doctors at Parirenyatwa Hospital between March 14 and April 15, 2021.

	Main complex	Sekuru Kaguvi	Mbuya Nehanda
Patients	2010	620	820
Doctors-General practitioners and specialists	200	20	15
Nurses-General and midwifery	890	400	555

- This information is to be used solely for study purposes as indicated in the student's application letter and may not be shared with third parties.

Yours Faithfully,

PGHs Senior Statistician
Parirenyatwa Group of Hospitals
Department of statistics

Appendix 4: Letter from the copy editor

No. 9 Nhedzi Street
Old Tafara
HARARE

6 October 2021

The University of Cape Town
School of Management Studies
Rondenbosch
7701

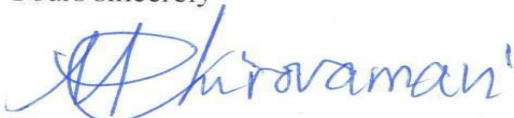
Dear Dr Jeandri Robertson & Dr Caitlin Ferreira

**RE: CONFIRMATION OF PROOFREADING (FRANK MUBAYIWA'S THESIS
IN MARKETING MBYFRA001)**

This letter serves to confirm that I have proofread Frank Mubayiwa's Masters' thesis in Marketing titled "**A holistic investigation into the healthcare service quality using a multi-stakeholder approach: A case of Parirenyatwa Hospital**". The copy was significantly enhanced in terms of material clarity in conformity to the rules of grammar and syntax.

The editor holds a doctorate in Theology, two Masters Degrees from the University of Zimbabwe, in Media and Communication Studies and Religious Studies. I have experience in research, teaching and editing of higher degree qualifications for at least 20 years in institutions of higher learning.

Yours sincerely



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Appendix 5: Turnitin plagiarism checker

mbyfra001:Frank_Mubayiwa_thesis_JR_010721.docx

ORIGINALITY REPORT

10% SIMILARITY INDEX

8% INTERNET SOURCES 3% PUBLICATIONS 4% STUDENT PAPERS

PRIMARY SOURCES

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Appendix 6: Commerce Faculty: Schedule of Corrections

Student Full Name:	Frank Mubayiwa
Student Number:	MBYFRA001
Dissertation Title:	A holistic investigation into the healthcare service quality using a multi-stakeholder approach: A case of Parirenyatwa Hospital.
Degree:	Masters of Business Science in Marketing
Department:	Marketing
Supervisor(s):	Dr. Caitlin Ferreira and Dr. Jeandri Robertson

This document serves to confirm that I have addressed all recommended changes from the examiners. In their feedback, the examiners provided both general and specific comments and recommendations concerning the dissertation. Both the general and specific comments have been taken into consideration. Where general remarks were given, for example, to review grammar and referencing throughout the document, changes were affected although not explicitly noted in the thesis.

The table below highlights the specific comments and recommendations given by the examiners, the chapter section and page where the issue can be found as well as my response to the recommendations.

Examiners' Recommendations	Student's Responses	Chapter / Section / Page
The title of the thesis as it stands is quite practical and appears to be more of a consulting report rather than an academic study.	The title of the thesis was reworked and now reads: "A holistic investigation into healthcare service quality using a multi-stakeholder approach: The case of Parirenyatwa Hospital."	Page 1

<p>General/Technical Comments:</p> <p>Some references are not correctly formatted.</p> <p>There are still significant language and technical errors.</p> <p>Numbering the title is unconventional, as is the writing out of the actual chapter number</p> <p>Numbering of headings needs to be corrected throughout the document.</p> <p>Spacing is inconsistent and there are some blank pages that need to be removed.</p> <p>Certain information is repeated multiple times throughout the document, making it redundant.</p>	<p>The thesis was sent for professional proofreading and editing to address language and technical errors.</p> <p>The list of references was reviewed and reformatted in line with the examiners' comments.</p> <p>Numbering was removed from all chapter titles and the numbering of headings was reviewed and corrected.</p> <p>All blank pages were removed and spacing corrected.</p> <p>Repetitive information has been removed, or in some cases information or references from other areas have been merged with earlier discussions. For example, section 1.6 Importance of Study was merged with the section on the problem statement.</p>	<p>Entire document</p>
<p>P. 9 (highlighted excerpt below refers): should be "hypotheses"</p>	<p>I have revised this section by writing the word 'hypothesis' in its plural form, which is hypotheses, so as to make it grammatically correct.</p>	<p>Chapter 1/ Section 1.1 Introduction/ Page 10</p>
<p>P. 11 (highlighted excerpt below refers): there should not be a full stop before the citation in brackets.</p>	<p>I have removed the full stop before the citation in brackets as follows: delivered (Ali, Basu & Ware, 2018).</p>	<p>Chapter 1/ Section 1.2 Problem statement, Page 11</p>

<p>P. 14 (highlighted excerpt below refers): “five dimensions.”</p>	<p>I have revised the word ‘dimension’ and have written it in its plural form, ‘dimensions’ to make it grammatically correct.</p>	<p>Chapter 1/ Section 1.4 Theoretical framework/ Page 13</p>
<p>The hypotheses in this study are incorrectly stated. Currently these hypotheses are a statement but there is not direction indicated e.g. H1: A distinction in the healthcare specification expectations of service quality between patients and management exists.</p> <p>This hypothesis does not indicate what it is testing. For example – the null hypothesis would be that there is NO distinction and the H1 would be that there IS a distinction.</p>	<p>Hypotheses have been reframed as follows:</p> <p>H1: There is a difference in the perceptions between patients and healthcare practitioners in terms of the empathy dimension.</p> <p>H2: There is a difference in the perceptions of service quality between patients and healthcare practitioners in terms of the improvement of care services dimension.</p> <p>H3: There is a difference in the perceptions between patients and healthcare practitioners in terms of the tangible evidence dimension.</p> <p>H4: There is a difference in the perceptions between patients and healthcare practitioners in terms of the efficiency of healthcare service quality dimension.</p> <p>H5: There is a difference in the perceptions between patients and healthcare practitioners in terms of the safety dimension.</p>	<p>Chapter 1/ Section 1.5 Development of the hypotheses/ Page 16</p>
<p>P. 15 (highlighted excerpt below refers): there should not be a full stop before the citation in brackets</p>	<p>I have removed the full stop before the citation in brackets as follows: practitioners and patients (Lee & Kim, 2017).</p>	<p>Chapter 1/ Section 1.4.1 Empathy/ Page 14</p>
<p>P. 16 (highlighted excerpts below refer): there should not be a full</p>	<p>I have removed the full stop before the citation in brackets as follows: treatment rendered (Lee & Kim, 2017).</p>	<p>Chapter 1/ Section 1.4.2 Improvements</p>

<p>stop before the citation in brackets</p>		<p>of care services/ Page 14</p>
<p>The introduction contains most of the methodology section as well – these points are addressed in the methodology chapter and I would suggest keeping a short summary in chapter 1 to improve readability and reduce duplication</p> <p>Research limitations and ethical considerations are repeated a few times in the study in various chapters – I would suggest addressing the limitations and ethical considerations only once</p>	<p>I have scaled down the discussion in section 1.6 Research design and methodology, to reduce duplication.</p>	<p>Chapter 1/Section 1.6 Research design and methodology/ Page 16</p>
<p>P. 18 (highlighted excerpt below refers): “...cross-sectional</p>	<p>I have removed the space before the hyphen on page 16.</p>	<p>Chapter 1/ Section 1.6.2 Research design/ Page 16</p>
<p>Section 1.7.4 is written in future tense. As the study has been completed, it needs to be past tense.</p>	<p>I rephrased section 1.7.4 from future tense to past tense since the study has already been completed.</p>	<p>Chapter 1/ Section 1.7.4 Target population/ Page 17</p>
<p>P. 19 (excerpt below refers): through which platform was the message sent, and how was it chosen? the Human Resources department at PGHs to send a pop-up message to patients and healthcare practitioners which would prompt them to complete the online questionnaire.</p>	<p>I have added more detail to the discussion on data collection in Chapter 3 to address this comment. The addition reads as follows</p> <p>This was done by downloading the online questionnaire link on Qualtrics and emailing it to the Human Resources</p>	<p>Originally in Chapter 1/ Section 1.6.5 Sampling/ Page 17</p> <p>Now in Chapter 3/ Section 3.7</p>

	<p>department of PGHs which then forwarded it to the healthcare practitioners and patients who fit into the desired timeframe and whose email addresses were registered with the hospital. This method of sending emails with the online link to the survey was chosen because of convenience of online data collection as well as the feasibility of collecting data at PGHs given the Covid-19 restrictions which prevailed. As such, a convenience sampling method was used to collect data because the participants were both willing and available to take part in the survey as there was reduced risk of contracting Covid-19 due to the absence of physical contact with them. The Qualtrics platform was used as it is a fast and efficient way of collecting data, and a similar study by Materla and Cudney (2020) evaluated patient service quality using the same platform. Additionally, UCT provides its students with access to the paid features of this platform, which has several benefits over other platforms.</p>	<p>Data collection/ Page 37</p>
<p>P.21 (highlighted sentence below refers): the sentence is not clear; please rephrase. “Mosadeghrad (2014) opines that quality is a strategic differentiator tool for improving quality through attending to structures and processes leads to a reduction of waste, rework, and delays, lower costs, higher market.”</p>	<p>The sentence has been rephrased as follows:</p> <p>Mosadeghrad (2014) opines that a competitive advantage can be sustained through the use of quality as a strategic differentiator tool. Furthermore, attending to structures and processes to improve quality leads to a reduction of waste, rework, and delays, as well as lower costs, higher market share, and a positive company image (Mosadeghrad, 2014).</p>	<p>Chapter 1/ Section 2.2 Service quality / Page 19</p>

<p>P. 24 (highlighted below refers): incomplete "...due to the ...". The analyses of healthcare service quality is crucial due the relationship between healthcare service quality and health outcomes.</p>	<p>I have added the word 'to' to complete the sentence and make it grammatically correct.</p>	<p>Chapter 2/ Section 2.3.1 Benefits of healthcare service quality/ Page 22</p>
<p>P. 25 (highlighted below refers): "... patients' ..." understanding patient's requirements and expectations.</p>	<p>I have revised the sentence to refer to the possessive plural form of patients correctly as patients'.</p>	<p>Chapter 2/ Section 2.3.2 Different perspectives in healthcare service quality / Page 23</p>
<p>P. 26 (highlighted below refers): the findings have not been reported at this point. Over time, the low perceptions of patients compared to those of healthcare practitioners, as confirmed by this research findings</p>	<p>I removed the words 'as confirmed by this research findings' since the research had not yet been reported at this point.</p>	<p>Chapter 2/ Section 2.3.5 Needs for a holistic view of healthcare service quality/ Page 24</p>
<p>P. 29 (highlighted below refers): The table is not "below"; it is on the next page (there is another instance of "table below" later on the same page). Table 1 below.</p>	<p>I removed the word 'below' as the table is on the next page.</p>	<p>Chapter 2/ Section 2.5 Literature on healthcare service quality/ Page 25</p>
<p>(there is another instance of "table below" later on the same page). The table 1 below, thus, depicts gaps from different authors</p>	<p>I removed the word 'below' as the table is on the next page.</p>	<p>Chapter 2/ Section 2.5 Literature on healthcare service quality / Page 27</p>

<p>P. 29 (highlighted below refers): there should not be an apostrophe. that is the healthcare practitioner’</p>	<p>I have revised this sentence to clarify its intent and to make it grammatically correct.</p>	<p>Chapter 2/ Section 2.5 Literature on healthcare service quality / Page 27</p>
<p>P.31 (highlighted below refers): “...necessary resources,...” to achieve the highest possible patient care without being provided the necessary resource</p>	<p>I have added an ‘s’ to the word ‘resources’ to indicate its plural form, in line with the context of the sentence.</p> <p>Vogus <i>et al.</i> (2020) argue that healthcare providers are expected at times to achieve the highest possible patient care without being provided the necessary resources, which has led to their reduced well-being.</p>	<p>Chapter 2/ Section 2.6 The research gap/ Page 29</p>
<p>P.31 (highlighted below refers): I believe this should be “level”, not “lever”. that technical quality is provided to the acceptable lever</p>	<p>I rephrased the first paragraph to improve on consistency and alignment. Therefore, the word <i>level</i> was no longer relevant.</p>	<p>Chapter2/ Section 2.6.1 Holistic view gap / Page 30</p>
<p>P. 32 (highlighted sentence below refers): the sentence is not clear; please rephrase.</p> <p>This because most of the studies on healthcare have been adopted and implemented on the African continent without any modification developed world without any modification exacerbates the problem.</p>	<p>I restructured the sentence as follows:</p> <p>“This is because most of the studies on healthcare that were conducted in the developed world have been adopted and implemented on the African continent without any modification, which exacerbates the problem.”</p>	<p>Chapter 2/ Section 2.6.1 Holistic view gap / Page 30</p>
<p>P.34 (Highlighted sentence below refers): the sentence is rather incoherent; please rephrase.</p> <p>This is because patients’ involvement and cooperation is needed and affects the quality of healthcare service and clinical</p>	<p>I restructured the sentence as follows:</p> <p>“This is because patients’ involvement and cooperation are needed, as they affect the quality of healthcare service and clinical outcomes that are achieved. The quality of healthcare service and clinical outcomes</p>	<p>Chapter 2/ Section 2.6.2 Patient-centeredness gap and the healthcare</p>

<p>outcomes depend on the ability of patients to provide information and cooperate with clinicians</p>	<p>are further also dependent on the ability of patients to provide information to and cooperate with clinicians.”</p>	<p>practitioners’ gap/ Page 32</p>
<p>P. 34 (highlighted below refers):</p> <p>in the subsection that follows, the highlighted are discussed, however, Subsection 2.6.2 “Ability to make rational choices” is not listed here.</p>	<p>The ‘ability to make rational choices’ has been added as one of the aspects to consider when assessing healthcare service quality from a multi-perspective viewpoint.</p> <p>The sentence on page 33 now reads:</p> <p>“Evaluating the difference in healthcare service quality from a multi-perspective viewpoint is crucial because it affects the following aspects of healthcare service quality: communication, ability to make rational choices, trust in healthcare practitioners, and the understanding of technical aspects within healthcare service quality.”</p>	<p>Chapter 2/ Section 2.6.2 Patient-centeredness gap and the healthcare practitioners’ gap/ Page 32.</p>
<p>P. 34 (highlighted sentence below refers): the sentence is incoherent; please rephrase.</p> <p>Efforts to include patients’ perspectives are gaining support from some healthcare practitioners are now advocating for position patients in their rightful place at the centre of care while acknowledging the importance of partnership between the care team and patient in improving healthcare and reducing harm (Nickel, Weinberger & Guze 2018).</p>	<p>The sentence has been rephrased as follows:</p> <p>“Efforts to include patients’ perspectives are gaining support from healthcare practitioners, who are advocating for patients to take their rightful place at the centre of care, whilst also acknowledging the importance of partnership between the care team and patient to improve healthcare and reduce harm (Nickel, Weinberger & Guze 2018).”</p>	<p>Chapter 2/ Section 2.6.2.1 Communication/ Page 32-33</p>

<p>P. 36 (highlighted sentence below refers): the sentence is incoherent; please rephrase.</p> <p>through treating of patients in hospitals, and patients in order to present a holistic point of view rather a one sided view.</p>	<p>The sentence has been rephrased as follows:</p> <p>This study is a novel attempt to simultaneously capture the perspectives of both healthcare practitioners (doctors and nurses) as well as patients, thus presenting a holistic view of healthcare service quality.</p>	<p>Chapter 2/ Section 2.7 Originality/value/ Page 35</p>
Chapter 3		
<p>Some sections of the methodology chapter are still written in the future tense (I expect this comes from the research proposal). Make sure to correct this to the past tense.</p>	<p>The chapter has been reviewed and rewritten in past tense.</p>	<p>Entire Chapter</p>
<p>p. 37 (highlighted below refers): this should be "...provide a lens..."</p>	<p>The sentence was restructured and now reads:</p> <p>In simple terms, it is an approach to thinking about and doing research that provides a lens that guides the choice of theory and methods in research.</p>	<p>Chapter 3/ Section 3.2 Research paradigm / Page 36</p>
<p>P. 37 (highlighted below refers): this should be "...measuring of current..."</p> <p>This implies that a cross-sectional method enables the measuring current attitudes or practices in a short amount of time, such as the time required for administering the questionnaires and collecting the information (Creswell, 2012).</p>	<p>I have added the word 'of' so that the sentence now reads:</p> <p>"This implies that a cross-sectional method enables the measuring of current attitudes or practices in a short amount of time, such as the time required for administering the questionnaires and collecting the information (Creswell, 2012)."</p>	<p>Chapter 3/ Section 3.3 Research design Page 36</p>

<p>P. 38 (highlighted sentence below refers): the sentence is incoherent; please rephrase;</p> <p>In addition, most questionnaires are widely used for collection of data from both healthcare practitioners and patients (Tsang, Royse & Terkawi, 2017) and thus, data for this research will be collected from both healthcare practitioners and patients therefore making the use of a questionnaires.</p>	<p>This sentence was removed to avoid repetition of information.</p>	<p>Chapter 3/ Section 3.4 Research method/ Page 37</p>
<p>P. 40, Table 2. Should be Likert scale, not Linkert, and 5=strongly agree, not 1</p>	<p>The correcting spelling of Likert scale has been used and the scale descriptors have been revised to read ‘5=strongly agree’.</p>	<p>Chapter 3/ Section 3.8 Measurement instrument / Page 39</p>
<p>P. 39-40 Survey instrument: were the scale items randomised in the online survey to minimise common method bias?</p>	<p>The scale items were not randomised in the online survey, as such, this is one of the limitations of this study This is discussed in depth in section 5.8 in chapter 5.</p> <p>“The high possibility of the presence of the common method bias could not have been avoided due to the nature of the industry in which this study was conducted, which is the healthcare industry. The incredible time constraints in the healthcare industry, particularly PGHs, made it difficult to collect data for both variables (independent variables and dependent variables) separately. In addition, this study used convenience sampling, a non-probability sampling technique to collect data. However, non-probability sampling techniques do not guarantee representation of the whole population as they rely on</p>	<p>Chapter 5/ Section 5.8 Limitations and scope for future research/ Page 62</p>

	voluntary participation which makes it difficult to generalise the findings to the whole population.”	
P. 41 (highlighted below refers): Author surname should not be underlined (this error also on the next page); Pannucci and Wilkins (2011)	Thank you for pointing out this oversight. Any underlined author surnames have now been corrected in the text.	Chapter3/ Section 3.9 Elimination of bias / Page 40
Chapter 4		
P. 45 (highlighted below refers): should be “Kolmogorov–Smirnov”	Kolmogorov–Smirnov has now been revised.	Chapter 4/ Section 4.1 Introduction/ Page 44
The “Hypothesis” line’s formatting is inconsistent with that of Section 4.6, where it was italicised.	All hypothesis statements are now italicized to ensure consistency throughout.	Chapter 4/ Section 4.7 Levene’s test for equality of variances/ Page 47-50
Section 4.8. It is common practice to report on the support (or not) of the alternative hypothesis, not the null hypothesis as per Table 8.	Instead of reporting on the null hypothesis, I have reported on the alternative hypothesis which is the common practice.	Chapter 4/ Section Table 8: Independent sample t-test of mean values of healthcare practitioners and patients / Page 48.
Please revisit the way the hypotheses results are reported.	I have revisited all the hypotheses results and combined the content of sections 4.8 and 4.9 into a seamless overall view of the full results of each tested hypothesis.	Chapter 4/ Section 4.8 and 4.9 Independent sample t-test / Page 49-50

Using future and present tense in one section is not advisable – the research has been completed and the chapter reports on it	Chapter 4 has been revised and now uses either present tense (to describe what content is covered in the chapter) as well as past tense (to report on the analysis of the data).	Chapter 4/ Section 4.3 to 4.9 / Page 46 to 51.
Chapter 5		
<p>The chapter format is inconsistent with the previous chapters. Here, there is no introduction.</p> <p>In reference to the discussion of the significant results – do consider the effect sizes as a small effect size does not denote much practical significance. As results with larger effect sizes signify more practical importance, they provide the basis for “stronger” recommendations.</p>	<p>An introduction has been added to the chapter.</p> <p>Effect sizes have been considered in discussing results, drawing up and supporting the recommendations.</p>	Entire Chapter
P. 52 (highlighted below refers): citation format	The citation format has been changed as follows: (McKinsey, 2015; Upadhyai <i>et al.</i> , 2019)	Chapter 5/ Section 5.2.1 Hypothesis 1 / Page 51.
Section 5.2.1. Be careful of straying too far into conjecture (stating “are most likely due...”) – there was no measurement of the effect of COVID in the survey, and making sweeping statements on that as a reason for the result is questionable.	<p>I have rephrased the sentence as follows:</p> <p>“The results of the empathy dimension may be due to the COVID-19 period, during which both the healthcare practitioners and the patients were equally adversely affected by the scourge.”</p>	Chapter 5/ Section 5.2.1 Hypothesis 1 / Page 51.
P. 54 (highlighted sentence below refers): Please rephrase; “healthcare practitioners highly perceive the efficiency of healthcare service.”	<p>I rephrased the sentence to:</p> <p>“This implied that both parties differed on their perceptions of the efficiency of the healthcare service quality dimension.”</p>	Chapter 5/ Section 5.2.4 Hypothesis 4 / Page 53.

<p>P. 55 (highlighted sentence below refers): the study examined the differences, and added to the scarce research, so why reiterate this, which was stated in previous chapters?</p>	<p>I have removed this sentence as it was reiterated in previous sections.</p>	<p>Chapter 5/ Section 5.2.5 Hypothesis 5 / Page 54.</p>
<p>P. 55 (highlighted below refers): should be "... there are differences...". Note that there was no difference for empathy</p>	<p>Since there were no statistically significant differences in terms of the empathy dimension, I have removed this dimension from the list of dimensions that showed statistically significant differences.</p>	<p>Chapter 5 / Section 5.2.5 Hypothesis 5 / Page 54.</p>
<p>by conducting an empirical study that ascertained that there is a differences</p>	<p>To make the sentence grammatically correct in its plural form I have rephrased it as follows:</p> <p>“This study, therefore, adequately addressed the dearth in healthcare literature by conducting an empirical study that ascertained that there were differences in perceptions between patients and healthcare practitioners (doctors and nurses) in terms of these four dimensions (efficiency of healthcare service quality, safety, improvement of care service and tangible evidence).”</p>	<p>Chapter 5 / Section 5.2.5 Hypothesis 5 / Page 54.</p>
<p>• P. 56 (highlighted sentence below refers): Please rephrase, sentence is incoherent;</p> <p>Whilst studies between patients and healthcare providers encompassing of both healthcare professionals and management have indicated differences in perceptions, there has been no definite and decisive conclusion on how a study on service quality that involves healthcare</p>	<p>I have rephrased the sentence as follows:</p> <p>“Whilst numerous studies on healthcare service quality have been conducted from patients’ viewpoint, there has been no definitive or decisive conclusion on how a study on service quality that includes both healthcare practitioners and patients, could be measured and analysed (Abuosi, 2015; Roohi <i>et al.</i>, 2011).”</p>	<p>Chapter 5 / Section / 5.3 Theoretical contribution of research / Page 54.</p>

<p>practitioners, comprising of only doctors, nurses and patients can be measured and analysed analysed (Abuosi, 2015; Roohi <i>et al.</i>, 2011).</p>		
<p>P. 58 (highlighted sentence below refers): Please rephrase, sentence is incoherent;</p> <p>Thus, patients want healthcare practitioners who not only do their technical jobs but also to empathetic.</p>	<p>I have rephrased this sentence as follows:</p> <p>“Thus, patients want healthcare practitioners who not only provide healthcare services in a technically competent manner but also in an empathetic way.”</p>	<p>Chapter 5/ Section 5.3.1 Technical and functional aspects of healthcare service quality / Page 56.</p>