Measuring Employee Satisfaction using Total Quality Management Practices: An Empirical Study of Nigerian General Hospitals

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Abstract

This research focuses on improving service quality by identifying TQM practices that could influence employee satisfaction to deliver efficient healthcare services that meet patients' needs and expectations in Nigerian general hospitals. Public healthcare in Nigeria faces several challenges, including providing quality services and patients satisfaction. While Nigerian general hospitals aim to satisfy patients, the management ignores the employees' satisfaction and, as such, has resulted in undesirable deficiencies. There is a need to balance the system through effective management of employees to achieve the higher service delivery lacking in the sector and has led to poor perception of the general hospitals.

The study adopted a quantitative method, using a self-administered questionnaire and online survey from a total of 328 respondents (39 Doctors, 67 Nurses, 58 administrative staffs; 74 patients, 62 family members of patients, and 28 friends of patients) from two public hospitals in the states of Delta and Abuja, Nigeria. Using PLS-SEM, data analysis was carried out following the hierarchical component modelling approach.

The study found positive links among TQM practices, employee satisfaction, service quality, and patient satisfaction. However, employee satisfaction has no impact on patient satisfaction, as the relationship was mediated by service quality. It was established that employees' perception of service quality differs from that of patients in the Nigerian general hospital.

The study contributes to knowledge by clarifying employee satisfaction as an essential link to improving service quality and patient satisfaction and has significant implications for improving service quality and stakeholders' satisfaction in hospitals.

Declaration

I, Fiakpa Afene Ernest, declare that the DBA thesis entitled Assessing employees and patients' satisfaction using quality practices in Nigerian general hospitals, is no more than 65,000 words in length including quotes and exclusive of tables, figures, appendices, bibliography, references and footnotes. This thesis contains no material that has been submitted previously, in whole or in part, for the award of any other academic degree or diploma. Except where otherwise indicated, this thesis is my own work.

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Signature

21/08/2020

Date

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List of Acronyms

AIDS	Acquired Immunodeficiency Syndrome
AMOS	Analysis of a Moment Structures
ASSU	Assurance
AVE	Average Variance Extracted
BBC	British Broadcasting Corporation
BHCPE	Baldrige Health Care Criteria for Performance Excellence
BHSS	Basic Health Service Scheme
CBO	Community Based Organisations
CB-SEM	Co-variance Based Structural Equation Modelling
CEO	Chief Executive Officer
CFA	Confirmatory Factor Analysis
CR	Composite Reliability
DP	Deming Prize
EFA	Exploratory Factor Analysis
EFQM	European Foundation of Quality Management
EMPT	Empathy
ES	Employee Satisfaction
ESQ	External Service Quality
FCT	Federal Capital Territory
FMOH	Federal Ministry of Health
GDP	Gross Domestic Product
HCM	Hierarchical Component Models
HIV	Human Immunodeficiency Viruses
HOC	Higher-Order Construct
HR	Human Resource
HTML	Heterotrait-Monotrait
ISO	International Standards Organisation
ISQ	Internal Service Quality

LEAD	Leadership
LOC	Lower-Order Construct
MAKM	Measurement, Analysis, and Knowledge Management
MBNQA	Malcolm Baldrige National Quality Award
MDG	Millennium Development Goals
NDP	National Development Plan
NEEDS	National Economic Empowerment and Development Strategy
NEPA	National Electric Power Authority
NEPAD	New Partnership for Africa's Development
NGO	Non-government organisations
NHIS	National Health Insurance Policy
NHIS	National Health Insurance Scheme
NIST	National Institute of Standards and Technology
NNPC	Nigerian National Petroleum Corporation
NSHDP	National Strategic Health Development Plan
OP	Operation
PAT	Patient
PDCA	Plan-To-Do-Check-Act
PHC	Primary Health Care
PHCN	Power Holding Company of Nigeria
PHCUOR	Primary Health Care Under One Roof
PLS	Partial Least Squares
PS	Patient Satisfaction
REL	Reliability
RESP	Responsiveness
RQ	Research Question
SEC	Service Excellence Chain
SEM	Structural Equation Modelling
SERVQUAL	Service Quality
SEVQ	Service Quality

SPC	Service Profit Chain
SPSS	Statistical Package for the Social Sciences
SRMR	Standardized Root Mean Squared Residual
STDEV	Standard Deviation
STRAT	Strategy
TAN	Tangible
TB	Tuberculosis
TQM	Total Quality Management
UAE	United Arab Emirates
UK	United Kingdom
US	United States
VIF	Variance Inflation Factor
VUHREC	Victoria University Human Research Ethics Committee
WHO	World Health Organisation
WKF	Workforce

Chapter 1: Introduction

1.1: Overview

This chapter presents the subject for investigation, exploring the research background, research rationale, and study gap. Further, the chapter presents the research question, research objectives, and significance. After that, the author depicts the research structure to illustrate the thesis' flow.

1.2: Background

The healthcare sector faces several challenges in providing quality care to patients. Some of the difficulties plaguing healthcare include rising cost, increasing expectations (Becker, Klein & Wetzels 2012; Silva, Ferreira & Daniel 2018; Xiong et al. 2018), healthcare providers' accountability (Silva, Ferreira & Daniel 2018), growing dependence on technology, and pressure to enhance quality to meet universally agreed standards (Aiken et al. 2012). Advanced countries have made substantial progress in their healthcare systems; however, developing nations continued to suffer from the lack of experienced healthcare practitioners, poor service quality, inadequate patient care, and high costs of medical expenditure (Talib et al. 2019; Talib, Rahman & Azam 2011; Voon et al. 2014). A notable case is a deplorable state of public healthcare services in Nigeria, a developing country in West Africa. Given these challenges, it has become imperative for healthcare managers and practitioners in developing countries to focus on innovative strategies for building a sustainable healthcare system (Karamat et al. 2019; Zarei et al. 2019).

To achieve a sustainable healthcare system, a high level of service quality (SQ) is critical (Meesala & Paul 2018; Prakash 2014) for the satisfaction of patients (Naidu 2009). Hence, Girma et al. (2007) opined that improving healthcare service quality reduces infectious diseases in developing countries, as excellent service quality gives hospitals a competitive edge. Service quality is a result of employees' input (Chang, Chiu & Chen 2010; Chen & Chen 2014; Heskett et al. 1994; Kaynak 2003; Sadikoglu & Zehir 2010; Yee, Yeung & Cheng 2010), in which patients based their judgement of hospitals (Andaleeb 2001; Naidu 2009). Thus, there should be a practical management strategy to improve staff quality (Yang 2006); one such strategy is

quality management, which significantly influenced Western economies' management methods (D'Souza & Sequeira 2012).

Quality management impacts employee satisfaction (ES), leading to quality service delivery, which creates customer satisfaction (Bouranta et al. 2019). Such a concept is akin to the service-profit chain model of Heskett et al. (1994) that depicts employees as the deliverer of the services that pleased customers for profitability. The service-profit chain model denotes that internal stimuli are critical to employees' higher satisfaction towards improving productivity and quality of services that positively impact customers for eventual profitability. Recent studies have investigated the service-profit chain model associations (Kelloway & Myers 2019; Myrden & Kelloway 2015; Yee, Yeung & Cheng 2011). However, there are uncertainties regarding subjective internal quality enablers that promote employee satisfaction, different service quality measures, and difficulties in establishing a cause-and-effect connection between workers and customers (Musella et al. 2017).

In line with the service-profit chain proposition and the stakeholder's theory that encourages managers to satisfy all persons connected to a business, this current study explores the notion of internal support policies and services empowering employees to provide superior services to patients' delight. This research operationalised Total Quality Management (TQM) practices as internal quality enablers that inspire employee satisfaction for improving healthcare service delivery to the patients' satisfaction in Nigerian general hospitals.

This research focuses only on public hospitals, specifically state-sponsored general hospitals. Consequently, it will explore service quality in a specific sector that nominally presents a more excellent opportunity for health generation and flexible work arrangements that become important for the country given local social norms and other related economic and political considerations. The exclusion list comprised private, primary, and tertiary hospitals. While the private hospitals are chiefly run for profit purposes and are expensive, primary care centres are mainly for minor ailments and lack facilities/workforce. The tertiary hospitals are for specialised treatments or medical colleges. Thus, most Nigerians depend on general hospitals, i.e., States-owned hospitals.

1.3: Definition of Concepts

In this study, there are two central concepts: customer satisfaction - the fulfillment of one's wishes and expectations, and service quality - customers' judgment regarding a service's superiority (Iqbal & Asrar-ul-Haq 2017). Service quality is of utmost importance to health care organisations (Meesala & Paul 2018) as customer satisfaction arises from a perceived high service quality (Aliman & Mohamad 2016), and poor quality of service results in undesirable results (Vogus & McClelland 2016). The term customer refers to two sets of people; the internal customers – people working in the organisation and external customers – the organisation's services' end-users (Srivastava & Prakash 2019). Hence, service quality comprised both internal service quality (ISQ), defined as the quality of services provided by employees to co-workers within an organisation, and external service quality (ESQ), the quality of services a company delivers to its customers (end-users) outside of the organisation (Latif 2016).

To ensure that customers (external customers) receive excellent service quality, an organisation needs to understand factors that influence the employees (internal customers) (Heskett et al. 1994). Because employee satisfaction (ES), service quality (SQ), and customer satisfaction are regarded as crucial factors in organisations (Douglas & Fredendall 2004; Heskett et al. 1994; Meyer & Collier 2001), organisations should endeavour to streamline their connections for better productivity. Employee satisfaction which is a positive feeling of contentment with one's job and the job environment, is considered a critical factor of organisation performance (Kim et al. 2012). In the health sector, employees are vital as they provide core services to patients. However, patient satisfaction (PS), which entails the patients' pleasurable overall judgement of the core services received in the hospital, is mainly used in the literature to gauge healthcare service quality (Badri, Attia & Ustadi 2009; Naidu 2009). The employees of an organisation interact with customers through the service process, and their satisfaction leads to the delivery of high quality services that delight customers (Amin et al. 2017; Heskett et al. 1994; Srivastava & Prakash 2019). Consequently, service quality is being used as a competitive advantage by various organisations (Parasuraman, Zeithaml & Berry 1994). Such is the chain of the interrelationship among the variables in the service-profit chain model.

1.3.1: Healthcare Service Quality

Service quality in healthcare is a complex multidimensional construct that needs a careful evaluation for all stakeholders' satisfaction (Gronroos 1984; Parasuraman, Zeithaml & Berry 1988). When the service quality fails to meet patients' requirements, it breeds dissatisfaction, and patients will be reluctant to use the service again (Naidu 2009). However, improving healthcare service quality requires a high employee satisfaction level (Firth et al. 2004), which has been shown to have a positive impact on patient satisfaction (Raharjo et al. 2016). Therefore, a critical assessment of internal quality enablers, understanding employees' and patients' perceptions regarding service quality in the healthcare sector, would create strategies for improving service delivery and enhance stakeholders' satisfaction (Ansari 2020; Mugion et al. 2020). According to Yang (2006), organisations can improve their internal service quality by using comprehensive quality management techniques that enhance the service delivery process. One technique that improves organisation performance, primarily through employee satisfaction, is Total Quality Management practices (Anderson, Fornell & Lehmann 1994; Prajogo, Power & Sohal 2004; Shields & Jennings 2013).

1.3.2: Total Quality Management

Total Quality Management is a structured managerial approach comprising various sets of practices for refining an organisation's overall quality through all workers' committed involvement in the business process towards customer satisfaction (Sadikoglu & Olcay 2014). TQM is reputed to improve employee morale, leads to higher quality service, enhance productivity, and ultimately, result in customer satisfaction; and it has been utilised by several scholars in various sectors (Alexander, Weiner & Griffith 2006; Amin et al. 2017; Kunst & Lemmink 2000; Macinati 2008; Sadikoglu & Olcay 2014). Total quality management provides a fitting reaction to healthcare challenges because it improves both systems and procedures through scientific methods to achieve desirable outcomes (Mosadeghrad 2013b). This study adopts the healthcare version of the Malcolm Baldrige National Quality Award (MBNQA) framework credited with capturing core TQM practices (Ahire, Golhar & Waller 1996; Flynn & Saladin 2001; Karimi et al. 2014) and operationalises it as the internal quality enabler. The MBNQA framework, which has achieved much recognition for self-assessment in companies (Porter & Tanner 2012), is a core set of TQM practices for measuring quality at every organisation's level to achieve performance excellence. The MBNQA consists of seven

practices, namely: Leadership, strategy, customer, information, analysis, and knowledge management, workforce, operations, and result (NIST 2017).

1.4: Public Healthcare Issues in Nigeria

As in many other developing countries, public healthcare in Nigeria faces considerable challenges (Amole, Oyatoye & Kuye 2016; Ekpe & Peter 2016; Iloh et al. 2012). Some of the public healthcare challenges in Nigeria include curative bias at all levels and the inefficiency of services, leading to distrust of public hospitals by the masses (Aregbeshola 2019; Federal Ministry of Health 2016; Iloh et al. 2012; Oladapo et al. 2016; Pezzuto 2019; Potluri 2018). The Nigerian health care conditions are appalling and call for serious attention (Iloh et al. 2012). Pezzuto (2019) cited lack of government funding, shortage of skilled workforce, deficient infrastructures, and weak administration as contributing factors.

Nigeria currently has the 7th largest population globally, estimated to be over 200 million people, and would reach 390 million in 2050 (World Population Review 2020). Such a massive population provides an excellent opportunity for growth; instead, it portends impending danger to Nigeria because the health system is fraught with critical issues. There are increasing issues like Malaria, Tuberculosis (TB), and Human Immune Deficiency Virus/Acquired Immune Deficiency Syndrome (HIV/AIDS) (World Health Organisation 2018); still, service delivery remains far below satisfactory level (Potluri 2018). According to the World Health Organisation (2018) report, the prevalence of HIV in Nigeria is at 3.2% of the global burden, malaria 27%, and TB prevalence is at 323/100,000. Another prevailing health problem is the increase of non-communicable diseases like diabetes, cancer, coronary heart diseases, and hypertension (World Health Organisation 2018). Nigeria has not done very well regarding specific health indicators compared to other sub-Saharan African nations. For example, Nigeria's maternal mortality shows a staggering 814/100,000 live births, and the mortality of kids below five years is at 109/1000 live births, which is the highest in the world (The World Bank 2017). The life expectancy in Nigeria was rated very low by World Health Organisation (2018).

In attempts to resolve the precarious situation in the health sector, the Nigerian government has, over the years, implemented several health reforms like the "National Action Committee on AIDS" and the "National Health Insurance Scheme (NHIS)" (Enabudoso et al. 2006). Despite the efforts made, there remained a daunting challenge of providing reliable and

accessible health care services (Aregbeshola 2019; Omoruan, Bamidele & Phillips 2009; World Health Organisation 2018). Moreover, the quality of health care service delivery continues to deteriorate with the negative impact felt mainly by the poor masses, which constitute 70% of the Nigerian population (Aregbeshola 2019). The Nigerian government's lack of political will, coupled with corruption and poor management, has not helped the situation (Abdulraheem, Olapipo & Amodu 2012; Alenoghena et al. 2014); because insecurity, political and economic uncertainties are prioritised over healthcare (Alloh & Regmi 2017; Pezzuto 2019).

1.5: Research Rationale

The Nigerian health system was analysed and deemed to be generally weak and performing below expectations (Okonofua et al. 2018; Oladapo et al. 2016; Potluri 2018; World Health Organisation 2018). Errors made by service providers have harmed patients (Ogunrin, Ogunrin & Akerele 2007); care workers exhibit nonchalant attitudes, disregard for quality and standards of operations (Bohren et al. 2016; Iloh et al. 2012; Saleh, Adamu & Ningi 2015). There are reports of discrimination against patients and their families (Letamo 2005), which result in a low perception of the hospital by the people (Iloh et al. 2012; Osubor, Fatusi & Chiwuzie 2006), and patients tend to trust private hospitals more than the public hospitals (Polsa et al. 2011).

Approximately 58,000 maternal deaths occurred from preventable causes in Nigeria, accounting for (19%) maternal deaths worldwide (World Health Organisation 2015). Also, infants' mortality under five years remains high at 70 and 104 per 1000 live births (World Health Organisation 2018). Consequently, women are sceptical of giving birth in public hospitals, citing the lack of quality services and trained workers (Adeloye et al. 2017; Okonofua et al. 2018; Osubor, Fatusi & Chiwuzie 2006). Patients started having a preference for traditional child delivery facilities, which could be detrimental to their health, over government hospitals (Okonofua et al. 2018; Osubor, Fatusi & Chiwuzie 2006). The general public is not left out in the Nigerian healthcare system's poor assessment, as people often perceive high cost and lack of quality as a deterrent to using child health and maternal services in the country (Aregbeshola 2019).

The Nigerian government has a child health policy covering perinatal and neonatal health, school health, childhood illness, feeding of young kids, and HIV (Federal Ministry of Health 2006). However, the public hospitals' patronage declined drastically since the 1990s (Federal

Ministry of Health 2010). People who can afford it utilize private hospitals at a huge expense or go overseas to access quality healthcare, accounting for the consistent increase in overseas medical tourism (Adeloye et al. 2017).

Most Nigerian Government officials would rather incur high costs in foreign currencies for medical tourism than utilise the hospitals in the country. Government officials incurred about US$1 billion in 2014 for overseas medical care, and ordinary citizens spent US$6.3 billion in 2015, for medical tourism (Damian 2017; Voice of America 2017). The Nigerian president got admitted for three months in a UK healthcare facility in 2017, and it cost the country several millions of public funds (Damian 2017; Voice of America 2017). Such a medical trip to the UK constitutes an enormous drain on the country's resources, especially as Nigeria was experiencing stiff economic hardship. Rather than utilise hospitals' services in the country, many Nigerians still prefer to embark on overseas healthcare, despite its high cost. Excellent service quality is in high demand, but the Nigerian general hospitals seem to lack in that regard, hence, the distrust of the country's healthcare system.

Regarding the employees, professionals who are dissatisfied with the system are increasingly seeking greener pastures to advanced countries, leaving Nigeria in need of competent practitioners (Aminu & Dattijo 2018; Olu-Abiodun & Abiodun 2017; Salami, Dada & Adelakun 2016). Furthermore, brain drain (emigration of highly qualified persons) has become a significant crisis in Nigeria (Adeloye et al. 2017). As a study puts it, the loss to African countries in migration of one doctor is at US$1,854,677 and one nurse, US$1,213,463, returns on investment. The price of losing such professionals to advanced countries is the people's suffering and high morbidity rate in Africa (Kirigia et al. 2006).

According to Adeloye et al. (2017), dissatisfaction among the Nigerian public hospital's workforce has led to doctors' repeated strike actions. At the onset of the Covid-19 pandemic, Nigerian doctors were on an indefinite strike over unsafe working conditions and unpaid salaries, leaving patients in dangerous situations (BBC News 2020; The New Humanitarian 2020). These issues may also be related to inadequate funding, corruption, lack of infrastructure, poor management, inadequate compensation, and low workforce motivation (Arisi-Nwugballa 2016), which adversely affect the country's growth, and productivity making the people more impoverished.

For the Nigerian general hospitals to function well, the internal factors relevant to employees' well-being and satisfaction should be improved, and patients' satisfaction could be achieved (Kassinis & Soteriou 2003). For patients to be satisfied, the hospital workforce should ensure a high service quality that delights patients (Heskett et al. 1994). Thus, it's critical to investigate service quality from the caregivers' perspective (employees) and the receiver of care (patients, patients' family, and friends). So, identifying quality practices that would improve staff satisfaction, investigating a gap in perception of service quality between employees and patients may provide valuable data for healthcare managers to allocate resources judiciously for better efficiency that would benefit all stakeholders.

1.5.1: Research Gap

The core issue in healthcare provision in Nigeria is service quality (Arisi-Nwugballa 2016; Oladapo et al. 2016; Polsa et al. 2011; Potluri 2018). Healthcare service quality relies heavily on interactions amongst care providers, the service process, and patients (Batbaatar et al. 2017; Mosadeghrad 2013a), which plays a crucial role in patient satisfaction.

Employee satisfaction is an essential measure of organisational performance (Bohren et al. 2016; Kim et al. 2012; Lin et al. 2005; Sadikoglu & Zehir 2010). Therefore, healthcare managers must find effective ways to assess and improve staff satisfaction for the hospital to achieve better service delivery and customer satisfaction (Chang, Chiu & Chen 2010; Heskett et al. 1994). However, most health sector studies focus more on patients' satisfaction and experience, neglecting the employees' satisfaction (Chen & Chen 2014; Ogunnowo, Olufunlayo & Sule 2015; Polsa et al. 2011). Whereas empirical studies found a significant link between satisfied employees and satisfied customers (Goldstein 2003; Heskett et al. 1994).

Some studies found a positive relationship between employee satisfaction and service quality (Chi & Gursoy 2009; Heskett et al. 1994; Jung & Yoon 2013; Yee, Yeung & Cheng 2010). Other studies significantly linked employees' satisfaction to patients' satisfaction (Badri, Attia & Ustadi 2009; Naidu 2009; Owusu-Frimpong, Nwankwo & Dason 2010; Raharjo et al. 2016; Sadikoglu & Zehir 2010; Sohail 2003). Despite establishing a positive link between employee satisfaction and patient satisfaction, Raharjo et al. (2016) posit that the relationship is complicated, as some studies did not find any direct connection between the two constructs. What seems scarce are empirical studies that simultaneously test the tripartite relationship and

predictive power amongst employee satisfaction, service quality, and patient satisfaction in public healthcare, especially in a developing economy.

Few studies found to be related (Chen & Chen 2014; Mugion et al. 2020; Raharjo et al. 2016) are either different in their methodology, subjective factors of employee satisfaction, and varying service quality dimensions - which remains an ongoing debate in the literature (Martínez & Martínez 2010). Further, the difference in perception of the external service quality between employees and patients has not received adequate attention in the healthcare literature (Rohini & Mahadevappa 2006).

TQM has been a success in organisations (Brah et al. 2000; Samson & Terziovski 1999; Jaca and Psomas, 2015) and shown to improve efficiency (Lam et al. 2015; Talib et al. 2011, 2013, 2014). However, most organisations seek to improve efficiency by increasing revenue rather than implementing a TQM approach (Wang et al. 2012); thus, focusing on methods rather than on the people that carry out the services (Rodrguez-Antón & Alonso-Almeida, 2011; Yee et al. 2008). TQM and employees are both critical elements of management in the healthcare sector. Patients expect high service delivery standards, as their first interaction with a hospital service is usually through front-line employees expected to provide high-quality service to them (Lee et al. 2015; Lin et al. 2015; Lee 2016). However, previous studies have not paid much attention to TQM practices' correlation with employee satisfaction and hospital efficiency (Lee et al. 2015; Sadikoglu & Zehir, 2010; Wang et al. 2012). Research that considered organisational performance components are notably in the manufacturing industry, neglecting the healthcare sector (Agyapong & Kwateng 2018); and most of the studies were conducted in developed countries, with little attention paid to developing countries (Baidoun et al. 2018; Amin et al. 2017).

Furthermore, numerous empirical studies stressed that a country's social, cultural, and economic conditions could influence TQM practises within a business (Flynn & Saladin 2006; Yoo, Rao & Hong 2006). As a result, there are arguments that TQM relationship with organisational success is best examined in a country-specific context (Sila & Ebrahimpour 2005; Flynn & Saladin 2006; Amin et al. 2017). Besides, despite mounting evidence of quality techniques' beneficial impact on organisational efficiency, minimal emphasis has been put on them (Handfield et al. 1999; Brah et al. 2002). Thus, Ahmed and Hassan (2003) concluded that quality management techniques should remain a core research area.

Scholars have postulated varying internal quality enablers critical to employee satisfaction, but hardly any research that examined the role of TQM practices as an internal enabler for improving service quality and patient satisfaction through employee satisfaction. More so, this current study employs the much-regarded Malcolm Baldrige National Quality Award (MBNQA) framework, which is mainly utilised in healthcare, to represent the core TQM dimensions. Therefore, highlighting the cause and effect relationship among TQM practices, employee satisfaction, service quality, and patient satisfaction is a new healthcare research area that needs exploration. This current study integrates the four variables, operationalizing TQM practices as internal quality enablers that enhance employee satisfaction, and investigates the connections and predictive values amongst employee satisfaction, service quality, and patient satisfaction in Nigerian general hospitals.

1.6: Study Aim

To determine TQM practices' impact on employee satisfaction for service quality improvement and patients' satisfaction.

1.6.1: Research Question

The service-profit chain model emphasised the need for service organisations to pay attention to employee satisfaction and service quality, as they are highly related to customer satisfaction and eventual organisational profitability (Heskett et al. 1994; Kelloway & Myers 2019; Yee, Yeung & Cheng 2011). Although the service-profit chain's idea is supported empirically, service organisations have found it challenging to implement (Kelloway & Myers 2019). With an increasing demand for quality in hospitals, healthcare managers must utilise quality tools and techniques for resource efficiency and strengthen their hospitals' services (Miguel 2006). The role of total quality management practices and employee satisfaction in the healthcare work environment as a link to enhancing service quality and improve patient satisfaction have not gained much recognition (Mugion et al. 2020). Therefore, this study will seek empirical evidence that supports internal quality enablers in the healthcare environment, with influence on employee satisfaction, to improve external service quality and patient satisfaction. In that regard, this research asks the following question:

RQ. ***What is the impact of TQM practices on employee satisfaction towards improving service quality and patient satisfaction in Nigerian general hospitals?***

1.6.2: Research Objectives

1. To determine the connections and predictive powers among TQM practices, employee satisfaction, service quality, and patient satisfaction.

2. To establish a gap between employees' and patients' perceptions of service quality in Nigerian general hospitals.

3. To recommend measures to improve the Nigerian general hospitals' performance.

The research question's answers can help healthcare managers improve operations based primarily on employee activities and management. A more efficient workplace will deliver more efficient services, and a delighted workforce will work more efficiently and productively to influence customers' satisfaction.

1.6.3: Significance of the Study

This research has theoretical and practical implications for quality management, human resources, and public healthcare services.

1.6.4: Theoretical Contribution

1. This study re-validates the MBNQA constructs as a core measure of TQM.

2. The study validates the structural relationship between TQM, ES, SQ, and PS in Nigerian general hospitals, with implications for other developing countries.

3. The study adds to the body of healthcare literature by giving a comprehensive explanation of the function of employee satisfaction as a direct link to service quality improvement, with an indirect connection to patient satisfaction.

4. Further, the research adds to the growing literature that supports service quality as an antecedent of patient satisfaction and empirically validates the relationship between the two constructs.

5. This study supports ‘perception’ in measuring service quality compared to ‘expectation,’ which has various interpretations that lead to conflicting conceptualisations in the literature.

7. This study contributes methodologically by conceptualising TQM and service quality as second-order exogenous and endogenous constructs, respectively, using the structural equation modelling approach.

1.6.5: Practical Contribution

1. The research outcome provides healthcare administrators with an understanding of TQM practices available and important to improving staff members’ satisfaction, achieving higher standards of care, and eventual satisfaction of patients in the Nigerian general hospitals. The chain of connections amongst the variables under investigation and their importance were made clear; managers of the public healthcare system could understand such links to enhance the hospitals’ decision-making process and provide employees the right tools to perform well in their tasks.

2. This study would allow public healthcare managers to consider staff concerns, comprehend the antecedents of employee satisfaction in the workplace, and review the staff’s experiences and outcomes toward improving relationships with customers. Thus, managers are equipped to meet employees’ requirements in the workplace and harness them to satisfy patients for competitive growth.

3. The recommendations of this study would give the Nigerian government hospitals a competitive advantage over private hospitals and boost their reputation.

4. The research findings would enhance the decision-making process for healthcare administrators and the performance of national healthcare systems, particularly in developing countries.

5. This study’s findings would enable Nigerian public healthcare managers to understand the importance of measuring service quality from both employees’ and patients’ perspectives and allocate resources judiciously where they are needed to achieve the hospitals’ aims and objectives. Thus, understanding both employees’ and patients’ needs and complaints would give management insight into resolving problems.

1.7: Thesis Structure

The first chapter of this paper introduces the study's background, research aims, and research objectives. The second chapter delved into the research context, detailing its demographics and healthcare sector. The third chapter discusses theories supporting the study's conceptual framework and reviews related literature on TQM practices, employee satisfaction, service quality dimensions, and patients' satisfaction. Chapter four elaborates the conceptual framework and depicts the relationships among the study variables — Chapter five comprises the methodology: study design, approach, and data collection. Chapter six contains data analysis and results, while chapter seven finalises the thesis with concluding discussions and recommendations.

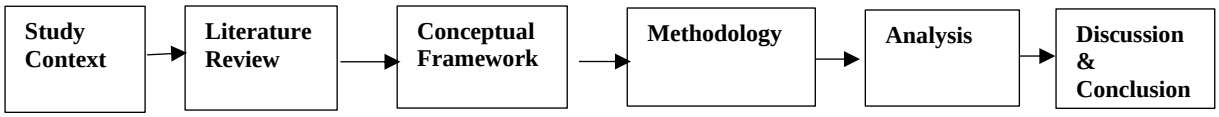

Figure 1.1: Thesis Flowchart

1.8: Chapter Summary

This chapter presents the research background, gap, question, aim and objectives, and the study's significance. It also provided definitions and a brief explanation of the concepts under investigation. Finally, it depicts the structure of the thesis.

The study presented the justification for investigating the connection between TQM practices and employee satisfaction towards improving service performance and patients' satisfaction in Nigerian general hospitals. The study's parameters were defined in line with the service-profit chain concept of internal service quality linked to external service quality through employee satisfaction. Internal customer satisfaction (employees) was also linked to external customer satisfaction (patients) through external service quality. TQM practices operationalised as an internal enabler (internal service quality) in the hospital bothers on employees' specific needs in the organisation that would enable them to provide the external service quality that would meet patients' satisfaction. TQM practices that are numerous and subjective in the literature were captured according to the Malcolm Baldrige National Quality Award (MBNQA) framework, which comprised the core TQM practices and validated by various scholars.

Following the notion of the service-profit chain model (Heskett et al. 1994), which highlights the importance of association amongst variables of employee satisfaction, service quality, customer satisfaction, and profitability, this study differs by operationalising TQM practices to catalyse improving employee morale for better service delivery in the hospital. Also, profitability was not included in this current study as public hospitals are not-for-profit.

To better understand the issues plaguing Nigerian public healthcare and the several efforts to alleviate the problems, the next chapter will explore the research context.

Chapter 2: Research Context

2.1: Overview

This chapter is about Nigeria and the healthcare development from the pre-colonial era to the post-colonial period. It delves into several healthcare policies, funding and health challenges inherent in the system, and healthcare organisation in Nigeria.

2.2: Nigeria

Nigeria is in West Africa, with the Republic of Benin bordered in the West, Niger republic bothered in the North, Chad connected in the East and Cameroon in the South. It is a multicultural society composed of 36 States, with the Federal Capital Territory in Abuja. The country has six geopolitical zones; North-West, North-Central, North-East, South-West, South-East, and South-South. English is the official language of Nigeria, but the nation has more than 250 ethnic groups with different native languages (Kombe et al. 2009), and the major ethnic groups are the Hausa/Fulani (28%), Yoruba (21%), and the Igbos (19%) (Suberu 2010). Additionally, the country has diverse religious beliefs, mainly Muslims, Christians, and traditional African beliefs. The Northern part of the country is predominantly Muslim, while the Southern region is largely Christian (Kombe et al. 2009).

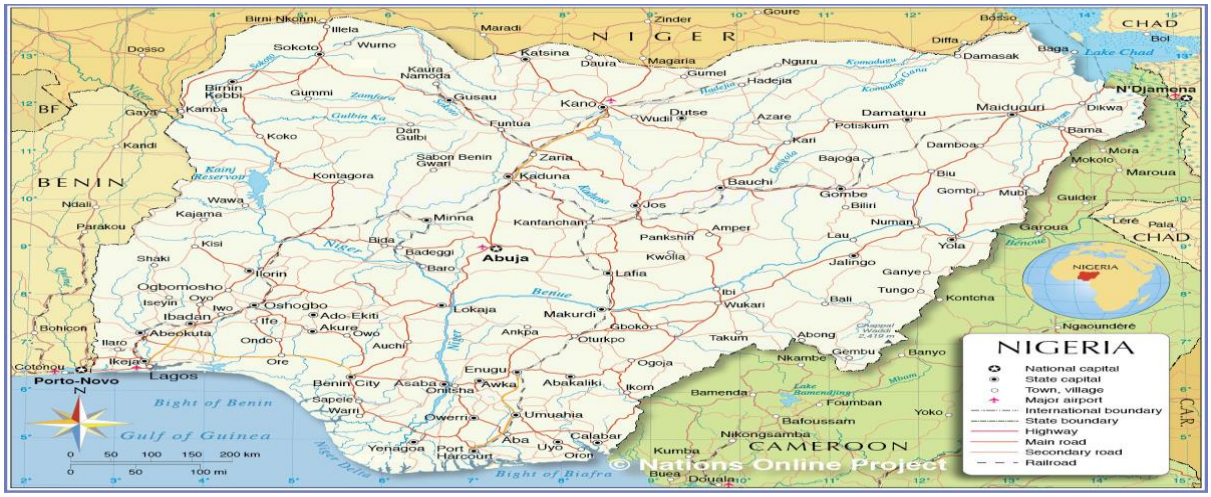

Figure 2.1: Map of Nigeria

Source*: Nationsonline.org*

2.3: Public Sector Organisations of Nigeria

Nigeria gained independence in the year 1960, and since that time, the country's public organisations have been using a method of government interference in the process of development (Omoleke & Adesopo 2005). The prime objective was to encourage and speed up the development of the economy (Adegoroye 2006; Omoleke & Adesopo 2005) and achieve economic goals. Also, it has played critical roles in the search for self-reliance and financial independence of the country (Adegoroye 2006). The majority of the organisations operated as quasi-commercial organisations due to the following: First, the fact that the usual bureaucratic machine did not give in to hasty decisions that are necessary for profitable operations; second, the accounting system of the government was planned to encourage the legislature's close control of expenditure and not necessarily to promote operational effectiveness; and third, commercial operations tend to create initiatives that hardly survive due to bureaucratic rigidity (Omoleke and Adesopo 2005).

Consequently, the theory was, in the absence of high-level conventional entrepreneurs required to stimulate economic growth, the public sector should be used as a constructive tool for government involvement in the economy (Obadan 2000). Nevertheless, these organisations' actual performance left much to be desired, which led to many of them having to default in reaction to a growing competitive economy's changing needs. Thus, the organisations did not seem to have the necessary tools to turn the expectation of successful business operations into practice (Agagu 2008). Maybe the change was made clear on the premise that the initial idea behind setting the organisations up differs from the expectation of polity. Any organisation aiming to achieve social needs can hardly serve as a profitable enterprise.

Several variables in the public institutions were traceable to poor performance issues. Adeyemo (2005) claims that the organisations are inefficient and providing merchandises and other services at an exorbitant cost of production, with the unwillingness to promote innovation and have excessive interruptions in the provision of services. Additionally, the organisations are inefficient in delivering goods and services, such as the inability to achieve the planned goals and diverting benefits for the elite groups. The bureaucracy's fast growth brought about a massive deficit in the public budget, and public organisations became a significant burden to the government due to weak financial performance.

Public service in Nigeria results from colonization by the British Empire (Inyang 2008). Esu and Inyang (2009) posit that the state-owned organisations' network started in 1898 when the British colonial authorities initiated rail transportation in Lagos. After that, the colonial regime started generating electricity, commenced coal mining and marine ports. The entities were formed as administrative bodies for promoting the colonial government's trade and commercial activities. In due course, the following public companies were founded in Nigeria in the 1950s: "Nigerian Coal Corporation," "Nigerian Electricity Corporation," later known as the "National Electric Power Authority (NEPA)" and now being called the "Power Holding Company of Nigeria (PHCN)," "Nigerian Cement Company," Nkalagwu, "Nigerian Railway Corporation" and "Nigerian Ports Authority" among others. Since then, more than 500 public organisations, including the "Nigerian National Petroleum Corporation (NNPC)" and several hospitals, have been founded (Adegoroye 2006). Some state governments also set up public organisations to deliver on their development goals.

2.4: Public Healthcare Development in Nigeria

The Nigerian health care system originated from its colonial ruler, Britain's health care system. The Nigerian public acts of "1848," "1875," and "1936" were passed to collect social and health statistics and to inspect modern social pathology with particular concentration on the working population's environmental, social and economic conditions (Ademiluyi & Aluko-Arowolo 2009).

Christian missionaries founded the first medical centres in Nigeria, with funding from the colonial administration (Onokerhoraye et al. 2014). It was estimated that most health centres were mobile clinics and outposts for treating primary health problems such as snake bites and minor injuries at most neighbourhood dispensaries (Ademiluyi & Aluko-Arowolo 2009). The earlier medical centres were replaced by typical medical hospitals that cater to diseases like smallpox, malaria, sleeping sickness, and other central health-related issues (Aluko-Arowolo 2006).

Nigeria also has diverse private healthcare (Non-governmental) that chiefly operates for profit. The sector comprises family or individual organisations, Church missionaries, non-government organisations (NGOs), community-based healthcare centres, and traditional healthcare

providers (Kombe et al. 2009). However, due to private healthcare's high cost, the poor can hardly afford to attend these hospitals.

2.4.1: Pre-colonial Era

During the colonial era, healthcare delivery in Nigeria was provided by traditional methods, which comprised: diviners, bonesetters, and traditional birth attendants (Aja 2001). The traditional health services were in existence before the British colonization of Nigeria (Asuzu 2004). In the advent of British colonization, most Nigerian people were still largely dependent on traditional medicine due to a lack of access to orthodox medicine. During such period, orthodox healthcare (qualified medical people giving treatments to patients with pharmaceuticals and surgery aid) were only reserved for the colonial administrators and their families (Aja 2001). Initially, the colonial administration's health clinics were reserved for the British military but later converted to public hospitals and clinics (Ofili et al. 2004). The merging of the colonial government medical service and the British military extended medical care to the local people, thus introducing public healthcare in Nigeria and other parts of West Africa (Adeyemo 2005).

In addition to the British military medical services, missionaries were introduced to Nigeria. The move led to the formation of different denominations like Sudan United Mission, 20 Catholic Missions, Baptist Mission, Anglicans, and Sudan Interior Mission that played crucial roles in healthcare provision to the Nigerian people (Scott-Emuakpor 2010). The missionaries brought Western medicine by building the first hospital in the country, the Sacred Heart Hospital in Abeokuta, by the Catholic mission in 1895 (Metz 1991). By the year 1960, when Nigerian gained independence, the Roman Catholic Mission has about 118 hospitals, which was higher in number than the government hospitals at 101 (Metz 1991). The missionary hospitals further educated the Nigerian people on modern medicine (Metz 1991). However, several unreliable reports believed that the missionary hospitals aimed to convert the people into accepting Christianity and followership (Scott-Emuakpor 2010). Nevertheless, the colonial masters made modern healthcare and education available to the Nigerian people after World War II due to clamour from groups agitating for independence. Such led to the creation of several pharmacies, schools of Nursing, and the first University in Nigeria, the University of Ibadan, which comprised the faculty of medicine, got created in 1948 (Metz 1991).

The colonial government established a development plan for Nigeria in the year 1940. However, the plan faced many criticisms because it concentrated on the unitary health service system (Adeyemo 2005; Asuzu 2004). After that, several constitutional and political changes spanning ten years from the 1950s to 1960 emerged. An earlier plan that got framed in 1946-1955, which focuses on welfare and development, got prolonged to 1962. The ministry of health got instituted, and it was mandated to oversee all health services in the country, covering the public, private, and missionary health services (Metz 1991). During the 1950s, several other health systems, such as the regional governments and parallel hospitals, came into operation (Asuzu 2004).

2.4.2: Post-colonial Era

Nigeria gained independence in the year 1960, and this period coincided with more developmental plans. Several health facilities were provided in the urban areas, leaving the rural areas lacking healthcare access (Aja 2001). Such imbalance is still prevalent in the system, as the country failed to keep pace with global healthcare advancement.

To date, little improvement had been made to correct the imbalance and be abreast of global health care advancement. The development plan of 1962-68 was the first national development plan. But, it's a plan acknowledged to be conceived by the colonial administrators before Nigerian independence, and as such, it was a combination of several projects that lack central focus (Metz 1991). However, a striking statement of the development plans highlights the inability of only clinical medicine to provide sustainable development to Nigerians' health issues. Housing, nutrition, good water supply, and sanitation to improve the quality of life in the country were later developed (Lambo 1982).

A second national development plan emerged in 1970-74, influenced mainly by the civil war in Nigeria. The plan intends to take care of restructuring, e.g., replacing physical assets destroyed during the civil war and restoring production capacity (Metz 1991). An effort was made to create a clear national health policy to achieve a primary healthcare service scheme, disease control, medical research, and efficient health resource usage (Adeyemo 2005). The plan brought to light the absence of progress in moving from the concentration on curative care to preventive care, as proposed in the first national development plan. Despite the revelation, the new development plan (2nd) was still focused on curative care, with a budget four times higher than preventive care (Lambo 1982). The second national development plan did not

indicate a clear direction of responsibilities to the three levels of government in health care (Asuzu 2004). Thus, preventive diseases remain a significant cause of mortality and morbidity in Nigeria.

In 1974, there was a boom in crude oil prices, which led to hasty approval of various projects by the Ministry of Economic Development, without cost and benefits appraisal and lack of feasibility study. A third national development plan of 1975-80 was formed, with its annual budget increased twelve times more than the previous development plans (Metz 1991). The plan also failed to consider services delivered by each tier of government, resource generation, and workforce development, including healthcare professionals (Asuzu 2004). Subsequently, the proposition of a fourth national development plan was made.

The Fourth national development plan of 1981-85 emphasised the need for a transparent healthcare system that provides protective, promotional rehabilitative, and restorative care to Nigeria's citizens. The services were to be provided by the three levels of healthcare governance: Primary care levels - essential healthcare services to be delivered in dispensaries, clinics, and health centres located in urban, rural, and sub-rural communities; Secondary care levels - serves as referral centres, aiding both primary and tertiary care centres; Tertiary care levels - are the specialist and teaching hospitals supporting both the primary and secondary care services (Lambo 1982).

Regarding the health sector, the fourth national development plan focuses on the "Basic Health Service Scheme (BHSS)," but the task proved challenging to achieve due to negligence. As a result, attention shifted from establishing a strong BHSS to creating teaching and specialist hospitals with an appropriate budget for these projects (Adeyemo 2005). However, several proposed plans did not come to fruition due decline in the cost of crude oil, which is Nigerian's primary source of income. A decline in oil prices affected the health sector, affected other sectors of the economy, and decreased growth (Metz 1991).

With apparent failures of the fourth national development plan, many consultations were made before initiating a fifth national development plan (Ejumudo 2013). The fifth national development plan got launched in 1988 after two years of delay. It was mainly focused on diversification of the economy, as the decline in oil prices harmed the economy (Ibietan & Ekhosuehi 2013).

The Primary Health Care (PHC) plan was launched in 1987 by the Federal government of Nigeria, and the fifth NDP got abandoned by the end of 1989. The government decided that the five-year fixed plan was no longer working due to the struggling economy and uncertainties. So, a rolling system that needs revision at the end of each year got introduced in 1990-92 (Metz 1991). According to Metz (1991), many issues remained unsolved despite the initiative. There were critical issues like the difference in access to medical care between the rich and the poor in different urban and rural areas. Thus, the rolling plan failed to achieve much and got termed a "stillbirth" (Ibietan & Ekhosuehi 2013).

Subsequently, Nigeria adopted several programs initiated by foreign and local bodies. The "Millennium Development Goals (MDGs)" was adopted, as well as the "New Partnership for Africa's Development (NEPAD)." Several other programs include the (7 Point Agenda, Vision 20:20, the "Transformation Program, the National Economic Empowerment, and Development Strategy" (NEEDS). The programs mentioned earlier aimed to bridge the gap between healthcare systems in Nigeria with the global standard of care. Unfortunately, the programs were viewed negatively as an imposition with little impact on the populace's core interest (Blueprint 2014).

A new program aimed at integrating international health agreement with national health initiatives, the "National Strategic Health Development Plan (NSHDP)" 2010-2015, was created. The NSHDP was to be overseen directly by the state governments, so eight vital areas were mapped out, which includes: "Leadership and governance, delivery of health services, healthcare financing, human resources for health, healthcare partnership, national health management information system, healthcare research and community participation and ownership" (Federal Ministry of Health 2010).

A national policy referred to as "Primary Health Care Under One Roof (PHCUOR)" was introduced in 2011 to bring all primary health care services under a single authority and ensure a smooth referral system across various health sectors. From the pre-colonial era to the current, multiple development plans and programs got introduced with uncertain results (Federal Ministry of Health 2010). Hence, the continuous search for a sustainable solution to Nigeria's lingering healthcare crisis.

2.5: Healthcare Organisation in Nigeria

Nigeria runs three tiers of government as a federation; federal, state, and local government. The Nigerian health care system has three levels: primary, secondary, and tertiary care. The sector consists of the public, private, Community Based Organisations (CBOs), Non-Governmental Organisations (NGOs), and traditional healthcare providers (Adefolaju 2011; World Health Organisation 2018). The three tiers of government are responsible for public health services. The private sector provides about 60% healthcare delivery, and available private healthcare facilities are at 30% (World Health Organisation 2018). Of the registered privately-owned facilities, 75% are Primary health care facilities, while the remaining 25% are secondary level facilities (Kombe et al. 2009). The Nigerian government has about 70% of available health facilities, but the provision of quality care remains a challenge in the public sector as health indicators in the country are unsatisfactorily high (World Health Organisation 2018)

Through the Federal Ministry of Health (FMOH), the Federal government is accountable for tertiary care. The FMOH is responsible for developing policies, guidelines, strategies, programs, and plans that give the country's health delivery systems overall direction. The state governments are responsible for secondary care through their health ministries, while the local government councils run primary care. The three-level healthcare structures are financed majorly by the federal government yearly allocations (Welcome 2011). Thus, the public sector's supply of health services mirrors the three-level structures (Asuzu 2004; Kombe et al. 2009). The basic link between the three levels of healthcare provision in Nigeria is the referral from primary to secondary and secondary to tertiary care (Welcome 2011).

The Nigerian primary health care was created to act as the entry point, but it did not get used as intended, as most patients prefer going to the secondary or tertiary hospitals, thereby causing congestions in those facilities (Abodunrin, Akande & Osagbemi 2010). However, primary healthcare remains the health system's foundation that mainly serves people living in rural areas. Facilities in the primary health care centres comprised: clinics, health centres, dispensaries that deliver preventive, curative, and pre-referral care (Abdulraheem, Olapipo & Amodu 2012). Typically, these facilities have a workforce that consists of nurses, midwives, community and environmental health officers. All local government areas in Nigeria are responsible for operating primary healthcare facilities within their neighbourhoods, for providing essential health services that comprised the following: handling of minor ailments

and injuries, provision of essential drugs, family planning, health education, locally endemic disease control, and immunisation (Chukwuani et al. 2006). However, the states' ministry of health coordinates the mentioned roles (African Development Fund 2002).

The general hospitals and comprehensive healthcare centres are in charge of secondary level services. Respective state governments supervise these healthcare centres, and they provide different services, e.g., diagnostic, curative care, referrals, radiological, surgical, and emergency medical care.

The tertiary services are highly specialised facilities with a core concentration on teaching, research, and curative (Federal Ministry of Health 2010). The tertiary facilities also serve as referral centres for primary and secondary facilities (Federal Ministry of Health 2010).

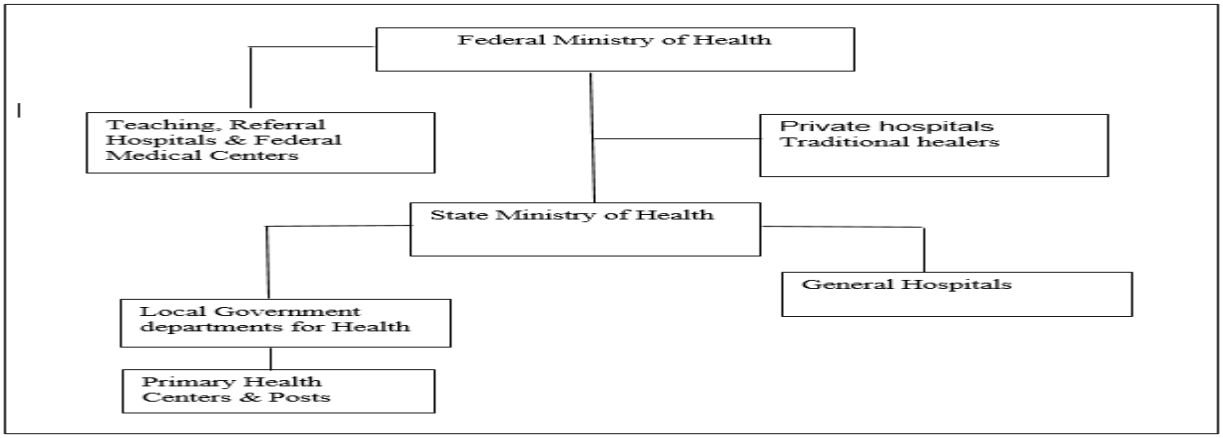

Figure 2.2: Health system structure in Nigeria.

Source: *Omoruan, Bamidele and Phillips (2009).*

2.6: Healthcare Funding in Nigeria

Different countries have varied methods of funding in their healthcare. Among these methods are direct payment by users, direct tax/general revenue, private insurance, and state or social insurance. In Nigeria's case, healthcare funding is mainly through out-of-pocket payment by the service users, representing 95.4% of spending from 2009 to 2013 (Ezeoke, Onwujekwe & Uzochukwu 2012). People attending government hospitals have to pay for their medical care (Registration card, medicine, laboratory services) except for the consultation fee (Ezeoke, Onwujekwe & Uzochukwu 2012). Although the Nigerian public healthcare claims it provides free care services to the vulnerable, as enshrined in the National Health Insurance Policy

(NHIS) of 2005, the scheme was ineffective and politically motivated (Aregbeshola 2019). About 70% of the Nigerian population comprises the poor, and with their inability to afford quality care, the people are further impoverished (Aregbeshola 2019). The government subsidising public healthcare services has done little to help the public due to other internal issues like corruption, lack of goodwill, poorly trained/unqualified workforce, poor leadership, etc. (Abdulraheem, Olapipo & Amodu 2012; Alenoghena et al. 2014). According to report, about 60% of Nigerians live below the poverty line; it is significant to note that it portends inability to access quality healthcare by most Nigerians due to lack of finance (World Bank 2017).

Health system financing has been very low in Nigeria compared to other African countries. The impact is that majority of Nigerians do not have adequate health cover and chose alternative means of care, such as traditional healers. For example, Nigeria's total spending on health as a percentage of GDP in 2014 was put at 3.7%, significantly lower than other African nations (World Health Organisation 2019). In the year 2001, several Heads of State for African Union countries met in Abuja, the capital city of Nigeria, and made a declaration to assign 15% of the total government budget yearly to the health sector; Sadly, Nigeria failed to live up to expectations (World Health Organisation 2010). Note, only a few countries in Africa could achieve a 15% target budget of the Abuja Declaration, and they are Burkina Faso, Rwanda, Niger, Botswana, Zambia, and Malawi (Senghore 2011). As of 2016, the Nigerian government had only succeeded in spending 3.6% (2.2 Billion Naira) total national health budget.

2.6.1: National Health Insurance Scheme

In 2005, the Nigerian government established the "National Health Insurance Scheme (NHIS)" that provides Nigerians with easy access to affordable and quality healthcare. The NHIS entails making payment for healthcare in advance through premium or taxes and contributions (Federal Ministry of Health 2016). The service was meant to cover people with employment, urban self-employed, armed forces, tertiary students, children under five, pregnant women, prisoners, and the disabled. The NHIS covers an individual, the spouse, four children under the age of 18, and participants to contribute 5% of each month's basic salary, while the employer contributes 10%. Unfortunately, the NHIS struggled to achieve national coverage, which led to only 3% of the Nigerian population with health cover (Dutta & Hongoro 2013); and the others left to find a solution to their health needs as they deem fit.

2.7: Public Healthcare Workforce in Nigeria

Employees have attitudinal problems and discriminate against patients in Nigerian hospitals (Letamo 2005). For example, an investigation of Good Health Weekly found that patients' lives are at risk due to the under-reported attitudinal problems of healthcare workers present at every level of care (Obinna 2011). According to Adeloye et al. (2017), there are apparent problems with the Nigerian healthcare workforce.

In Nigerian public healthcare, several factors act as impediments to employees. The factors include the following: poor enumeration of the workforce, dilapidating infrastructures, lack of modern equipment, lack of adequate government funding, low motivation of the workforce, and poor management (Arisi-Nwugballa 2016; Letamo 2005; Pezzuto 2019). In Africa, Nigeria has one of the highest human resources in healthcare, but the numbers of available practitioners are below the required density to deliver effective and efficient health services (World Health Organisation 2019). Welcome (2011) noted that equipment and personnel in the Nigerian healthcare system are inadequate, and the system's development deplorable. Consequently, the country suffers from a shortage of healthcare professionals, while diseases increase (Ezeja et al. 2010).

There are reports regarding the Nigerian healthcare challenging working conditions (Ogunrin, Ogunrin & Akerele 2007; Welcome 2011) that have bred dissatisfaction among the workforce and culminate in industrial strikes (Mcfubara 2015; Oleribe et al. 2016). With the rates of industrial strikes in the country and poor working conditions, healthcare service delivery in Nigeria continues to suffer. Consequently, the country has been in constant need of qualified professionals to drive sustainable change in the healthcare system to cater to the needs of all Nigerians.

Employee dissatisfaction, characterized by absenteeism, low productivity, and lack of motivation (Amin et al. 2017), is evident in Nigerian public healthcare. Most likely, an unsatisfied employee will exhibit problems that could be counter-productive to the organisation. The job's stress breeds employee dissatisfaction and reduces commitment to the organisation (Firth et al. 2004; Wang 2017). Ogunrin, Ogunrin and Akerele (2007) noted that low motivation and poor quality of service delivery are positively related. These issues have driven some of the best hands in the industry out of Nigeria to seek greener pastures in advanced countries (Uneke et al. 2008).

A high-quality human resource performance is needed to improve the Nigerian general hospitals' service quality (Ojo & Akinwumi 2015). But to achieve the task, management must be ready to provide employees' needs. The change is critical for Nigeria and her citizens; thus, demands vital steps toward uplifting the system through the proper application of a functioning technique to foster improved performance and efficiency.

2.8: Chapter Summary

Health challenges have plagued Nigeria for a long time, and the country's healthcare system continues to perform below acceptable standards in every aspect. Despite the various attempts by subsequent governments to alleviate the problems, as evident in establishing different health policies from the '60s, healthcare quality remains low, and the citizens face serious consequences. Over the past three decades, some reformations had been established to develop and bring the Nigerian health care system to internationally acceptable standards. The traditional healthcare system that existed before colonial rule had undergone five reforms to what is obtainable currently (Asuzu 2004). However, citizens still prefer private hospitals or alternative care over government hospitals, as they have a poor perception of the government health facilities. On the part of employees, able professionals leave the country in droves for better employment in countries like Australia, England, USA, UAE, etc. The ones left behind are either demotivated to perform their jobs well or feel frustrated in the system, which poorly reflects how they handle their duties.

The Nigerian government has failed to properly manage the health sector due to its poor leadership concerning healthcare policies and conflict management (Ogunrin, Ogunrin & Akerele 2007; Welcome 2011). The hideous situation has raised clamour from scholars and other stakeholders urging the Nigerian government to be proactive and innovative in reaction to the prevailing health issues (Asakitikpi, 2019). Thus, to improve Nigeria's public healthcare situation, there is a need for research that examines the hospitals' internal enablers that influence employee satisfaction for better service quality and patient satisfaction.

The next chapter reviews the literature on the four variables under investigation; Total quality management practices, employee satisfaction, service quality, and patient satisfaction.

Chapter 3: Literature Review

3.1: Overview

This chapter contains literature reviews about TQM, employee satisfaction, service quality, and patient satisfaction. The thesis aims to analyse a public organisation's research issues, especially public hospitals. Thus, the chapter flows from a broader theoretical perspective of public sector institutions to a narrow view of Nigeria's public health care system. A brief highlight of public healthcare and performance was made, as they cover a broader perspective of this study's objectives, particularly in determining the connections and predictive powers among TQM practices, employee satisfaction, service quality, and patient satisfaction. Also, to establish a gap between employees' perceptions of service quality and patients' perceptions in the Nigerian general hospitals. Total Quality Management (TQM) was defined, followed by the reviews of related studies, including literature on employee satisfaction, service quality, and patient satisfaction in order of appearance. The last section depicts literature summaries and paved the way for the study's conceptual framework.

3.2: Public Sector Organisation

Public organisations are practically involved in delivering a government's goods and services to its people (Fryer, Antony & Douglas 2007). These goods and services may differ in one country from another, but they mainly include Healthcare, education, housing, police services, social security, etc. (Fryer, Antony & Douglas 2007).

According to Pestieau (2009), a public sector is a production unit comprised of companies, programs, departments, agencies such as the administration of social security, national care, railways, national defence, and education, with all components using resources within a particular institutional and geographical entity for production. The production can be either quantitative or qualitative and linked by the government to goals delegated to the production unit. While the structure of the public sector remains intact, the focus on its functions has shifted from the 1970s (Fecher & Lévesque 2008). Arguably, the public sector organisations have transformed from pure interventionist institutions to providers of reliable, productive, and inclusive services that meet citizens' expectations (Boyne & Walker 2010). Consequently, public sector organisations are likely to receive high expectations on several good performance

metrics. However, anxiety about the global economy, combined with government funding problems, has pressured public enterprises to investigate various methods of providing responsive services to the public. In other words, responsibility and performance are now the goals for public organisations.

In recent times, public organizations have been pressured to be more efficient and effective in their service delivery processes to meet the people's ever-changing needs rather than bureaucracy (To, Lee & Yu 2011). Hence, the shift from "traditional management" to "modern management" by public organisations, a strategy termed "New public management" by Carvalho and Santiago (2010). Expectedly, such new management would be more result-oriented, focused on the people, be transparent, and differentiated from the traditional methods that mainly concentrate on bureaucracy (Noordhoek & Saner 2005; Robertson & Ball 2002).

3.2.1: Public Healthcare

Public healthcare refers to a nation's health system, financed by the government to provide for its citizens' health free of cost or reduced cost. There have been many challenges in public healthcare that include the ever-changing consumer expectations, increasing costs, changing patient demographics, growing and aging population, increasing diseases, technological advancements, and evolving care models. Thus, the need to add value to care quality, create innovative delivery models, and embrace digital technologies (Aiken et al. 2012). Other issues in healthcare include pressure to improve the quality of care to internationally accepted standards, the ever-increasing demand for patients' satisfaction, and lengthy waiting time (Iloh et al. 2012). With the increasing healthcare problems, service quality and patient satisfaction are gaining more interest amongst researchers worldwide (Javed & Ilyas 2018).

In conjunction with several other agencies, the World Health Organisation (WHO) has been vigorously canvassing ideas on improving health systems to react effectively to diverse emerging health issues. Various countries strive to meet stipulated required standards in healthcare and handle risks connected to communicable diseases and other health issues resulting from globalization (Ruelas et al. 2012). These problems, which affect many countries, are considerably worse in developing countries, specifically Nigeria. The World Health Organisation has been chasing a plan to make healthcare coverage a fundamental right of humans in developing countries (World Health Organisation 2010). But much is yet to be

achieved, which may be due to numerous factors, including less research in developing countries (Amin et al. 2017).

Developed countries have made significant gains in their healthcare improvement for citizens and gaining revenue in healthcare tourism (Han & Hyun 2015; Lee & Fernando 2015; Mosadeghrad 2015). Developing countries can also achieve such a feat by providing affordable, high-quality healthcare to the citizens (De Arellano 2007; Lee & Fernando 2015), but the task seems to be a monumental challenge to countries in Africa.

3.2.2: Public Healthcare Performance Indicators

A public sector organisation's performance is controlled by internal and external factors (Boyne & Walker 2010). According to Boyne and Walker (2010), the internal factors are workforce age distribution and dominant organisational culture, while the external factors include: size and characteristics of the population, the level of support given by political leaders, the political ideology of national and sub-national governments, and resources allocated by higher government levels. For instance, the extent of financial resources provided to a public organisation will affect real resources that would later influence service efficiency (Boyne 2003).

To understand the significance of public service efficiency, using 65 empirical studies as evidence, Boyne (2003) carefully analysed the factors that decide public service efficiency under five different theoretical perspectives: regulation, markets, organisation, resources, and management. Boyne found inconsistencies, contradictory facts, and flaws in performance literature. Nevertheless, two out of the five factors of public service performance, resources and management, emerged as the most influential performance factors, while the other three were contradictory. There was an argument that the research was not adequate to encompass a wider variety of programmes and political processes since it concentrated solely on the United States of America and the education field. The study's two key results suggest that the evaluation of resources and management are significant factors in public enterprises' success. The parameters for measuring tangible assets are staff quantity, the number of students, the number of teachers, the teacher/pupil ratio, the number of doctors, the number of patients, and the doctor/patient ratio. At the same time, management measurement includes quality/capacity of leadership, job security, staff morale, and staff satisfaction.

Boyne (2002) identified some service performance factors in the public sector that include outputs quantity, outputs quality, equity, outcomes, value for money, and patient satisfaction. O*utputs quantity* - comprised procedures performed in hospitals, school teaching hours, and several houses constructed. *Outputs quality* - consist of service reliability, service speed, and courtesy of the staff. *Equity* - pertains to costs and benefits amongst varying groups, equitable distribution of service. *Outcomes* - includes a percentage of students who pass examinations, the percentage of favourable treatments in hospitals, the percentage, and the ratio of births/deaths in hospitals. *Value for Money* - refers to the cost per patient, cost per student. *Patient satisfaction* - assessed in the form of satisfaction with overall services.

Terziovski and Samson (1999) posit that performance is generally perceived as how an organisation meets its targets and objectives. White and Simas (2008) noted that the idea of the term "organisational performance" could be of numerous variables specific to an organisation and could be subjective. In other words, there are several methods of assessing the performance of an organisation, which could either be direct or indirect with several influencing factors that are internal or external to the organisation. Healthcare performance indicators are numerous, subjective, and impact each other. Some notable hospital performance indicators in the literature are patient satisfaction, safety, waiting time, staff turnover, rate of mortality, employee satisfaction (Si et al. 2017), organisational efficiency, financial effectiveness (Mosadeghrad 2015), and service quality (Naidu 2009).

In this study, employee satisfaction, service quality, and patient satisfaction are regarded as measures of performance in Nigerian public healthcare, in line with the Nigerian health policy's objectives of improving service quality, human resource development, and patient-centred care (Federal Ministry of Health 2016).

3.3: Theoretical Perspective

According to the stakeholder theory, interactions between managers and stockholders in creating value for an enterprise constitute a business. This principle encourages managers to express shared values that drive success and encourage managers to articulate their relationship with their stakeholders to attain their goals (Freeman, Wicks & Parmar 2004). Therefore, the managers are accountable for organising company activities that stabilise conflicting stakeholders' demands. When an organisation meets shareholders' and investors' specific needs, other stakeholders' implicit needs in the business must not be ignored (Huang & Kung

2010). Hence, the stakeholder theory encompasses the connections among an enterprise, the staff, and society. Such links explain how companies communicate and create value for their stakeholders (Simionescu & Dumitrescu 2016). As such, the stakeholders continually back the organisation's activities and deliver vibrant resources and opportunities for prosperity in the competitive world. The organisation is saddled with the moral and social responsibility of meeting their stakeholders' needs and expectations (Park & Ghauri 2015).

Further, stakeholders' orientation is a key strategic goal to an organisation (Bhattacharya 2016). It performs a vital part in assessing the organisation's success or failure and attaining the strategic goals (Cordeiro & Tewari 2015). Ultimately, the stakeholder's orientation can help the company create value for the goods and services produced. The organisation's overall business performance would be affected inevitably, as it produces goods and services that satisfy its stakeholders (Park & Ghauri 2015). Husted and de Sousa-Filho (2017) indicated that more excellent stakeholder orientation is required in the competitive organisational market to achieve higher organisational performance. Donaldson and Preston (1995) submitted that a company that embraces the concept would accommodate all stakeholders' interests and inherent advantages, e.g., internal or external consumers, creditors, investors, competitors, and society.

This current research will expand on the integrated TQM practices and service-profit chain model to benefit stakeholders of the Nigerian general hospitals, including employees, patients, and the Nigerian masses. Therefore, the stakeholder's theory's principles provide the basis for this study and suggest that companies should maximise shareholder capital by supplying their consumers with excellent goods and services without harming the people, community, and the environment. In trying to achieve such a goal, there should be a balance in giving all the organisation's stakeholders satisfaction. Favouring one side and neglecting the other may result in resentment and eventual business loss. Thus, to achieve a better service quality in the Nigerian general hospitals, both employees' and patients' satisfaction should be guaranteed and the community's satisfaction not neglected.

3.4: Concept of Quality

Quality has developed to be a dominant subject in management theory since the middle of the 20th century (Beckford 2010), so it is vital to understand and assess the concept of quality

before addressing the idea of TQM. Globalization brought with it several changes in how organisations operate, and trend in the business world is ever-evolving as companies are constantly looking for ways to stay competitive. Product quality and quality of services are essential concentration factors for organisations. Quality is now generally seen as a significant competitive factor in every organisation. The idea of quality no longer ends in the structure or products of an organisation but includes the work process, the employees, and other stakeholders. Prajogo and Cooper (2010) stressed that the supervisor's primary role should focus on quality rather than goal management; it must provide staff with regular training to meet appropriate production and service standards. Organisations must achieve quality, not at the level of departments, but as an overall objective.

The term “Quality,” was developed several centuries ago, and it entails a continuous process of improvement (Juran 1995), defined in various ways by scholars. For example, quality was defined as the height of fitness for a purpose and function (Oakland 2003), which is in line with the definition of (Juran 1988) that quality is fitness for use. Quality gurus such as Ishikawa (1985) stated that quality is equal to customer satisfaction; Deming (1986) defined quality as a varying production process of a product or service delivery that meets customers' expectations and brings about their satisfaction. Zeithaml, Berry and Parasuraman (1993) posit that the notion of meeting or surpassing the expectations of customers is the core principle behind all quality definitions, an idea most likely to be taken up by future research, buttressed in how Oakland (2003) views quality as meeting the needs of customers. Therefore, quality means a service or a product that conforms to specific standards and requirements for acceptable use. From an organisational perspective, quality is the impression of an organisation that determines the quality seen in a service, formed by the technical and functional qualities (Gronroos 2007). Ansell (1993) viewed quality as eliminating errors and satisfying customers.

While the emphasis on customer satisfaction is the key component in all these concepts, each quality expert seems to be defining quality in a somewhat different way. According to Harvey and Newton (2004), the interpretation of quality is challenging because the meaning denotes a social and personal construct. They argued that quality is not absolute but a perception linked to every person's views and experiences and not an isolated practice, but part of an organisation's entire environment. Watty (2003) opined that personal values and judgments are the criteria for selecting attributes. Hence, some people believe the price is in the customer's

eyes. In the current challenging business world, overlooking quality in companies will increase costs and time, customer loss, and cause project failure.

From the various definitions above, quality is not an end but a continuous improvement process to meet the ever-changing and increasing needs of customers. Modern organisations should encompass quality in every aspect of their business, from product development, services, human resources, and external customers. Customer satisfaction is at the core of quality, but neglecting the product development or production process can be counterproductive to an organisation. Quality has been with humans from time immemorial, still very relevant, and will continue to play a significant competitive role in the business world for the foreseeable future.

3.4.1: Total Quality Management Definition

An excellent way to understand the concept of TQM is by splitting it into the following categories: *Total* refers to the whole, *quality* entails excellence of the product or service, while *management* relates to the functions like planning, preparation, control, etc., (Besterfield et al. 2009). According to Oakland (2003), TQM should be a holistic approach to organisational performance and productivity utilising management functions and the awareness of each employee and operation at all organisation levels. TQM is recognised as a major management theory and a set of theories or practices that tackle the quality management and management of quality, helping organisations improve employees' and customers' satisfaction (Deming 1986; Smadi & Al-Khawaldeh 2006).

Total Quality Management (TQM) has varying definitions, according to researchers like (Kotler 1999), who defined it as a continuous process of improving and maintaining organisation's quality, goods, and services, including the process. Also, TQM was defined as the thinking process of management connected with every worker's participation and dedication to achieving customer results (Ahire, Golhar & Waller 1996; Prajogo, Power & Sohal 2004). Flynn, BB, Schroeder and Sakakibara (1994) defined TQM as a total way of achieving and constantly maintaining top quality products or services, defects avoidance at every stage, and continuous improvement to surpass the standards expected by customers. Anderson, Fornell and Lehmann (1994) posit that TQM is a way of attaining overall quality in organisations that involves product, internal and external cooperation, learning, good management of processes, continuous improvement, effective leadership focus on customers and employees. According to Reed, Lemak & Montgomery (1996), the researcher's

background, point of view of quality, and interests dictate how TQM is defined. Overall, there is an interconnectivity between management activities, employees, processes, and customers. Therefore, TQM can be accepted as a management practice that emphasises the need for everyone in an organisation, from top management to the lowest-paid employee, to think and continuously act on quality in all business processes to satisfy customers (Sadikoglu & Olcay 2014).

TQM mostly pays attention to customer satisfaction, analysing relationships between management systems, enhancing internal communications, and satisfying internal and external customers ' demands (Milakovich 1991). TQM has become extremely people-oriented and has had consequences for organisational behaviour research. While interest in TQM research has increased, research on public sector behavioural aspects of TQM remains scant and unsystematic (Wickramaratne 2013).

3.4.2: Concept of Total Quality Management

Many scholars agree that William Edwards Deming is the TQM concept founder (Beckford 2010). William Edwards Deming used the concept of TQM to transform the declining Japanese industries after the Second World War in the 1950s (Douglas & Fredendall 2004; Gibson, Tesone & Blackwell 2003). After the Second World War, the Japanese industries were in disorder. William Edwards Deming, an American engineer, initially proposed TQM to the Americans but was ignored, went to Japan, and initiated the concept. The Japanese diligently acted on the concept to effectively improve their industries' performance (Muchinsky 2003).

TQM is applicable both in the manufacturing and service sectors (Boje & Winsor 1993). The initial success of TQM in the manufacturing industry encouraged health care leaders to investigate its possible use for delivering quality of care services (Mosadeghrad 2013). Thus, healthcare organisations in developed nations have relied on TQM (Mosadeghrad 2014a), but this concept is scarce and needs to be practiced in developing countries (Amin et al. 2017).

There are many notable studies on TQM in healthcare across different countries. Schalk and van Dijk (2005) examined the connection between quality management and employee commitment, using samples from Netherland only. Xiong et al. (2017) explored the relationship between TQM practices and public hospital performance in China. Baidoun, Salem, and Omran (2018) using the MBNQA framework assessed TQM implementation in

Palestinian public and private hospitals. D'Souza and Sequeira (2012) applied the MBNQA framework to manage service quality and performance in Indian healthcare.

3.4.3: Total Quality Management Practices

TQM comprised various factors or practices that are interrelated. Researchers do have different ideas of the meaning of TQM, and what constitutes the practices are still debatable issues in the literature (Prajogo, Power & Sohal 2004; Wang, Chen & Chen 2012). Some researchers suggested a broad list of TQM practices (Arasli 2012; Mosadeghrad 2014a; Talib, Rahman & Qureshi 2013), with others proposing a few TQM practices (Psomas & Jaca 2016; San Miguel, Heras-Saizarbitoria & Tarí 2016). These practices are sometimes referred to as factors, components, and enablers in the literature. A long list of TQM practices might cause managerial problems and prevent proper implementation due to a lack of adequate understanding. In some situations, suggested practices are integrated, particularly when referring to common practices or policies.

In trying to identify the key practices of total quality management (TQM) in service companies, Bouranta et al. (2019) looked at the impact of these factors on internal and external customer performance measures across different countries, Greece, Mexico, and Spain. They did exploratory factor analysis and explored TQM practices' influence on employees and customers in the three countries. They found several TQM practices common among the countries: top management, employee quality management, process management, customer focus, and employee knowledge and education. The results also confirmed that some key TQM elements were antecedent of customer and employee focused performance.

Lewis, Pun and Lalla (2006) reviewed TQM literature on small, medium-sized businesses in a growing economic context and identified the primary emerging practices frequently occurring in different studies. The authors stressed the key practices and quality management concepts that decide the TQM's performance. The study compiled TQM implementation literature for small and medium-sized businesses operating in an evolving environment and discussed many critical factors. The established critical factors were prioritised based on their frequency in previous studies. The ISO 9001:2000 standard compliance requirements are mapped to one or a combination of quality management principles that underpin the standard, and the factors were grouped into soft and hard principles. It's worth noting, as this study shows, while some researchers stressed the "soft" factors, the ISO 9001:2000 quality specifications relied more on

the "hard" factors. The following 12 factors were identified and highlighted: data quality and reporting, customer satisfaction, use of human resources, continuous improvement, quality management of the process, performance measurement, strategic quality planning, training and education, commitment of management, leadership, customer focus and contacts with suppliers and professional partners.

Koh and Low (2010) examined types of TQM practices and the implementation rate in construction companies. The study used a questionnaire to generate the implementation level of several key TQM factors defined. They identified eight key factors arising from organisational and construction research, crucial for TQM implementation in the building industry and reflective of the TQM spirit. These included (top management, leadership, customer management, supplier management, people management, information management, organisational learning, continuous improvement, and process management).

To identify and quantify the key factors of TQM implementation, Hietschold, Reinhardt and Gurtner (2014) carried out a systematic literature review. The review includes analysing 145 studies, and it established eleven key factors: management of human resources and teamwork, customer focus, top management engagement, process management, supplier relationship, strategic planning, training and education, communication and culture, information and analysis, social responsibility, environmental responsibility and benchmarking.

Dedy et al. (2016) investigated the links between key TQM factors and their effect on employees' performance in Malaysia's automotive industry. They utilised a conceptual model that connects six key factors of TQM with the employees' performances. The six TQM factors were: leadership, top management, customer focus, communication, teamwork, and training.

In their report, Neyestani and Juanzon (2016) carried out a systematic literature review based primarily on the construction industry and other industries to identify key TQM factors. Seven factors were identified, which were regarded as the positive key factors for TQM derived from the review of 37 empirical studies. The factors identified are leadership, customer focus, process management, quality management of suppliers, staff engagement, training, information, and analysis. Other researchers investigated the key TQM factors and came up with varying numbers (Aquilani et al. 2017; Bani Ismail 2012; Dean Jr & Bowen 1994; Sila & Ebrahimpour 2002; Talib, Rahman & Azam 2011).

Different authors use varying TQM practices in the literature, not only in numbers but also like the factors. For example, (Arasli 2002) identified seven practices, namely: "Leadership, internal and external cooperation, customer focus, employee fulfilment, process management, learning, and continuous improvement," which is in line with the practices identified in the study of Goetsch and Davis (2006). However, a study done by Sadikoglu and Zehir (2010) came up with "customer focus, employee management, training, information and analysis, process management, supplier management, and continuous improvement." Wang, Chen and Chen (2012) found "leadership, customer focus, continuous improvement, internal and external cooperation, employee fulfilment, process management, and learning." While certain empirical studies concentrate more on soft practices (Prajogo & Cooper 2017; Prajogo & Cooper 2010), others focus on hard TQM practices (Duggirala, Rajendran & Anantharaman 2008). And some studies paid attention to both soft and hard TQM factors (Al-Marri, Ahmed & Zairi 2007; Kaynak 2003). Soft TQM practices are intangible and mainly related to human elements of leadership, employee satisfaction, and culture. In contrast, hard TQM practices relate to tools and techniques for improving quality, such as management systems, statistical processes control, benchmarking (Fotopoulos & Psomas 2009).

A common set of TQM practices has not yet been identified. There may be discrepancies, inconclusive methodological approaches adopted by scholars (Sila & Ebrahimpour 2002), company size (Brah, Tee & Rao 2002; Sila 2018), which have caused a lack of consensus about specific TQM practices. But the most common practices identified and used in the literature are: "Leadership, strategy, customer focus, information and analysis, human resource management, and process management" (Ahire, Golhar & Waller 1996; Flynn, Schroeder & Sakakibara 1995; Nair 2006; Saraph, Benson & Schroeder 1989). However, to avoid inconsistencies in TQM research, Fotopoulos and Psomas (2009), in a study to measure "the structural relationship between TQM factors and organisational performance," recommend using quality frameworks that are reputed to capture the core TQM practices.

3.4.4: Quality Performance Excellence Models

There are various quality performance excellence models, awards, and tools such as the ISO 9000 series, Six Sigma, Malcolm Baldrige National Quality Award (MBNQA), and the European Foundation of Quality Management (EFQM) developed to measure organisational performance. There has been significant research focus on employees' and customers' satisfaction in the performance excellence models, and it has become a problem in

organisations (Matzler & Renzl 2007). The performance excellence models like MBNQA, Deming Prize (DP), and EFQM are integrated frameworks built for holistic management to improve public and private organisations' productivity in various cultures to attain success (Mugion et al. 2020).

Excellence models have been discussed extensively in the literature, focusing on the models' structure, the impact of the factors on performance results, and the interrelationships among the components based on varying assessment criteria (D'Souza & Sequeira 2012; Raharjo et al. 2015). Some studies focused on the internal understanding of the category/ criteria relationship structure, including reviewing cause and effect between enablers and outcomes (Heras-Saizarbitoria, Marimon & Casadesús 2012; Santos-Vijande & Alvarez-Gonzalez 2007).

There are other quality tools used in hospitals, which include 5S, Control charts, PDCA, Kaizen, and cause analysis (Ahmed, Abd Manaf & Islam 2017), but the most relevant and best recognised system remains the Malcolm Baldrige National Quality Award (MBNQA) (Ahire, Golhar & Waller 1996)

3.4.5: Malcolm Baldrige National Quality Award

The Malcolm Baldrige National Quality Award (MBNQA) is a set of principles for measuring quality at every level of an organisation to achieve performance excellence (NIST 2017). The MBNQA was established in 1987 in the US to promote the quality of products and services. It encourages quality standards and helps organisations reach an optimal performance measure (Garvin 1991). The MBNQA framework has been validated in previous studies and accepted as a good representative of quality management practices (Ahire, Golhar & Waller 1996; Dean Jr & Bowen 1994; Flynn & Saladin 2001; Karimi et al. 2014; Meyer & Collier 2001; Terziovski & Samson 1999; Wilson & Collier 2000), supported by Prajogo and Sohal (2003), as one of the most used frameworks for Large Australian companies. In a study to validate the Baldrige framework on plant managers in the US, Curkovic et al. (2000a) conclude that the MBNQA framework captures the core TQM concept. They claim that the categories of the TQM framework are three: (i) Anecdotal - based on personal experience by renowned quality gurus like Deming, Juran, and Crosby; (ii) Empirically based on past research of scholars like Saraph, Benson, and Schroeder (1989) and Flynn, Schroeder and Sakakibara (1994); (iii) A formal assessment like the ISO series, EFQM and MBNQA, etc. Based on the three categories above, researchers have developed various constructs that constitute TQM.

The MBNQA has evolved over the years from being a measure for identifying and encouraging good quality management practices to an all-inclusive framework used for performance improvement (Badri, Attia & Ustadi 2009). The program was renamed in 2015 as the Baldrige Performance Excellence Program. The version for healthcare that is constantly being adjusted to suit current challenges is called the Baldrige Health Care Criteria for Performance Excellence (BHCPE). The framework consists of seven practices, namely: Leadership, strategy, customer, Information, analysis, and knowledge management, workforce, operations, and result (NIST 2017). The first six constructs deal with organisational practices, while the seventh construct deals with healthcare performance outcomes of leadership, strategy, customer, and workforce.

As shown in Figure 3.1 below, the seven MBNQA practices are:

1. Leadership: explores how senior managers set corporate standards of quality and discuss organisational obligations to direct all organisations' operations.

2. Strategy: discusses how the organisation creates and implements strategies and describes and recognises the main action plans needed to achieve successful results.

3. Customer: explores how the company develops and sustains strong customer ties.

4. Measurement analysis and knowledge management: explores data and information quality to help the company's core processes and performance.

5. Workforce: discusses how the organisation encourages and empowers its workers to grow their potentials and inspire employees to achieve its goals.

6. Operations: discusses how the company manages, creates, strengthens, and addresses main process management problems such as production, support process, and business processes.

7. Results: analyses the company's main performance areas, including employee and customer satisfaction, financial and operational efficiency.

The MBNQA model aims to stimulate awareness of quality and its effects on competitiveness. The MBNQA shares information about the proper implementation of quality plans and benefits that accrue from employing these strategies and suggests a set of criteria for business, industry, and government in evaluating their efforts to improve quality (Porter & Tanner 2012).

Consequently, MBNQA aims to encourage organisations to improve quality and efficiency, enabling organisations to develop standards and guidelines for optimal business performance.

3.4.6: Justification of MBNQA Framework

The MBNQA is a quality tool for assessing progress in an organisation (Curkovic et al. 2000a); it consists of soft and hard TQM practices (Prajogo & Cooper 2017), with a positive link to organisational performance (Lee, Rho & Lee 2003). The framework has been applied in advanced countries and adjustable to fit any organisation or context (Flynn & Saladin 2006). Also, the MBNQA is used to pursue care quality, patient satisfaction, and workforce commitment (Sternick 2011) and reputed to capture several quality practices meant to measure the quality of treatment, treatment results, and medical care processes (Moeller, Breinlinger-O'Reilly & Elser 2000). The framework has also been adopted as a conceptual model by various quality scholars (Baidoun, Salem & Omran 2018; Lee, Lee & Olson 2013; Saraph, Benson & Schroeder 1989; Terziovski & Samson 1999). For example, Lee, Lee and Olson (2013) studied healthcare quality management using the MBNQA framework and found it empirically valid. They posit that quality is vital to patient satisfaction and suggest managers give their employees support based on the dimensions of the Baldrige healthcare framework to improve the quality of care. They agree, just like the service-profit chain theory of Heskett et al. (1994), that every attempt to enhance care quality and hospital services is connected to the employees. This position is logically balanced as employees are the primary contact point with patients, and as such, they impact service quality. Thus, improving patients' hospital services and satisfaction results from enhancing the employees' internal quality.

Meyer and Collier (2001) analysed the MBNQA constructs in 220 US hospitals using the structural equation modelling approach. One of the study's objectives was to develop a valid measurement model corresponding to the MBNQA healthcare categories; their result was significant, having a valid causal relationship among the variables.

Lee, Rho and Lee (2003) established a positive connection between the MBNQA constructs and performance. Flynn and Saladin (2006) accessed the Baldrige constructs' suitability across national borders in five countries: Italy, Germany, England, the US, and Japan. Their findings showed slight variations amongst the countries, and they recommended adapting the MBNQA constructs to fit the country's culture rather than trying to adopt it without modification. Lee and Ooi (2015) applied the MBNQA framework and found it valuable to improve

organisational memory and process innovation. They suggested a further survey that uses structural equation modelling for validity.

D'Souza and Sequeira (2012) applied the MBNQA framework to study healthcare service quality management and performance and found the MBNQA dimension a critical measure of service quality in healthcare. Colombo et al. (2011) used the Baldrige survey to assess healthcare workers' perceptions and found it a valid survey for employees and leadership. Similarly, using empirical data, Peng and Prybutok (2014) tested the relative effectiveness of the MBNQA in government organisations, and they found the framework to be valid with strong theoretical foundations.

Mellat-Parast (2015), using the structural equation modelling, assessed the Baldrige criteria within 1992-94 and 2003 -2005 and found that the Baldrige robustness and measurement items have not changed over time. Baidoun, Salem and Omran (2018) assessed the degree of TQM implementation in government and non-government hospitals in Palestinian hospitals, using the MBNQA framework. They concluded that TQM is not a fading fad but a hospital tool to enhance service quality.

Research in the US has compared 34 healthcare organisations that won the MBNQA award with 153 close competitors and found the award recipients exceeded their rivals' quality of care and performance regarding patients' experience (NIST 2015). Other researchers like Lau, Zhao and Xiao (2004), Sabella, Kashou and Omran (2015) have used the Baldrige criteria to measure quality performance.

The MBNQA constructs used in this current study are mainly like those validated in Terziovski (2006) and Prajogo and Sohal (2003). The difference is that this research uses the more recent healthcare performance excellence framework, which has two constructs modified to cover current issues. For example, knowledge management was added to the construct "information and analysis," which is now "information, analysis, and knowledge management." While the construct "process" was changed to "operations," the meaning remains the same. The difference in terms of constructs used in previous studies and this current study are in Table 3.1 below:

Figure 3.1: Baldrige Healthcare criteria.

Source: (NIST, 2017)

Table 3. 1: MBNQA constructs used in the literature

MBNQA Constructs	Sources
"CEO's leadership, role of quality department, disciplines of employee, design of goods/service, supplier quality control, process management, quality information and analysis, and employees" participation."	(Saraph, Benson & Schroeder 1989)
"Leadership with vision, internal/external partnership, process management. Continuous improvement, employee satisfaction, customer satisfaction."	(Anderson, Fornell & Lehmann 1994)
"CEO's support, customer relationship, supplier relationship, human resource management, task attitude, product design process, process flow management, control/feedback."	(Flynn, Schroeder & Sakakibara 1995)
"CEO's Involvement, customer focus, supplier quality management, supplier performance, quality control design, product quality, benchmarking; statistic quality management, internal quality information, employee empowerment, employee training, employee participation."	(Ahire, Golhar & Waller 1996)
"Leadership, strategic planning, consumer and market focus, information and analysis, human resource development and management, process management, business results."	(Curkovic et al. 2000a)

"Leadership, strategic quality planning, customer and market focus, information and analysis, HR development and management, process management, business result."	(Flynn & Saladin 2001)
"Leadership, strategic planning, information and analysis, human resource development and management, process management, focus on satisfaction of patients and other stakeholders, and organisation performance results."	(Meyer & Collier 2001)
"Leadership, information and analysis, Human resource focus, Process management, strategic planning, Business result, customer and market focus."	(Flynn & Saladin 2006)
"Leadership, strategic planning, customer focus, Measurement, analysis and knowledge management, workforce focus, process management, results."	(D'Souza & Sequeira 2012)
"Leadership, strategic planning, consumer and market focus, information and analysis, human resources, process management, business results."	(Prybutok, Zhang & Peak 2011)
"Leadership, strategic planning, customer focus, Measurement, analysis and knowledge management, workforce focus, operations focus, results."	(Sternick 2011)
"Leadership, strategic planning, customer focus, Measurement, analysis and knowledge management, workforce focus, process management, results."	(Lee, Lee & Olson 2013)
"Leadership, strategic planning, customer focus, measurement, analysis and knowledge management, workforce focus, operations focus."	(Lee & Ooi 2014)
"Leadership, human resource management, customer focus, strategic planning, information and analysis, process management, performance result."	(Sabella, Kashou & Omran 2015)
"Leadership, strategic planning, customer focus, measurement, analysis and knowledge management, workforce focus, operations focus, results."	(Peng & Prybutok 2015)
"Leadership, strategic planning, customer focus and satisfaction, Information and analysis, human resource	(Mellat-Parast 2015)

development and management, Process management, quality, and operational results."	
"Leadership, strategic planning, customer & market, Resources, operations management, measurement analysis and improvement, Financial results."	(Wen et al. 2016)
"Leadership, strategy planning, patient and sector focus, information and analysis, human resource focus, process management, results."	(Baidoun, Salem & Omran 2018)
"Leadership, strategy, customer, knowledge management, workforce, operations, performance."	(Matondang, Alda & Nasution 2018)

3.4.7: Total Quality Management Practices and Organisational performance

Before looking at the impact of TQM practices on employees, it would be prudent and better understanding to establish the link between TQM practices and organisational performance, as employee satisfaction is a source of organisational performance. TQM has gained wide popularity mostly in developed countries like the USA, Japan, Australia, China, and the UK, where attempts have been made to increase efficiency, quality output, delivery of services, and other performance results (Sabella, Kashou & Omran 2015; Talib, Rahman & Qureshi 2013). Under the TQM banner, efforts were explicitly aimed at defining and enhancing the practices in the form of enablers. In a developing country like Nigeria, the emphasis must be on identifying and implementing TQM enablers in the general hospitals according to their priorities. There is an urgent need to apply methodologies to enhance and maintain quality systems (Yang 2006).

Several studies have shown a positive relationship between TQM practices and organisational performance (Chase, Jacobs & Aquilano 2006; Talib & Rahman 2015); Also, TQM influences service delivery in healthcare (Mosadeghrad 2013a, 2015). Yet reviewing the literature on TQM in healthcare still indicates the need for prioritisation studies and ranking TQM practices for their preference and performance evaluation.

According to Chase, Jacobs, and Aquilano (2006), TQM provides a competitive advantage and enhances an organisation's business results. Organisations that embrace the idea of TQM will attain increased performance outcomes (Lau, Zhao & Xiao 2004; Talib & Rahman 2015). TQM has links to organisation performance measures like employee satisfaction (Amin et al. 2017), service quality, and customer satisfaction (Lam et al. 2012; Ooi et al. 2011; Samat, Ramayah & Mat Saad 2006). For example, Ooi et al. (2011) examined the connection between total quality management (TQM) practices and customer satisfaction and the association between TQM and service quality. Their study surveyed sales and marketing managers' perceptions in 108 small service organisations in Malaysia. The findings were that TQM practices have a significant and positive link with the small service firms' customer satisfaction and service quality. The authors also found customer focus, information, and analysis dimensions to have a strong connection with service quality and customer satisfaction. However, employees' role in such a chain of relationships was not established.

In another example, Samat, Ramayah, and Mat Saad (2006) examined the association between TQM practices, service quality, and market orientation in the Malaysian hotel industry. Structured questionnaires were circulated to the managers of 175 service companies located in the northern region of Malaysia. The findings showed that continuous improvement, employee empowerment, information, and communication, had a strong impact on service quality. But they found market orientation to be influenced significantly only by customer focus and employee empowerment. Not all the practices had a significant effect on service quality. Lam et al. (2012) examined the association among TQM practices, market orientation, and service quality in the Malaysian service industry. The authors collected data from 150 service firms, and structural equation modelling was used to examine the constructs' relationships. It was found that TQM practices have a positive relationship with both market orientation and service quality.

In a more recent example, Salhieh and Abu-Doleh (2015), using five TQM practices, investigated the connection between TQM practices and technical efficiency in Jordanian commercial banks. Their study found a positive relationship between TQM practices and organisational performance. Nwadukwe and Court (2013) studied how TQM affected Nigerian companies' organisational performance and found the connection positive. The authors posit that TQM should cover all organisation sections to attain improved employee and customer

satisfaction. Nair (2006) suggested that TQM practices inspire an organisation's performance, mainly through employees' and customers' satisfaction.

3.4.8: TQM Practices and Organisational Performance Controversies

Total quality management is a widely accepted but debatable issue in the literature (Prajogo & Sohal 2006; Sadikoglu 2004). The relationship between TQM practices and organisational performance is a mixed one that depends on several other impacting factors (Kaynak 2003; Nair 2006; Prajogo & Sohal 2006). While some scholars found a positive connection between total quality management practices and organisational performance (Chase, Jacobs & Aquilano 2006; Lau, Zhao & Xiao 2004; Nwadukwe & Court 2013; Salhieh & Abu-Doleh 2015; Talib & Rahman 2015), several others came up with mix results (Nair 2006). Conflicting views and causes were given regarding the disparities in the link between TQM practices and organisational performance.

According to Perles (2002), TQM implementation failure is due to leaders who fail to comprehend their tasks in applying its practices. Srdoc, Sluga and Bratko (2005) posit that such TQM failures are due to the inability to understand TQM practices' connections. Other issues were attributed to varying TQM methods, such as Amin et al. (2017), citing different contexts and cultures; Kaynak (2003) noted measuring TQM as a single construct, subjective performance measures, varied analytical techniques, and design of research. Mosadeghrad (2014d) cited several obstacles like TQM models that do not fit, ineffectual methods for TQM application, and an unsuitable environment. Despite these controversies, TQM practices do work, and it is still massively sought after by organisations (Vecchi, Demeter & Brennan 2011).

3.4.9: Impact of Total Quality Management Practices on Employee Satisfaction

TQM can increase both employees' and patients' satisfaction, improve the overall quality of medical care, and reduce errors (Alexander, Weiner & Griffith 2006). Quality management practices positively affect employee satisfaction (Sadikoglu & Zehir 2010; Terziovski 2006; Zakuan et al. 2010) and well-being, reduces workload, stress, encourage participation, cooperation, and autonomy (Liu & Liu 2014) which lead to organisational performance (Talib & Rahman 2015). Therefore, employee satisfaction could mediate the relationship between TQM practices and service quality.

Several studies have established a link between TQM practices and employee satisfaction. For example, in a study carried out in Taiwan, titled "the effect of TQM practices on employee satisfaction and loyalty in Government," Chang, Chiu and Chen (2010) integrated the TQM practises, which comprised: management leadership, employee empowerment, employee training, employee compensation, and teamwork, into a theoretical model to study employee satisfaction and loyalty within the government context. Using a stratified sampling method and a sample of 200 government employees in Taipei, Taiwan's capital city, data were analysed using structural equation modelling, partial least squares. The study's findings showed that management leadership, employee empowerment, employee compensation, and teamwork are significant positive predictors of employee satisfaction. Also, employee loyalty increased through employee satisfaction, but employee training has no connection with employee satisfaction. They posit that employees' satisfaction in the public sector could be improved when the human resource practices of TQM are implemented. A notable limitation in their study is the use of only five soft TQM factors.

Using the structural equation modelling approach, Álvarez-García et al. (2015) investigated the relationship between critical factors of quality management and employee satisfaction in Spain's tourism sector. A total of 566 organisations were selected, and their findings show a positive relationship that denotes employee satisfaction as vital to an organisation. Data was collected using both questionnaires and interview surveys. The authors identified several factors as critical to employee satisfaction: Process management, planning, and quality policy, with planning having a more significant influence. The study also found that leadership is an important element that influences employee satisfaction through the remaining factors and employees' satisfaction encourages learning in the organisation. The authors posit that employee satisfaction is a matter of great interest and complexity. Employee satisfaction is informed by the essential quality factors clearly illustrated in the European Foundation for Quality Management Model (EFQM). The EFQM fundamental theory stipulates that processes and people are the factors that result from employee satisfaction, which will impact service quality.

Liu and Liu (2014) carried out a study to determine the impact of quality management practices on employees' well-being. They hypothesised that quality management activities change the working environment's characteristics, influence workers, enhance behaviours, and work-life outcomes. With the aid of a questionnaire, they collected data from a sample of 344 employees

in 27 business organisations that include both manufacturing and service companies. The findings show quality management practices to improve employees' satisfaction and employee belongingness, also reduce employees' job stress and workload. They concluded that, when empowered, employees feel important in attaining the organisation's objectives. Therefore, employees will find their job more satisfying and handle job tasks without much support from others.

Prajogo and Cooper (2017) measured TQM practices' association at the individual level of employee perceptions, shared organisation perceptions, and employee job satisfaction in 23 private organisations in Australia. Drawing from organisational climate theory, the researchers collected data from a sample of 201 employees who work in private companies in Victoria, Australia. Their results showed a significant connection between job satisfaction and people-related TQM practices (soft TQM) operationalized at individual and organisational levels.

Amin et al. (2017) studied the structural relationship between the TQM practices, employee satisfaction, and hotel performance in Malaysia. Using a judgmental sampling technique, they targeted about 77 four-star and five-star hotels out of the 1,030 hotels in Malaysia registered with the country's hotel directory association and within the cities of "Kuala Lumpur, Putrajaya, Johor Bahru, and Pulau Pinang." The authors did random shortlisting and eventually picked 25 hotels for the study. Data collection was carried out by distributing 625 questionnaires to respondents — five hundred questionnaires to employees and the managers/top leaders given one hundred and twenty-five questionnaires. Their findings reveal a positive relationship using the structural equation modelling technique for data analysis, specifically, the partial least squares (PLS-SEM). They posit that TQM practices are good predictor of employee satisfaction to improve an organisation's performance. Additionally, they stated that employees who have high contentment in their jobs would be loyal and ready to support colleagues and enhance their performance. Thus, organisations need a friendly working environment and clear strategy to improve employee satisfaction and organizational performance. However, in their conclusion, the authors noted that TQM practices might vary in different industries or countries and suggested more studies in developing countries.

Bouranta et al. (2019) carried out a study to empirically identify core dimensions of TQM and their influence on employees' and customers' performance measures in different countries. With samples from service organisations, 151 from Spain, 131 from Greece, and 70 from

Mexico, they found several TQM factors like “process management, quality practices of top management, employee quality management, employee knowledge and education, and customer focus.” The authors claimed that the five identified TQM dimensions' utilisation defers among service companies in various countries. They also posit that some of the TQM dimensions are a precursor to the focus on employees' and customers' performance.

Sabella, Kashou and Omran (2014) surveyed the extent of implementing quality management in medical services in the occupied Palestinian Territories, using the Malcolm Baldrige National Quality Award criteria. The findings indicated a significant positive relationship between TQM practises and hospital performance. The authors posit that TQM allows workers to perform at a higher level through continuous improvement, which gives satisfaction to the patients.

Mugion et al. (2020) developed an innovative research model, the "Service Excellence Chain (SEC)," which connects internal and external viewpoints by combining a service-profit chain and an excellent performance model. Theoretical concepts and quantitative methods were formulated using sophisticated statistical techniques. The service excellence chain was researched using empirical studies in the healthcare field, concentrating on two core hospital units in Italy. The internal and external customers' satisfaction was tested using the structural equation modelling technique, and a link between both constructs proposed and modelled through Bayesian networks. It was found that the models demonstrated strong internal validity and a good match for both patients' and employees' perspectives and that employee's perception of performance excellence affects their satisfaction. The Authors posit that quality management techniques should be deployed to improve both employees' and patients' satisfaction to achieve service excellence in healthcare. Also, the study recommended a performance excellence framework for measuring internal satisfaction.

Several studies came up with inconclusive findings, like research done by Rodríguez-Antón and Alonso-Almeida (2011) to check the effectiveness of quality certification systems on employee satisfaction in Spanish hotels did not find a direct impact on employee satisfaction. A notable limitation in their research was their only managers' survey, leaving out the employees', an essential factor. In another study to develop a TQM model for the Iranian healthcare sector, Mosadeghrad (2015) found less TQM effect on Iranian healthcare due to lack

of employee participation. However, the author suggested that the proper application of TQM practices may improve hospital performance.

3.5: Employee Satisfaction

Employee satisfaction is a multidimensional scale defined in different ways in the literature. For example, employee satisfaction was defined as an employee's personal evaluation of the general quality of job tasks (Hsu & Wang 2008; Prajogo & Cooper 2010); also, as an emotional state of mind derived from a favourable evaluation of an employee's job or job experience (Chang, Chiu & Chen 2010). As explained by Johnson (1955), the Employee satisfaction notion includes extrinsic factors like: "pay, benefits, promotion opportunities, working conditions" and intrinsic factors: "a sense of pride or accomplishment, liking one's work, opportunities for personal and career growth." Johnson posits that employee satisfaction includes the following work areas: physical and mental exertion; relations among employees; relations with the employer; security, growth, and finances; interest in the work, emotional attachment to the job; job formation, status; physical environment and work conditions; future, goals, and development toward goals, as well as evaluation. Generally, employee satisfaction can be accepted as staff satisfaction with policies, the employer, leadership, work environment, supervision, other subjective factors, and the work itself.

For any organisation to survive, the employees must be loyal, and employees' loyalty comes from employee satisfaction (Chang, Chiu & Chen 2010). However diverse the role of employee satisfaction may be, employees are the significant link to service delivery, and without the workforce, there can be no service (Briggs, Deretti & Kato 2020; Heskett et al. 1994; Kelloway & Myers 2019; Myrden & Kelloway 2015; Yee, Yeung & Cheng 2011). Hence, employee satisfaction is a measure to improve an organisation's service quality (Chang, Chiu & Chen 2010; Grigoroudis, Tsitsiridi & Zopounidis 2013; Heskett et al. 1994; Kelloway & Myers 2019; Macinati 2008; Mendoza & Maldonado 2014).

According to Sadikoglu and Zehir (2010), employee satisfaction is a unique competitive advantage that brings new ideas, quality, ease of work processes and efficiency, productivity, and eventual cost reduction. In their research to determine the impact of employee performance and innovation on the link between total quality management practices and Turkish organisations' performance, Sadikoglu and Zehir (2010) posit that employee satisfaction is a significant measure of organisational performance and the greater an employee's satisfaction,

the higher the performance. The service-profit chain model of Heskett et al. (1994) illustrates the idea by connecting employee satisfaction to higher service delivery and customer satisfaction.

Failure to provide workers with their basic needs for the job may lead to dissatisfaction and eventual poor service delivery, negatively impacting customers' satisfaction (Heskett et al. 1994). The literature links employee satisfaction to service quality and service quality to patient satisfaction (Briggs, Deretti & Kato 2020; Heskett et al. 1994; Kelloway & Myers 2019; Myrden & Kelloway 2015; Yee, Yeung & Cheng 2011). Employees being the backbone of any organisation need the right tools and support to work effectively. When employee morale is down, it's reflected negatively in a way that could weigh heavily on the organisation's performance.

Service workers value customer-oriented results, but when they are not well supported and backed with the correct data or tools in their job, this could lead to dissatisfaction in the workplace. When dissatisfaction arises in the work environment, there are bound to be unhappy employees, which can manifest in poor output that negatively impacts the external customers' satisfaction and commitment (Firth et al. 2004), thereby leading to loss of revenue underperformance (Heskett et al. 1994). Dissatisfaction in the workplace can cause psychological stress to medical staff, leading to absenteeism and staff turnover (Wang et al. 2017). Stressors in the job result in dissatisfaction and lack of commitment which positively influence intention to quit the organisation (Firth et al. 2004). Absenteeism and turnover come at a high cost to the organisation because they can lead to low morale and reduced production level, but increase hiring and training new employees for the organisation. While certain turnover may be desirable, e.g., filtering out unsuitable and unproductive employees, turnover is mainly disruptive to the business enterprise and its workers. The actual cost of employee turnover is not just in recruiting new employees but a loss in productivity and decline in customer satisfaction (Heskett et al. 1994)

Employees are essential in an organisation (Kim et al. 2012), and their satisfaction is related to overall hospital performance and increased productivity (Macinati 2008). Happy employees will be more dedicated to their job tasks and deliver quality services to meet customers' needs. Hence Grigoroudis, Tsitsiridi and Zopounidis (2013) posit that the focus on the organisation's employees and customers will improve the service delivery process. Therefore, organisations

need to devise good working techniques to manage employees' satisfaction and loyalty because the relationship between employees and external customers impacts an organisation's quality of service and growth (Grigoroudis, Tsitsiridi & Zopounidis 2013).

Firth et al. (2004) carried out a study to understand ways managers could reduce employees' quitting intentions and found that supervision relates to job satisfaction, and job satisfaction increases commitment. Therefore, employers should improve the dimensions of job satisfaction for better efficiency. Their study also found that employees who feel dissatisfied most likely intend to quit the job, as they no longer feel any sense of commitment to the organisation, which may be born out of stress and other factors. When employees no longer find their work meaningful, no other form of management's incentive management would keep them around. Thus, employees must be motivated to have meaning in their job to avoid turnover (Globoforce 2017). Feeling appreciated and valued in the workplace gives an employee the added incentive to be productive. Making employees feel appreciated and valued will bring about low turnover rates and high satisfaction.

For an organisation to improve, dissatisfaction should be handled, and employees provided with effective leadership, job security, and training that increases staff morale for higher service delivery (Gursoy & Swanger 2007). When employees feel disrespected and undervalued by the leadership, they are likely to be less productive. Therefore, it is vital to value every individual in the workplace to improve satisfaction and productivity. An employee that feels valued would go the extra mile to help with job task, assist others and even stay beyond closing hours to get the task done. Satisfied employees feel much motivated to work more efficiently by delivering high service quality, which positively influences patient satisfaction (Heskett et al. 1994).

An explicit aim of any employment is to attain financial security for oneself and family. The job vacancy for an individual may not compare favourably to the person's abilities and experience searching for the job. Several impacting considerations are location, job attractiveness, salary, the fit of the job seekers' skills and need in the organisation. Every job comes with its requirements and demands, so job seekers must tailor themselves to meet such demands for gainful employment. Invariably, an employee comes with specific skills to the job and may need training to achieve other skills required for certain areas of the job, which comes at the employer's expense. Thus, the employer may benefit from employees having a sense of

satisfaction that endeared them more to the organisation, be more productive, and achieve growth in different areas.

3.5.1: Sources of Employee Satisfaction

According to Spector (1997), any part of a job that gives a feeling of satisfaction or unhappiness is a dimension of employee satisfaction. These dimensions help organisations identify areas of discontent in their efforts to improve them (Spector 1997). Employee satisfaction lacks limits and may differ from one employee to the other. Therefore, enhancing employees' satisfaction depends on good relationships with colleagues, good working conditions, career advancement, and high salaries. When evaluating employee satisfaction, one should keep in mind that any factor that can significantly improve one employee's satisfaction may be irrelevant to another. A significant source of job satisfaction in the service industry is the worker's perception of the capacity to provide adequate service according to customers' needs (Heskett et al. 1994). Hence, employers should prioritise staff's well-being because their involvement in a service organisation's quality process is of utmost importance (Kaynak 2003). Consequently, employees are the most vital ingredients in customer interactions through which services are provided to satisfy customers (Kim et al. 2012; Sadikoglu & Zehir 2010).

Customer satisfaction is impacted mainly by the quality of services delivered by the organisation, and it is the employees' task to provide such valuable services to the customers. The Service-profit chain theory (Heskett et al. 1994) implies that management should supervise employees by using internal service quality tools and techniques like employee rewards and recognition, job designs, and workplace design to manage employees. Such would induce a sense of satisfaction amongst the employees, leading to increased productivity and employee retention. Once achieved internally, the external customers' result would be an improved service delivery that meets their expectations. So, the customers will be loyal to the organisation, leading to higher revenue for the company and profit. Therefore, employees should have an enabling working environment and support, which fosters satisfaction and leads to loyalty and increased productivity (Heskett et al. 1994).

Kassinis and Soteriou (2003) stressed that high-quality support services, the internal quality of the working environment, and policies enable employees to provide valuable results to customers, which drives employee satisfaction. Similarly, Heskett et al. (1994) opined that organisations should ensure employees' internal satisfaction and cooperation to enable them to

do their tasks. An overworked employee without adequate compensation is bound to have a disciplinary attitude in the workplace. Therefore, it is crucial to hire the right persons, avail them of development opportunities, provide training and adequate support and compensation to improve the satisfaction that positively impacts service delivery and eventual customer satisfaction. In this sense, employee empowerment, teamwork, and value system in the workplace should be implemented (Andaleeb 2001).

In a study to understand the influence of total quality management practices on employee satisfaction and loyalty in a public organisation, Chang, Chiu and Chen (2010) argued that employee satisfaction highly determines the service quality process. They listed the antecedents of employee satisfaction as management leadership, compensation, empowerment of employees, and teamwork. Therefore, by understanding the importance of certain elements impacting workers' satisfaction and the effect on service operations and customer satisfaction, it is possible to decide on factors that need improvement for higher performance.

Mendoza and Maldonado (2014) carried out a systematic literature review on the relationship between employee job satisfaction and customer satisfaction. They found that management acts that clarify the likely tasks create good working conditions that prioritises recognition and support of workers, promote quality, the awareness of customers' needs, and willingness to satisfy these needs, are highly significant in the organisation. Employees would prefer to stay with a company when offered career advancement through training and development. Training employees and retaining them is more cost-effective than hiring and training new employees. Professional growth and career training are crucial to employee satisfaction; thus, it is vital to constantly check the level of employee satisfaction with their growth and opportunities in an organisation.

Trivellas, Reklitis and Platis (2013) surveyed 271 nurses working in Greek hospitals to determine how job stressors could impact the nurses' job satisfaction. The result showed high workload, conflict, and lack of autonomy negatively connected with all aspects of job satisfaction dimensions. Extrinsic and intrinsic factors of job satisfaction should be monitored, as they affect employee satisfaction. Therefore, for an organisation to be competitive, improvement should be made on supervision, interpersonal relationships between supervisors and subordinates, and other subjective and personal factors that may affect employees.

It is important to note that numerous subjective factors can impact employee satisfaction, especially within the working environment where the employee interacts with colleagues, job tasks, and the company. According to Heskett et al. (1994), good leadership, attitude, and service interactions positively impact satisfaction. Interactions among co-workers are essential practices in the hospital, affecting an employee's happiness or productivity. When there is a cordial interaction among the employees and workers' motivation, it inspires them to perform better in their various tasks.

Some other factors that could impact on employee satisfaction include: salary, working conditions (Hsieh et al. 2017; Jun, Cai & Shin 2006); Stress and high workload, conflict, job performance evaluation (Oakley 2012); lack of career development and training (Burke, Graham & Smith 2005; Hsieh et al. 2017); interpersonal relationships, job security and lack of job autonomy, support and fairness of supervisor (Hsieh et al. 2017; Hsu & Wang 2008). How an organisation measures these factors and uses the data to improve performance would determine competitiveness and success. However, employees' perceptions regarding those factors could be subjective and different from one industry to another.

Employees work hard to earn the salary they deserve and the benefits of the job. Also, employees need to learn through constant education and training set up by the organisation. So, organisations must provide adequate and substantial learning resources to employees (Fletcher, Major & Davis 2008). Another factor is evaluative systems and employee promotion, which impact satisfaction and give a clear direction of their efforts (Muhammad & Akhter 2010; Yee, Yeung & Cheng 2008). Communication, skills, cooperation, interactions amongst colleagues also foster satisfaction (Logan & Ganster 2005).

In terms of supervision, having to listen to employees' needs and ideas on improving things in the organisation, fostering an easy communication stream with employees, and giving employees the necessary support and mutual respect is highly related to satisfaction (Alexander et al. 2012). Another factor is employee recognition, which provides an employee with autonomy and the empowerment to delegate job tasks positively (Rothausen, Gonzalez & Griffin 2009). The work itself is a dimension of employee satisfaction that does not entirely represent employee satisfaction (Yee, Yeung & Cheng 2008). In other words, the work's enjoyment solely depends on the performance employees derived from the work. So, feelings about the job tasks are dimensions of employee satisfaction (Hsieh et al. 2017). Lee, Lee and

Kang (2012) supported the positive impact of training, education, compensation, communication on employee satisfaction.

Leadership listens to improvement suggestions from employees, as well as customers. But there seems to be a gap in how leaders of the Nigerian public hospitals relate with their subordinates, which hinders the hospitals' progress. For example, in a study to determine factors affecting health workers and governance in Nigerian public hospitals, Adeloye et al. (2017) claimed that the lack of efficient leadership and management negatively impacts the workforce and service delivery. When the leaders of an organisation are not committed to quality, little the subordinates could do to make progress. The bulk of the leaders' inadequacies culminate in poor service delivery that negatively impacts the customers.

Numerous factors influence workers' satisfaction, and employers/managers should learn how to manage these factors to motivate their employees for better productivity. However, some of these factors' subjective nature, which varies across industry and nationality, calls for a comprehensive approach to determine staff satisfaction. Such could be achieved using TQM, which comprised core management practices that studies have shown to enhance employee satisfaction and cope with healthcare's wide-ranging challenges (Zakuan et al. 2010). Hence, this current study aims to measure employee satisfaction in the Nigerian general hospitals, using TQM practices, as represented by the Malcolm Baldrige National Quality Award (MBNQA). Although not all the issues would be solved, it is still viable to design and carry out research to guide management significantly and clearly explain the role of employee satisfaction in improving the quality of services in the Nigerian public hospitals.

3.5.2: Impact of Employee Satisfaction on Service Quality

Healthcare service quality depends on employee and provider interactions, and the satisfaction of healthcare workers is of paramount importance to providing excellent service quality to patients (Mosadeghrad 2014c). Chang, Chen and Lan (2013) posit that perception of interpersonal relations between employees and patients positively impact service quality. It implies that the way employees and customers engage or interact can determine the organisation's quality of service. A moody employee may elicit a poor perception of service by the customer. A satisfied and happy employee is likely to cheer the customer's mood, thereby generating a higher quality of service.

The assertion that employee satisfaction improves service quality was based on the equity in social exchange theory (Blau 1964; Gouldner 1960; Organ 1977). While different views exist on the social exchange theory, there is a consensus that it entails a sequence of connections that give rise to commitment (Cropanzano & Mitchell 2005; Emerson 1976) that are not specified (Blau 1964). Generally, the social exchange theory connections are free from someone else's actions (Blau 1964). The logic is that an exchange needs a two-way transaction that warrants give and take (Cropanzano & Mitchell 2005). Such transactions also can bring forth good relations between the parties involved (Cropanzano & Mitchell 2005). A fundamental supposition of equity in social exchange is that most people expect social justice or equity to hold in interpersonal dealings. Individuals granted certain forms of social gifts superior to expectation would have gratitude and a duty to reciprocate the giver (Gouldner 1960; Organ 1977). Over time these positive reciprocal ties grow into secure, trustworthy, and shared commitments (Cropanzano & Mitchell 2005).

In connection with the social exchange theory, when an employer offers favourable working conditions that satisfy the staff, the staff are most likely to make extra efforts as reciprocation, resulting in a better quality of service in the organisation (Flynn & Saladin 2006; Wayne, Shore & Liden 1997). The equal treatment of employees by managers contributes to employees' performance in providing high quality service to customers as promoted by the principle of reciprocity (Jeon & Choi 2012). Feeling treated equally, workers are happier, give better performance, and likely provide higher quality services to customers (Jeon & Choi 2012).

The relationship between employee satisfaction and service quality has been examined severally. For example, Hallowell, Schlesinger & Zornitsky (1996) examined the internal service quality (ISQ) concept, which refers to the perceived quality of services provided by various units in an organisation for the staff in the organisation (Caruana & Pitt 1997). They identified six ISQ components, “tools, policies and procedures, teamwork, management support, goal alignments and training,” and came up with a framework suggesting that internal service quality has a connection to customer service quality through employees' capability. Therefore, ISQ plays a role in the concept of internal organisational operations, which affect relationships within various organisational functions and thus affect the service quality measurement (Gilbert 2000). In other words, a higher internal service quality increases employee satisfaction, and this leads to a higher service quality performance.

The health sector focuses mainly on providing services instead of physical products. Thus, service quality in healthcare organisations focuses more on the organisation's external component, i.e., patients. However, only once internal (employee) output is measured and optimized, the effective and efficient realisation of the quality of service between the hospital and its external customer is feasible (Gronroos 1984; Parasuraman, Zeithaml & Berry 1988). Patients' satisfaction levels can improve by recognizing and reacting to employees' requirements and complaints, which leads to performance in the organisation (Gilbert 2000; Kang, Jame & Alexandris 2002).

Satisfied employees are most likely to give their best in the job and provide better services through organisational citizenship behaviours (Yoon & Suh 2003). Employees who are happy with their jobs tend to be more involved and committed to delivering high-quality services. Previous research has also shown the willingness and ability of loyal employees to offer a higher quality of service (Loveman 1998). Service quality is influenced by an employee's job satisfaction (Hartline & Ferrell 1996; Schneider & Bowen 1985). Hartline and Ferrell (1996) found evidence that supports the correlation of front-line employee satisfaction with the quality of service.

The proper understanding of customers' needs is a suitable means for service staff to transfer the relevant information to co-workers by sharing ideas, suggestions, and service improvement strategies (Bettencourt & Brown 2003; Lages & Piercy 2012). For example, the exchange of solutions with colleagues regarding problems and empowering them to improve services with feedback and ideas (Lages & Piercy 2012). Kurtz and Clow (1998) posit that when employees feel that their work is vital for the organisation, they are inclined to offer better performance. Thus, with more accountability and authority assigned to service employees, productivity increases (Lashley 2001).

Yee, Yeung and Cheng (2008) carried out a study titled "The impact of employee satisfaction on quality and profitability in high-contact service industries." They concluded that Employee satisfaction is crucial to managers as it serves as a link to improving service quality, achieving customer satisfaction, and improving operational performance in organisations. Such a relationship between employee satisfaction and service quality was bolstered by Yee, Yeung and Cheng (2011) study, showing evidence that an increase in employee satisfaction significantly impacts the service dimensions that influence customer satisfaction and loyalty.

The same conclusion was arrived at in the banking sector by Grigoroudis, Tsitsiridi and Zopounidis (2013) in their study, which established the critical justification of the connections among employee satisfaction, service quality, and customer satisfaction. The importance of employee satisfaction on service quality and eventual customer satisfaction was well illustrated in the service-profit chain model of Heskett et al. (1994). Consequently, satisfied employees will be loyal to the firms, improve service quality, be more productive and innovative in ways that would satisfy customers, and make customers want to patronize the organisation (Yee, Yeung & Cheng 2010).

Tawana, Barkhuizen and du Plessis (2019) carried out a study in South Africa that compared factors and implications of employee satisfaction in urban and rural healthcare professionals. They tend to identify distinguishing characteristics that can assist in managing human resources (HR) to increase workers' satisfaction and service provision. They concluded that employees' satisfaction impacts the quality of services provided in public hospitals. They stated that workers' managers should endeavour to enhance the determinants of employee satisfaction in the workplace like working conditions, remuneration, availability of equipment and medications, recognition, and safety, which will lead to an improved quality of services for patients.

3.5.3: Impact of Employee Satisfaction on Patient Satisfaction

Historically, the literature has clearly defined the employee satisfaction-organisational performance relationship (Vroom 1964), but manufacturing and individual performance used to be the focus. Recently, research has focused more on the link between customer satisfaction and employee satisfaction in private organisations (Heskett et al. 1994; Schneider & Bowen 1985) while still overlooking the public sector. As far as the public sector is concerned, the literature emphasises employees' importance and motivation to succeed in service organisations (Hays & Hill 2001). Without employees (Lammermeyr 1991), operating systems are impossible, and there is a correlation between employees and customers (Chi & Gursoy 2009; Raharjo et al. 2016; Yee, Yeung & Cheng 2010). The positive attitudes and emotions of workers towards their company can manifest in their encounters with customers (Melhem 2004). Thus, a happy employee can positively impact the service encounter with the customer and results in mutual satisfaction.

Employees can work autonomously towards meeting the organisation's customers' needs and satisfaction when they feel that the organisation makes performance possible, improves employee satisfaction, motivates and provides career opportunities. Some practitioners suggested using a few service indicators, such as accuracy of the information, customer needs, expectations, clarity of procedure, and staff consideration (Brown 2007; Cassia & Magno 2011). Hocutt and Stone (1998) stated that another measure is integrating the employee-customer relationship, which is required to train the frontline staff, who are entirely allowed to communicate with clients.

Employees' satisfaction leads to employee's ability to listen, show knowledge, care, and be thoughtful of others' needs and feelings (Motowidlo 1984). For example, Newman, Maylor and Chansarkar (2001) have recognised the worker's ability to serve depends on internal processes, resources available, and recognition. This capacity affects the worker's happiness, desire to stay in business, and the quality of the services provided, ultimately impacting potential customers' loyalty. An organisation's core objective is to ensure efficient internal exchanges between the organisation and its staff as an essential condition for successful external exchanges (interactions with customers outside the organisation) (Rafiq & Ahmed 2000). Once workers engage in an internal service network, a service meeting occurs. The engagement leads to potential customers' overall satisfaction and desire to continue using the company's products or services (Heskett et al. 1994).

The relationship between employee satisfaction and patient satisfaction was also tested in the healthcare industry. Several studies have investigated such links in hospitals and found a positive relationship between the level of satisfaction of medical staff and their patients (DeVoe et al. 2007; Linn et al. 1985; Musella et al. 2017; Raharjo et al. 2016; Raharjo et al. 2015).

For example, Raharjo et al. (2016) studied the relationship between employees' and patients' satisfaction in an Italian hospital and gained insight into the critical factors to their satisfaction. The 4P-based European Framework for Quality Management (EFQM) framework and Picker's Patient Experience quality indicators were used as a theoretical basis for understanding the relationship of satisfaction with the key drivers. From June to August 2014, a cross-sectional survey was carried out in two departments (maternity and cardiology) after performing a pilot study with 15 respondents. A sample of 75 employees and 130 patients were surveyed using questionnaires for employees and patients. For analysis, they used the partial least square

structural equation modelling technique and an "importance-performance matrix" analysis to identify sections that need improvement in the hospital. For the 4P model, strong evidence was found that enablers influence the results and the employees' satisfaction. Evidence was also found for effect on their overall satisfaction and the resulting loyalty of the patients' experience. Regarding the relationship between employee satisfaction and patient satisfaction, they found a higher level of patient satisfaction in one unit associated with higher employee satisfaction in the same unit. Specific results include identifying critical factors for patient satisfaction and employee satisfaction, along with development goals for each station. This research suggested using PLS-SEM as a useful statistical tool to define primary drivers of employee satisfaction and patient development goals in the healthcare context.

DeVoe et al. (2007) carried out a study to determine the relationship between physicians' satisfaction with their career and patients' satisfaction with overall healthcare in similar geographic locations. They used physician data spanning 1996 to 2001, a nationwide telephone survey of both patients and physicians, and randomly interviewed 179,127 household patients and 37,238 physician populations. They found a varying level of satisfaction by region but a high relationship in the same location and site between physicians' and patients' satisfaction. The Physicians' satisfaction with their career has a strong relationship with patient overall satisfaction with healthcare than any other facet of the healthcare system. Further, it was found that patients' trust in the physicians was also strongly related to physicians' career satisfaction. The authors concluded that dissatisfaction leads to poor quality of care, as satisfied physicians will make few mistakes, which invariably translate to safer practices that patients hope to have. Thus, promoting quality in healthcare entails satisfaction and collaboration. Assessing the degree of satisfaction and relationship between physicians and patients is an effective way to measure healthcare quality.

Musella et al. (2017) carried out research to connect internal and external customer satisfaction using probabilistic graphical models. The models are used to determine the most critical variables for building internal and external consumer satisfaction and generate development scenarios probabilistically. Using standard and object-oriented Bayesian networks, they made probabilistic graphical models for internal and external customers in an Italian hospital. The model was used to assess satisfaction drivers by groups in each ward, and they created scenarios to enhance overall satisfaction variables. Based on linear combinations, the authors developed a global index that establishes the relationship between internal and external satisfaction. The

model's parameters were taken from an Italian hospital's survey data and used the SEM technique for data analysis. Their study found “experience” to be the most important internal factor for increasing overall patient satisfaction. The most significant variable found was product and service quality regarding overall employee satisfaction improvement. The authors posit that external satisfaction is more sensitive to internal satisfaction regarding a given goal of overall satisfaction between both variables.

In the health sector, employees often interact with patients in service delivery (Ahmad et al. 2015); and it tends to serve an essential role in the perception of quality and patients’ satisfaction (Batbaatar et al. 2017). Since patients primarily draw their conclusion of quality based on the interactions with service providers and the service experienced, healthcare managers should ensure staff’s internal cooperation, ensure they are well catered for, and deliver the best services to patients. Patient-provider interactions are significant to patient satisfaction (Oetzel et al. 2015). Therefore, a satisfied employee would work hard to provide better service to patients and influence the patients’ satisfaction level in the service encounter process. The patient-provider relationship is one of the many factors influencing patients’ satisfaction, as the provider's patient value delivery time (Baummer-Carr & Nicolau 2017). (Andaleeb 2001), supports the claim that front-line employees and other support staff are the most important to a service organisation’s success.

Lee, Lee & Kang (2012) examined the relationship among high-performance work systems, employees' attitude, service quality, customer satisfaction, and customer loyalty. With the aid of a questionnaire, they collected data from 196 employees, patients, and family members in two private hospitals and two public hospitals. Data were analysed using the structural equation modelling approach, and the findings show that operations efficiency, employee engagement, and service quality are positively related to customer satisfaction. They claimed that hospitals' efforts to improve customer satisfaction and loyalty are connected to medical staff's attitudes and perceptions. In a study to enhance employee satisfaction, Chen and Chen (2014) noted that measuring satisfaction from a customer perspective and ignoring factors that create the service or product perceived by customers mostly leads to inconclusive data needed for improvement. They further stressed the importance of fulfilling employee requirements for an organisation's growth. Organisations that measure external customers' satisfaction without assessing the needs of the internal customers (employees in the workplace) are only creating difficulties for themselves rather than solving a problem.

Mahmoud and Reisel (2014) did a study to link patients' satisfaction to nurses' satisfaction via job security and obedience. They found that job security leads to happier nurses who comply with the highest care standards, more interested in their duties and activities that better the care services, leading to patient satisfaction. Therefore, to enhance patient satisfaction, nurses' perceptions of workplace safety should be improved. In a study to investigate changes in employee satisfaction and customer outcomes, Wolter et al. (2019) found strong evidence to support the notion that employee satisfaction influences customer satisfaction and repurchase intentions.

Jung and Yoon (2013) carried out a study to determine the impact of satisfied employees on customers' satisfaction and loyalty in South Korea. They used two different survey instruments to measure employee satisfaction, customer satisfaction, and loyalty in the top five family restaurants ranked by highest sales. Samples comprised 69 employees and 258 customers of the selected restaurants. They did a confirmatory factor analysis and measurement model assessment utilizing the SEM technique. Their results showed that while employee satisfaction has no direct impact on customer loyalty, it has indirect effects through customer satisfaction. Also, employee satisfaction affects customer satisfaction more than customer loyalty. The authors posited that increasing employee satisfaction would prompt satisfaction in customers.

3.6: Service Quality

The meaning of service quality had been argued extensively in the 1980s to 1990s by earlier pioneers of the idea (Berry 1983; Carman 1990; Lehtinen & Lehtinen 1982). For example, Lehtinen and Lehtinen (1982) defined service quality as having “corporate quality, interactive and physical quality.” Grönroos (1983) described service quality as technical and functional quality; while technical quality refers to deliverables, e.g., the accuracy of diagnoses, procedures, or adherence to professional stipulations, functional quality entails how the service is delivered. In line with Grönroos (1983) description of service quality, Berry (1983) described service quality as process and outcome quality measurements. Parasuraman, Zeithaml and Berry (1988) defined service quality as the difference between customers' expectations and perception of services. The authors argued that service quality evaluation is not limited to service outcomes but includes examining the process of service delivery. Their popular definition of service quality is called the expectancy-disconfirmation or gap model, which

implies that service quality is the degree to which a customer's expectation before receiving the service is confirmed or disconfirmed by his/her perception after experiencing the service.

A recent definition of service quality in healthcare is “consistently delighting the patient by providing constructive, effective and efficient healthcare services according to the latest clinical guidelines and standards, which meet the patients’ needs and satisfies providers” (Mosadeghrad 2013a). This definition is firmly in line with the current study's theme: achieving healthcare workers' satisfaction by providing internal enablers that lead to efficient service delivery that delights patients.

3.6.1: Internal and External Service Quality

Customers in an organisation comprised the internal and external customers or employees; such has led to scholars classifying service quality into two categories: internal service quality (ISQ) and external service quality (ESQ) (Latif 2016). Fadil, Singh and Joseph (2016) described ISQ as the employees' satisfaction from their positive perception of the services provided by the organisation's internal service providers. On the other hand, Latif (2016) defined internal service quality (ISQ) as the quality of services provided to colleagues by employees from different departments within the same organisation, and external service quality (ESQ) as the quality of service offered to the end-users of the organisation’s products or services. To ensure external customers receive high service quality, organisations need to understand how to operationalize service quality among employees. Dauda, Maishanu and Mawoli (2013) identified two approaches to assess service quality: the outside-in approach, which focuses on the customers outside the corporation, and the inside-out approach that focuses on the customers within the organisation.

Prakash and Srivastava (2018) found coordinated care, perceived organisational support, and heterogeneous environment as antecedents of internal service quality, driving internal employee satisfaction and patient-centeredness. Their study lends credence to an important area in service organisation, which focuses on the people who run the business (internal customers) and the end-users of the product/services of the company (external customers). These two sets of people interrelate to generate revenue for the organisation or cause problems that may lead to income loss. The organisation's internal customers (employees) must ensure quality service delivery to the external customers (end-users) to induce satisfaction and loyalty to the organisation (Andaleeb 2001; Heskett et al. 1994; Musella et al. 2017). However, the

organisation should provide employees with the tools and support needed to derive their satisfaction. Therefore, a motivated and satisfied employee can influence the customer's satisfaction from a positive service encounter. Such motivation to satisfaction cannot happen without a service that would bring both parties together. Hence, Kassinis and Soteriou (2003) stressed the importance of quality of the internal work environment, high-quality support services and policies, as factors that improve employee satisfaction and allow employees to achieve customer results. Further, in a study to determine the influence of the internal service quality on employee satisfaction, commitment, and performance, Sharma, Kong and Kingshott (2016) found that internal service quality drives employee satisfaction, and employee satisfaction improves performance.

3.6.2: Service Quality Dimensions

Healthcare service quality is complex to measure due to advances in technology and the ever-changing needs of patients, who are the service recipients and the best judge of its quality (Rao, Peters & Bandeen-Roche 2006). Hence, the literature disparity on what constitutes service quality and how it should be measured (Martínez & Martínez 2010).

There are many studies on healthcare service quality in both developed and developing countries (Arasli, Ekiz & Katircioglu 2008; Fuentes 1999; Lam 1997; Naidu 2009; Parasuraman, Zeithaml & Berry 1988; Taylor & Cronin Jr 1994). Notable studies done in Nigeria (Adeoti 2012; Bohren et al. 2016; Lawal et al. 2018; Ogunnowo, Olufunlayo & Sule 2015; Polsa et al. 2011). However, the factors that constitute service quality and the best way to measure them in healthcare are yet to be given an unequivocal answer, as academics keep the debate open (Martínez & Martínez 2010). For example, Otani, Kurz and Barney (2004) carried out a study in the USA to determine hospital service quality. They conceptualised service quality dimensions into several categories: nursing care, physician care, admission process, discharge process, compassion to family/friends, and pleasant surroundings. Another study by Schneider and White (2004) suggested measuring service quality as a single construct. Gray and Boshoff (2004) stated service quality to be tangibles, nurses' empathy, assurance, responsiveness of administrative staff, communication, security, and physician responsiveness. Zeithaml et al. (2009) maintained that service quality should be measured as two-dimensional constructs. Kessler and Mylod (2011) named four dimensions: quality of the place, quality of the people, process, and treatment quality.

Mosadeghrad (2014c) did an exploratory study to determine factors affecting service quality in Iranian healthcare; using in-depth interviews of focus groups and individuals, he collected data from 222 healthcare stakeholders, including policymakers, healthcare providers, managers, and other payers. The study found a positive relationship between employee satisfaction, service quality, and patient satisfaction. The author opined that healthcare quality results from cooperation between the providers and the receivers of care in a supportive environment. Certain factors of the care environment, organisation, individual characteristics of care providers and patients can affect the hospital's quality of service. The external quality of care and patient satisfaction could be affected by internal factors like lack of resources and cooperation among employees, employees' age, education, and experience, which affect employee satisfaction. Further, it was noted that several factors like poor leadership, inadequate compensation, heavy workloads, and low quality of work-life impede the delivery of quality services in public healthcare. Mosadeghrad concludes that managing quality entails new thinking, change in mindsets, beliefs, and employees' attitudes regarding quality, teamwork, collaboration, effective communication, promotion of shared responsibilities, and support for employees and cooperation. Therefore, to improve public healthcare quality, proper planning, adequate supportive leadership, continuous education and training, good management of resources, processes, and employees should be improved.

Service quality dimensions are different amongst scholars, and it keeps changing just as the expectations and needs of customers continue to change. In a study to determine service quality perceptions and patients' satisfaction in India, Rao, Peters and Bandeen-Roche (2006) developed a scale to measure both in-patients and outpatients' perception of quality dimensions' services in hospitals. The findings identified five distinctive dimensions of care quality: infrastructure, medicine availability, staff behaviour, medical information, and doctor behaviour. The result indicates which aspects of perceived quality have the most significant impact on patient satisfaction in general. Physician behaviour has the most significant impact on outpatients, followed by medicine availability, hospital infrastructure, staff behaviour, and medical information. Staff behaviour has the most significant impact on in-patients, followed by physician behaviour, medicine availability, hospital infrastructure, and medical information. In both cases, patient satisfaction is significantly influenced by the interpersonal skills of medical personnel and the availability of medications.

Senarath et al. (2013) found perceived quality in healthcare as competency, interpersonal aspects, personal instructions, comfort and environment, efficiency, personal instructions, cleanliness, and sanitation. Silva, Ferreira and Daniel (2018) carried out a study to determine patient satisfaction with a major Portuguese hospital's service quality. A mailed questionnaire derived from a specific hospital assessment tool was used to collect data from former in-patient and families for three months, and data analysis followed the structural equation modelling (SEM) approach. They found the hospital's perceived service quality to include Information, nursing staff, medical personnel, and daily care.

Padma, Rajendran and Sai Lokachari (2010) did a study that examined the impact of service quality on patients' and attendants' satisfaction in government and private hospitals in Indian. They designed a questionnaire to collect data from patients and attendants to determine the perception of service quality in the hospital and know if there are any differences in perceptions. They identified eight service quality dimensions: personnel quality, hospital image, clinical care process, safety indicators, social responsibility, the trustworthiness of hospital, infrastructure, and administrative procedures. They found patients satisfaction and that of their attendants to be influenced by different dimensions of the services. The patients' satisfaction level was significantly influenced by hospital image, personnel quality, hospital, and clinical care trustworthiness. In contrast, the satisfaction of attendants was greatly influenced by administrative procedures, personnel quality, and infrastructure.

Amin and Zahora Nasharuddin (2013) researched the impact of hospital service quality on patient satisfaction and behavioural intention in a Malaysian context. Using a convenient sampling method, 350 participants that received in-patient treatment were sampled in public and private hospitals. Using the structural equation modelling (SEM) for analysis, they identified five distinct dimensions: medical service, admission, discharge, social responsibility, and overall services. The authors claimed that hospitals' higher service quality would increase patients' satisfaction and behavioral intentions.

Dagger, Sweeney and Johnson (2016) developed a multidimensional scale to measure healthcare service quality and determine the connection among service quality dimensions, service satisfaction, and behavioural intentions in Australia's cities. Using qualitative data, through interviews of focus groups and three different field studies of patients in oncology clinics and general medical practices, they found several service quality dimensions that impact

each other. The study identified the primary dimensions of service quality: technical quality, interpersonal quality, administrative quality, and environmental quality. The sub-dimensions include tangibles, interaction, outcome, relationship, expertise, timeliness, atmosphere, support, and operation. They claimed that the identified nine sub-dimensions are the factors that drive the four primary dimensions. The mixed findings indicate complexities in healthcare service quality, and the debate still lingers in the literature on the dimensions of service quality and how best to measure the construct (Martínez & Martínez 2010).

Hospital service quality aims to meet patients' preferences. Patients are different across countries, and their demands are ever-evolving. The service quality dimension of a hospital may not be the same as another. The quality of a hospital service determines patients' satisfaction, and as such, it should be well defined and measured for better improvement and sustainable growth. A patient who is not satisfied with the quality of service in a hospital can bad-mouth the hospital's service, which contrasts with a satisfied patient with the service received and can use positive word-of-mouth to promote the hospital (Naidu 2009). Hence, a study on the perception of service quality and patient satisfaction in Bangladesh emphasised hospitals' need to prioritise patient-driven service operations (Andaleeb 2001). Hospitals that want to be successful should ensure employees' requirements and well-being in the delivery process to meet patients' needs and expectations. When hospitals do not meet patients' expectations, they are perceived as inferior, and patients may seek an alternative, leading to loss of patronage and revenue to the hospital.

3.6.3: Service Quality Models

There are two schools of thought regarding service quality measurement: the American school of thought and the Nordic school of thought. The American school of thought measures service quality from two dimensions, tangibles, and intangibles. Tangible factors comprised: technology, personnel, communication system, and physical facility, while intangible factors consist of reliability, dependability, accuracy, responsiveness, assurance, and empathy. The Nordic school of thought posits that service quality should be measured from functional and technical aspects (Gronroos 1984; Parasuraman, Zeithaml & Berry 1985). The functional aspect of service quality was emphasised by Ramsaran-Fowdar (2008), while Carman (2000) proposed technical quality as most important. Disparities in service quality measures mask the determination of what constitutes service quality, as different researchers seem to produce

conflicting findings. Although researchers disagree on how to assess service quality expectations, service quality is widely regarded as a multidimensional, higher-order construct. (Gronroos 1984; Parasuraman, Zeithaml & Berry 1988).

The gap model conceptualised by Parasuraman remains one of the most important measures of service quality (Fatima, Malik & Shabbir 2018; Jun, Yang & Kim 2004). According to Parasuraman, Zeithaml & Berry (1988), service quality is measured in five basic dimensions: Tangibles, reliability, responsiveness, assurance, and empathy. Tangible - represent physical facilities, equipment, and personnel. Reliability - refers to employees' ability to perform tasks accurately in a consistent manner. Responsiveness - pertains to attending to customers' readiness and offering quick services. Assurance – refers to employees promoting trust in customers. Empathy - demands individual attention and care to customers. The Servqual scale is applied to determine how consumers assess the quality inherent in an organisation. The scale, consisting of five dimensions, has 22 items to measure the gap between customers' expectations and perception (Parasuraman, Zeithaml & Berry 1988).

The popular Servqual scale has been used for measuring service quality in lots of studies. Several scholars have used the scale's exact dimensions (tangible, reliable, responsiveness, assurance, and empathy). In contrast, others have incorporated or changed the precise dimensions to fit different circumstances (Itumalla, Acharyulu & Shekhar 2014). Randheer, Al-Motawa and Vijay (2011), for example, examined the consistency of external service using Servqual dimensions; tangible, reliable, responsiveness, assurance, and empathy; adding "culture" to make it six dimensions. Lim and Tang (2000) included accessibility and affordability; Tucker and Adams (2001) added caring and outcomes. The values of the gap in the use of Servqual to measure service quality differs across contexts. Babakus & Mangold (1992) found assurance to have the lowest gap score, followed by reliability, responsiveness, empathy, and tangibles in their study to measure service quality in US hospitals. Lam, (1997) found empathy dimension to have the highest scores, responsiveness, assurance, and reliability. In Singapore contexts, Lim and Tang (2000) found responsiveness to have the highest gap score, followed by assurance and reliability. Popa et al. (2011) found the highest gap scores in the following order: Empathy, reliability, and assurance in Romania hospitals. Thus, the Servqual dimensions are adaptable in different contexts.

However, the Servqual scale remains the most popular, most validated, and accepted measure of service quality (Ramsaran_Fowdar, 2005; Fatima et al. 2019). The Servqual scale, which

completely covers the core service factors, is now being used universally in the health sector to measure service quality (Sohail, 2003; Naidu, 2009; Badri et al. 2009; Hu et al. 2010; Haque et al. 2012).

This current research adopts the five dimensions of Servqual to measure service perception to avoid any uncertainty and confusion. A lot of evidence supports the parasuraman's Servqual scale with five dimensions, as an effective tool for measuring healthcare service quality, and the most validated in the literature (Naidu, 2009; Ooi et al. 2011; Arisi-Nwugballa 2016; Javed & Ilyas, 2018; Polsa, Spens & Soneye 2011; Ogunnowo, Olufunlayo & Sule 2015).

3.6.4: The Service-profit Chain Model

Heskett et al. (1994) introduced a conceptual model to clarify the relationship among the following variables: employee satisfaction, service quality, customer satisfaction, and profitability. That model is known as the Service-profit Chain (SPC) (see Figure 3.1), based on principles prevalent in TQM and service-quality literature (Silvestro & Cross 2000). TQM pioneers claim that those who own the process influence work satisfaction, resulting in increased efficiency and organisational performance (Deming 1986; Ishikawa 1985). Besides, the model follows the so-called 'satisfaction mirror,' which suggests that the effects of a successful business performance stem from employee satisfaction (Silvestro & Cross 2000).

The SPC focuses on the internal functioning of an organisation; that is, everything that happens within the organisation concerning the workplace design and the staff that facilitate the functioning and customer satisfaction of the organisation (Briggs, Deretti & Kato 2020; Heskett et al. 1994; Kelloway & Myers 2019; Musella et al. 2017; Myrden & Kelloway 2015; Yee, Yeung & Cheng 2011). Focusing on internal organisational functioning, the SPC emphasises that quality service delivery is not simply an independent occurrence. Instead, it needs efforts to encourage and assist workers in providing quality service (Schneider & White 2004). In other words, companies must equip their workers with the required tools and services with productivity and effectiveness for the service delivery objective. Management of an organisation should satisfy the employees significantly if the management aims to provide high-quality service (Reynoso & Moores 1995). Also, excellent service delivery is conditional on well-supported employees (Grönroos 1990).

Hundreds of scholars have used SPC in the marketing and service literature, but it is yet to gain comprehensive coverage, and its robustness has been investigated rigorously in a cross-disciplinary approach (Choudhury et al. 2020). SPC was designed for businesses whose target is productivity. However, it is noteworthy that public healthcare organisations have different objectives and different types of consumer characteristics. To date, the conceptualisation of the service-profit chain connections is based on several unreliable pieces of evidence from specific samples in business firms. However, the service-profit chain suggests that internal quality sets job satisfaction without revealing exactly which internal quality factors cause job satisfaction (Melhem 2003). Nevertheless, the model has thrown an eternal argument about the chain's feasibility or some of its connections and continues to stimulate empirical and conceptual research in different contexts.

Although Schlesinger and Zornitsky (1991) empirically supported the relationship between customer satisfaction and employees' attitude, Loveman (1998) questioned such a relationship, citing that it has not been given thorough tests based on data representing core factors of SPC. SPC has scrutinised no organisation regarding all the SPC chain relationships (Silvestro and Cross (2000). Melhem (2003); Silvestro & Cross (2000) ignored several considerations: the lack of essential TQM practices like; leadership, customer and workforce focus, information management systems, etc. For example, Silvestro and Cross (2000) posit that stress in the workplace is high as employees are expected to work very hard, be firmly supervised, and are highly likely to make mistakes. Human elements such as good supervision, collaboration, involvement, and recognition critical in dealings with customers are missing in such an environment.

It is highly possible to make some minor adjustments to the service-profit chain for public healthcare deployment. In this regard, Davis (2006) underlined that the public sector's ultimate goal is still the same, mainly to deliver services to the public. The service-profit chain can provide a concrete and beneficial guide to directing public enterprise to achieve the general business goal, quality improvement (Davis 2006). Modifying and developing the service-profit chain model to fit public agencies would be a valuable contribution to illustrating the position that service employee satisfaction plays in public sector service quality.

Ansari (2020) studied the importance and applicability of the service-profit chain model among equipment manufacturers, telecom services providers, and customers. The author designed a

questionnaire to measure quality, loyalty, satisfaction, and profitability. The result was that employee satisfaction and service quality are the main drivers that improve customer satisfaction and loyalty towards repurchase intentions. The author recommended constant tracking of the parameters to keep the organisation competitive.

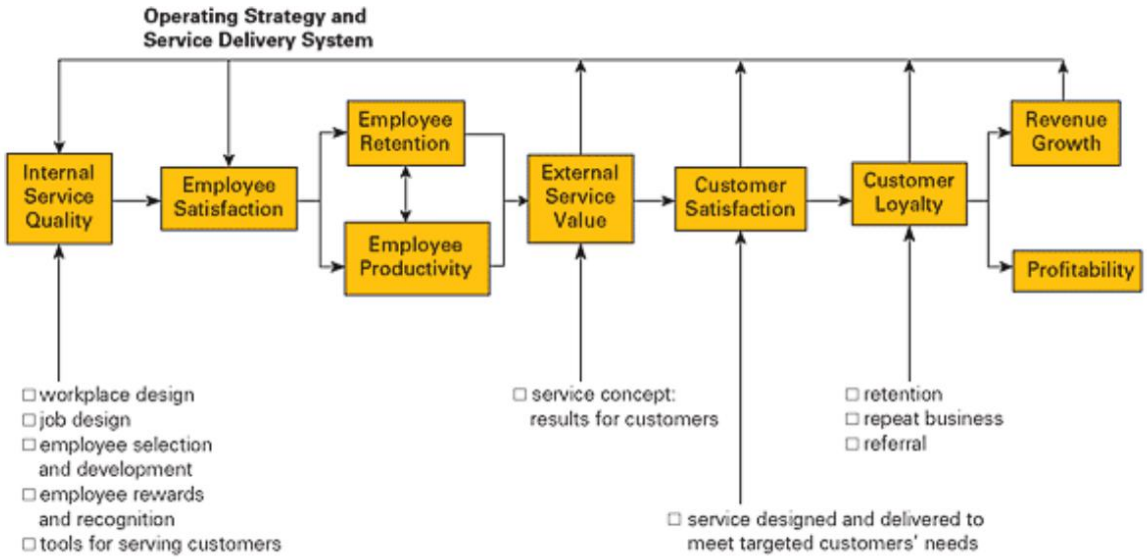

Figure 3.1: The Service-profit Chain Model

Source: *Adopted from Heskett et al. (1994)*

3.6.5: Criticisms of Servqual Scale

The Servqual scale, although widely accepted, is not without some criticisms. There is an argument that the 5-dimensions of Servqual can be limited to just two core services and increased services (McDougall 1994), synonymous with (Grönroos 1983) technical and functional dimensions. Carman (1990) argued that the Servqual scale could not be used globally in all service industries. Another argument states that customers' expectations neglect the technical dimension, which has led to a modified Servqual scale called SERPERF (Cronin & Taylor 1992). Regarding their questioning the validity of the Servqual scale, Cronin and Taylor (1992) contended that the theory of perception and expectation gap in service quality as suitable service quality measures does not have strong empirical and theoretical evidence. The authors based their arguments upon several other researchers' concerns (Bolton & Drew 1991; Carman 1990; Oliver 1980) and proposed using performance as a quality-service measure, giving birth to SERVPERF. Cronin Jr and Taylor (1994) argued favouring SERVPERF: Quality of service should be conceptualised and evaluated as an attitude instead of a satisfaction

metric because the quality of service is directly dependent on performance perception. Thus, service providers will know if they want consumers to be satisfied with their performance or achieve maximum perceived quality (Cronin & Taylor 1992).

Researchers have produced their modification of the standard Servqual scale, e.g., Lim and Tang (2000) included accessibility and affordability; Tucker and Adams (2001) added caring and outcomes; Johnson (1995) reduced the items from 22 to 18. The Servqual scale remains the most popular, most validated, and accepted measure of service quality because it covers core service dimensions and the most frequently used in the literature (Liao 201; Ramsaran-Fowdar 2005; Fatima, Malik and Shabbir 2018). More so, the Servqual scale is now being used universally in the health sector to measure service quality (Badri, Attia & Ustadi 2009; Hu, Lee & Yen 2010; Naidu 2009; Nikhashemi et al. 2012; Sohail 2003).

In a recent study, Fatima, Malik and Shabbir (2018) carried out an extensive literature review of service quality dimensions used in various countries by various scholars. They concluded that the Servqual scale is the most commonly utilised healthcare service quality measurement. They acknowledged the multidimensionality of healthcare service quality which prompted several authors to add or reduce dimensions in the Servqual scale according to context and needs.

The values of the gap in using the Servqual scale to measure service quality differ across contexts. Babakus and Mangold (1992) studied service quality in US hospitals and found assurance to have the lowest gap score, trailed by reliability, responsiveness, empathy, and tangibles. In another study to measure service quality in Hong Kong hospitals, Lam (1997) found empathy dimension to have the highest scores, followed by responsiveness, assurance, and reliability. In Singapore contexts, Lim and Tang (2000) used the Servqual scale to measure service quality in hospitals, and they found the highest gap score in responsiveness, followed by assurance and reliability.

This current study will adopt the five dimensions of Servqual to measure perception to avoid uncertainty. Considerable evidence supports the Servqual scale as an effective tool for measuring healthcare service quality, most validated and commonly used by scholars (Arisi-Nwugballa 2016; Javed & Ilyas 2018; Naidu 2009; Ogunnowo, Olufunlayo & Sule 2015; Polsa et al. 2011).

3.6.6: Service Quality Perception Gap

The perception of service quality among various stakeholders may not be congruent. Service quality assessment studies have generally attempted to determine customers' level of quality perception, mainly by focusing on customers' quality assessments. The difference in perception of service quality between employees and customers has not received much attention. Few studies have drawn attention to the importance of determining the differences in service quality perception by customers and employees.

For example, Rohini and Mahadevappa (2006) studied the service quality perceptions of 500 patients and 40 management personnel in five hospitals in India. Using a stratified method to select hospitals, they included private, public, and specialty hospitals and randomly selected respondents. Utilizing the Servqual scale, they measured the gap between patients' perception and expectation and the management perception of patients' expectations and actual expectations. The findings reveal a gap in both measures and that patients mostly perceived healthcare quality from the five dimensions of tangibles, reliability, responsiveness, assurance, and empathy. They concluded that examining both management and patients' perceptions is a way of identifying gaps in expectation and experience. Once inconsistencies have been identified, strategies can be initiated to achieve more consistent expectations and experiences. Besides, enhanced continuity leads to better service interactions and increases the likelihood that experience can grow into a lasting relationship between the patient and the hospital.

Another example, Dedeoğlu and Demirer (2015), carried out a study to determine differences in perception of service quality among managers, workers, and customers in the hotel industry. The authors used the original Servqual scale for the questionnaire and collected data from tourists, personnel, and managers working in the hotel. Their result indicates differences in how the various stakeholders perceive service quality. They claimed that employees' and managers' perception of service quality is different but not significant. However, they found a significant difference in the perception of service quality between employees and customers and between managers and customers. The authors concluded that employees' and managers' higher service quality perception than that of customers might be due to surface acting, a dimension of emotional labour that refers to an employee changing outward appearance pretending to be happy (Hochschild 1983) and other personality characteristics. Ovretveit (1992) suggested combining patients, their relatives and friends, doctors, and a purchaser or a

financing authority. Each party has needs and expectations which the service provider must understand and reconcile.

In an explanatory study in Iran, Mosadeghrad (2014c) concluded that healthcare quality means different things to all stakeholders: patients, families, care providers, healthcare managers, policymakers, and independent payers. According to the study, patients perceive good access, experienced and helpful healthcare providers, clean facilities, effective services, and safety as service quality measures. While the healthcare professionals consider the aspect of their services, e.g., having possible treatment results and adhering to clinical guidelines. Whereas the managers emphasise efficiency and patient satisfaction, policymakers are concerned with mainly cost, clinical outcomes, while other payers consider cost-effectiveness and customer satisfaction. Mosadeghrad (2014c) opined that despite healthcare service quality having a different meaning to all stakeholders, a common theme among the stakeholders is "customer satisfaction." Such re-iterates the importance of both the internal and external customers' satisfaction chain emphasised by Heskett et al. (1994).

However, in Nigerian general hospitals, the patients' views and opinions are mostly disregarded due to discrimination (Letamo 2005). Patients are treated with disrespect, which calls for improvement on the interrelationship between healthcare workers and patients (Adeoti 2012; Lawal et al. 2018). When a service fails to cater to customers' needs, customers may feel disappointed and most likely not use the service again (Andaleeb 2001; Heskett et al. 1994; Naidu 2009; Terziovski & Samson 1999). So, it is imperative for the Nigerian general hospitals to critically identify and understand the dimensions of the services which patients deem important, rather than assume that the services exceed patients' expectations. Frustrated patients may voice their displeasures to other people, resulting in the government hospitals' negative publicity (Iloh et al. 2012).

A proper assessment of care providers' perceptions and receivers of care regarding service quality is a way of identifying gaps in expectations and experience. Addressing the gap in perception may be a logical way to initiate strategies that can guarantee a stable and reliable measure of expectations and experiences, thereby improving the possibility of satisfaction and positive assessment of quality. Incongruences may be found, and strategies implemented to attain more consistency in expectations and experiences. A higher consistency creates a higher

effective service experience and increases the probability of the experience developing into an extensive positive hospital-patient relationship.

Scholars and practitioners have struggled to fully conceptualise service quality to patients and other stakeholders' satisfaction. So, employees' understanding of service quality dimensions and the patients' perception of the service dimension is critical in the ever-evolving health sector. Evidence has shown that the perception of service quality could mean different things to the care-providers and the care-receivers. For example, Rohini and Mahadevappa (2006) found a gap in service quality perception between managers and employees. Also, Mosadeghrad (2013a) opined that healthcare service quality means different things to all stakeholders. The care-providers may deem the services to be of high quality, that the care-receivers are okay with it, and the care-receivers may have a different perception regarding the services, which could hurt the hospital. Dedeoğlu and Demirer (2015) claim that employees and managers have higher service quality perceptions than customers. Therefore, it is critical to evaluate service quality from the employees' perspectives and the care receivers'.

3.6.7: Impact of Service Quality on Patient Satisfaction

While service quality and customer satisfaction concepts are closely related, how these two terms connect is unclear. Theoretical and empirical work supports the argument that service satisfaction and quality are specific and distinctive constructs (Laroche et al. 2005; Oliver 1997; Rosen & Surprenant 1998), but most practitioners conclude that similar terms are somewhat synonymous (Juga, Juntunen & Grant 2010). Oliver (1997) describes satisfaction as the mental state of the customer's desires due to previous consumption. In other words, it is an opinion that a product or service itself offers a satisfactory level of consumption-related efficiency, including performance levels (Oliver 1997; Parasuraman, 1998). While service quality is a cognitive construct that involves reasoning, thinking, patient satisfaction is an affective construct that has to do with the individual's positive or negative emotions and feelings (Laroche et al. 2005).

The literature has been widely ambiguous about the nature and causal relationship between consumer satisfaction and service quality. In creating the Servqual model, Parasuraman, Zeithaml and Berry (1988) argue that the perceived quality of service of customers results from a comparison of their understanding of the service provider's performance. According to Amaratunga et al. (2010), Servqual measures the quality of service by contrasting the

customer's requirements and the actual performance of the service provider. Thus, the use of “expectation” in the literature on service quality contrasts with how it is used in customer satisfaction literature. Expectations are customers' projections of likely occurrence in future transactions. In comparison, consumer preferences are seen in the service quality literature as wishes, i.e., what the service consumers think they should be offered rather than what the service provider has to offer (Parasuraman, Zeithaml & Berry 1988).

A review of the literature reveals that the causal link between the quality of service and customer satisfaction has three different views. First, it claims that the service quality is the basis of satisfaction (Anderson, Fornell & Lehmann 1994; Brady, Cronin Jr & Brand 2002; Cronin & Taylor 1992; Fornell et al. 1996; Parasuraman, Zeithaml & Berry 1994). Secondly, satisfaction prevails over service quality (Bitner 1990; Bitner & Hubbert 1994). Thirdly, the path between service quality and satisfaction is not always the same and may vary in different contexts (Dabholkar 1995). In summary, while the path of causality between service quality and customer satisfaction is universal, most researchers conclude that customer satisfaction precedes service quality. Besides, employee satisfaction, dimensions of service quality, and patient satisfaction are constructs in the literature conceptualised subjectively. As such, arguments exist on the factors that influence satisfaction, especially in a complex healthcare environment.

With greater awareness, patients tend to look for quality service these days and quickly switch patronage when they don't find it in a hospital (Naidu 2009). Patients lose confidence in a healthcare organisation when it fails to maintain a good and acceptable quality of care. In the long run, people will start seeing the hospital as a place for a minor ailment or last resort in times of financial constraints (Naidu 2009). Hence quality in healthcare should be a top priority, not just to gain competitive advantage (Brown & Swartz 1989) but to meet patients' satisfaction (Dagger, Sweeney & Johnson 2016) which is the primary aim of any healthcare. Such has led to several studies examining the connection between service quality and patient satisfaction in the health sector. For example, Turan and Bozaykut-Bük (2016) investigated the influence of healthcare service quality on patient satisfaction in a Turkish hospital. With a structured questionnaire adapted from the Servqual model, they sampled patients that spent a minimum of three days in public training hospitals and concluded that perceived service quality is positively significant to patient satisfaction, with tangibles having the highest impact on patient satisfaction.

Swain and Kar (2018) did an extensive literature review and critical analysis to determine the interactions of hospital service quality, patient satisfaction, and behavioural intention. The proposed framework found dimensions of technical quality, infrastructural, procedural, interactional, social support, and personnel quality to have direct relationships with patients' satisfaction. They also found other sub-dimensions under the primary six dimensions of service quality as: "clinical procedure, quality of outcome, admission, discharge, waiting time, patient safety, billing and price, follow-up, ambience, availability of resources, accessibility, food, staff attitude, personalized attention, information availability, staff competency, trustworthiness, staff diversity, hospital image, and social responsibility."

Kitapci, Akdogan and Dortyol (2014) carried out a study to determine the effect of service quality dimensions on customer satisfaction, repurchase intent, and word of mouth. Using the Servqual scale, data was collected from 369 patients treated in a teaching hospital in Turkey and analysed with structural equation modelling (SEM). They found that assurance and empathy impact customer satisfaction and that customer satisfaction is positively related and significant to Word-of-mouth and repurchase intention. Such denotes the repurchase intent and loyalty of a customer to the organisation where he/she receives excellent and satisfactory services. When the customers feel satisfied with the service dimensions, they may talk about it to their friends (word of mouth), which, in turn, promotes the organisation and increases its followership, as elaborated in the studies of (Naidu 2009).

Ramadevi et al. (2016) established a framework for improving healthcare services through an efficient management system for human resources in Pakistani hospitals. Using the case study method, they investigated the appropriate human resources management processes in the public sector and better ways to accomplish a higher customer satisfaction rate. The study concluded that patient satisfaction directly results from the quality of the healthcare services received and recommended that health organisations build an adequate workforce and provide high-quality facilities to make the patients happy.

Research investigating the causal link between service quality and customer satisfaction is extensive, and the topic continues to be of growing interest to researchers. Vinagre and Neves (2008) have built and tested a structural equation model to analyse service quality's impact on customer satisfaction. A study of 317 patients from six Portuguese public health centres found that all predictors of service quality substantially affected satisfaction. Elleuch (2008) studied

the causal relationship between quality perception and patient satisfaction in Japan. Using the structural equation modelling approach for analysis, the author demonstrated positive interactions between the attributes of process efficiency and patient satisfaction. Badri, Attia and Ustadi (2009) developed and tested a robust service quality and patient satisfaction model based on the structural equation model. The authors used data from 214 patients in the United Arab Emirates (UAE) hospitals, considering patients' experiences before and after release from the hospital. They found a clear causal association between healthcare quality and patient satisfaction.

Away from hospitals, (Juga, Juntunen & Grant 2010) examined how perceived service quality influences shippers' satisfaction in outsourcing relationships with third-party logistics. Using a structural equation model to examine the data of 235 participants from Finnish industrial companies, the authors identified a causal relationship between a history of service quality and loyalty through the customer's overall satisfaction with the service provider. Using a similar method, Amaratunga et al. (2010) measured the extent of the connection between customer satisfaction and service quality at a Hong Kong housing estate. Their findings showed that quality of service and quality of management significantly influence customer satisfaction.

Shabbir, Malik and Malik (2016) studied private and public hospitals in Pakistan to measure in-patient's perception of healthcare service quality and its relationship to patient satisfaction and loyalty. They employed a stratified random sampling approach, and a total of 600 participants were surveyed using a self-administered questionnaire. The result found the relationship positive, but the satisfaction of private hospital patients was higher than that of the public hospital patients. Meesala and Paul (2018) seek to identify the essential service quality dimensions related to consumer satisfaction and loyalty in India's private hospitals. Using the Servqual model, they sampled 180 patients who have undergone treatment in 40 private hospitals and found responsiveness and reliability related to patient satisfaction. But there were no relationships between patients' satisfaction and empathy, tangibles, and assurance. The authors concluded that empathy, tangibles, and assurance are not deemed necessary by patients because patients mainly depend on treating physicians in a developing country.

Farooq et al. (2018) measured the quality of service dimensions of Malaysian airlines and the effect on customers' satisfaction. They carried out a convenient sampling and got data from 460 respondents using a questionnaire built with five dimensions: airline tangibles, terminal

tangibles, personnel services, sympathy, and image. Their findings show a significant relationship between the five measured Malaysian airlines' quality of service dimensions and customer satisfaction.

Mohebifar et al. (2016) carried out a descriptive-analytic study to evaluate service quality, using patients' perceptions in six Iranian Teaching Hospitals. Using the Servqual scale and a stratified random sampling technique, they selected a total of 360 patients from different wards. They performed data analysis using SPSS and the Importance Performance Analysis Matrix. Patients' perception of service quality in the hospitals was impacted mainly by tangibles, e.g., the hospitals' physical environment, equipment, and cleanliness. Their study indicates that the patients' expectations which hinged on physical environment and equipment, surpassed what the hospital had to offer.

Javed and Ilyas (2018) explored patients' expectations with service quality dimensions and their satisfaction in Pakistan's private and public hospitals. They used a self-administered questionnaire developed from the Servqual model to gather data from 456 patients who have experienced the hospitals' services. Patients' expectations regarding public hospital services were higher than expected with private hospitals. Also, public hospitals' patients were more satisfied with the dimensions of assurance, empathy but least satisfied with tangibles. On the other hand, patients of private hospitals were satisfied with tangibles, responsiveness but least satisfied with assurance.

Lim et al. (2018) collected data from 179 California hospitals and explored the relationship between service quality, patient satisfaction, utilization, and financial performance. They found a positive relationship among all the variables. Their findings support the positive influence of service quality on patient satisfaction and the resultant patient patronage of hospitals, and eventual financial growth.

Sadeh (2017) investigated the interrelationship among quality practices and their impact on patient satisfaction and loyalty through improved service quality. The researcher identified several quality dimensions through an extensive review of the literature. Using five dimensions of the European Foundation for Quality Management (EFQM) as enablers, five Servqual dimensions, four patient satisfaction measures, and three loyalty factors, they interviewed nine doctors and fourteen managers with extensive experience in the hospitals. They concluded that

patient satisfaction and loyalty in hospitals could be achieved through implementing quality enablers, as quality practices improve medical and treatment services in hospitals.

Asnawi et al. (2019), this study examines the influence of service quality and hospital image on patient satisfaction and loyalty in Terengganu, Malaysia. Data were collected in all emergency units from hospital patients and analysed with structural equation modelling (SEM), specifically Amos software. The findings relate service quality to patient satisfaction and that hospital image ensures patient satisfaction but does not affect patient loyalty.

Um and Lau (2018) explored the effects of service quality dimensions on patient dissatisfaction and negative behaviour responses. Using a modified survey questionnaire of critical incident technique, they collected data from a total of 453 dissatisfied patients in 59 Korean hospitals, specialized in dental, cosmetic, and skincare. SEM was used for analysis, and they found that patients are dissatisfied mainly by outcomes quality, followed by administrative quality, interactive quality, and environmental quality. They concluded that patients that are not satisfied often engaged in negative word-of-mouth, complaining, and switching hospitals.

To be reactive to the people's health and well-being, the care providers have to comprehend patients' views regarding the quality of the hospital's services (Wilson et al. 2008). The above statement drives the importance of patient-centeredness and how the quality of care in a given hospital impacts patients' satisfaction. As such, hospitals should include patients in their decision-making towards providing services that would surpass patients' expectations.

Nguyen & Nagase (2019) carried out research on a Vietnamese tertiary hospital to determine the impact of TQM on customer satisfaction. Using a self-administered questionnaire, they sampled 516 inpatients of the hospital. Data analysis was carried out with the aid of SPSS and structural equation modelling, using the AMOS package. They found a positive link between all TQM variables and customer satisfaction and concluded that hospitals' service quality dimensions are positively related to patients' satisfaction. Further, they posit that TQM affects healthcare services, gives value to the organisation, and increases competitive capability in the sector.

Researchers have analysed the relationship between service quality and customer satisfaction in different countries. Cong and Mai (2014) found a positive relationship between service quality and patient satisfaction in their research of Vietnamese public hospitals. Elleuch (2008)

found positive and negative relationships between the dimensions of service quality and patient satisfaction in Japanese hospitals but concluded that service quality dimensions predict patient satisfaction

Given several studies addressing the topic of service quality and patient satisfaction, there are likely methodological flaws in most of these studies due to the subjective quantification of hospital service quality and patient satisfaction among researchers. It is noteworthy that service quality and customer satisfaction are two separate interconnected systems (Cronin Jr & Taylor 1994; McAlexander, Kaldenberg & Koenig 1994).

Although the reviewed studies have shown a causal association between service quality and customer satisfaction, several research gaps need addressing in this report. It is worth studying how the quality of care in Nigeria's general hospital has impacted patients and other stakeholders, such as staff, service providers. It is crucial to assess the disparity in service quality perception between employees and patients to give hospital management personnel insights into service elements that positively impact internal and external customers and those who need routine corrective action. A study fully dedicated to the public hospitals in Nigeria would serve as a benchmark for comparison with other world regions. Given the differences mentioned above, the studies do have similar things; most of the studies used the widely published instruments of Servqual to establish their service quality constructs. The service quality constructs built for this current study are theoretically based on the Servqual model but conceptualised as a hierarchical construct.

In Nigeria, several studies have looked at service quality and patient satisfaction (Amole, Oyatoye & Kuye 2016; Iloh et al. 2012; Odetola & Fakorede 2018). For example, Iloh et al. (2012) considered patient satisfaction and quality of care provided at the National Health Insurance Scheme clinic of Tertiary hospitals in South-Eastern Nigeria. Amole, Oyatoye and Kuye (2016), using Servqual, carried out a study to determine patients' perception regarding service quality dimensions of public hospitals in Nigeria. They found that, while patients rate the hospital equipment high, the employees' appearance and empathy were disappointing. In another study to determine mothers' satisfaction with perinatal care in hospitals in Ibadan, Nigeria, Odetola and Fakorede (2018) revealed that most respondents considered the perinatal treatment they provided to be of high quality and pleased with the services and facilities used for their treatment. Identified causes of discontent include wasted time, insufficient water

supply, inadequate staffing, unsatisfactory conduct, physical and verbal violence. There was a positive link between satisfaction with the standard of maternal care and the potential intention to use the service.

Ogunfowokan and Mora (2012) investigated patients' waiting time before consultation and satisfaction with received service at a national hospital in Abuja. They found patients who waited too long to receive service showed higher dissatisfaction with the hospital overall services. Osubor, Fatusi and Chiwuzie (2006), using focus group discussions, carried out a study to assess maternal health services in Southern Nigeria. Their findings were that women prefer private birth centres and traditional birth attendants to government hospitals. Staff irregularity, poor service quality were cited as reasons for avoiding the Government hospitals.

Ogunnowo, Olufunlayo and Sule (2015), using a modified Servqual questionnaire, did a descriptive cross-sectional study to explore the perception of service quality by patients at a general hospital in Lagos state. Patients' perceptions were found to be good, except in the domain of responsiveness, particularly, waiting time to receive treatment.

Polsa et al. (2011) studied service quality perception in Nigeria's private and public hospitals. Findings showed service quality to be higher in private than in public hospitals when tertiary hospitals were removed. Also, patients trust private hospitals' employees more than public hospitals'.

Oladapo et al. (2016) did a nationwide cross-sectional study on near misses and maternal death in Nigerian tertiary hospitals; they found an increase in the high number of maternal deaths related to poor performance due to the hospitals' inability to give prompt quality services. Their study was only carried out in one department of the tertiary institutions, and they suggested research on general care quality in the tertiary institutions to improve lapses.

Okonofua et al. (2018) carried out a qualitative study to assess women's satisfaction with maternal care in Nigeria's secondary and tertiary government hospitals. They held five focus group discussions with women in about eight hospitals to assess their degree of satisfaction with the hospitals' services. The majority of the women express dissatisfaction with various aspects of care, including poor staff attitude, long waiting time, sub-standard facilities, and poor attention to women in labour. Some women admit having a preference for the traditional

method of child delivery than using the government facility. The authors recommended improving hospital facilities, reducing delays, and training healthcare staff.

Potluri (2018) did a quantitative study, using the Servqual questionnaire to measure service quality in a government tertiary hospital in Adamawa state of Nigeria. They found service delivery to be poorly below the satisfaction of patients. Patients complained of lack of maintenance, complacency in service delivery, and lack of reliable infrastructures, and thus, patients do not have confidence in care providers of the public hospitals. They recommended improving the service delivery process and employees.

All these studies are different in methodology and mainly focused on measuring service quality from patients' perspectives. The current study measures service quality from both employees' and patients' perspectives. As indicated in the literature reviewed above, studies found service quality directly or indirectly impacts patient satisfaction. Patients base their judgment of hospitals on several quality dimensions of the hospital that meet their needs. These dimensions may be subjective, differentiated in private or public hospitals, depending on contexts, country, and locality.

3.7: Patient Satisfaction

Customer satisfaction means assessing a product or service after purchase to determine if it meets expectations (Kotler 1991). It mainly depends on the product or service provider's capacity to meet or surpass customers' standards and expectations, as customers often demand and continually ask for the best service (Fornell 1992; Oliva, Oliver & MacMillan 1992). Customer satisfaction has been recommended and frequently being recommended for further research in the literature (Banytė, Tarutė & Taujanskytė 2014; Zhang, Z et al. 2015), as an increase in customer satisfaction positively influences behavioural commitment and patronage (Gounaris & Dimitriadis 2003; Heskett et al. 1994; Naidu 2009; Newman, Maylor & Chansarkar 2001).

In the health sector, patient satisfaction was defined as the degree of positive evaluation of health care services received compared to the patient's expectations (Chang, Chen & Lan 2013; Rashid & Jusoff 2009). As defined by Alhashem, Alquraini and Chowdhury (2011), patient satisfaction is a conclusion drawn by the care receiver based on whether the service received meets expectations. In the definitions above, two themes emerged: One, the patient's

expectations before receiving service at the hospital; two, the perceptions after receiving service. When the perception of the hospital's service is positive, satisfaction is achieved; otherwise, the hospital encounters a dissatisfied patient.

Patients' satisfaction, which is a conclusion drawn from the overall appraisal of the service environment and processes, has been a chief measure of hospital service quality and performance (Andaleeb 2001; Naidu 2009). Assessing patients' satisfaction with the services provided may give healthcare providers a broad understanding of factors impacting patients needing improvement (Wong, Cummings & Ducharme 2013). From the literature definition, it can be inferred that a patient can be satisfied with service quality when the performance meets or exceeds his/her expectation (Holder & Berndt 2011). So, receiving customer feedback on the quality of service in hospitals is very important, as satisfied patients often maintain long-term relationships with the hospitals (Naidu 2009). Thus, measuring patients' satisfaction in hospitals is an excellent way to improve service quality.

Brown (2007) stressed that the patient is becoming an ever more silent partner in the health care system. Growing demand for patient satisfaction in healthcare has led hospitals to prioritise it to achieve success (Gustavsson 2016; Moeller, Breinlinger-O'Reilly & Elser 2000). With more awareness and knowledge, patients' demand for better healthcare continues to increase, and hospitals must find ways of meeting these demands and expectations (Carman 2000; Zineldin 2006). As such, lots of factors are deemed important by the patients. For example, high reliability, response rate, and empathy are shown to patients by hospital service providers (Parasuraman, Zeithaml & Berry 1985). Patients' satisfaction is crucial to the growth and survival of any healthcare, as customers are the direct receiver and judges of the services (Cronin & Taylor 1992). Also, patient satisfaction is a good measure for improving hospital quality (Naidu 2009). Patients who receive satisfaction from a hospital are more likely to re-use the hospital, recommend it to friends and family, and give positive word-of-mouth promotion (Andaleeb 2001; Arab et al. 2012; Naidu 2009). In a study to determine issues affecting patient satisfaction and quality of care, Naidu (2009) posits that patient satisfaction improves a hospital's image, increasing patronage and more favourable word of mouth.

Patient satisfaction has become an essential competitive advantage in healthcare (Mortazavi et al. 2009), and most commonly stated in the literature (Si et al. 2017). The perception of care by a patient influences his/her satisfaction, and most often, dissatisfied patients do not follow

care recommendations (Gill & White 2009; Miaoulis Jr, Gutman & Snow 2009). And such may lead to negative word-of-mouth and bad hospital recommendation to other people, making the hospital lose reputation and competitive advantage (Andaleeb 2001; Miaoulis Jr, Gutman & Snow 2009; Naidu 2009). Despite the mounting evidence supporting the importance of patient satisfaction, there is still a lack of consensus on how best to measure patient satisfaction and its importance in the health sector (Hwang, Eves & Desombre 2003).

There are lots of factors affecting patient satisfaction in the literature. For example, Naidu (2009) mentioned tangibles, cost, access, healthcare output, and behaviour, while Haque et al. (2012) recommended patients satisfaction with service quality in hospitals to include hospital facilities, satisfaction with personal support, and attention to patients. Alhashem, Alquraini and Chowdhury (2011) viewed patient satisfaction from six dimensions: convenience, interpersonal relations, availability, technicality, overall quality, and accessibility.

Zeithaml et al. (1990) posited that one way to overcome gaps in service quality is using the patient's knowledge to improve the healthcare process. However, in a healthcare organisation, the patient and the patient's family must be recognised as consumers in an extended definition of a customer in healthcare (Milakovich 1995). Duggirala, Rajendran and Anantharaman (2008) argued that patients are not always in the best position to judge the quality of service in a hospital because they often have psychological or physiological discomfort. Therefore, the patients' relatives and friends who accompany the patient to the hospital may be better judges of the hospital's quality of service.

The importance of families and friends of patients was emphasised by several researchers (Butler, Oswald & Turner 1996; Rhodes et al. 2008; Strasser et al. 1995; Tucker & Adams 2001). For example, in their study, Strasser et al. (1995) compared the satisfaction among patients and their family/friends. They found patients more satisfied with the service provided than their family and friends. In a related study, Butler, Oswald and Turner (1996) assessed the difference in perception of service quality by patients and family/friends; they concluded that a significant difference exists. When a patient's friends and family are updated regularly with a patient's condition, they achieve a good level of satisfaction (Rhodes et al. 2008). Including patients' family and friends to assess a hospital's service quality should not be overlooked.

In Nigeria, family members and friends always accompany patients to the hospital and cater to their needs, including feeding and support. Therefore, this study will measure patient

satisfaction from the actual patient, family members, and friends regarding the quality of services provided in the Nigerian general hospitals.

3.8: Chapter Summary

TQM is a managerial philosophy that involves everybody in an organisation to provide services in a quality manner. TQM has critical factors that help develop people in organisations, work conditions, communication, and work relationships. Although researchers have a varied conceptualisation of TQM and the practices, there is agreement that TQM has a good effect on organisational performance, especially at the employees' level. The TQM literature reveals a gap in knowledge about the impact of TQM on employee satisfaction. Despite evidence supporting the effects of TQM on healthcare systems and its contribution to quality improvements in treatment and improvements in policies, there is very little in the literature in terms of a clear explanation of the relationships between TQM practices and employee satisfaction in public healthcare.

Applying a TQM framework was decided by different management techniques and using specific strategies derived from the literature, meant to ensure the satisfaction of the healthcare workforce and linked to better service quality and patients' satisfaction. Employee satisfaction is a significant measure of organisational performance, which has affected service delivery and customer satisfaction (Andaleeb 2001; Brown 2007; Firth et al. 2004; Lee, Lee & Kang 2012; Wu 2007). Most studies in the health sector focus more on patient satisfaction, neglecting employees' input. Therefore, it is imperative to investigate techniques that could improve workforce satisfaction for better productivity and performance (Gursoy & Swanger 2007) that would delight patients.

There is enough evidence to support the positive impact of total quality management practices on employee satisfaction from the literature analysed. While some findings may not be conclusive, which may be due to different factors, a good analysis of the core TQM practices and their impact on employee satisfaction is warranted. Besides, most of the studies reviewed conceptualised the TQM practices differently. For example, Sabella, Kashou and Omran (2015) used the much-acclaimed Malcolm Baldrige National Quality Award criteria to represent core TQM practices, while Chang, Chiu and Chen (2010) supported soft practices of TQM, a factor further established by Prajogo and Cooper (2017). In that regard, this study utilises the TQM practices, as captured in the Malcolm Baldrige National Quality Award

(MBNQA) excellence framework (Healthcare version), and will establish its relationship to employee satisfaction.

Further, the literature detailed the impact that satisfied employees could have on the organisations. Also, that service quality, which patients derive their satisfaction from, is a function of employee satisfaction. A few studies have examined the provider's understanding of patients' perceptions regarding healthcare service quality (O'Connor, Trinh & Shewchuk 2000). More so, studies on perceived public healthcare service are scarce (Sánchez-Pérez et al. 2007). Research that concentrates on increasing our comprehension of the meaning, correct measurement, and proper management of perceived service quality from both employees' and patients' perspectives in healthcare is debatable and of paramount importance. The need to initiate a new approach to healthcare management for effective and efficient delivery of quality services can never be overemphasised.

Based on this literature review, the next chapter provides an overview of the theoretical framework that addresses the links among this study's constructs and the development of the hypotheses.

Chapter 4: Conceptual Framework and Hypothesis Development

4.1: Overview

The conceptual framework integrates a quality excellence model and the service-profit chain model to elicit a chain of relationships from internal to external service quality, particularly the complex association between healthcare service providers and receivers. The literature indicates a hypothesised relationship between TQM practices and employee satisfaction and that employee satisfaction has a positive link with service quality and patient satisfaction, while service quality positively impacts patient satisfaction. The conceptual framework has the six dimension of the MBNQA representing the core of TQM practices (leadership (top management commitment), strategy (defining, communicating objectives and plans), customer focus (relationship with customers), measurement, analysis, and knowledge management (quality data, process control, feedback and benchmarking), workforce (involvement and training of staff), and operations (service delivery and improvement), as independent variables measured as a single construct in hierarchical order. Scholars have extensively used these practices as representing the core TQM dimensions (Ahire, Golhar & Waller 1996; Baidoun, Salem & Omran 2018; D'Souza & Sequeira 2012; Flynn, Schroeder & Sakakibara 1995; Lee, Lee & Olson 2013; Meyer & Collier 2001; Peng & Prybutok 2014). The dependent variables are employee satisfaction, service quality, and patient satisfaction. The evidence in previous studies proved the validity of MBNQA as an excellent framework for measuring and improving an organisation's effectiveness and performance.

Table 4.1 Independent and Dependent variables

Independent Variables	Item No.	Sources
TQM Practices: Management practice that emphasises the need for everyone in an organisation, from top management, to the lowest employee, to think and continue to act on quality in all business processes for customer satisfaction (Sadikoglu & Olcay 2014).		
• Leadership	10	(D'Souza and Sequeira 2012)

• Strategy	10	(Baidoun, Salem & Omran 2018; D'Souza and Sequeira 2012; Meyer and Collier 2001)
• Patient	12	(Baidoun, Salem & Omran 2018; D'Souza & Sequeira 2012; Meyer & Collier 2001)
• Measurement, analysis, and knowledge management	9	(Wilson & Collier 2000; D'Souza & Sequeira 2012; Meyer & Collier 2001)
• Workforce	10	(D'Souza & Sequeira 2012; Meyer & Collier 2001)
• Operations	11	(D'Souza and Sequeira 2012; Meyer and Collier 2001)
Dependent Variables		
Employee satisfaction: An employee's personal evaluation of the general quality of job tasks (Hsu & Wang 2008).	15	(Huang, Rundle-Thiele & Chen 2018; Jun, Cai & Shin 2006; Yee et al. 2013; Homburg & Stock 2005; Hsieh et al. 2019)
Service Quality: The difference between a customer's expectation and perception of services (Parasuraman, Zeithaml and Berry, 1988)		(Parasuraman, Zeithaml & Berry 1988)
• Tangible	6	
• Responsiveness	6	
• reliability	6	
• Assurance	**6**	
• Empathy	**7**	
Patient satisfaction: The degree of positive evaluation of health care services provided, compared to the patient's expectations (Chang, Chen & Lan 2013).	10	(Boakye 2017; Swain & Kar 2018)

A broad link between total quality management practices and employee satisfaction was established after an extensive literature review. This study's conceptual framework will justify the essential elements of the Baldrige criteria as latent variables to measure employees' satisfaction. The tripartite relationship among employee satisfaction, service quality, and patient satisfaction was analysed, with several hypotheses developed. Also, control was made for the respondents' demographics to determine any influence on the link between TQM practices and employee satisfaction and the connection between service quality and patient satisfaction.

4.2: TQM Practices and Employee Satisfaction

4.2.1: Leadership

A core objective of any management practice is leadership (Bass 1985). Leadership drives the vision and mission of the organisation on employees. It entails how senior leaders' personal actions control and keep an organisation functioning to full capacity. It also involves leaders' governance, as they set a vision, direct and continually improve the vision in an organisation. In that regard, committed hospital leadership will guide employees well enough to perform their tasks effectively in line with the organisation's goals. Leadership is a crucial TQM component that influences employees' satisfaction (Aquilani et al. 2017). It is one of the most mentioned dimensions of TQM in quality literature. There should be total commitment to quality service, adequate resource allocation, assessing and supporting employees' input, and guiding employees towards the organisation's goal. Some studies have established links between leadership/top management commitment and employee satisfaction (Amin et al. 2017; Hsu & Wang 2008; Lasrado 2017; Mosadeghrad 2015; Prajogo & Cooper 2010; Sadikoglu & Zehir 2010).

4.2.2: Strategy

Strategy is when an organisation plans, puts plans into action, makes changes when necessary, measures progress, thinks of the future, and carries the employees along to achieve future organisational goals. In this regard, employees' skills must be developed to improve the organisation's capacity to reach set goals. Strategy is just a plan that needs various resources like employees to accomplish. There must be good communication of strategic objectives from management to the employees to clearly define the strategy and employee roles for a strategy to work. Companies primarily involved in strategic planning are more likely to improve their performance (Banister 2001). Several studies have found positive relationships between strategic planning and employee satisfaction (Jacobs, Yu & Chavez 2016; Kabak et al. 2014; Mosadeghrad 2015).

4.2.3: Patient Focus

Patient focus encourages organisations to maintain a strong relationship with customers; practically, it looks at how the organisation sets out to determine customers' needs and expectations, acquires new customers, establishes a good relationship with customers, and

finds ways to satisfy and retain them. Such can ensure the hospital's continued relevance and create new service opportunities. The organisation engages with the customer, listens to customer complaints, and uses feedback to improve on lapses and determine innovative ways to satisfy customers. Patient engagement for long-term patronage, building a good rapport, meeting and exceeding patients' needs and expectations, focuses on patient' well-being,' and overall satisfaction should be high (Cavallone, Magno & Zucchi 2017). When employees focus on meeting patients' needs and satisfaction, this, in turn, gives satisfaction to the caregivers, as found in a study of Pantouvakis and Bouranta (2013), in which they state that happy customers influence employee satisfaction; which is in line with the service-profit chain theory of Heskett et al. (1994). Listening to customers and using their feedback effectively gives employees good knowledge to serve better, positively impacting workers' satisfaction and improving the quality of care in the hospital. Using the information on customers' concerns to solve issues promptly is vital, so employees must help customers. Several studies found a link between customer focus and employee satisfaction (Lasrado 2017; Mosadeghrad 2015; Ooi et al. 2007).

4.2.4: Measurement, Analysis, and Knowledge Management

This involves how an organisation derives its data, analyses, and manages it for competitive growth. Data can be a source of strategic advantage, and how an organisation gets it, reviews and analyses it for quality performance is a critical aspect of achieving set goals. Employees are more capable when they have effective knowledge management, enabling them to obtain the required data timely to carry out their tasks. When employees are given quality information, they are bound to provide optimal output. In this regard, management should ensure a good source of quality data, adequate screening of quality data, and effective utilization to bring about positive results. The effects of technology, how it is used and managed should be made known to employees. Thus, knowledge management is a key for organisational competitiveness (Anand, Chhajed & Delfin 2012). Healthcare managers should provide timely, tangible, and valid data to employees to better carry out their tasks to achieve a good quality of care and technological know-how (Kianto, Vanhala & Heilmann 2016).

4.2.5: Workforce

This involves human resource management activities like training, development, recognition, reward, and employee empowerment. It entails the organisations' ability to assess workforce capacity, build a good working environment that fosters collaboration, teamwork, employee

development, and engagement, and encourage employees to reach their potentials in line with its strategy. Garavan, Barnicle and Heraty (1993) argued that human resource management is one of the most significant organisational performance issues (Lasrado 2017; Mosadeghrad 2015). The focus is on sound management of performance and development to bring out employees' optimal abilities. In healthcare, encouraging and maintaining good relationships among the practitioners is deemed a critical practice that shouldn't be overlooked (NIST 2017). Engagement involves having the workers feel trusted to effectively carry out their duties, given good cooperation and support. In a study by Xiong et al. (2017) to find the effects of TQM practices on public hospitals' performance, they concluded that effective management and workforce engagement is highly related to employee satisfaction. Other studies found a positive relationship between workforce engagement and employee satisfaction (Mosadeghrad 2015; Ooi et al. 2007; Xiong et al. 2017).

4.2.6: Operations

This concerns the overall service processes and how they are managed in the organisation. How the organisation handles product or service process and delivery of quality service to customers' satisfaction and eventual organisational growth is critical. Focus on important service delivery from admission, administrative procedures, streamlining employees' tasks, and eases their job stress. Managing and enhancing working processes in the hospital in line with patients' needs and requirements lessons burden for all stakeholders. Hospitals should ensure a smooth working process that will enable employees to provide adequate service to meet patients' satisfaction. Service delivery is critical here, so the link between the hospital employees and the patient should be an amicable one, and employees should be supplied with whatever they need for the job on time. Xiong et al. (2017) found a positive relationship between operations focus and employee satisfaction (Mosadeghrad 2015).

From the above analysis of TQM practices, one can safely hypothesise that TQM influences employee satisfaction. Thus, the first hypothesis in this study follows:

H1: There is a significant positive relationship between TQM practices and employee satisfaction in Nigerian general hospitals.

4.3: Employee Satisfaction and Service Quality

Jung and Yoon (2013) posit that when employees are satisfied, they produce better services, leading to customers' satisfaction. Employee satisfaction serves as a link to improving service quality (Yee, Yeung & Cheng 2010). The service-profit chain theory of Heskett et al. (1994) described the link between employee satisfaction and service quality to be positive. A satisfied employee would be motivated and committed to the organisation, thereby effectively delivering job tasks and improving the quality of services to the customers' satisfaction. Employee satisfaction is significant and positively related to service quality (Grigoroudis, Tsitsiridi & Zopounidis 2013). Employee satisfaction is a means of improving service quality (Firth et al. 2004), as satisfied employees lead to increased service quality that delights the customers (Chi & Gursoy 2009). Employee satisfaction is related to increased productivity in hospitals (Macinati 2008). Other studies that established the link between employee satisfaction and service quality in different contexts are: (Amin et al. 2017; Andaleeb 2001; Chen & Chen 2014; Kermani 2013; Kim et al. 2012; Sadikoglu & Zehir 2010; Yee, Yeung & Cheng 2010). Therefore, the second hypothesis proposed as follows:

H2: There is a significant positive relationship between employee satisfaction and service quality in Nigerian general hospitals.

4.3.1: Employee Satisfaction and Patient Satisfaction

The literature shows a particular relationship between employee satisfaction and patient satisfaction in different contexts. Such a relationship has been either direct or indirect, mediated by other factors (Chi & Gursoy 2009; Linn et al. 1985; Yee, Yeung & Cheng 2010). For example, the connection between employee satisfaction and customer satisfaction was mediated by service quality (Heskett et al. 1994; Sadikoglu & Zehir 2010; Yee, Yeung & Cheng 2010). However, a correlation exists between employee satisfaction and customer satisfaction (Wu 2008). Linn et al. (1985) found an association between medical staff satisfaction and patient satisfaction in the healthcare sector. According to the idea of the service-profit chain, creating an excellent internal working environment for the employees will increase their satisfaction and loyalty to customers' organisation and eventual satisfaction through efficient services (Heskett et al. 1994).

Jung and Yoon (2013) found that employee satisfaction directly impacts customer satisfaction and suggests that improvement in employees' satisfaction will increase customers' satisfaction and patronage. Other studies have investigated the link between employee satisfaction and patient satisfaction in different countries. For example, in Iran, Kermani (2013) found an indirect link between employee satisfaction and customer satisfaction via service quality. In Italy, Raharjo et al. (2016) found a direct connection between employee satisfaction and patient satisfaction. Baummer-Carr and Nicolau (2017) posit that the provider-patient relationship is positively related to patient satisfaction in the US. Therefore, it can be inferred that employees' satisfaction greatly influences patients' satisfaction. A third hypothesis proposed as follows:

H3: There is a significant positive relationship between employee satisfaction and patient satisfaction in Nigerian general hospitals.

4.4. Service Quality and Patient Satisfaction

The relationship between service quality and customer satisfaction has was examined by several scholars (Cronin & Taylor 1992; Heskett et al. 1994; Parasuraman, Zeithaml & Berry 1994), and they found the link to be positive. Patients often based their satisfaction on the perception of the quality of service received (Naidu 2009), especially in a highly interactive hospital setting. If the performance does not meet the patient's expectations, he/she will feel dissatisfied.

Service quality was established as an antecedent of patient satisfaction in the literature (Lee, Lee & Yoo 2000). It is widely believed that higher service quality levels lead to higher levels of customer satisfaction (Oliver 1997; Pollack 2008; Taner & Antony 2006). Studies have established a positive link between service quality and customer satisfaction (Lee, Lee & Yoo 2000): the relationship between the service quality dimensions and satisfaction was highly significant (Wu, Liu & Hsu 2008). Hence, the ever-growing research on service quality established that customer satisfaction comes from the direct impact of improved service quality (Cronin Jr, Brady & Hult 2000; Heskett et al. 1994; Oliver 1997; Pollack 2008).

Studies in healthcare settings have also found a positive relationship between service quality and patient satisfaction, so conclusions were drawn that service quality dimensions are strong antecedents to satisfaction (Mpinganjira 2015; Naidu 2009; Woodside, Frey & Daly 1989). Thus, achieving a higher level of service quality in hospitals leads to increased patient

satisfaction (Amin & Zahora Nasharuddin 2013). Badri, Attia and Ustadi (2009) found service quality in hospitals of the United Arab Emirates (U.A.E) to positively relate to patient satisfaction. Other studies established a positive link between service quality and patient satisfaction (Badri, Attia & Ustadi 2009; Elleuch 2008; Naidu 2009; Owusu-Frimpong, Nwankwo & Dason 2010; Sohail 2003). This leads to the fourth hypothesis:

H4: There is a significant positive relationship between service quality and patient satisfaction in Nigerian general hospitals.

4.5: Control Variables

According to Dong, Xu and Zhu (2009), the hypothesised relationships' differences could be clarified when controls are correctly applied. The conceptual framework allows for unregulated interactions of control variables. The effect of the control variables could be checked from the first construct, TQM practices to employee satisfaction, and from the third construct, service quality to patient satisfaction. Ideally, the effects of the control variables on each construct within the framework can be investigated without problems.

A study found job satisfaction increased with age, but no effect was found with gender (Ommen et al. 2009). Samaiya (2015) study found no impact of age and gender on employee satisfaction. Jung, Jae Moon and Hahm (2007) came up with mixed findings on the effect of age and gender on employee satisfaction. Several other studies found age and gender to significantly affect employee satisfaction (Bellou 2010; Fields & Blum 1997; Magee 2015). Therefore, the author of this current study controls the effects of age, gender, religion, profession, duration in the job, and level of education on the relationship between TQM and employee satisfaction in Nigerian general hospitals.

Venn and Fone (2005) argued that patient satisfaction varies with age, gender, marital status, and employment status. Jenkinson et al. (2002) found older patients more pleased with healthcare facilities than younger patients. The findings of a study conducted by Brown et al. (2008) found less-educated older male patients with better health more likely to offer higher hospital care ratings than younger and more educated female patients who are sicker. Nevertheless, Baldwin and Sohal (2003) findings showed no significant impact on age, gender, and location between quality and satisfaction. Tucker and Adams (2001) have also demonstrated that demographic variables such as age, gender, race, education, and marital status do not affect satisfaction. Therefore, the current research will test the effects of age,

gender, religion, and education on the relationship between quality of service and patient satisfaction in Nigerian general hospitals.

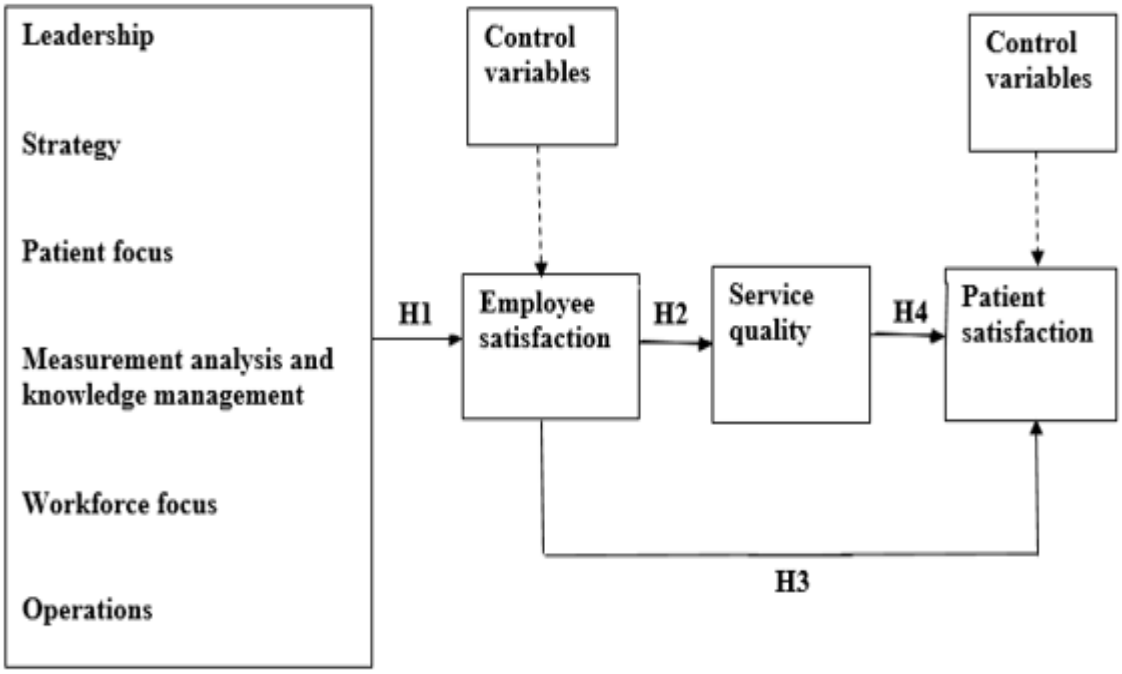

Figure 4.1: The conceptual model

Source: *Researcher*

Direct effects were proposed in this conceptual framework. As shown in the figure above, the first construct is the MBNQA excellence framework representing the core TQM practices, and the other part depicts the service-profit chain model without the profit construct. It's predicted that TQM practices would influence employee satisfaction, and employee satisfaction would lead to improved service quality that would positively impact patient satisfaction in the Nigerian general hospitals. Such model is supported by the stakeholder's theory, which tasks organisations to strive for the satisfaction of the people internal to the company and give satisfaction to other external persons connected to the business, and in so doing, ensure no harm befalls anyone. In that regard, four distinct hypotheses were proposed, as shown above, to test the significance of the predicted relationships.

4.6: Chapter Summary

This chapter sets out the proposed conceptual framework that reflects TQM practices' effects on employee satisfaction and employee satisfaction on service quality, which influences

patients' satisfaction. The impact of TQM practices on employee satisfaction was summarised from the literature. The literature says that employees are the backbone of any organisation, and TQM practices enable employee satisfaction. A summary of the connection between employee satisfaction and service quality was enumerated, and a positive link between service quality and patient satisfaction was established.

The next chapter describes the methodology, research design, research instruments, and data collection methods and analysis for testing the study's conceptual framework.

Chapter 5: Methodology

5.1: Overview

Previous chapters covered the background and context of this research. Theoretical arguments explained the relationships amongst TQM practices, employee satisfaction, service quality, and patient satisfaction. As already stated, this research aims to understand the impact of TQM practices on employee satisfaction and the resultant effect on service quality and patient satisfaction in Nigerian general hospitals. Also, the research aims to determine any difference in perception of service quality between employees and patients of the Nigerian general hospitals.

This chapter entails developing a blueprint for the research, which involves designing a suitable sampling strategy, data collection approach, choosing a method of analysis, and ethical considerations. The first section discusses the research paradigm, the research design, and the relevance of applying the quantitative approach. The second section discusses the study sampling, sample size justification, study locations, and respondents. Further, the data collection approach illustrates the questionnaire design and the participants' selection process, which follows proper ethical requirements and discusses the data analysis technique. The chapter concludes with discussions of ethical challenges and their mitigation.

5.2: Research Paradigm

Saunders, Lewis and Thornhill (2016) opined that researchers usually have a set of philosophical beliefs when carrying out research, whether they realise it or not. There are several ways researchers view the world, guided by certain beliefs or their interaction with the environment, which influence their decision to use a research design and method. Such is referred to as paradigms, also known as epistemology, ontology, and philosophical worldviews (Creswell & Zhang 2009). Paradigms are formed by the past experiences of researchers, beliefs system, and researchers' orientation of the world, which inform the decision to use a qualitative, quantitative, or mixed-method. The five main paradigms are positivism, critical realism, interpretivism, postmodernism, and pragmatism.

Based on the researcher's scientific background, this study follows the guiding philosophy of positivism. Positivism is more quantitative and was the traditional form of research, sometimes referred to as the scientific method (Creswell & Zhang 2009). Positivism is the view of a natural scientist that works with reality and strictly focuses on the scientific way of collecting empirical data and interpreting data without human bias (Saunders, Lewis & Thornhill 2016). The positivist researcher collects measurable and quantifiable data and mainly uses existing theories to develop hypotheses tested and confirmed to be true or false (Saunders, Lewis & Thornhill 2016).

5.2.1: Research Design

The research design is a plan or method used in research, from data collection to data analysis. Generally, the philosophical assumptions, procedures of inquiry, and data collection approach inform the decision to use a research design (Creswell & Zhang 2009). There are three main research designs: Quantitative, qualitative, and mixed-method designs.

5.2.2: Quantitative Design

A quantitative design, referred to as the scientific approach, is an unbiased method of testing theories on the relationship between variables and involves collecting numerical data that are analysed statistically (Creswell & Zhang 2009; Saunders, Lewis & Thornhill 2016). The quantitative design falls under positivism and post-positivism paradigms, which involve hypotheses. Quantitative design either utilises an experimental method of data collection (treatments and outcomes) or a survey (interview or closed-ended questionnaires) to determine correlations, causes and effects, and identification of strength among variables to solve research problems (Creswell & Zhang 2009).

5.2.3: Qualitative Design

The qualitative design falls under the constructivism paradigm, and it observes a given situation from the participants' perspective (Creswell & Zhang 2009). The qualitative design emerged in the mid-20th century due to a shift from positivism to post-positivism and constructivism worldviews. Positivism used to be the most prevalent worldview until several researchers started questioning it and new thinking emerged. The qualitative design follows a narrative approach by exploring and interpreting a phenomenon to find meaning. Various ways of carrying out qualitative research include Case study, Ethnography, Grounded theory, etc. The

qualitative design usually collects data using open-ended questions in interviews, focus groups, observation, and group discussions, coded and analysed to solve a research problem (Creswell & Zhang 2009).

5.2.4: Mixed-Method Design

As the name suggests, this design involves the combination of several methods. Most notably is the combination of quantitative and qualitative design, either one before the other or concurrently in a research (Creswell & Zhang 2009). The mixed-method seeks to address biases in a single method by converging quantitative and qualitative designs, integration, or connecting quantitative and qualitative data. The quantitative and qualitative data can be merged and used as a single data or interpreted separately, using the results to support each other, as shown in figure 5.1 below.

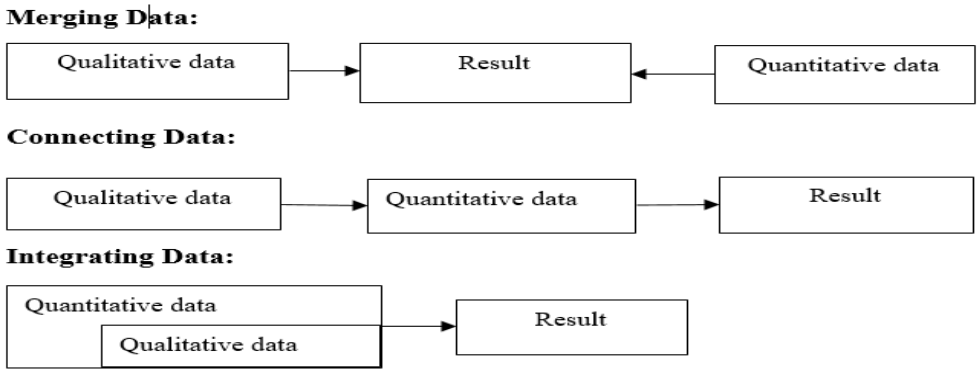

Figure 5.1: Mixed methods research design approaches.

Source: *Creswell & Plano Clark (2007).*

5.2.5: Design Selection

The following determines the choice of a research design: the research paradigm, the research problem, the research question, and the researcher's previous experience (Creswell & Zhang 2009).

This study's research paradigm is positivism, which entails a quantitative scientific approach, and the research question implies relationships amongst variables. According to Creswell and Zhang (2009), a research problem that identifies factors influencing other factors to achieve or predict an outcome or calls for testing theories is solved using a quantitative design. Among

other factors that informed the quantitative design in this study is the researcher's prior scientific background.

This research aims to determine how TQM practices influence employee satisfaction towards service quality improvement and eventual patients' satisfaction. The variables needed to study the research problem are TQM practices - operationalised as internal service enablers, employee satisfaction, service quality, and patient satisfaction. The study employs a quantitative design to address research questions seeking to verify the relationship between the variables. TQM practices are the independent variables, while employee satisfaction, service quality, and patient satisfaction are dependent variables. Using the quantitative design permits determining the relationship's strength and direction amongst the study variables.

Therefore, this study uses a cross-sectional quantitative design and statistical analysis based on testing hypotheses related to the conceptual model in Figure One. The quantitative design is most appropriate for a study of this nature because the research entails relationships between variables (Saunders, Lewis & Thornhill 2016; Saunders, Lewis & Thornhill 2009). Besides, a quantitative design is less time-consuming and cost-effective than other research designs (Creswell & Zhang 2009). Moreover, survey-based quantitative methods enable objective scientific investigations to presume that cross-sectional survey data explains the relationship between predictor variables and results as they occur at a specific point in time (Saunders, Lewis & Thornhill 2016; Saunders, Lewis & Thornhill 2009). More so, quantitative surveys are widely used in the management literature to measure various aspects of organisational performance (Van Der Vaart & Van Donk 2008; Amin et al. 2017; Baidoun, Salem & Omran 2018; D'Souza & Sequeira 2012; Swain & Kar 2018; Yee, Yeung & Cheng 2011).

The process entails preparing and distributing a survey questionnaire to employees and patients of two Nigerian general hospitals with 100 beds and above. Structural equation modelling (SEM), specifically the SmartPLS version 3 programme, was used to check the study designs' hypothesised relationship (Cheah et al. 2020; Cheah et al. 2018; Hair et al. 2019; Hair Jr, Howard & Nitzl 2020). Further, the author assessed the measurement and structural models as recommended (Cheah et al. 2020; Cheah et al. 2018; Hair et al. 2019; Hair Jr, Howard & Nitzl 2020). The measurement model verified the unidimensionality, consistency, and reliability of the constructs; while the structural model verified the path relationship (Cheah et al. 2020; Cheah et al. 2018; Hair et al. 2019; Hair Jr, Howard & Nitzl 2020).

5.3: Data Collection Method

Surveys are recommended for theoretical research and operational management due to their generalisation capability (Karlsson 2016). Consequently, it is the most widely used research framework for organisational management (Flynn, Huo & Zhao 2010). The survey was the most commonly used data collection approach for research using statistical methods (Karlsson 2016; Saunders, Lewis & Thornhill 2016). As a result, there has been a substantial rise in survey work in the quality management literature (Boyer & Swink 2008; Knoppen et al. 2015). Previous similar studies have successfully used the survey data collection method (Amin et al. 2017; Baidoun, Salem & Omran 2018; D'Souza & Sequeira 2012).

Within the confines of a survey strategy is the questionnaire, which is the most widely used survey research method (Flynn, Huo & Zhao 2010). Compared to observations and interviews, the questionnaire provides the advantage of obtaining data from many people spread across different geographical locations (Flynn, Huo & Zhao 2010). A questionnaire contains a series of questions that can be answered either by the participants, the researcher, or the survey assistant (Bryman 2015)

Survey questionnaires can be self-administered through the mail, using groups, and online circulation. This study used paper and online-based questionnaires, which are cost-effective methods to reach a wide-ranging sample of employees and patients in Nigeria (Denzin & Lincoln 2005). The initial plan was to use a paper-based questionnaire, but an online survey was implemented due to time constraints. The questionnaire was distributed to many respondents (Couper 2000; Reimers 2014; Zhang 2000). It enables the data collection from many people in different geographical locations, and the questionnaire is the most used data collection method compared to interviews and observations (Sekaran & Bougie 2016).

5.4: Development of Measures

Effective construct measurement methods are the foundation of empirical studies and are fundamental to the proper evaluation of latent variables (Crook et al. 2010; DeVellis 2003; Netemeyer, Bearden & Sharma 2003; Reynolds et al. 2010). Valid and reliable measures provide accuracy and advancement (Slavec & Drnovsek 2012). Strong measurement theory is key to the achievement of reliable SEM tests, and the test of structural relationships between

constructs can only be as accurate as the measurement model (Benitez et al. 2020; Hair et al. 2019).

Researchers have the choice to choose from the number of scales developed in previous studies. Nevertheless, when researching a context that does not have a rich background, if there is a lack of defined scales, the researcher may have to create new scales or significantly modify an already developed scale to suit the new context (Hair et al. 2010). When previously established measures are changed considerably from their original forms, they become adapted measures (Slavec & Drnovsek 2012). A new measure refers to a measure that has not been used previously and is newly established in a questionnaire by reporting on any or all measures in scale establishment procedures (Slavec & Drnovsek 2012).

There are various proposed methods of scale development, and the scale developed for this study was adapted from the procedures of Churchill (1979), DeVellis (2003), and Slavec and Drnovsek (2012). Churchill (1979) proposed an eight-step method that includes identifying the constructs of interest, producing a sample of items, gathering preliminary data, filtering the measures, determining reliability, collecting data, checking the reliability and validity of data, and creating standards. DeVellis (2003) guidelines also comprised eight steps: determining what to measure, selecting items, choosing measurement format, review of experts, consideration for including validated items, sampling, appraise the items, and fine-tune the scale length. The DeVellis (2003) guidelines are similar to that of Churchill (1979), but the terms and process are slightly dissimilar (DeVellis 2003). Slavec and Drnovsek (2012) carried out an in-depth review of the literature and found ten similar scale development steps grouped into three phases: (i). Theoretical significance and existence of the construct, (ii). Representativeness and suitability of data collection and statistical analysis, (iii). Statistical evidence of the construct.

Given this study's context, the researcher modified a few measures from their original forms to fit the study’s objectives. This study had both measurement items and the questionnaires reviewed, and the following steps of the scale development process followed: Identification of the constructs and conceptual framework, collating items, establishing the measurement format, designing the questionnaire, content validity, fine-tuning items and questionnaire, run pilot test, check the reliability of items, sampling, and data collection.

5.4.1: Identification of Constructs and Conceptual Framework

This step aimed to define the study domain by specifying the scope and clarifying the study designs and the conceptual framework. Establishing what the researcher wants to measure is the first step in creating new measures (DeVellis 2003). Each latent construct in the conceptual framework was identified, and measurement items were allocated to the respective latent constructs (Benitez et al. 2020; Hair Jr, Howard & Nitzl 2020). The description of new constructs should be suggested to clarify how they vary from existing related constructs (Nunnally 1978; Slavec & Drnovsek 2012). Also important is the specification of the new constructs' dimensions (Haynes, Richard & Kubany 1995). A thorough review of the related literature served as the basis for the conceptual framework theory. The construct dimensions were drawn from the literature and modified to ensure construct distinction (DeVellis 2016). The theoretical basis in Chapter three clarified the content domain of the conceptual framework and its constructs before collating the items (Netemeyer, Bearden & Sharma 2003).

5.4.2: Collating Items

This study's conceptual framework consists of four theoretical constructs: TQM, employee satisfaction, service quality, and patient satisfaction. When selecting the constructs measures, it is advantageous to have multiple indicators to understand the concept (Bryman 2015; Gerbing & Anderson 1988). DeVellis (2003) suggests a preference for over-inclusiveness over under-inclusiveness, including a significant number of items in the initial list of items, perhaps, three times more than the final scale. The primary preference for enhancing the reliability and validity of the scales was established in the literature (Churchill 1979; DeVellis 2003). The scales' contextual suitability was also confirmed to guarantee the strength of the measures (Kalafatis, Sarpong & Sharif 2005).

According to Slavec and Drnovsek (2012), items should be simple, short, and clear for the survey respondents' easy readability. The scale items were precisely worded to capture the central idea of the constructs and ensure clarity of expression. Ambiguity, lengthiness, multiple negativity questions, leading and double-barrelled items were cautiously avoided (Churchill 1979; DeVellis 2003). Some adjustments were made to original questions in the literature, i.e., rewording, but caution was taken to preserve the meaning of the concepts.

The TQM items were adapted from empirical TQM studies that utilised the MBNQA framework (Baidoun, Salem & Omran 2018; D'Souza & Sequeira 2012; Meyer & Collier 2001; Wilson & Collier 2000). All TQM questions correspond with the (2017-2018) Baldrige national quality program at the National Institute of Standards and Technology (NIST 2018). Employee satisfaction was measured with questions adapted from Homburg and Stock (2005); Jun, Cai and Shin (2006); Huang, Rundle-Thiele and Chen (2018); Yee et al. (2013). The Servqual scale of Parasuraman, Zeithaml and Berry (1988), for service quality measure, was used to survey opinions of employees, the patients, the patient's family, and friends regarding service quality. The five core dimensions of the Servqual (Tangible, reliability, responsiveness, assurance, empathy) provide a basic skeleton that researchers can modify to fit specific research needs of an organisation or context (Parasuraman, Zeithaml & Berry 1988). Patient satisfaction was measured using items adapted from the studies of Boakye (2017); Swain and Kar (2018). The items from the studies mentioned above were vetted and selected mainly from studies carried out in the service sector, particularly in healthcare organisations, and have shown high validity and reliability. Multi-item scales used in complex concepts simplify things and increase the scale's validity as it reduces respondents' chances of misinterpreting a single item (Roberts 1999). Thus, the use of multi-item scales in the study was well supported.

5.4.3: Establishing the Measurement Format

A Likert scale was chosen as the preferred scale for measurements. The Likert (1932) scale is a psychometric scale most widely used to scale responses in research that employs survey questionnaires (Westland 2015). It provides a means to capture the variation that points to an underlying phenomenon (Carifio & Perla 2007). It is an appropriate technique for measuring beliefs, opinions, and attitudes (DeVellis 2016). The Likert scale is a balanced rating scale with an odd number of categories and a neutral point (Malhotra 2006). A scale with an odd number of categories can contain a salient central neutral point where the observed attribute fits amongst the continuum's two extremes (DeVellis 2016).

This study utilises a five-point Likert scale ranging from (1) strongly disagree to (5) strongly agree. Likert scales can range from four to ten points (Pai & Chary 2016). However, the five-point scale adds quality and improves response rates by reducing respondents' frustrations (Lam 1997); the respondents understand it clearly, and it is easy to complete with reduced frequency of item omission (Nagata et al. 1996). Another advantage of using the five-point Likert scale is its balanced rating, with equal categories before and after the mid-point. This

study used the five-point scale as follows: “strongly disagree,” “disagree,” “not sure,” “agree,” “strongly agree” (Saunders, Lewis & Thornhill 2016).

5.4.4: Questionnaire Design

The questionnaire used for this study has a front summary page on the study's aims, information about confidentiality, and the capacity to contact researchers. Questions that can be used to identify any participant were not included. All questions were in English, which is the official language in Nigeria.

There were two sets of questionnaires with closed-ended questions; one questionnaire for employees and the other set for patients. The employee questionnaire has three sections, and the first section comprises TQM practices: (leadership, strategy, patient focus, measurement analysis and knowledge management, workforce, operations); and employee satisfaction. The second section has the perceived service quality, while the last section contains the respondents' demographics. The patients’ questionnaire has two sections, with the first section capturing the perceived service quality and patient satisfaction. The patients’ perceived service quality questions are the same set of questions used for employees. The last section contains the patients’ demographics. A five-point Likert scale ranging from 1 – strongly disagree to 5 – strongly agreed was used in the questionnaire. The supervisors first checked the questionnaire, and feedback received on the consistency and importance of the questions, their logical structure, and appropriateness. Few changes were made to the questionnaire, like splitting double-barrelled questions.

The online questionnaire was set up in a similar format in Qualtrics with a survey progress indication added for automatic validation as recommended for online survey input (Hoonakker & Carayon 2009). By so doing, respondents were allowed to complete surveys over some time with pauses. Online surveys allow researchers to easily create surveys, provide the survey to participants quickly, track data, and produce results in synchronised form (Buchanan & Hvizdak 2009). The online survey gave the researcher an added advantage when the researcher had to travel back to Australia due to time constraints in data collection locations. Thus, the online survey was used effectively to complete the data collection. However, internet interviewees are more likely than mail or face-to-face respondents to provide additional information (Mehta & Sivadas 1995). A well-managed, properly informed online questionnaire will produce a comparable response level to the survey carried out with a paper-based

questionnaire (Baruch 1999; Dillman 2011). Besides, follow-up reminders can double the response rate (Kittleson 1997). An internet survey's benefits include convenient access to large populations, speed, reduced costs, reduced time and mistakes in data entry, ease of management, and greater flexibility. The errors in coverage, sampling errors, non-response errors, computer security/illiteracy, and non-deliverability are disadvantages that need to be adjusted carefully (Hoonakker & Carayon 2009).

5.4.5: Content Validity

Two supervisors of the researcher first reviewed the questionnaire. After that, expert reviews were made of the measurement items as recommended by DeVellis (2003); and in line with other previous studies (Flynn, Huo & Zhao 2010; Huo 2012). The experts give feedback on the questions' wordings, qualifying questions, and clarity (DeVellis 2016). Such expert review is content validity (DeVellis 2016) which is the degree to which components of a measurement instrument, including instructions, items, and formats of responses, related to and illustrative of the study design for a specified purpose (Haynes, Richard & Kubany 1995; Slavec & Drnovsek 2012). Content validity improves items' face validity in latent constructs (Hardesty & Bearden 2004). Thus, five academics specialising in quality management and human resources were chosen for this task. The feedback given regarding relevance and clarity was good, suggesting changing from US English to Australian.

5.4.6: Fine-tuning Items and Questionnaire

Based on the preliminary checks on the questionnaire, minor changes were made to increase the accuracy of the survey instrument. The researcher's supervisors advised against using double-barrelled questions and recommended putting respondents' characteristics in the last section of the questionnaire. The questionnaire was adjusted according to the feedback received from the supervisors. The questions sequence, how they are displayed, and their length, were deemed okay by the experts. The pre-test also provides the opportunity to address response bias issues and comprehend the questions before the data collection phase (Fink & Lichtenstein 2014). The complete survey instrument is displayed in Table 5.1 below.

Table 5. 1: Measurement scale items

Item No.	Measurement Items	Sources
Leadership		

L1	Our leaders stay true to the core values while continuously improving quality	D'Souza and Sequeira (2012)
L2	Our leaders create an environment for empowerment	
L3	Our leaders encourage learning in the hospital	
L4	Our leaders have cordial relationship with other staff members	
L5	Our leaders recognise staff contribution	
L6	Actions of our leaders create a high-performing hospital	
L7	Departments head accept responsibility for quality	
L8	Our leaders place patients first	
L9	Our leaders use performance feedback to improve the quality of care	
L10	Our leaders are focused on the well-being of the community	
Strategy		
S1	The hospital has comprehensive strategic objectives	Baidoun, Salem and Omran (2018)
S2	Strategic objectives are clearly communicated to all staff	
S3	Every staff member is aware of the strategic objectives	
S4	Staff are committed to the strategic objectives	
S5	Strategic decisions are evaluated with objective measures	D'Souza and Sequeira (2012)
S6	Strategic objectives include reducing waste	
S7	Strategic plans are supported by all stakeholders	
S8	There are deadline for achieving strategic objectives	
S9	Strategies are used to address performance as a health care provider	Meyer and Collier (2001)
S10	Strategies are translated into actions	
Patient		
P1	The hospital identifies its target patients well	Baidoun, Salem and Omran (2018)
P2	Patient-oriented vision is clearly communicated to the staff	D'Souza and Sequeira (2012)
P3	Patients' satisfaction is a top priority	
P4	Patients' opinions are taken seriously	Baidoun, Salem and Omran (2018)
P5	Staff actively seek feedback from patients regarding services	D'Souza and Sequeira (2012)
P6	We have a well-established communication channel with patients	Baidoun, Salem and Omran (2018)
P7	We regularly measure the extent of patients' satisfaction	D'Souza and Sequeira (2012)
P8	We compare patients' satisfaction information with that of competitors	
P9	The hospital monitors community health trends	Meyer and Collier (2001)
P10	The hospital provides free services for those who cannot pay	
P11	We strive to be highly responsive to patients' needs	Baidoun, Salem and Omran (2018)
P12	Patients' preferences are analysed when designing new patient services	Meyer and Collier (2001)
Measurement Analysis &Knowledge Management		
M1	The hospital ensures staff have rapid access to quality-related data	Wilson and Collier (2000)
M2	The hospital ensures data matches current healthcare needs	D'Souza and Sequeira (2012)
M3	Data accuracy is ensured	
M4	Comparative data is used to analyse performance	
M5	Staff members are trained on data collection techniques	Wilson and Collier (2000)
M6	Staff members are trained on data analysis techniques	
M7	The information systems of the hospital are reliable	
M8	The information systems are user-friendly	
M9	The information systems are standardized across all departments	Meyer and Collier (2001)
Workforce		
W1	Adequate effort is made to get the opinions of staff members	D'Souza and Sequeira (2012)
W2	Staff are free to discuss work-related issues with their supervisors	
W3	Staff members are involved in decisions that affect their work	
W4	Staff members have access to information needed to serve patients	
W5	There is a comprehensive system to motivate staff	
W6	Staff are given a broad range of tasks	Meyer and Collier (2001)
W7	Staff are given decision-making responsibility	
W8	Staff are rewarded for learning new skills	
W9	The work environment supports the well-being of staff	
W10	The hospital uses various methods to measure staff satisfaction	
Operation		
O1	The hospital addresses quality of healthcare in design processes	D'Souza and Sequeira (2012)
O2	The hospital ensures efficiency in its service processes	
O3	The hospital ensures effective service delivery processes	
O4	Patients' participate in the service processes	
O5	There are standardized operating procedures to support daily operations	

O6	There are effective methods for assessing performance to improve service delivery	
O7	There are enough staff to handle workload	
O8	The hospital measures performance of its administrative services	Meyer and Collier (2001)
O9	The hospital establishes long-term relationships with its suppliers	
O10	Quality is an important criterion for selecting suppliers	
O11	Suppliers are involved in designing new services	
Employee satisfaction		
ES1	I like my job	Homburg and Stock (2005)
ES2	My job gives me much satisfaction	Huang, Rundle-Thiele and Chen (2018)
ES3	I feel personal satisfaction when I do my job well	Jun, Cai and Shin (2006)
ES4	The nature of the job is satisfactory	Yee et al. (2013)
ES5	I consider this hospital my first choice	Homburg and Stock (2005)
ES6	This is the best hospital for me to work	Jun, Cai and Shin (2006)
ES7	I am proud to tell people that am part of this hospital	
ES8	I am delighted with the benefits the hospital provides	Hsieh et al. (2019)
ES9	I am satisfied with the level of supervision in the hospital	Yee et al. (2013)
ES10	I am satisfied with my salary in this hospital	
ES11	The hospital's on-job training meets my expectation	Hsieh et al. (2019)
ES12	I am happy with my co-workers	Yee et al. (2013)
ES13	The promotion opportunity in the hospital is satisfactory	Yee et al. (2013)
ES14	I am satisfied with the variety of activities my work offers	Huang, Rundle-Thiele and Chen (2018)
ES15	I am very satisfied working in this hospital	Homburg and Stock (2005)
Tangible		
T1	The hospital has modern equipment	(Parasuraman, Zeithaml & Berry 1988)
T2	The hospital has a clean environment	
T3	The hospital's facilities are visually appealing	
T4	The hospital's staff look professional in appearance	
T5	The hospital's physical facilities reflect the concept of a hospital	
T6	Materials associated with the hospital's services are visually appealing	
Reliability		
R1	The hospital diagnoses patients accurately at first attempt	
R2	The hospital gives appropriate treatment at first attempt	
R3	The hospital's staff show sincere interest in solving patients' problems	
R4	The hospital keeps its promise to provide services at the appointed time	
R5	The hospital ensures medical records are free from errors	
R6	The hospital provides services on time	
Responsiveness		
RS1	Staff are willing to listen carefully to patients	
RS2	Staff are always willing to help patients	
RS3	Staff respond to patients' needs in a timely manner	
RS4	The hospital provides efficient services	
RS5	Staff do not hesitate to respond to patients' requests	
RS6	Staff respond quickly to an emergency	
Assurance		
A1	Patients have confidence in the ability of the hospital's staff	
A2	Patients feel safe interacting with staff of the hospital	
A3	Patients are treated with courtesy	
A4	Staff of the hospital are knowledgeable	
A5	Staff of the hospital are highly skilled	
A6	Staff of the hospital have the required training to deliver services to patients	
Empathy		
E1	The staff understand patients' emotions	
E2	The staff are sympathetic towards patients	
E3	The staff try to understand the specific needs of patients	
E4	The staff have patients' best interests at heart	
E5	The staff have genuine concern for patients	
E6	The staff always try to make patients feel comfortable	
E7	The staff give individual attention to patients	
Patient satisfaction		
PS1	I am satisfied with my stay in the hospital	Boakye (2017)

PS2	I am satisfied with my medical expenses compared to the medical care received	Swain and Kar (2018)
PS3	I feel satisfied that the extent to which I was treated produced the best possible outcome	Boakye (2017)
PS4	The medical services have fulfilled my requirements	
PS5	I am satisfied with the level of services provided	
PS6	I am satisfied with the hospital's admission process	Swain and Kar (2018)
PS7	I am satisfied with medical care provided by the doctors	
PS8	I am satisfied with medical care provided by the nurses	
PS9	I am satisfied with services provided by the administrative staff	
PS10	Overall, I am very satisfied with the services in this hospital	Boakye (2017)

5.4.7: Pilot Test

A pilot study is to determine how well respondents comprehend the questions. Using a small sample of a study's population for a pilot study comes highly recommended (DeVellis 2016), as it serves to pinpoint likely problems in the questionnaire (Dillman, Smyth & Christian 2014) and check the reliability of the items before finalizing the questionnaire (Netemeyer, Bearden & Sharma 2003). Consequently, potential issues can be identified and rectified before carrying out the major survey (Slavec & Drnovsek 2012). The pilot test was carried out using precisely 90 participants, but only 49 valid responses were received. The participants comprised heads of departments, senior administrative staff, senior doctors, and nurses of Ekpan general hospital, Delta state, including randomly selected patients in the hospital. The questions were judged to be generally good, except for a particular item that the majority of the respondents skipped. Suggestions were given to rephrase the question. The researcher made modifications to the questionnaire as recommended from the pilot study.

5.4.8: Reliability and Validity

One of the most important criteria for evaluating the quality of research results and tests is validity and reliability (Saunders, Lewis & Thornhill 2016). Validity measures whether the questions measure what they are meant to measure, and reliability refers to the measurement instrument's ability to give consistent answers (Churchill 1979; DeVellis 2016; Kline 2013). Measurements must be reliable and precise so that the same results can be obtained by another researcher using the same instruments or measurements (Saunders, Lewis & Thornhill 2016). Thus, the scale items' internal consistency was confirmed using the Cronbach's alpha reliability measure, while validity was confirmed by testing both convergent and discriminant validity of all constructs. The Cronbach's Alpha is the most prevalent indicator of scale reliability and demonstrates the interrelationship between several items that comprised a scale. Cronbach's alpha values range from zero to one (0-1). Higher values suggest greater scale reliability and

vice versa. For good reliability, it is recommended that the alpha values of Cronbach should be 0.70 or higher (Hair et al. 2017). Despite the recommendation to have a value of 0.70 or higher, Nunnally (1978) suggests a lower threshold of 0.60 is acceptable, especially at the research's developmental stage. However, (DeVellis 2016) deemed the threshold of 0.60 not acceptable.

5.4.8.1: Pilot Reliability Check

The constructs' reliability was tested using the SPSS software version 26. The reliability test findings showed values above 0.6, which acceptable threshold for reliability (DeVellis 2016), especially in the early stages of a study (Nunnally 1978). Thus, the result corroborates an excellent degree of consistency for all constructs (DeVellis 2016; Kline, P 2013; Nunnally 1978). With such acceptable values found, the survey instrument was considered accurate. Cronbach's alpha values are shown in Table 5.2.

Table 5.2: Pilot Test Reliability Result

Construct	**Cronbach's Alpha**	**No. of items**
TQM	0.791	62
Employee satisfaction	0.627	15
Employee perception of Service quality	0.708	31
Patient perception of service quality	0.822	31
Patient satisfaction	0.674	10

This research takes cognizance of drawbacks associated with surveys, such as potential bias, errors, the probability of low response rate, and reducing the number of questions in a questionnaire if the respondent's willingness to participate in the survey is not taken for granted. The study uses a large sample size, reminders, and, where necessary, questionnaire readmission and questionnaire structuring without ambiguities to fix the drawbacks. Besides, reliability and validity strategies were implemented fully to address established drawbacks in surveys.

5.4.9: Sampling Method

This study's participants were selected through convenient-quota sampling from two Nigerian general hospitals based on the number of clients treated in each hospital and the sample group's volume. Quota sampling is a non-probability sampling method that a researcher utilises to select a sample according to a fixed quota (Saunders, Lewis & Thornhill 2016). The researcher

uses his decision to pick the sample population conveniently after stratifying the population into groups based on pre-specified characteristics. Quota sampling is proper when there is limited time, and the research budget is very tight (Saunders, Lewis & Thornhill 2016). Participants were selected using convenience sampling, a beneficial sampling approach to reach participants at the most convenient time. The researcher decides how many of the categories are picked. This type of sampling refers to selecting controls, ensuring that the specified quotas are obtained from each specified population subgroup. Note, quota sampling has drawbacks, including difficulty adding particular persons rather than others, and there's always a chance for sampling bias.

5.4.9.1: Population and Sample

The persons, activities, or things that the researcher is interested in and wishes to be the focus of the study are known as the population (Sekaran & Bougie 2016) while collecting possible persons from the population that would participate in the study is the sample (Lavrakas 1998). This study's populations are employees and patients of the Nigerian general hospitals, which are states owned hospitals that mostly attend to most Nigerian people for health-related issues. Two hospitals located in two different states were selected for this purpose, and the requirements are that these hospitals must be state-owned and have over 100-bed spaces. The two states are Abuja and Delta, with Abuja located in the Northcentral part of the country and Delta state located in the southern region. Abuja and Delta states were chosen based on their economic importance to Nigeria. While Abuja is Nigeria's capital where most economic activities and governance occur, Delta state is one of the wealthiest crude oil-producing states, a mainstay of the Nigerian economy. So, they are both significant states to the economy of Nigeria.

The samples for the study comprised three professional groups of doctors, nurses, and administrative staff employed in the hospitals for a year and above. The patients' group comprised patients, family members of patients, and friends of patients who attended the government hospitals for diagnosis and treatment. The following patients were excluded from the study: first-time patients waiting for diagnoses and treatment, vulnerable groups of patients, e.g., people highly dependent on medical care that are unable to give consent, people with cognitive impairment, mental illness, current long-term care residents, and patients with limited English proficiency.

Choosing frontline hospital employees: doctors, nurses, and administrative staff as the sample for this study is because they are mostly in contact with patients and are more suitable for assessing the quality of service delivery in the hospitals. The inclusion of patients' samples in the study is because the evaluation of the service quality level by employees may be biased. The consumers are the beneficiaries of the services; hence, their assessment of the quality of the services they provide appears to be more credible.

5.4.9.2: Sample Size

Slavec and Drnovsek (2012) contend that there are no established rules regarding sample size. However, multivariate analysis techniques such as the Structural Equation Modelling (SEM) need at least 100 samples (Hair et al. 2010). Since SEM was chosen as the key method for data analysis in this study, the requirements were the key determinants of sample size, as recommended by Hair et al. (2010) and used by various scholars (Agrawal 2019; Amin et al. 2017; Putri et al. 2017). In structural equation modelling (SEM), the 10-times rule for determining the minimum number of sample size requires the sample size to be greater than ten times the maximum number of inner or outer model links pointing at any latent variable in the model (Hair et al. 2010). In this study, six arrows point at the higher-order construct TQM, which gives 10 x 6 = 60. Therefore, the initial sample size of 500 falls between a minimum of 60 and a maximum of 500.

Additionally, another method recommended for determining a minimum sample size to generate the minimum effect size in PLS-SEM studies is the power analysis (Ali et al. 2018; Benitez et al. 2020; Cheah et al. 2020; Hair et al. 2019). In line with such recommendations, this study uses the power analysis software G*Power version 3.1.9.6. The author used the recommended settings of 0.8 statistical power and a significance level of 0.05. The highest number of independent variables in a model are needed to compute as predictors. In this study, the second-order construct of TQM comprised the highest independent variables (Leadership, strategy, patients, Measurement analysis and knowledge management, workforce, and operations). Therefore, six predictors and the required minimum size of the sample to attain a power of 0.8 with effect size assumed to be ($f^2 = 0.15$) is 98. The G*power output shows that this study needs a minimum sample size of 98 to attain the desired effect. See Figure 5.2 below.

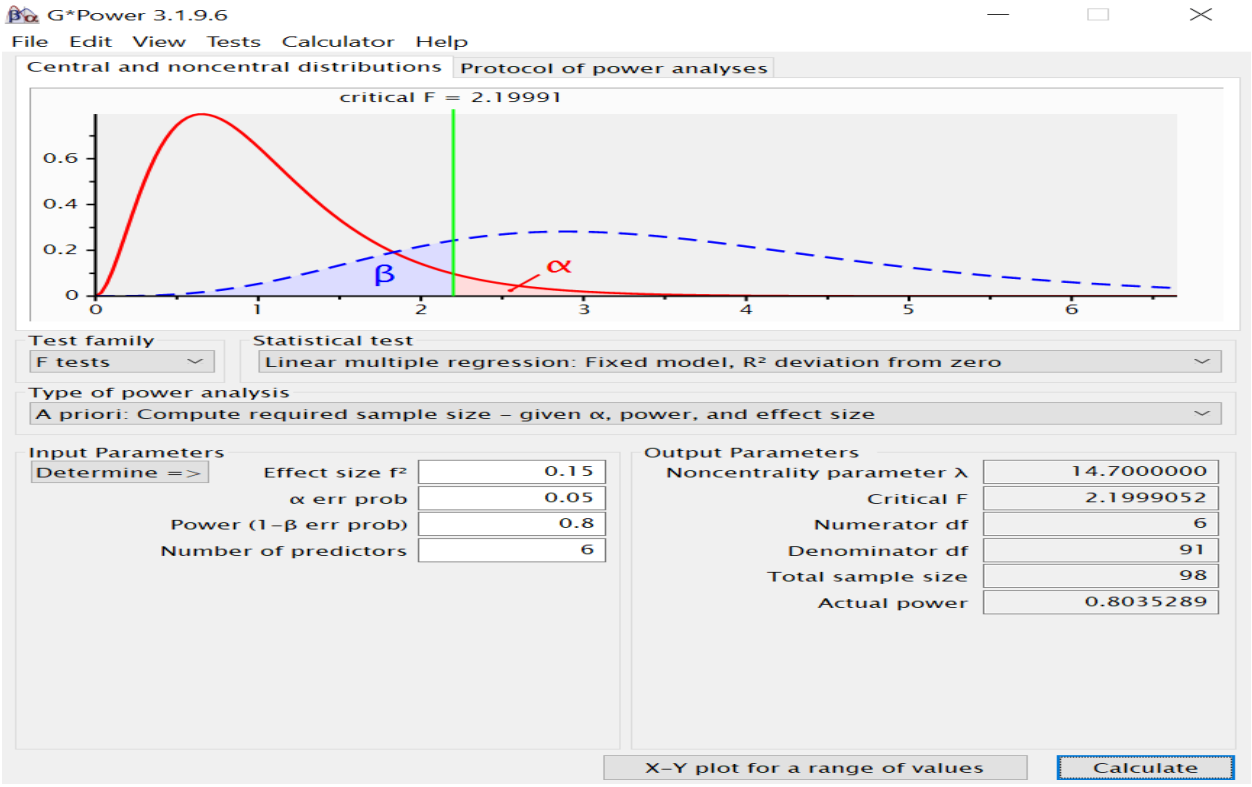

Figure 5.2: Minimum Sample Requirement Output from G*Power

5.5: Data Collection Approach

Two approaches were used for collecting data in this study: A paper survey and an online survey. The researcher did not originally plan this approach. Initially, a paper survey was preferred because it has the advantage of gaining more responses due to the face-to-face meeting with respondents compared to an online survey that may receive little to no attention. However, after close to two months of the researcher collecting data at the research locations, time became a critical factor. The researcher needed to return to Australia; hence an online survey was used to supplement the data collection.

5.5.1: Paper Survey

The researcher contacted the hospitals' relevant offices, and a letter introducing the researcher, the research topic, and the aim of the research was presented to them. Also submitted are the ethical approval letters from the hospitals' management that grant permission to the researcher to carry out the research on their premises. The facilities acknowledged the approval letters and gave guidance on how to proceed.

The researcher directly approached the hospitals' departments/premises and made an introduction. Patients were contacted during their waiting time in the outpatient waiting room and after visiting the hospital. Participants were given written and verbal explanations of the study's purpose, the procedures involved, potential benefits, potential risks, and assurance of confidentiality. Participants were also told they are participating in their own free will and are free to ask any questions, decline to participate, or pull out of the project at any time without repercussions.

After the researcher explained the study to participants, those interested in participating gave verbal acceptance. The researcher presented them with a self-addressed envelope, the informed consent form, the questionnaire, and the information to participant form, which thoroughly explains the purpose of the researcher's study and role. All participants were advised to complete the informed consent form before proceeding further. Thus, a completed informed consent form indicates a participant's consent to partake in the research of their own free will. The informed consent form and questionnaire were sealed in the self-addressed envelope and returned directly to the researcher in person or through the hospitals' reception offices.

5.5.2: Online Survey

Despite some drawbacks, online surveys can effectively collect data with quicker returns and fewer reminders (Smith et al. 2013). Therefore, an online questionnaire was used to meet the number of intended participants (Buchanan & Hvizdak 2009; James & Busher 2015; Roberts & Allen 2015). The online survey was administered using Qualtrics (https://www.qualtrics.com). A customised link was created in Qualtrics and sent to respondents via social media platforms like Facebook, LinkedIn, and WhatsApp messenger, as done in previous research (Baltar & Brunet Icart 2011, 2012). The link was sent to only those that agreed to participate in the study after initial contact. After an online search of Nigerian healthcare professional groups, WhatsApp/Facebook groups, and open campaigns on LinkedIn, initial contact was made. Other participants got reached through personal contacts and recommendations using the snowballing technique. All potential respondents were given prior electronics invite to partake, and the purpose of the study was fully explained (Cook, Heath & Thompson 2000; Dillman 2011; Hoonakker & Carayon 2009). Some respondents preferred emailing and were sent the link through their given email addresses. Notifications were sent to the respondents who did not respond to the initial invitations.

A total of 1300 staff and patients from the respective hospitals were contacted, and questionnaires were distributed according to consent received. Out of the respondents contacted, 752 responses were received within three months of survey distribution, but only 346 were found usable. The returned questionnaires from health workers were 402, and from patients 350, making a total of 752. Thus, 346 / 752 x 100 = 46% response rate which is deemed okay (Bryman & Bell 2015).

5.5.3: Test for Non-response Bias

An error in calculating a population attribute based on a sample of survey data that underrepresents other survey respondents due to non-response is known as Non-response bias (Berg 2005). Consequently, a non-response bias test was carried out using analysis of variations between early and late waves of survey responses (Khanna 2009; Kureshi, Qureshi & Sajid 2010). The characteristics of early responses and late responses were compared 60% - 40% and validated using the independent t-test with a confidence interval set at 95% (Huo 2012; Qrunfleh & Tarafdar 2014; Yu 2015). There were no substantial differences among the demographic variables at $p < .05$ between early and late responses. Therefore, it was concluded that non-response bias does not pose any threat to the data.

5.6: Preliminary Data Analysis

A preliminary analysis was carried out to transform the raw data from the surveys into a usable statistical format for analysis, which entails data screening, missing values, and distribution normality was initially checked (Hair et al. 2010).

5.6.1: Screening of Data

The data screening ensures that the data set is safe and ready for more statistical review (Field 2013). After the survey got completed, the responses received were coded into SPSS software. Regarding online questionnaires, they were downloaded automatically from Qualtrics to the SPSS software, and this came with some irrelevant data like IP addresses. At first, the researcher had to screen the data visually to detect cases to be filtered out. Filtering of the questionnaire removes unsuitable respondents who did not represent the targeted sample. The second move was to ensure that questionnaires were not answered uniformly, i.e., with the same answer for all items with the same pattern.

5.6.2: Missing Values

Missing data pose significant obstacles for SEM estimates, thus addressing missing values before statistical analysis is acceptable (Hair et al. 2014; Little & Rubin 2014). In general, missing data less than 10% on an individual case may be detected, and treatment may be given, except in the case of a specific non-random pattern (Hair et al. 2014). Missing cases are excluded if the impairment is concentrated on a small subset of variables or if the missing values are closely correlated with other complete variables (Hair et al. 2014). Methods such as list-wise or pairwise deletion can be used in this situation. List-wise deletion may not be suitable for small samples because it eliminates whole cases with missing values, limiting existing data and generalisability to the population (Allison 2003). However, cases with missing values were eliminated using list-wise in this study as the study has an adequate sample size. List-wise and pairwise deletions can result in bias estimates where the lack of data is inconsistent (Baraldi & Enders 2010).

5.6.3: Data Normality Distribution

Normality is the most fundamental principle for multivariate analysis (Hair et al. 2014); It is the shape of the data distribution that corresponds to the normal distribution. If there is a substantial variance in the normal distribution, all the resulting statistical tests would be invalid (Hair et al. 2014). Each variable's univariate normality test was carried out, followed by the multivariate normality test. Univariate normality is a prerequisite for multivariate normality (Hair et al. 2014). Univariate normality, however, does not guarantee multivariate normality. The univariate normality for every element was verified using skewness and kurtosis estimates. A skewness of less than three and kurtosis of less than ten are considered univariate normality (Kline 2015). After verifying each element's univariate normality, the coefficient of kurtosis was examined for multivariate normality. Standardized coefficients greater than three indicate non-normality (Mardia 1970, 1974).

5.6.4: Data Analysis

This research performed data analysis in three stages (1) data cleansing, (2) Measurement model assessment, and (3) evaluation of the structural model as recommended by Benitez et al. (2020). The data collected was preliminarily reviewed and cleaned before performing a statistical analysis. At this point, inadequate responses were eliminated, missing values treated,

and the normality of distribution checked. This stage was carried out to convert fresh data from the survey into a design fit for multivariate statistical analysis (Hair et al. 2010).

This study utilised IBM SPSS statistics (version 26) to provide information on respondents' profiles, frequency counts, means, standard deviations, and percentages. The Variance-based partial least squares structural equation modelling (PLS-SEM) was applied to evaluate both the measurement and structural models. Specifically, the SmartPLS 3 package for Regression analysis, testing for relationships among the variables under study and test of hypotheses, was utilised (Hair et al. 2019; Sarstedt et al. 2019)

5.6.5: Structural Equation Modelling

Structural equation modelling (SEM) is a second-generation data analysis technique that tests complete theories by estimating latent variables in the measurement model and assesses the relationship between them simultaneously (Hair, Ringle & Sarstedt 2012). SEM models compensate for measurement error; thus, they have a more reliable estimation of how well the data support the model than the regression techniques (Gefen, Straub & Boudreau 2000). Structural Equation Modelling (SEM) has become a relevant statistical instrument in the social sciences and behavioural sciences. SEM can model nomological networks using abstract principles demonstrated through constructs and integrates these constructs in a structural model to study their relationships (Benitez et al. 2020). Before performing SEM analysis, it is necessary to define the model correctly; the direction, nature of the relationships between constructs and their respective indicators accurately depicted, as an incorrect model specification can lead to inaccurate results that affect the process of building theory (Benitez et al. 2020; Sarstedt et al. 2019).

Bisbe, Batista-Foguet and Chenhall (2007) stated that a construct is an underlying concept manifesting itself through a series of interchangeable indicators that characterise the construct as a reflective model. Alternatively, if the construct is understood to be created by a series of constitutive indicators and not interchangeable, it is a formative model. According to Jarvis, MacKenzie and Podsakoff (2003), reflective models are principal factor models, and formative models are composite factor models. A reflective construct has arrows depicting the relationship's direction from the construct to the items. In contrast, a formative construct has arrows representing the relationship from the items to the construct.

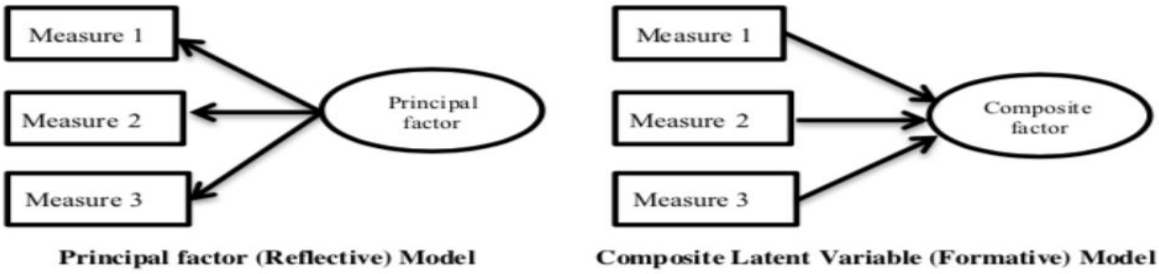

Figure 5.3: Reflective and Formative Models

Source: *Jarvis, MacKenzie and Podsakoff (2003)*

Regarding this current study, all TQM practices constructs, e.g., leadership, strategy, patient focus, measurement analysis and knowledge management, workforce focus, and operations, were reflectively measured and modelled as lower-order components which form a higher-order component, TQM. The service quality components, i.e., tangible, reliability, responsiveness, assurance, and empathy, are reflectively measured and serves as the lower-order construct to the higher-order service quality. The lower-order components are the ingredients that composed the higher-order construct, sometimes called emerging variables (Benitez et al. 2020). While the lower-order components have reflective measures, they measure the higher-order components formatively.

The measure of quality management in the literature is multidimensional (Gronroos 1984; Parasuraman, Zeithaml & Berry 1988), an idea buttressed by other researchers (Lee, Lee & Olson 2013; Terziovski & Samson 1999). Several scholars have extended the dimensions to smaller domains. Although service quality is a multidimensional construct that could be subdivided or modified in different ways, only a few studies have measured it at a higher abstraction level (Rahman et al. 2017; Thirunavukkarasu & Nedunchezian 2019). Thus, the conceptualisation of quality practices as a second-order construct is feasible.

These models in SEM are referred to as Hierarchical Component Models (HCMs) with the lower-order component (LOC) either reflecting the higher-order component (HOC) or forming the higher-order component (Sarstedt et al. 2019). Four types of higher-order constructs are shown in figure 5.2 below.

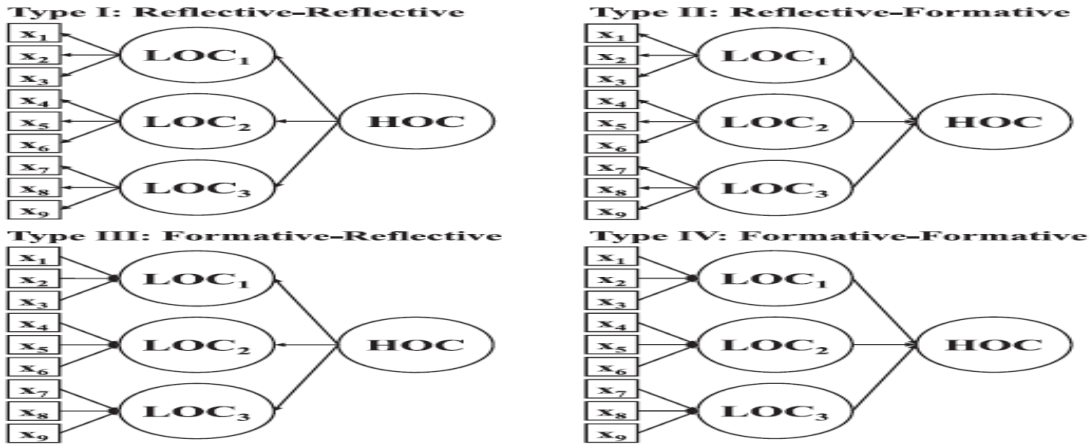

Figure 5.3: Types of higher-order constructs.

Note: LOC = lower-order component; HOC = higher-order component.

Source: Sarstedt et al. (2019).

Once models are specified correctly, the appropriate SEM analytical tool is selected for analysis. There are two SEM methods: covariance-based (CB-SEM) and variance-based partial least squares (PLS-SEM). The SEM methods' choice depends on the properties of the data from the study and the model (Benitez et al. 2020; Hair, Ringle & Sarstedt 2011). According to the authors, both methods are complementary, so researchers should select the methods based on the similarity between their study characteristics and objectives and the method's characteristics and goals. There are several rules of thumb for choosing either method, as listed in Figure 5.4 below:

Research Goals

- If the goal is predicting key target constructs or identifying key "driver" constructs, select PLS-SEM.
- If the goal is theory testing, theory confirmation, or comparison of alternative theories, select CB-SEM.
- If the research is exploratory or an extension of an existing structural theory, select PLS-SEM.

Measurement Model Specification

- If formative constructs are part of the structural model, select PLS-SEM.
  Note that formative measures can also be used with CB-SEM but to do so requires accounting for relatively complex and limiting specification rules.
- If error terms require additional specification, such as covariation, select CB-SEM.

Structural Model

- If the structural model is complex (many constructs and many indicators), select PLS-SEM.
- If the model is nonrecursive, select CB-SEM.

Data Characteristics and Algorithm

- If your data meet the CB-SEM assumptions exactly, for example, with respect to the minimum sample size and the distributional assumptions, select CB-SEM; otherwise, PLS-SEM is a good approximation of CB-SEM results.
- *Sample size considerations:*
  - If the sample size is relatively low, select PLS-SEM. With large data sets, CB-SEM and PLS-SEM results are similar, provided that a large number of indicator variables are used to measure the latent constructs (consistency at large).
  - PLS-SEM minimum sample size should be equal to the larger of the following: (1) ten times the largest number of formative indicators used to measure one construct or (2) ten times the largest number of structural paths directed at a particular latent construct in the structural model.
- If the data are to some extent nonnormal, use PLS-SEM; otherwise, under normal data conditions, CB-SEM and PLS-SEM results are highly similar, with CB-SEM providing slightly more precise model estimates.
- If CB-SEM requirements cannot be met (e.g., model specification, identification, nonconvergence, data distributional assumptions), use PLS-SEM as a good approximation of CB-SEM results.
- CB-SEM and PLS-SEM results should be similar. If not, check the model specification to ensure that CB-SEM was appropriately applied. If not, PLS-SEM results are a good approximation of CB-SEM results.

Model Evaluation

- If you need to use latent variable scores in subsequent analyses, PLS-SEM is the best approach.
- If your research requires a global goodness-of-fit criterion, then CB-SEM is the preferred approach.
- If you need to test for measurement model invariance, use CB-SEM.

Figure 5.4: Rules of Thumb for CB-SEM or PLS-SEM

Source: *Hair, Ringle and Sarstedt (2011).*

As seen in the rule of thumb mentioned earlier, the research goals, characteristics of the data, and appropriate theoretical specification of the model are the requirements to be considered when selecting a suitable tool to perform a meaningful and accurate analysis. This study deals with the relationship amongst variables, the model specified to comprise both reflective and formative constructs, and it is a complex model that needs to be parsimonious (Benitez et al. 2020; Sarstedt et al. 2019). Besides, the study's data is non-normal, and latent variable scores are needed to compute the second-order constructs measures. Thus, PLS-SEM is the appropriate tool for analysis in this research

5.6.6: PLS-SEM Justification

PLS-SEM is a variance-based structural equation modelling approach that estimates partial model constructs using principal component analysis and ordinary least squares regressions. It is a method viewed as a substitute for covariance-based structural equation modelling (CB-

SEM) with lots of distinctive assumptions and restrictions (Hair et al. 2019). PLS-SEM is variance-based because it accounts for the total variance used for parameter estimates. In contrast, CB-SEM only observes common variance to estimate models' parameters through the data's covariance matrix (Hair et al. 2019).

There are several reasons PLS-SEM approach is most suitable for this current study's analysis: it tests causal relationships among several latent constructs simultaneously (Henseler, Ringle & Sinkovics 2009); it caters for measurement errors (Chin 1998), and a host of scholars have used it successfully in empirical studies (Amin et al. 2017; Farooq et al. 2018; Roni, Djajadikerta & Ahmad 2015). SmartPLS is an estimator of linear, non-linear, recursive, and non-recursive structural equation models (Benitez et al. 2020). Compared to co-variance-based CB-SEM, PLS-SEM has no minimum requirements of the restrictive assumptions imposed by CB-SEM, such as measurement scales, sample size, and distributional assumptions (Benitez et al. 2020; Hair, Ringle & Sarstedt 2011; Hair Jr, Howard & Nitzl 2020).

This study picked PLS-SEM over CB-SEM as a more suitable technique due to several reasons as follows: 1, the research focuses on prediction and explaining the variance in key target constructs of TQM, employee satisfaction, service quality, and patient satisfaction (Benitez et al. 2020; Chin 2010; Hair, Ringle & Sarstedt 2011); 2, the research model shows a complex structure that includes first-order and second-order hierarchical constructs (Benitez et al. 2020; Chin 2010; Hair, Ringle & Sarstedt 2011); 3, the use of latent variables scores for formative constructs evaluation, and the capability of PLS to estimate both reflective and formative constructs simultaneously (Benitez et al. 2020; Chin 2010; Hair, Ringle & Sarstedt 2011). Also, this study comprised both reflective and formative constructs, which is one big advantage of using PLS-SEM.

5.6.7: Confirmatory Factor Analysis

A confirmatory factor analysis (CFA) was carried out on the final data to assess the construct's dimensionality after preliminary analysis as explained earlier (Becker, Klein & Wetzels 2012; Hair Jr, Howard & Nitzl 2020; Sarstedt et al. 2019; Slavec & Drnovsek 2012). Note, exploratory factor analysis (EFA), or both EFA and CFA, can be utilised in determining the dimensionality of measures (Huo 2012; Yu 2015). A measure's dimensionality refers to the items' homogeneity, which is the number of factors needed to reflect the correlation between

items (Netemeyer, Bearden & Sharma 2003). Homogeneity means the manifest variables reflect a single underlying construct (Clark & Watson 1995).

There is an assumption that researchers may not know the dimensionality of the measures; thus, EFA should be conducted at the scale development phase, especially when developing new measures (Netemeyer, Bearden & Sharma 2003). However, when already developed measurement scales found valid and reliable in the literature are adopted, EFA is irrelevant (Netemeyer, Bearden & Sharma 2003). CFA is applicable when researchers have prior knowledge of the latent variables' structure from empirical research (Byrne 2013). This study's measures were adapted from previous studies, and using CFA in SmartPLS is adequate, as shown in several empirical studies (Ali et al. 2018; Amin et al. 2017; Koay et al. 2020; Tehseen et al. 2019).

According to Hair et al. (2020), a primary objective of EFA is to reduce data through exploring the pattern of responses, while that of CFA is measurement model confirmation. Hair et al. (2020) enumerated several distinctive features between EFA and CFA as follows: 1, while EFA results in factor identification, CFA starts with the conception of the theoretical constructs meant for confirmation and progresses to structural modelling after validation of the composite measurement models; 2, While EFA gives only Cronbach's alpha reliability, CFA includes composite reliability, measurement of reflective models, convergent validity, discriminant validity, and structural modelling (Hair et al. 2020). Thus, using the confirmatory factor analysis in this study is the most appropriate approach.

5.6.8: Process of Confirmatory Factor Analysis

CFA process entails examining the reliability of individual indicators, reliability of constructs, convergent validity, discriminant validity, and overall fit of the model (Benitez et al. 2020; Hair Jr, Howard & Nitzl 2020). The first step is to assess the saturated model. i.e., allowing all constructs to correlate as specified by the researcher freely but with the same concept proposed in the model and accessing the overall model fit by checking the SRMR value and a SRMR value below the recommended threshold of 0.08 is accepted as a good overall model fit (Benitez et al. 2020). The step helps evaluate the validity of the measurement and the composite models since possible model misfits can be attributed entirely to the measurement misspecifications in the composite or measurement models, thereby giving empirical support for the constructs showing the existence of latent variable or emergent variable (Benitez et al. 2020). After that,

scholars should assess the reflective and formative measurement models before assessing the structural model by first checking all items for indicator reliability, and items greater than 0.60 are retained for further analysis (Benitez et al. 2020; Hair Jr, Howard & Nitzl 2020; Hair Jr et al. 2017).

5.7: Independent Sample T-Test Analysis

An independent T-test was performed to determine the gap in service quality perception between employees and patients of the Nigerian general hospitals. The test involves using SPSS to compare the means of both groups of respondents, i.e., the external service quality data, and determining the difference using Levene's Test for Equality of Variances.

5.8: Test of Hypotheses

Four hypotheses in this study were evaluated using the structural path model. The t-value above 1.95 suggests a significant path $p < 0.05$ (Byrne 2013). Other values checked include the coefficient of determination R^2, the effect size $f^{2,}$ and the predictive value Q^2. All the aforementioned were tested to assess the degree to which the manifest variables describe the latent variables' variance.

5.9: Ethical Requirement

This study involves a human sample, so approval from Victoria University Human Research Ethics Committee (VUHREC) was applied for and granted before the researcher proceeded with data collection. The ethics application with ID number (HRE19-028) was granted on 16/08/2019. Also, the researcher applied for and obtained ethical clearances from the ethics departments of respective research centres.

The researcher ensured professionalism and strictly adhered to the stipulated legal and ethical standards that ensure no harm or potential threats to respondents during and after the research. Specific details on the study's voluntary nature, the freedom to withdraw at any time were made known to all participants in written and verbal forms. The study's participants were adults of 18yrs and above, so they are eligible to give valid consent before being recruited to participate in the research. Participants were made to feel relaxed and could ask questions freely. Also, participants were given a free choice to fill the questionnaire at their own convenient time without any pressure from the researcher.

The researcher explained possible risks and clarified that there would not be any monetary incentives or benefits to the participants during or after the research phase. Further, the researcher clearly stated that participants are at liberty to accept or refuse to be involved without any form of repercussion. Participants were assured of data security that hard data would be kept securely and soft data secured in a computer by a password with limited access confined to the researcher and supervisors alone and appropriately disposed of after five years. All information would be kept strictly confidential, and no identifiable information would be used to ensure anonymity.

There could be a risk to the study in negative perception, whereby participants may not want to be completely honest in a survey because they do not want to be perceived negatively. Among the subjects of the investigation, there may be real culprits of the research problem, and it would be embarrassing for such people to admit to being part of the problem. Therefore, the questions were designed to reduce this risk by not being personally explicit and general regarding issues under investigation. Further, the respondents were assured that their names and any other personally identifiable information would not be included in the study. If any participant's personal details were given inadvertently, they would be removed by the researcher.

To further protect all parties involved in the study, participating hospitals were not identified in the questionnaire, and participants' responses were blinded from the hospitals.

5.9.1: Informed Consent

Informed consent was obtained from the employees and patients using a standard Informed Consent form. Included in the consent form, was any potential risks and benefits from participating in the study. Participants were informed that no compensation would be received to participate in the study. All participants were duly informed of respect for their privacy. The aims and benefits of the research were clearly explained to participants and asked if they understood what was required of them. The right to partake or withdraw at any time in the study was made clear to all participants. Those who showed interest were asked to read the information to the research participants carefully, fill the informed consent form and return it to the researcher to indicate their agreement to participate in the research. A completed informed consent form indicates the consent of participants. See appendix B and C for informed consent and information to participants' forms.

5.10: Chapter Summary

This chapter clarifies the approach applied in the research: The research paradigm and the quantitative methodology employed were justified; the process of instrument development and validation was documented, and the techniques for collecting quantitative data using paper and online surveys were shown. The online and paper questionnaires were given to employees and patients of the Nigerian general hospitals. The structural equation modelling technique was used to analyse data, specifically, the SmartPLS-SEM. The author employed the two-stage reflective-formative hierarchical component model (HCM) technique to assess the measurement model before assessing the structural model. The next chapter addresses the study's analysis and findings.

Chapter 6: Data Analysis

6.1: Overview

This chapter details the data analysis procedure, assessment of the measurement and structural models, test of the proposed hypotheses, and presentation of the research findings. The first section presents data cleansing before analysing the demographic profiles of respondents.

6.2: Preliminary Analysis

Data was extracted from online questionnaires to SPSS and paper questionnaires manually inputted. All irrelevant information was deleted, and variable names developed. The data was first screened manually for errors. Data should be checked for data collection issues like missing values, unusual response patterns, and data delivery problems after the data collection (Hair et al. 2017).

6.2.1: Missing Values

Missing values is a common problem in the survey questionnaire. Many potential respondents were approached, and there is the probability that respondents chose not to fill out the complete questionnaire (Saunders, Lewis & Thornhill 2016). Addressing missing values is essential as they can reduce the study's predictive power and lead to skewed results (Saunders, Lewis & Thornhill 2016; Tsikriktsis 2005). The data collected were analysed to identify any missing value issue and appropriate solutions applied to resolve this issue.

The respondents that decided not to answer any questions or where most of the measures were left unanswered were excluded based on a case-wise deletion as suggested by Hair et al. (2017). A total of 18 cases with missing values and numbers beyond 164 were deleted, as they have no impact on the sample for the study; thereby, resulting in a final sample of 328 questionnaires. Note, a quota sampling was applied for this study, and thus late responses were deleted from the higher imbalance group in order to obtain a quota sample.

6.2.2: Data Normality Analysis

Normality was assessed using skewness and Kurtosis and the Shapiro-Wilk test suggested by Hair et al. (2017). The tests' results showed some distorted values fall beyond the stringent

value range of + 1 to -1 (Lewis-Beck, Bryman & Liao 2003) and the kurtosis range of + 3 to – 3 (Hair, 2017). When the Shapiro-Wilk test was done, the null hypothesis was rejected, as the data significantly violated the assumption of data normality. However, with sufficiently large sample sizes, violation of the assumption of normality does not cause significant problems (Pallant 2013), and the data distribution can be ignored (Altman & Bland 1995). It means parametric procedures could be used even though the data are not normally distributed (Elliott & Woodward 2007). Besides, since PLS-SEM does not make any assumptions about normality (Hair et al. 2017; Tehseen et al. 2017), it provides a robust way to handle these data. This result further gives credence to using PLS-SEM as the analytical tool for estimating the inner and outer parameters of the model for this analysis. Results of tests are shown in appendix H.

6.2.3: Common Method Bias

Common method bias could be a problem when respondents answer items in a single questionnaire at the same point in time, with the same Likert scale, which can lead to inaccurate assessments of relationships (Podsakoff et al. 2003). Since the study asked all respondents to answer questions using a 5-point Likert scale, common method bias was assessed using the post-hoc Harman's single factor test (Podsakoff et al. 2003. All items used for this research (excluding demographics) were included in an un-rotated principal component analysis to detect whether a single factor constitutes more than 50% of the variance. With all factors suppressed into a single factor and using the un-rotated option in SPSS, the results showed a single factor explains 7.201% of the total variance, which is less than 50%. Thus, the study has no problem with common method variance. See Appendix I for the result.

6.3: Respondents Profiles

Demographic questions of the respondents were included in the questionnaire. The respondents' descriptive characteristics for both employees and patients were summarised in Table 6.1 below.

Table 6.1: Profile of Respondents

	EMPLOYEES			**PATIENTS**	
Attributes	Frequency	%	Attributes	Frequency	%
Gender			Gender		
Male	72	43.9	Male	69	42.1
Female	92	56.1	Female	95	56.9

Age			Age		
18 – 29	25	15.2	18 – 29	46	28.0
30 – 39	51	31.1	30 – 39	55	33.5
40 – 49	49	29.9	40 – 49	23	14.0
50 – 59	27	16.5	50 – 59	24	14.6
60 and above	12	7.3	60 and above	16	9.8
Marital Stat.			Marital Status		
Single	61	37.2	Single	39	23.8
Married	49	29.9	Married	67	40.9
In a relationship	14	8.5	In a relationship	36	22.0
Divorced	15	9.1	Divorced	15	9.1
Widowed	25	15.2	Widowed	7	4.3
Profession			Employment Status		
Doctor	39	23.8	Employed	48	29.3
Nurse	67	40.9	Unemployed	46	28.0
Amin. staff	58	35.4	Retired	12	7.3
			Student	58	35.4
Years in Job			Level of Education		
1 – 4yrs	23	14.0	Primary	4	2.4
5 – 9yrs	30	24.4	Secondary	42	25.6
10 – 14yrs	43	20.1	Diploma	41	25.0
15yrs and above	68	41.5	Undergraduate	67	40.9
			Postgraduate	10	6.1
			Total		
Level of Education			Religion		
Primary	Nil		Christian	80	48.8
Secondary	Nil		Muslim	82	50.0
Diploma	65	39.6	Traditional	2	1.2
Undergraduate	52	31.7			
Postgraduate	47	28.7			
Religion			Duration in Hospital		
Christian	92	56.1	1 night or less	37	22.6
Muslim	69	42.1	2 - 4 nights	83	50.6
Traditional	Nil		5 - 9 nights	29	17.7
			10 nights and above	15	9.1
Total	164		Category of patient		
			Patient	74	45.1
			Family member	62	37.8
			Friend of patient	28	17.1
			Reasons for admission		
			Surgical	40	24.4

			Medical Maternity Not sure	76 38 10	46.3 23.2 6.1
			Total	164	

It can be seen from the table that respondents in the employee group comprised 72 males (43.9%) and 92 females (56.1%). 25 respondents (15.2%) are within the ages of 18-29, 51 respondents (31.1%) within 30 – 39 years, 49 respondents (29.9%) within the age range of 40 – 49, 27 respondents (16.5%) within 50 – 59 years, 60years and above, having 12 respondents (7.3%). In terms of marital status, 61 respondents (37.2%) were single, 49 respondents (29.9%) married, 14 respondents (8.5%) are in a relationship, 15 respondents (9.1%0 divorced and 25 (15.2%) widowed. Regarding the profession of respondents, 39 doctors account for (23.8%), 67 Nurses account for (40.9%), and 58 administrative staff (35.4%). 23 respondents (14.0%) had been in the job for a period of 1 – 4yrs, 30 respondents (24.4) had been in the job for 5 – 9 years, 43 (20.1%) within a period of 10 – 14years and 68 respondents (41.5%) had been in their jobs for 15years and above. The level of education of the employees, 65 (39.7%), is with a diploma, 52 undergraduate degree holders constitute (31.7%), and 47 respondents (28.7%) are holding postgraduate degrees. 92 respondents (56.9%) are Christians, while 69 (42.1%) are Muslims.

The patients comprised 69 males (42.1%) and 95 females (56.9%). Patients with age ranging from 18 – 29 are 46 (28.0%), those within 30 – 39 years are 51 (33.5%), 23 patients (14.0%) are within 40 – 49 years, 24 (14.6%) within age range of 50 – 59, while 16 (9.8%) falls within 60 years and above. Single patients are 39 (23.8%), those that are married are 67 (40.9%), 36 patients (22.0%) are in a relationship, 15 (9.1%) divorced, and those that are widowed are 7 (4.3%). Amongst the patients, only 48 (29.3%) are fully employed, 46 (28.0%) are unemployed, 12 (7.3%) are retired, and 58 (35.4%) comprised students. The patients' level of education, 4 (2.4%) having primary education, 42 (25.6) having secondary education, 41 ((25.0) having a diploma, 67 (40.9%) with undergraduate education, and 10 (6.1%) having postgraduate education. Patients' religion has 80 (48.8%0 as Christians, Muslims are 82 (50.0%) and 2 patients (1.2%) are affiliated to traditional religion. Patients that stayed in the hospital within one night or less are 37 (22.6%), those who stayed within 2 – 4 nights are 83 (50.6%), within 5 – 9 nights are 29 (17.7%), 10 nights and above are 15 (9.1%). Within the category of patients, 74 (45.1%) were actual patients, 62 (37.8%) were family members of the patient, and 28 (17.1%) were friends of the patient. The reasons for admission to the hospital

are 40 (24.4%) for surgical, 76 (46.3%) for medical, 38 (23.2%) for maternity, and 10 (6.1%) were not sure.

6.4: Descriptive Analysis

The study was designed using TQM practices, employee satisfaction, service quality, and patient satisfaction. The respondents were asked to respond by indicating the extent they agree or disagree with the statements, using a 5-point Likert scale (1 = strongly disagree, 2 = disagree, 3 = not sure, 4 = agree, 5 = strongly agree). The midpoint of the scale is (3), so when the mean falls below the point, it denotes disagreement with the statement; while a mean above the point indicates agreement with the statement. The following illustration describes the participants' responses.

6.4.1: Employee Ratings of TQM Practices

Table 6.2 below shows that employees of the Nigerian hospitals rate quality practices to be good with the means of the variables between the range of 3.08 and 3.51. Amongst all the practices, strategy has the highest mean score of 3.51. Measurement analysis and knowledge management were given the third-highest rating with a mean of 3.40, followed by leadership with a mean score of 3.33. Patient focus was rated with a mean score of 3.15, and workforce given the lowest rating with a mean score of 3.08.

Employee satisfaction was rated above average, with a mean score of 3.10. It indicates a satisfied workforce in the Nigerian general hospitals.

Table 6.2 TQM ratings

Constructs	**N**	**Mean**	**Std. Dev**
Leadership	164	3.33	0.500
Strategy	164	3.51	0.485
Patient focus	164	3.15	0.491
Measurement Analysis and Knowledge Management	164	3.40	0.549
Workforce	164	3.08	0.597
Operations	164	3.50	0.534
Employee satisfaction	164	3.10	0.467

6.4.2: Employee Perception of Service Quality

The employees gave responsiveness the highest rating with a mean of 3.38, and the lowest-ranked was reliability with a mean score of 2.60. It indicates that the Nigerian general hospital

employees perceive healthcare workers to be more responsive to patients than reliable to deliver the desired services. Assurance was given the second-highest ranking with a mean score of 3.27, followed by tangible with a mean score of 3.17. Empathy was rated low with a mean score of 2.93. As shown in Table 6.3 below, the rating of empathy indicates that health workers are less concerned and unsympathetic towards patients in the Nigerian general hospitals.

6.4.3: Patient Perception of Service quality

The Nigerian general hospitals' patients rated responsiveness, assurance, and empathy above tangible and reliability. As shown in Table 6.3 below, responsiveness was given the highest rating with a mean score of 3.91, followed by empathy with a mean score of 3.46, and assurance given the mean score of 3.15. Tangible and reliability were given low rankings with mean scores of 2.95 and 2.61. It indicates that the Nigerian general hospitals' patients perceived the hospitals' staff to be less reliable in delivering quality services. The physical attributes and equipment of the hospitals were perceived to be poor.

Patients' satisfaction was rated low with a mean score of 2.67. It indicates that patients are not satisfied with the services they received in the Nigerian general hospitals

Table 6.3 Employee and Patient Perception

Employee Perception				**Patient Perception**			
	N	**Mean**	**Std. Dev**		**N**	**Mean**	**Std. Dev**
Tangible	164	3.17	0.726	Tangible	164	2.95	1.050
Reliability	164	2.60	0.748	Reliability	164	2.65	1.028
Responsiveness	164	3.38	0.565	Responsiveness	164	3.91	0.645
Assurance	164	3.27	0.654	Assurance	164	3.15	0.864
Empathy	164	2.93	0.567	Empathy	164	3.46	0.574
				Patient satisfaction	164	2.67	0.559

6.4.4: Service Quality Perception Gap between Employees and Patients

The identical service quality items in both the employees ' and the patients ' surveys were used to determine the difference between employees' perception of service quality and patients' perception of service quality. After that, an independent t-test was conducted using the means of employees' perception of service quality and the corresponding means of patients' perception of service quality. The first thing was to determine if a difference exists between the two groups. Having established variance between the two groups, the next step was to test the difference in perception of the service quality items. The aim was to assess whether there

was a significant difference between the two groups' perceptions of service quality. The results are shown in Tables 6.4 and 6.5 below, indicating statistical significance between both groups in some parameters.

Table 6.4: Independent Samples T-Test for Group difference

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Means	Equal variances assumed	9.310	.002	-3158	326	.002	-15107	.04784	-24519	-05696
	Equal variances not assumed			-3158	303.489	.002	-15107	.04784	-24522	-05693

An independent samples t-test was carried out to determine the potential difference between the employee groups and patients groups. In the result in Table 6.4 above, significant difference was found at t (303.489) = - 3158; p = .002). The comparison results confirmed the researcher's decision to use the scores of patients' perceptions of service quality in the final analysis, as patients are often regarded as the best judge of hospital service quality (Naidu 2009).

Table 6.5: Differences of Perceived Service Quality between Employees and Patients

Variable	Group	Mean	t	df	Mean Difference	Std. Error Difference	Sig. (2-tailed)
The hospital's staff look professional in appearance	Employees Patients	3.22 2.84	2.681	316.226	.384	.143	.008*
The hospital's physical facilities reflect the concept of a hospital	Employees Patients	3.22 2.76	3.322	315.237	.463	.140	.001*
Materials associated with the hospital's services are visually appealing	Employees Patients	3.01 2.43	3.887	315.263	.573	.147	.000*
The hospital gives appropriate treatment at first attempt	Employees Patients	2.39 2.77	-2.699	326	-.384	.142	.007*
The hospital keeps its promise to provide services at the appointed time	Employees Patients	2.49 2.93	-2.899	311.172	-.433	.149	.004*
The hospital provides services on time	Employees Patients	2.95 2.54	3.000	319.653	.402	.134	.003*
Staff are willing to listen carefully to patients	Employees Patients	3.77 4.08	-2.875	312.153	-.305	.106	.004*
Staff are always willing to help patients	Employees Patients	3.32 3.80	-4.612	287.826	-.476	.103	.000*
The hospital provides efficient services	Employees Patients	3.26 4.09	-7.601	312.303	-.835	.110	.000*

staff do not hesitate to respond to patients' requests	Employees Patients	2.85 4.04	-10.622	321.549	-1.189	.112	.000*
Staff respond quickly to an emergency	Employees Patients	3.24 3.68	-3.906	326	-.445	.114	.000*
Staff of the hospital are knowledgeable	Employees Patients	3.21 2.93	2.157	326	.280	.130	.032*
Staff of the hospital are highly skilled	Employees Patients	3.35 3.06	2.183	310.702	.287	.131	.030*
The staff understand patients' emotions	Employees Patients	3.26 3.80	-5.205	282.575	-.537	.103	.000*
The staff try to understand the specific needs of patients	Employees Patients	2.89 3.83	-7.742	325.983	-.939	.121	.000*
The staff have patients' best interests at heart	Employees Patients	2.87 3.96	-8.853	320.205	-1.098	.124	.000*
The staff have genuine concern for patients	Employees Patients	2.78 3.61	-6.233	326	-.829	.133	.000*

Source*: Data Analysis 2020* ***Note:*** $p \leq .05$*

As shown in Table 6.5 above, some key significant findings on the difference between employees' and patients' perception of service quality are worth mentioning.

1. "The hospital's staff look professional in appearance," showed a statistically significant difference with employee (M = 3.22) and patient (M = 2.84) t (316.23) = 2.681, P = .008. With the mean of patients lower than that of employees, what this result suggests is that patients have a poor perception of the professional appearance of the hospitals' staff. While the employees may think their appearance is okay, the patients do not share such a notion.

2. "The hospital's physical facilities reflect the concept of a hospital," with employees (M = 3.22) and patient (M = 2.76). A statistically significant difference was found with t (315.23) = 3.33, P = .001. The patients with a lower mean score suggest their disapproval of the hospitals' physical facilities. The result indicates the patient's poor perception of the hospitals' building and environment, which needs improvement.

3. "Materials associated with the hospital's services are visually appealing," showed a significant difference in employees and patients perception with the employee having a mean (M = 3.01) and patients having a mean (M = 2.43), with t (315.26) = 3.887, $p < .001$. Patients having a lower mean indicates their low perception of materials related to service delivery in hospitals.

4. "The hospital provides services on time," was found to have a statistical significance with employee (M = 2.95) and patient (2.54), with t (319.65) = 3, p = .001. Employees' perception differs from that of patients with a higher mean. It denotes employees' confidence in providing

swift services to the patients. However, the patients seem to think of the reverse. Patients being the service receivers, their complaints should be investigated, and measures put in place to bridge the gap.

5. “Staff of the hospital are knowledgeable,” was found to elicit a significant difference in mean of employees (M = 3.21) and patients (2.93), with t (326) = 2.16, p = .032. The patient may not have adequate knowledge to judge the staff level of knowledge as they perceive employees’ knowledge to be poor. Hospital employees should be made to display competence at all times.

6. “Staff of the hospital are highly skilled,” generated a statistically significant difference between employees (M = 3.35) and patients (3.06), with t (310.7) = 2.18, p = .030. Such low perception of the hospitals’ staffs kills means the hospital needs to look into their recruitment strategy, as recruiting the right persons with the right skills will overcome many issues.

7. "The staff understand patients’ emotions," with the employee (M = 3.26) and patients (3.8), with t (282.6) = -5.21, p < .001. Patients having a higher mean score here denotes their positive appraisal of the staff understanding of patients’ emotions. Patients are often in a psychological state of mind and need empathy from the caregivers. Therefore, the hospitals should maintain this status quo and encourage the staff to show more understanding of how the patients are feeling and help ease their minds as necessary as possible.

8. A significant difference was found in the perception of the item “The hospital gives appropriate treatment at first attempt,” with employees having mean (M = 2.39) and patients (2.77), with t (326) = -2.7, p = .007. The result shows employees having a lower mean than patients. It suggests that the patients deem the treatment to be okay at first instance. In other words, patients think they receive the best treatment.

9. "The hospital keeps its promise to provide the services at the appointed time," showed a statistical significance with employees (M = 2.49) and patients (2.93), with t (311.2) = -2.899, p = .004. Going by the higher means of patients, patients think the hospitals’ service delivery in terms of keeping to treatment appointments is okay.

10. "Staff are willing to listen carefully to patients," was found to have a significant difference in employees (M = 3.77) and patients (4.08), with t (312.2) = -2.875, p = .004. Patients have a higher mean than employees which shows a significant difference in their perception regarding employees listening to their complaints. Thus, the hospitals should maintain such gesture.

11. "The hospital provides efficient services," was found to have a significant difference in employees (M = 3.26) and patients (4.09), with t (312.30) = -7.6, p < .001. Patients having a higher means than employees portend their high ratings of efficient services in the hospitals. The hospitals need to be consistently organised, less wasteful and endeavour to achieve service operations without wasting effort or expenses.

12. "Staff do not hesitate to respond to patients' requests," was found to have a significant difference with employees (M = 2.85) and patients (4.04), with t (312.55) = -10.62, p < .001. Patients highly rated this item and showed the hospital staff having a good response to their needs,

13. "Staff respond quickly to an emergency," was found to have a significant difference with employees (M = 3.24) and patients (3.68), with t (326) = -3.906, p < .001. The patients having a higher mean score than employees, shows their favourable ratings of this item.

14. "The staff try to understand the specific needs of patients," was found to have a significant difference with employees (M = 2.89) and patients (3.83), with t (325.98) = -7.74, p < .001. Patients having a higher mean than the employees denotes favourable perception of this item. This is more in line with the ever-increasing clamour for patient-centred care, honouring individual interests and diversity. Healthcare workers should understand the patients' needs and honour these needs. Appointments should be scheduled to suit needs and lifestyle. This calls for patients to be given care beyond their medical conditions, tailoring the hospitals' services to suit the lifestyle and needs of patients, and not forcing patients to do what they do not like or want.

15. "The staff have patients' best interests at heart," was found to have a significant difference with employees (M = 2.87) and patients (3.96), with t (320.21) = -8.85, p < .001. Patients' higher mean indicates their favourable perception about staff members putting themselves in the patients' shoes.

16. "The staff have a genuine concern for patients," was found to have a significant difference with employees (M = 2.78) and patients (3.61), with t (326) = -6.23, p < .001. Patients' perception is favourable towards this item, and the hospital should continue to maintain this care area and improve on them whenever possible.

6.5: PLS-SEM Analysis

The partial least square structural equation modelling (PLS-SEM) method was used in this study to assess the measurement and structural models; specifically, the SmartPLS was chosen as the analytical tool. For some additional tests, SPSS (version 26) was used.

Using the PLS-SEM, a two-step approach was implemented as suggested (Becker, Klein & Wetzels 2012; Benitez et al. 2020; Hair et al. 2019; Sarstedt et al. 2019). Firstly, the measurement model was assessed, including reliability and validity checks of each construct's measurement items under investigation. Secondly, the structural model was evaluated, which estimates relationships amongst paths and determines their significance level.

This study conceptualised both TQM and service quality in hierarchical component modelling (HCM) as a second-order reflective-formative construct (Type II). In PLS-SEM, there are two major approaches of assessing models containing HCMs: (1) the repeated indicator approach and (2) the 2-stage approach (Becker, Klein & Wetzels 2012; Ringle, Sarstedt & Straub 2012; Sarstedt et al. 2019).

A higher-order construct (HOC) is specified in the repeated indicator approach by assigning all indicators of the Lower Order Constructs (LOC) to it (Becker, Klein & Wetzels 2012; Sarstedt et al. 2019). As a result, all manifested lower-order constructs (LOC) indicators were assigned twice. First, the variables were used individually to specify the first-order latent construct, and second, to collectively define the second-order constructs. The repeated indicator approach's benefit is that all latent variables can be estimated simultaneously. It is contrary to the two-stage approach, which includes separate assessments of the lower and higher-order constructs (Becker, Klein & Wetzels 2012; Sarstedt et al. 2019). However, the repeated indicator method consists of the same number of indicators for the lower-order constructs LOCs to prevent modelling bias (Hair & Sarstedt 2019; Sarstedt et al. 2019). Though one major pitfall in its use is when the HOC is an endogenous construct, that is, a construct predicted by another variable, the values of the HOC becomes unreliable (Becker, Klein & Wetzels 2012; Sarstedt et al. 2019). The two-stage approach was introduced to avoid such pitfall.

The two-stage approach follows a similar pattern to the repeated indicator approach. The repeated indicator approach is used in the first stage to obtain LOC latent scores and presented

as manifest variables for HOC in the second stage (Hair et al. 2017; Sarstedt et al. 2019). This method is useful when the number of indicators across the LOCs is not equal. Hence this study opted to use the two-stage approach for analysis.

6.5.1: Construct Specification and Assessment of the Measurement Model

This study has two constructs treated as higher-order: Total quality management practices and service quality. Total quality management practices, an exogenous (independent variable) second-order construct or emergent variable, consist of first-order constructs of (1) leadership, (2) strategy, (3) patient, (4) Measurement analysis and knowledge management, (5) Workforce, and (6) operations, while service quality, an endogenous construct, consist of the following service dimensions as first-order constructs: (1) tangible, (2) reliability, (3) responsiveness, (4) assurance, and (5) empathy. All first-order constructs are reflective variables with the arrows pointing from the constructs to the indicators. The second-order was specified using all variables in the first-order constructs (Sarstedt et al. 2019). As the study uses reflective-formative (Type II) higher-order constructs, the path coefficients between the first-order and second-order constructs were taken as weights of the second-order construct to account for the formative relation (Benitez et al. 2020; Hair et al. 2019; Sarstedt et al. 2019).

Becker, Klein and Wetzels (2012) pointed out two important factors that researchers should consider when using the repeated indicator approach for model specifications. They emphasised the importance of defining the mode of the measurement correctly for the LOCs and HOCs as "Mode A" and "Mode B," respectively. The weighting scheme for formative measures was also recommended (Sarstedt et al. 2019; Benitez et al. 2020). The research model for this analysis was built according to these guidelines, with Mode (A) used for estimating LOC and mode B for HOC. The latent scores of LOC were then used to model the HOC in the second phase.

The reflective-formative model (Type II) with the higher-order constructs specified using the repeated indicator approach is shown in Figure 6.1. Below.

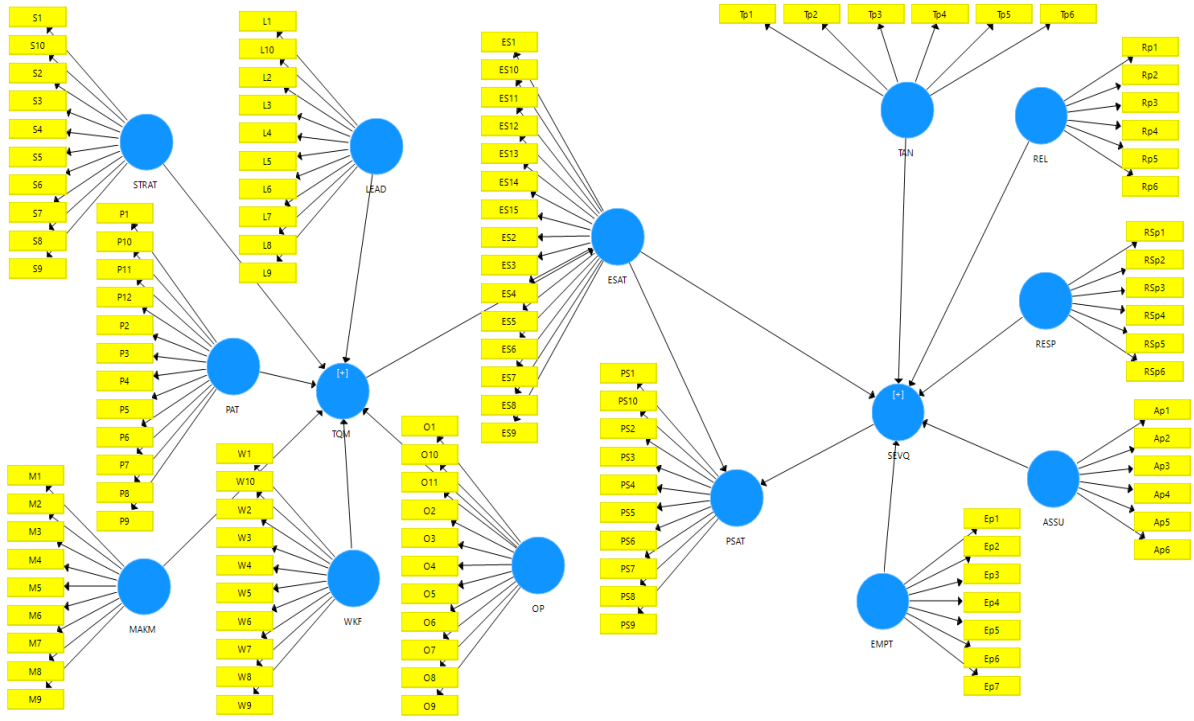

Figure 6.1: Reflective-formative Type (II)

6.5.2: Reflective Measurement Model Assessment

The exogenous construct TQM and endogenous variable service quality are second-order reflective-formative (Type II) constructs, composed of six and five reflective constructs, respectively, in the first order. All other constructs, except the higher-order constructs, were reflectively measured in the model. Hair Jr, Howard and Nitzl (2020) recommend four steps to assess reflective first-order constructs in a measurement model by checking (1) loadings of the indicators, (2) looking at the internal consistency reliability, (3) convergent validity, and (4) discriminant validity. The results of the assessments are presented below.

6.5.3: Indicator Reliability

Hair Jr et al. (2017) suggested factor loadings of 0.6 to 0.7 for social science studies are acceptable for indicator reliability. They also stated that indicator loadings ranging from 0.4 to 0.7 should only be considered for deletion if this deletion increases the composite reliability scores or the average variance extracted (AVE). However, content validity should be applied before the deletion of indicators. As recommended, all indicator loadings were reviewed, and those with poor loadings were deleted. After examining the indicator loadings, it was found that all indicators have loadings above 0.7 except one under responsiveness, two under

assurance, and two under patient satisfaction, above 0.6. These indicators below 0.7 but above 0.6 were retained to maintain good composite reliability and AVE. The final PLS algorithm in figure 6.2 below shows all retained indicators and their loadings.

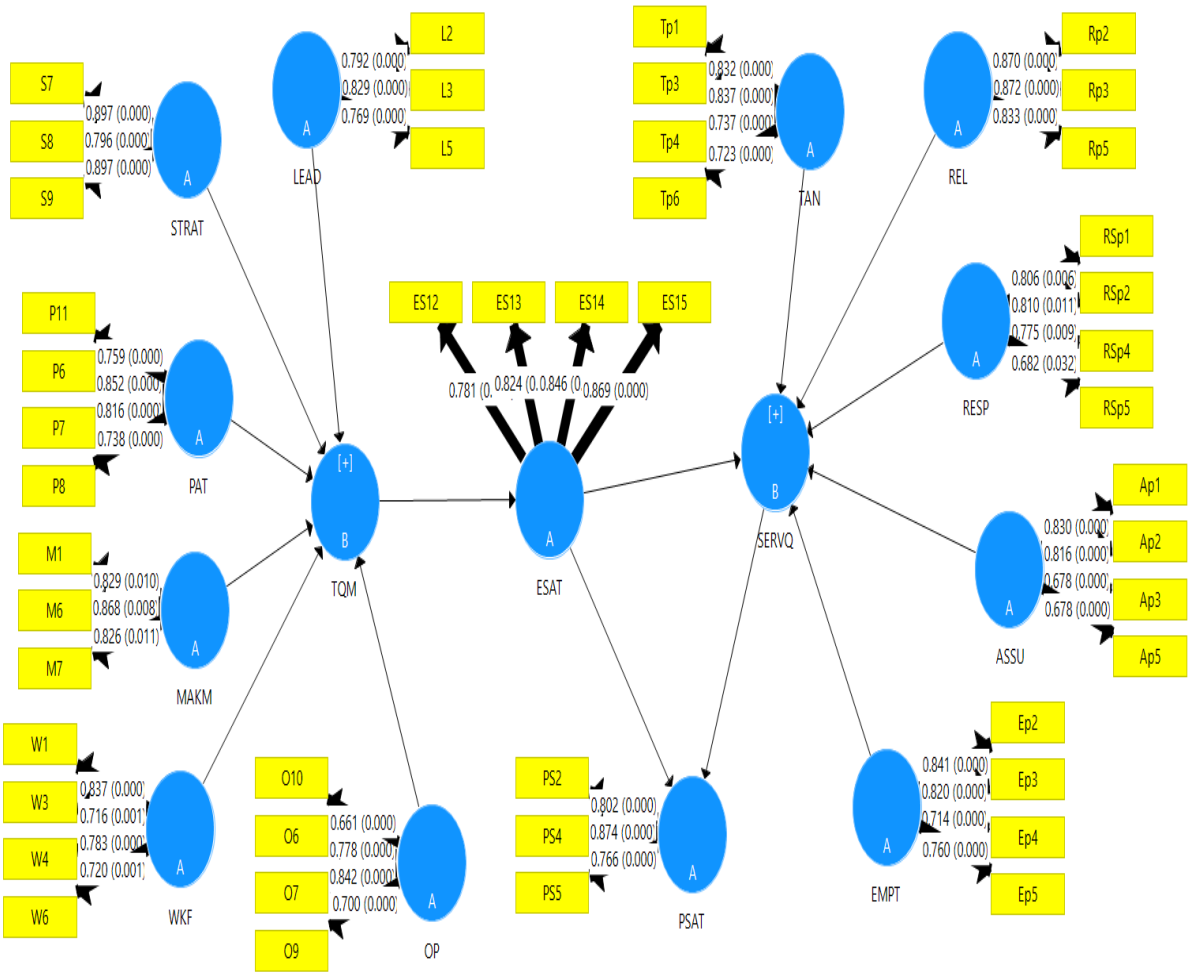

Figure 6. 2: Full Model with Factor Loadings and Significance

6.5.4: Internal Consistency Reliability

The constructs' internal consistency was measured using the composite reliability, Cronbach's alpha, and Henseler's rho_A values (Benitez et al. 2020; Hair et al. 2019; Sarstedt et al. 2019). Composite reliability measures the extent to which each item or indicator in a construct truly measures such construct. The value ranges from 0 to 1, with a value closer to 1 indicating greater reliability. Values from 0.6 to 0.9 are best considered, as values below 0.6 show a lack of composite reliability, whereas values greater than 0.95 are problematic and imply redundancy, reducing construct reliability (Hair et al. 2019). Cronbach's alpha assumes a

similar threshold with composite reliability but produces less values. Hence, Cronbach's alpha is regarded as a less accurate measure of reliability due to the unweighted items compared to composite reliability, whose items are weighted, thus having higher reliability (Hair et al. 2019). The actual value of a construct can be found between composite reliability, which is deemed too free, and Cronbach's alpha, which is considered conservative. As such, the values of Dijkstra-Henseler's rho_A were proposed as the proper measure of construct reliability, as it lies between composite reliability and Cronbach's alpha (Benitez et al. 2020; Hair et al. 2019).

The composite reliability values for the study model are listed in Table 6.6 below. The results show that the reflective constructs demonstrated reliability within the acceptable thresholds (Benitez et al. 2020; Hair et al. 2019; Hair Jr et al. 2017), indicating that internal consistency issues were not present in this analysis.

6.5.5: Convergent Validity

Convergent validity is the degree of positive correlation of a measure (indicator) with other measures of the same construct (Hair Jr et al. 2017). Different indicators represent the same construct for a reflective construct, thus converging each indicator with its reflective construct (Gefen & Straub 2005). According to Hair Jr et al. (2017), to achieve convergent validity, the outer loadings (indicator reliability) and average variance extracted (AVE) must be evaluated. The AVE calculation can be carried out by squaring loadings of each indicator in a construct and determining the mean value; AVE values above 0.5 are considered enough for convergent validity of multi-item reflective constructs (Hair et al. 2019). As shown in Table 6.4 below, all the model's reflective constructs surpass the threshold of 0.5.

Since all the reflective constructs in the study model meet the AVE requirements and factor loadings exceeding the recommended threshold, convergent validity for the measures of reflective constructs has been established. The factor loadings, composite reliability results, Cronbach alpha, rho_A, and AVE for all the constructs are shown in Table 6.6 below.

Table 6.6: Factor loadings, Cronbach's Alpha, RHO_A, CR and AVE.

Constructs	Items	Factor Loadings	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)

Leadership	L2	0.792	0.714	0.714	0.839	0.635
	L3	0.829				
	L5	0.769				
Strategy	S7	0.897	0.830	0.842	0.899	0.7480
	S8	0.796				
	S9	0.897				
Patient	P11	0.759	0.801	0.806	0.871	0.628
	P6	0.852				
	P7	0.816				
	P8	0.738				
Measurement Analysis and Knowledge Management	M1	0.829	0.793	0.798	0.879	0.708
	M6	0.868				
	M7	0.826				
Workforce	W1	0.837	0.765	0.777	0.850	0.586
	W3	0.716				
	W4	0.783				
	W6	0.720				
Operations	O11	0.661	0.739	0.774	0.835	0.560
	O6	0.778				
	O7	0.842				
	O9	0.700				
Employee satisfaction	ES12	0.781	0.851	0.860	0.899	0.690
	ES13	0.824				
	ES14	0.846				
	ES15	0.869				
Tangible	T1	0.832	0.798	0.834	0.864	0.614
	T3	0.837				
	T4	0.737				
	T6	0.723				
Reliability	R2	0.870	0.822	0.824	0.894	0.737
	R3	0.872				
	R5	0.833				
Responsiveness	RS1	0.806	0.779	0.814	0.853	0.593
	RS2	0.810				
	RS4	0.775				
	RS5	0.682				
Assurance	A1	0.830	0.747	0.765	0.839	0.569
	A2	0.816				
	A3	0.678				

	A5	0.678				
Empathy	E2	0.841	0.794	0.810	0.865	0.617
	E3	0.820				
	E4	0.714				
	E5	0.760				
Patient Satisfaction	PS2	0.802	0.749	0.777	0.855	0.664
	PS4	0.874				
	PS5	0.766				

6.5.6: Discriminant Validity of the Reflective Constructs

Discriminatory validity is the degree to which a construct is different from other constructs in a model (Chin 2010). The Fornell-Larcker criterion used to be the traditional method of assessing discriminant validity, but recent studies have stipulated that it is not a good measure of discriminant validity, and the Heterotrait-Monotrait ratio (HTMT) is currently being used (Benitez et al. 2020; Hair et al. 2019; Henseler, Ringle & Sarstedt 2015; Sarstedt et al. 2019). As described by Hair et al. (2019), the Heterotrait-Monotrait ratio is "the mean value of the item correlations across constructs relative to the (geometric) mean of the average correlations for the items measuring the same construct." Evidence for discriminant validity is shown if HTMT values are lower than 0.85, a strict threshold, or 0.90 a lenient threshold.

Table 6.7: Heterotrait-Monotrait ratio (HTMT)

	ASSU	EMPT	ESAT	LEAD	MAKM	OP	PAT	PSAT	REL	RESP	SERVQ	STRAT	TAN	TQM	WKF
ASSU															
EMPT	0.178														
ESAT	0.164	0.126													
LEAD	0.142	0.15	0.167												
MAKM	0.185	0.126	0.183	0.109											
OP	0.174	0.164	0.416	0.3	0.107										
PAT	0.103	0.132	0.528	0.392	0.109	0.451									
PSAT	0.449	0.255	0.098	0.14	0.071	0.141	0.167								
REL	0.571	0.225	0.309	0.081	0.153	0.122	0.202	0.393							
RESP	0.133	0.094	0.132	0.085	0.114	0.145	0.198	0.108	0.162						
SERVQ	0.82	0.692	0.273	0.176	0.25	0.257	0.278	0.451	0.832	0.606					
STRAT	0.116	0.124	0.539	0.471	0.079	0.529	0.669	0.127	0.127	0.149	0.221				
TAN	0.293	0.258	0.11	0.067	0.171	0.158	0.197	0.174	0.429	0.111	0.796	0.142			
TQM	0.237	0.212	0.562	0.678	0.639	0.801	0.823	0.213	0.248	0.228	0.388	0.827	0.237		
WKF	0.189	0.116	0.253	0.108	0.81	0.242	0.152	0.155	0.235	0.156	0.279	0.195	0.149	0.752	

6.6: Formative Measurement Model Assessment

In this analysis, the exogenous construct TQM and endogenous construct service quality are second-order reflective-formative constructs, so they are measured formatively. Formative measurement constructs are evaluated by assessing multicollinearity, weights, composite loading, and significance (Benitez et al. 2020). Internal consistency does not matter for formative constructs because they are multi-dimensional constructs with indicators that do not necessarily covary. (Benitez et al. 2020; Chin 2010; Hair Jr et al. 2017).

The consistency check for a second-order model follows a similar method to check the first-order measurement variables (Becker, Klein & Wetzels 2012). Since TQM and service quality are second-order reflective-formative constructs, the assessment occurs in the second stage, where the latent values of LOCs were measured and used as variables for HOCs. After that, an examination of the relationship between the latent LOCs and the HOCs was made (Becker, Klein & Wetzels 2012). The quality parameters suggested by Chin (2010), were applied and the first-order constructs served as indicators of the second-order construct (represented by the latent variable scores measured from the first stage). The criteria for evaluating the formatively measured construct are detailed in the following sections and the measurement model displayed in Figure 6.3 below.

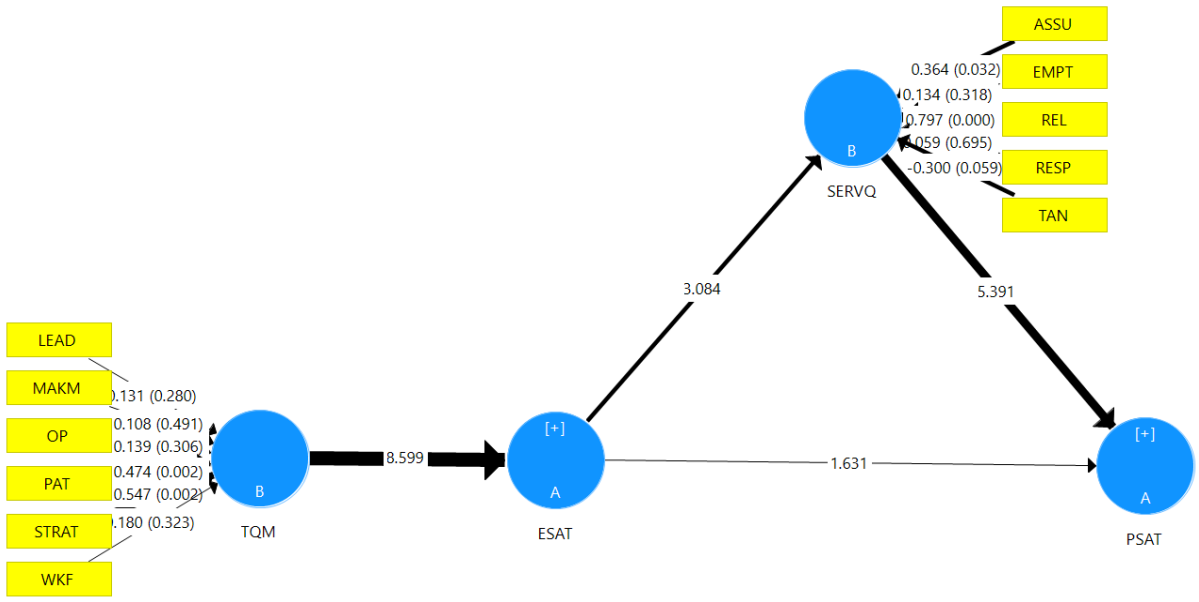

Figure 6.3: Formative Measurement Weights and Significance

6.6.1: Collinearity Assessment

In a formative model, the indicators form the construct collectively, with each indicator adding new information, and the direction of arrows are usually from the indicators to the construct (Benitez et al. 2020). Therefore, the indicators should not be too correlated due to high collinearity between formative indicators (also known as multi-collinearity) may lead to bias in weight estimation and statistical significance (Hair Jr et al. 2017). Collinearity was analysed by checking the variance inflation factor (VIF). The VIF is a measure to determine the extent of the collinearity effect (Benitez et al. 2020; Hair et al. 2017; Hair et al. 2019; Sarstedt et al. 2019). A VIF value of 5 and above signals collinearity problems amongst the formative indicators. A lower value of 3 can signal a collinearity issue, so the current threshold for collinearity should be VIF values lower than 3 as the value 5 is deemed high (Hair Jr, Howard & Nitzl 2020).

Table 6.8 indicates that the VIF values for the study model are well below the acceptable threshold level of 3, suggesting that the collinearity in the formative construct did not reach critical levels.

Table 6.8 Collinearity VIF values

Indicators	VIF
Leadership	1.182

Strategy	1.712
Patient Focus	1.505
Measurement Analysis and Knowledge Management	1.684
Workforce Focus	1.722
Operation	1.325
Tangible	1.142
Reliability	1.431
Responsiveness	1.011
Assurance	1.280
Empathy	1.044

6.6.2: Evaluation of Significance and Relevance of Indicator Weights

The next step is to check the significance of the outer weight of the formative model and each indicator's relative contribution. As recommended, Bootstrapping in PLS-SEM is used to check for significance (Hair et al. 2019). The process of bootstrapping was performed using 2000 resamples (Chin 2010). The findings in Table 6.9 below show that all weights, except LEAD and TAN, surpass the recommended threshold of 0.1 (Lohmöller 1989), and STRAT, PAT, REL, and ASSU showing a good level of significance with their P-values less than 0.05. As advised by several scholars (Benitez et al. 2020; Hair et al. 2019; Hair Jr et al. 2017), when a formative indicator weight is non-significant, the respective loading is checked for significance, then indicators having non-significant weights and loadings are dropped. However, dropping a formative indicator can make the construct lose its meaning because formative indicators constitute the construct; hence, scholars could opt to keep an indicator without significant weight and loading to retain the meaning of the construct (Benitez et al. 2020; Hair et al. 2017).

Table 6.9 Outer Weights and Significance

Outer Weights							
Mean, STDEV, T-Values, P-Values						Confidence Intervals	
Items	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values	2.5%	97.5%
LEAD -> TQM	-0.131	-0.131	0.122	1.080	0.280	-0.367	0.108
STRAT -> TQM	0.547	0.530	0.176	3.101	0.002	0.198	0.881
PAT -> TQM	0.474	0.449	0.151	3.131	0.002	0.190	0.782
MAKM -> TQM	0.108	0.091	0.158	0.688	0.491	-0.207	0.402
WKF -> TQM	0.180	0.188	0.182	0.989	0.323	-0.138	0.580
OP -> TQM	0.139	0.132	0.136	1.023	0.306	-0.096	0.433
TAN -> SERVQ	-0.300	-0.289	0.159	1.890	0.059	-0.614	-0.007
REL -> SERVQ	0.797	0.768	0.160	4.969	0.000	0.482	1.055

RESP -> SERVQ	0.059	0.061	0.150	0.393	0.695	-0.263	0.336
ASSU -> SERVQ	0.364	0.341	0.170	2.147	0.032	0.042	0.701
EMPT -> SERVQ	0.134	0.120	0.134	0.998	0.318	-0.093	0.415

6.6.3: The Outer Loadings and Significance

All outer loadings are expected to be statistically significant, especially those having nonsignificant weights, i.e., LEAD, MKM, WKF, OP, TAN, RESP, and EMPT did not have significant weights. From the results in table 6.10 below, all outer loadings are significant with P-values less than 0.05, except for TAN and RESP, which also do not have significant weights. As recommended, considering content validity, these two indicators, with non-significant weights and loadings, were retained to maintain the whole meaning of the service quality construct (Benitez et al. 2020; Hair et al. 2017; Hair et al. 2019). That completes the measurement model evaluation.

Table 6.10 Outer Loadings and Significance

Outer Loadings							
Mean, STDEV, T-Values, P-Values						Confidence Intervals	
Items	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values	2.5%	97.5%
LEAD -> TQM	0.253	0.233	0.123	2.053	0.04	0.015	0.499
STRAT -> TQM	0.859	0.820	0.092	9.334	0.000	0.690	0.973
PAT -> TQM	0.812	0.778	0.085	9.524	0.000	0.664	0.946
MAKM -> TQM	0.281	0.271	0.143	1.962	0.05	0.014	0.566
WKF -> TQM	0.388	0.376	0.149	2.601	0.009	0.106	0.688
OP -> TQM	0.563	0.536	0.122	4.634	0.000	0.332	0.793
TAN -> SERVQ	0.059	0.056	0.173	0.339	0.734	-0.293	0.382
REL -> SERVQ	0.892	0.853	0.088	10.136	0.000	0.747	0.985
RESP -> SERVQ	0.137	0.134	0.172	0.800	0.424	-0.238	0.462
ASSU -> SERVQ	0.704	0.668	0.117	6.030	0.000	0.481	0.893
EMPT -> SERVQ	0.314	0.296	0.121	2.599	0.009	0.100	0.565

6.7: Evaluation of the Structural Model

After assessing the measurement model, the next step is to assess the structural model. The first thing is to check the overall fit of the estimated model before estimating path coefficients, significance, and effect size (f^2), as well as the coefficient of determination (R^2) (Benitez et al. 2020). According to Benitez et al. (2020), the bootstrap-based overall model fit can be assessed using the Standardized Root Mean Square Residual (SRMR) as a measure of approximate fit. It should be noted that the estimation of overall model fit in PLS-SEM was newly introduced, and scholars are advised to take caution in its application (Hair et al. 2019). The SRMR check in this study showed a value of 0.030, which falls below the acceptable threshold of 0.08, indicating that the model fit is acceptable. However, of utmost importance is assessing path coefficients and significance.

6.7.1: Evaluation of Paths Coefficients and Significance

In this phase of evaluating the structural model, the hypothesised relationships among the constructs, shown by the path coefficients and related t-statistics, were obtained through a bootstrapping process (Hair et al. 2017). The t-values, p values, and path coefficients obtained by the bootstrapping method are described in Table 6.11 below. The significance of the path coefficients, using a two-tailed test, was assessed with t-values and p-values (Hair, Ringle & Sarstedt 2012). See Figure 6.3 for the two-stage structural model, and the results are summarised below in Table 6.11, detailing the hypothesised relationships and their significance.

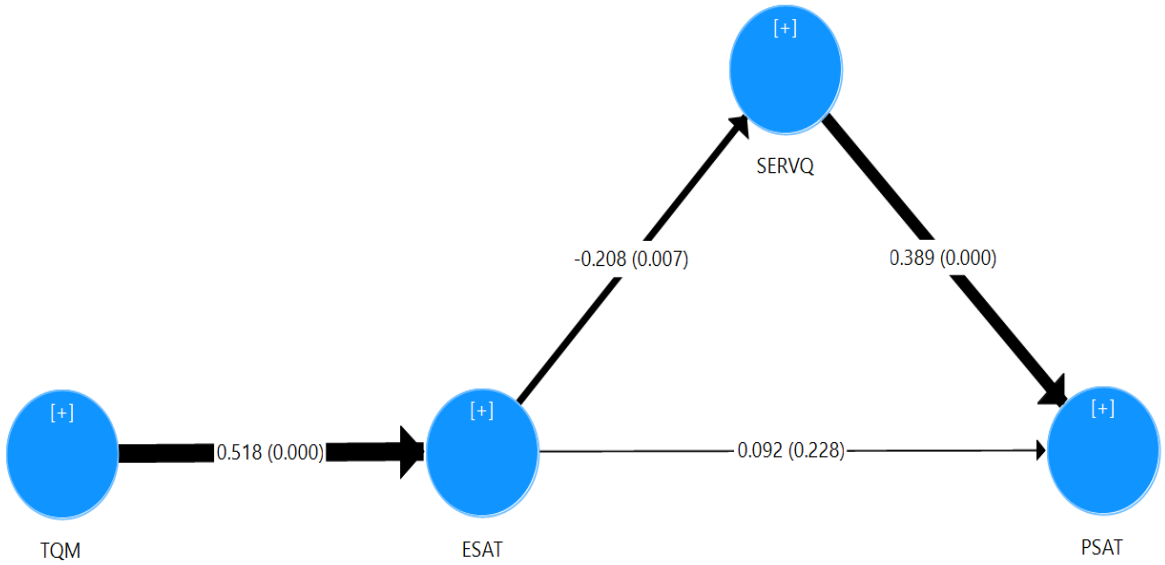

Figure 6.4: Bootstrap result of structural Paths (Without Control Variables)

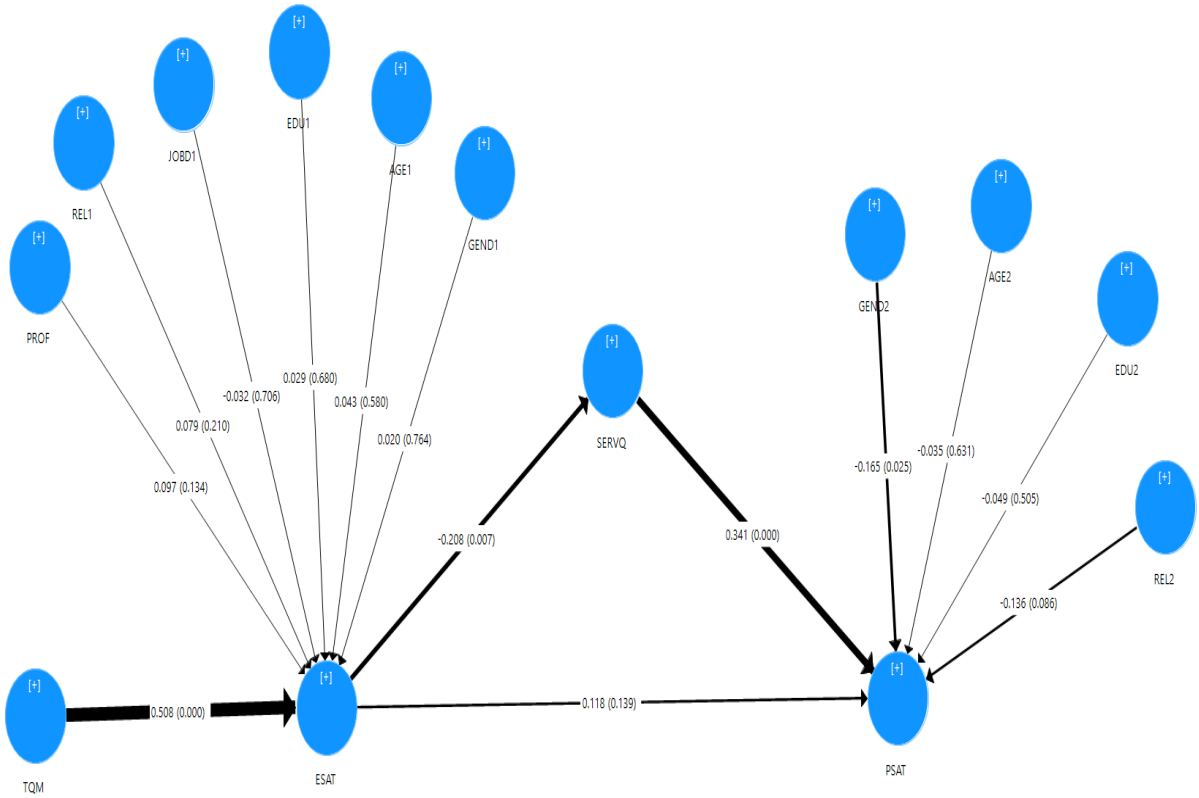

Figure 6.5: Bootstrap result of structural Paths (With Control Variables)

Table 6.11: Paths Coefficients and Significance

	Mean, STDEV, T-Values, P-values						Confidence Interval	
H.	Relationship	Path Coefficient	Sample Mean	STDEV	T-values	P-values	2.5%	95.5%
H1	TQM -> ESAT	0.518	0.518	0.066	7.908	0.000	0.380	0.635
H2	ESAT -> SERVQ	-0.208	-0.208	0.077	2.695	0.007	-0.362	-0.056
H3	ESAT -> PSAT	0.092	0.091	0.077	1.205	0.228	-0.059	0.243
H4	SERVQ -> PSAT	0.389	0.386	0.07	5.552	0.000	0.247	0.518

Note: $p < .05$*

The findings showed that TQM have a significant impact on employee satisfaction (ß = 0.518, t = 0.7.908; p < .001). Similarly, employee satisfaction has a significant impact on service quality (ß = -0.208, t = 2.695, p = .007). No significant impact was found on the relationship between employee satisfaction and patient satisfaction (ß = 0.092, t = 1.205, p = .228). Service quality was found to have a significant impact on patient satisfaction (ß = 0.389, t = 5.552, p < .001). Through confirming all the theories, the results supported the theoretical model suggested in this investigation.

6.7.2: Evaluation of Indirect Effects

According to Hair et al. (2017), researchers should determine if there is an indirect relationship between two constructs and whether such a relationship is significant. The SmartPLS bootstrapping report provides the results of the indirect/mediation effects. Table 6.12 below shows no indirect relationship among TQM, employee satisfaction and patient satisfaction with (t = 1.16; p = 0.246). The result found a significant indirect relationship between TQM and service quality mediated by employee satisfaction (t = 2.772; p = 0.001). The link between TQM, employee satisfaction, service quality, and patient satisfaction was a significant indirect relationship (t = 2.334; p = 0.002). The result found a significant indirect relationship between employee satisfaction and patient satisfaction mediated by service quality with values (t= 2.447; p = 0.014). The result empirically supports the links among the four principal variables under investigation.

Table 6.12 Results of Indirect Effects

	Mean, STDEV, T-Values, P-values					Confidence Interval	
Relationship		Sample Mean	STDEV	T-values	P-values	2.5%	97.5%
TQM -> ESAT -> PSAT	0.048	0.048	0.041	1.16	0.246	-0.029	0.132
TQM -> ESAT -> SERVQ	-0.108	-0.108	0.042	2.572	0.01	-0.194	-0.034
TQM -> ESAT -> SERVQ -> PSAT	-0.042	-0.041	0.018	2.334	0.02	-0.086	-0.014

ESAT -> SERVQ -> PSAT	-0.081	-0.08	0.033	2.447	0.014	-0.162	-0.026

6.7.3: Effects of Control Variables on the Relationship between TQM and Employee Satisfaction

Control was made for the following variables age, gender, education level, job duration, profession, and religion. The effects of the variables were assessed on the relationship between TQM practices and employee satisfaction (Age, gender, education level, job duration, profession, and religion), as well as the relationship between service quality and patient satisfaction (Age, gender, education level, and religion). Among all the variables, gender significantly impacted the relationship between service quality and patient satisfaction (t = 2.249; p = .025). The results are displayed in table 6.13 below.

Table 6.13 Effects Control Variables

	Mean, STDEV, T-Values, P-values				
	Original sample	Sample Mean	STDEV	T-values	P-values
AGE1 -> ESAT	0.043	0.043	0.078	0.554	0.58
AGE2 -> PSAT	-0.035	-0.032	0.072	0.481	0.631
EDU1 -> ESAT	0.029	0.030	0.069	0.413	0.68
EDU2 -> PSAT	-0.049	-0.049	0.074	0.667	0.505
GEND1 -> ESAT	0.020	0.021	0.067	0.301	0.764
GEND2 -> PSAT	-0.165	-0.163	0.073	2.249	0.025
JOBD1 -> ESAT	-0.032	-0.030	0.084	0.377	0.706
PROF -> ESAT	0.097	0.098	0.065	1.498	0.134
REL1 -> ESAT	0.079	0.075	0.063	1.254	0.210
REL2 -> PSAT	-0.136	-0.137	0.079	1.719	0.086

6.7.4: Coefficient of Determination (R^2)

The next step was evaluating the explanatory power of the structural model by assessing the significance of the coefficient of determination (R^2) (Hair et al. 2017). This is the degree of variation in the model's endogenous constructs (dependent constructs), which gives insight into the model's in-sample predictive capability (Benitez et al. 2020; Henseler, Ringle & Sinkovics 2009). Chin (1998) notes that R^2 values of 0.67, 0.33, or 0.19 are respectively considered to be high, moderate, or weak. However, Benitez et al. (2020) posit that R^2 values mainly depend on what is being investigated, and an already well-researched and properly understood idea is expected to produce a higher R^2 than an idea less understood, in which a lower R^2 can be accepted. They further stated that the R^2 values could be judged compared to other studies with

the same dependent variables. The respective results show R^2 values for employee satisfaction, service quality, and patient satisfaction to be 0.268, 0.043, and 0.145. These values range from moderate to weak. However, considering the conceptualisation of both TQM and service quality as second-order constructs, a less investigated way of measuring internal and external service quality on satisfaction, the values of 0.268 and 0.145 are deemed to be good. Two variables impacting patient satisfaction may have affected its R^2 value.

6.7.5: Evaluation of Effect Sizes (f^2)

The relationships between paths produce effect sizes that are investigated for significance. The effect size refers to measuring the level of an effect independent of the sample size and the values of 0.020 to 0.150, 0.150 to 0.350, and 0.350 and higher, denotes, respectively, weak, moderate and high effect sizes (Benitez et al. 2020). The f^2 values in this study hypothesised relationships are 0.367 for TQM to employee satisfaction, 0.045 for employee satisfaction to service quality, 0.010 for employee satisfaction to patient satisfaction, and 0.169 for service quality to patient satisfaction. The effect size for this study ranges from high to weak.

6.7.6: Predictive Relevance (Q^2)

The predictive relevance (Q^2) is a test introduced for predictive validity using the blindfolding process. The parameters are predicted after a certain block of indicators has been omitted in the process. The Q^2 value indicates how well the path model can predict data values originally observed (Hair et al. 2017). According to Henseler, Ringle & Sinkovics (2009), a value of Q2 greater than 0 is needed to confirm predictive relevance.

Table 6.8 displays the Q^2 values of endogenous variables in this analysis. The model's predictive validity has been verified, as these values are greater than 0.

Table 6.14: The values of Q^2

	SSO	**SSE**	**Q^2 (=1-SSE/SSO)**
ESAT	164.000	122.932	0.250
PSAT	164.000	141.526	0.137
SERVQ	164.000	158.582	0.033
TQM	164.000	164.000	

Table 6.15 Summary of the Hypothesis and Findings

Hypotheses			Path Coefficient	T-values	P-values	Decision
H1	TQM ->ESAT	There is a significant positive relationship between TQM practices and employee satisfaction in Nigerian general hospitals.	0.518	7.908	0.000	Accepted
H2	ESAT >SERVQ	There is a significant positive relationship between employee satisfaction and service quality in Nigerian general hospitals.	-0.208	2.695	0.007	Accepted
H3	ESAT -> PSAT	There is a significant positive relationship between employee satisfaction and patient satisfaction in Nigerian general hospitals.	0.092	1.205	0.228	Rejected
H4	SERVQ >PSAT	There is a significant positive relationship between Service quality and patient satisfaction in Nigerian general hospitals.	0.389	5.552	0.000	Accepted

Based on the findings presented in this section, all proposed hypotheses were supported except for the relationship between employee satisfaction and patient satisfaction. There was no significant effect of age and gender on the relationship between TQM and employee satisfaction, but gender was found to impact the relationship between service quality and patient satisfaction. However, such an impact did not change the relationships found in the model.

The theoretical, methodological, and managerial implications are presented in the next chapter, with limitations of this research and suggestions for future research.

6.8: Chapter Summary

This chapter outlined the results of the data collected. The Procedures for cleaning the data prior to analysis were shown. A descriptive analysis was conducted to explain the range of demographics of the respondents. The SEM method was implemented in two phases: measurement model assessment and assessment of the structural model. A confirmatory factor analysis was performed for the measurement items to achieve validity for each construct, and the research hypotheses were tested on the structural models. The findings verified the theoretical model, and all but one of the proposed hypotheses were found to be true: (H1, H2, and H4, except H3).

The results indicate that TQM practices positively impact employee satisfaction in Nigerian public healthcare, and employee satisfaction positively impacts service quality. Also, service quality has a positive impact on patients' satisfaction. Employee satisfaction was found to have no impact on patients' satisfaction. However, the impact of employee satisfaction on patients' satisfaction was mediated by service quality.

In terms of the PLS-SEM analytical methods employed in this study, this researcher takes cognisance of other advanced methods in PLS-SEM. There are suggestions to perform redundancy analysis for composite models to determine convergent validity (Hair et al. 2019). However, one criterion to performing a redundancy analysis is having a global item in the survey material from the preliminary stage of the study. This study did not plan for such, and redundancy analysis was not performed. However, Benitez et al. (2020) advise that scholars may consider using such validity criteria only when there is enough evidence like “Monte Carlo simulations.” to support it.

The next chapter discusses the results, limitations of the study, and recommendations.

Chapter 7: Discussion and Conclusion

7.1: Overview

This chapter addresses the findings of the analysis discussed in chapter 6 to properly answer the research question of the thesis, which asked what impact TQM practices have on employee satisfaction towards improving service quality and patient satisfaction in Nigerian general hospitals. The related hypotheses are outlined in each segment, followed by a brief review of how these results improve the current theoretical knowledge. The outcome of the quantitative analysis is discussed in this section to enhance comprehension of the relationship amongst the variables of this study: TQM practices, employee satisfaction, service quality, and patient satisfaction in the Nigerian general hospitals. The deductions drawn from the study are discussed, including the recommendations and limitations.

7.2: Summary of the Study

This study aims to improve the service quality of the Nigerian general hospitals by exploring the impact of TQM practices on employee satisfaction to achieve better service delivery that would delight patients. The research question and some objectives were postulated, and a review of empirical studies on four basic knowledge domains led to four proposed hypotheses. A quantitative method was utilised, and data were analysed using the PLS-SEM and SPSS software. Quantitative data collected from both employees and patients of the Nigerian general hospitals were used to obtain insights on the relationships under review among TQM practices, employee satisfaction, service quality, and patient satisfaction. The sample of employees focused on experiences regarding quality practices within the hospitals, experiences with the external service quality, and employees' level of satisfaction, while that of the patients focused on their experiences with the dimension of external service quality of the general hospitals and their degree of satisfaction with those services. Data were duly analysed, and the following sessions provide additional clarifications on the interactions of the variables, TQM, ES, SQ, and PS, further explains the study's objectives.

7.3: The Structural Relationships

The structural model contains four key variables: TQM, employee satisfaction, service quality, and patient satisfaction. As established in the previous chapter, all TQM, ES, and SQ relationships were positive except between ES and PS. TQM has a direct positive impact on employee satisfaction, employee satisfaction significantly influences service quality, and service quality positively impacts patients' satisfaction. But there was no relationship between employee satisfaction and patients' satisfaction. From the analysis in Chapter 6, TQM practices are key factors to improving employee satisfaction towards achieving higher service quality and patient satisfaction.

The following sections address the analytical and theoretical foundations of TQM, ES, SQ, and PS relationships in Nigerian general hospitals.

7.3.1: Link between TQM and Employee Satisfaction

The first hypothesis of this study suggested a positive link between TQM practices and employee satisfaction in Nigerian general hospitals. The following section summarises the findings of the relationship as hypothesised.

H1: TQM is positively related to employee satisfaction

Findings: There is a direct positive relationship between TQM practices and employee satisfaction in the Nigerian general hospitals, with an effect size (f^2 =0.407). This denotes that the magnitude of the impact of TQM practices on employee satisfaction in this study is very high (Benitez et al. 2020; Hair et al. 2019). The result suggests that TQM is a tool that can improve the satisfaction of the workforce in an organisation for better performance, as found in several empirical studies (Amin et al. 2017; Bouranta et al. 2019; Liu & Liu 2014; Prajogo & Cooper 2017; Sadikoglu & Zehir 2010).

This result concludes the discussion in public healthcare organisations regarding the relationship between TQM and employee satisfaction in Nigerian general hospitals. In theory, it is not entirely clear how TQM influences employee satisfaction and the essence of the influence, especially in public healthcare organisations, which is different in terms of priorities and context. Moreover, scholars had not been unanimous in their findings on the connection between TQM practices and employee satisfaction. For instance, the study of Rodríguez-Antón

and Alonso-Almeida (2011) in Spain did not find any direct effect of TQM practices on employee satisfaction. However, this current research strongly supports and reaffirms the positive impact of TQM practices on employee satisfaction, especially in Nigerian general hospitals.

As shown in this study, using the MBNQA framework, the TQM practices utilised are Leadership, strategy, Patient focus, Measurement analysis and knowledge management, workforce focus, and operations. Employee satisfaction is determined by a host of factors that the author of this thesis believes to be core and integrative TQM practices. For the Nigerian general hospitals to satisfy their employees, the six practices of TQM in this study should be well augmented.

7.3.2: Link between Employee Satisfaction and Service Quality

The second hypothesis of this study suggested a positive link between employee satisfaction and service quality in Nigerian general hospitals.

H2: Employee satisfaction is positively related to service quality.

Findings: This study found a direct positive link between employee satisfaction and service quality, with an effect size ($f^2 = 0.080$). It indicates a low magnitude of the connection between employee satisfaction and service quality. However, the result is in line with several other empirical studies that found employee satisfaction significantly impacted service quality (Amin et al. 2017; Chen & Chen 2014; Chi & Gursoy 2009; Firth et al. 2004; Grigoroudis, Tsitsiridi & Zopounidis 2013; Kermani 2013).

The findings support the notion of the service-profit chain model, which states that a satisfied employee is more committed and dedicated to the organisation, and performs effectively on job tasks, which leads to an improvement in service delivery (Heskett et al. 1994; Kelloway & Myers 2019; Yee, Yeung & Cheng 2011). The result also backs the study of Mosadeghrad (2014c) in Iranian hospitals, stating that employees' satisfaction is integral to service excellence that delights patients. Further, this study's result is in line with Tawana, Barkhuizen and du Plessis (2019) that found a significant positive impact of employee satisfaction on the quality of services delivered in public hospitals. It denotes employee satisfaction as a good predictor

of service quality. Therefore, for the Nigerian general hospitals to improve the quality of services, there is a need to keep the employees satisfied.

7.3.3: Link between Employee Satisfaction and Patient Satisfaction

The third hypothesis in this study proposed a positive impact between employee satisfaction and patient satisfaction in Nigerian general hospitals.

H3: Employee satisfaction is positively related to patient satisfaction

Findings: No direct positive link was found between employee satisfaction and patient satisfaction, as hypothesised in this study. Contrary to several studies that support a positive link between employee satisfaction and customer/patient satisfaction (Chi & Gursoy 2009; DeVoe et al. 2007; Jung & Yoon 2013; Linn et al. 1985; Raharjo et al. 2016), this current study found no direct connection. The literature has mixed results regarding the relationship between employee satisfaction and patient satisfaction in different contexts. For example, Jung and Yoon (2013) found employee satisfaction directly impacting customer satisfaction. Some other studies found employee satisfaction and customer satisfaction mediated by service quality (Heskett et al. 1994; Sadikoglu & Zehir 2010; Yee, Yeung & Cheng 2010). Raharjo et al. (2016) found a positive correlation between employees and patients but admits the relationship is complex. Melhem (2004) argues on the emotional side of the employees that the positive attitude and emotion of workers towards their company can manifest during encounters with customers. Thus, a happy employee can positively impact the "service encounter" with the customer and results in mutual satisfaction. However, Baummer-Carr and Nicolau (2017) found the relationship between employees and patients dependent on patients' satisfaction. Thus, the encounter between a happy employee and an unsatisfied patient may not lead to mutual satisfaction. On further analysis of indirect effects in this study, employee satisfaction has an indirect relationship with patient satisfaction, through the mediating influence of service quality, which is consistent with the results of several other studies (Heskett et al. 1994; Kermani 2013; Sadikoglu & Zehir 2010; Yee, Yeung & Cheng 2010). For example, the service-profit chain model emphasised the importance of service quality as a bridge between employees and customers, through which organisations make profits (Heskett et al. 1994; Kelloway & Myers 2019; Yee et al. 2013). Thus, the relationship between employee satisfaction and patient satisfaction is unclear, as several impacting factors determine it.

7.3.4: Link between Service Quality and Patient Satisfaction

The fourth hypothesis in this study was of a positive relationship between service quality and patient satisfaction in Nigerian general hospitals.

H4: Service quality is positively related to patient satisfaction

Findings: A direct positive link was found between service quality and patient satisfaction in the Nigerian general hospitals. This result supports several other studies that came up with similar findings, that there is a positive link between service quality and patient satisfaction (Asnawi et al. 2019; Badri, Attia & Ustadi 2009; Elleuch 2008; Lim et al. 2018; Nguyen & Nagase 2019; Shabbir, Malik & Malik 2016; Turan & Bozaykut-Bük 2016; Vinagre & Neves 2008). The result denotes that the higher the organization's service quality, the greater the satisfaction of its customers. Service quality is what patients based their decision on, which tends to influence their judgement of a hospital.

From the above discussion of the hypothesised relationships, TQM practices positively impact employee satisfaction, employee satisfaction positively impacts service quality, and service quality positively affects patient satisfaction. TQM is a tool that public healthcare managers could utilise to instigate satisfaction in employees to increase efficiency. Satisfied employees are willing to give more to the organisation as the basic requirements for their job task had been met. Employees' concerted efforts stem from the organisation's good internal operations, which results in better external service delivery (Sharma, Kong & Kingshott 2016), which studies have shown to delight customers (Asnawi et al. 2019; Javed & Ilyas 2018; Swain & Kar 2018).

Thus, the research question in this study, which asked the impact of TQM practices on employee satisfaction towards improving service quality and patient satisfaction in Nigerian general hospitals, has been answered. Also, the first objective of the study has been achieved.

7.4: Difference in Perception of Service Quality

The second objective of this study was to establish a gap between employees' perception of service quality and patients' perception in the Nigerian general hospitals. To determine the difference, a T-statistics was carried out. As shown in chapter 6 under table 6.5, the findings revealed that employees' perception differs from the perception of patients regarding service quality. Further, it was noted that the employees perceived tangible, responsiveness and

assurance to be high, with reliability and empathy having low perceptions. It contrasts with the patients' perception that all other dimensions are high except for tangible and reliability. While employees perceived empathy to be low in the hospitals, the patients gave it a good rating. Also, the patients' low judgement of tangible did not reflect the favourable judgement of the employees. However, both employees and patients have a low perception of reliability. Specifically, patients rated the hospital low in staff professional dress sense. Also, the rating of physical facilities was poor. Patients perceived the hospitals lack more materials associated with their services and deem the hospital services unreliable.

The difference in perception of service quality dimensions between employees and patients may be related to surface acting (Dedeoğlu and Demirer 2015), a dimension of emotional labour that refers to an employee changing outward appearance and pretends to be happy (Hochschild 1983), and other personality characteristics. Such could make the employee give favourable answers than patients on how they perceive the service quality of the hospitals. Also, it may be because patients mainly depend on treating physicians in developing countries, so they are not in the best position to judge service quality (Meesala and Paul 2018). Like Mosadeghrad (2014c) opined, healthcare quality means different things to all stakeholders. The findings lend credence to the growing support to measure healthcare service quality from the caregiver's perspective and the receiver of care.

The results are in line with the findings of several empirical studies in the service industry that established a gap in perception of service quality between employees and patients (Dedeoğlu & Demirer 2015; Mosadeghrad 2014c; Rohini & Mahadevappa 2006). The implication is that service quality may be perceived as high by the employees but perceived low by the patients, who are regarded as the best judge of hospital service quality (Rao, Peters & Bandeen-Roche 2006). Thus, patients are not satisfied with the services offered in the Nigerian general hospitals, in contrast to what the hospital management may have thought. It specifies a weakness in the system that needs to be addressed. Thus, hospitals should tailor their services to the patient's preference rather than what managers or employees deem suitable.

7.5: Theoretical Contribution

Several studies have emphasised a direct relationship between TQM practices and organisational performance. However, there is little awareness of the contextual links of employee satisfaction in that relationship. When the concept of dependency and intensity of such a relationship is understood, it will shed more light on the function of employee satisfaction as an influencer of service quality.

This study addresses the impact of TQM practices on employee satisfaction for improving service quality and attaining patients' satisfaction in Nigerian general hospitals. Thus, this study explains the role of employee satisfaction as a function of service quality. The management perspective of previous literature concentrated on identifying key TQM practises which contribute significantly to organisational success (Jun, Cai & Shin 2006). Thus, while human resource strategic public healthcare management is important for maximising internal hospital efficiency, employees' insights into TQM practices present in every organisation and employee satisfaction have received little attention (Ahmad & Schroeder 2003). Most traditional quality initiative studies were carried out in the developed countries, ignoring the developing countries, and by extension, Nigeria. Such prevents current literature from informing overseas managers on how the internal quality of a public hospital can enhance employee satisfaction and contribute towards improving the external service quality that would meet the needs and satisfaction of patients in the context of a developing country. This study has made an original contribution by establishing the importance of employees as mediators through which internal service operations are conveyed to the external operations. The study successfully connects internal enablers to hospital employee satisfaction and relates satisfied employees to external excellent service delivery in which patients based their judgment of hospitals.

Another key contribution of this research is to consider the TQM practices as captured in the Malcolm Baldrige National Quality Award in a new context with entirely different cultures, strategies, systems, methods, ideologies; and integrating the framework with the much acclaimed service-profit model. Most other TQM studies have focused on varying and sometimes conflicting quality factors. The current research is based on the factors captured by the healthcare version of the MBNQA, which comprise core TQM practices (Ahire, Golhar & Waller 1996), linked to employees' happiness and eventual satisfaction of customers.

While this study found TQM to impact service quality indirectly, Nigerian general hospitals' employees have a complementary function. In this respect, one may argue that human factors still have to provide the services despite the much reliance on information technology. In other words, the importance of employees in the job place is justified. Thus, as found in this research, the engagement, preparation, and guaranteeing employee morale and satisfaction in public healthcare organisations can be highly attended to through several internal quality enablers as follows: good leadership, focus on strategy, focussed attention on the patients, improving on measurement analysis and knowledge management, concentrating efforts to give the workforce the necessary support and making the operations in the hospitals as smooth as possible. The case studied in this thesis showed the collaborated and organised functions of hospital service staff towards providing high service delivery.

From a Nigerian contextual viewpoint, this thesis relates explicitly to quality in public hospitals both theoretically and empirically, considering the views of employees and patients. Most previous research focused on the relationship between quality and patient satisfaction. A further deviation from previous research was the study's emphasis on TQM success in improving the workforce's satisfaction to formulate a research model. In contrast, previous studies were primarily based on TQM implementation and failures. Indeed, this represents a new focus in the research of the public hospitals and an original contribution to public healthcare management.

The gap model for analysing service quality (Parasuraman, Zeithaml & Berry 1988) used in earlier studies focuses more on customers' expectations and perceptions. However, in most cases, such a comparison is not completely accurate and does not reflect fact. Most researchers find that the match between customer expectation and perception of service quality is weak. In that regard, Brown and Peterson (1993) empirical study found that the expectation-perception gap provides contradictory scores, leading to psychometric issues, and they warned of its usage (Jain & Gupta 2004). “Perception” has a basic definition and can be measured accurately because the client experienced the service before the judgement. But, “expectation” is interpreted in various ways, which leads to different conceptualisations in the literature (Grönroos 1990). Besides, due to the conceptualisation of the Servqual expectation variable, the validity of the “expectation” and “perception” measurement concept had been criticised. For example, most researchers have made concerted efforts to quantify the size of the difference between customers' and employees' expectations. Also, there can be bias regarding

the findings when employee expectation is used for service quality assessment. This current study avoided such bias and contributed methodologically by using perception rather than expectation in measuring service quality. Hence, perception alone in measuring service quality is the most appropriate approach (Sachdev & Verma 2004).

Another methodological contribution of this study was the conceptualisation of both TQM and service quality as second-order exogenous and endogenous constructs, respectively. To the best of the author's knowledge, no other study has conceptualised the TQM practices, especially the Malcolm Baldrige National Quality Award (Healthcare criteria), as a second-order construct. While studies have conceptualised service quality as a second-order construct, they mostly do so as an exogenous construct, unlike this current study used it as an endogenous construct. Generally, models comprising more than one higher-order construct in the health sector are scarce.

7.6: Practical Contribution

The lack of rigorous and systematic management and quality studies in Nigerian public healthcare made this current research critical. There was a theoretical interest amongst scholars when investigating the role of TQM in achieving organisational performance. However, little research interest in attaining TQM aims as internal quality enabler to enhance employees' morale towards delivering a better quality of service that meets customers' satisfaction in the Nigerian general hospitals. This research has produced some implications for healthcare managers and other practitioners in Nigeria, as enumerated below:

• Findings of the research would aid in enhancing the decision-making process for healthcare administrators and the performance of national healthcare systems, particularly in developing countries. Nigerian public healthcare scholars and managers should consider a better understanding of the relationships captured in this study's model comprising TQM, ES, SQ, and PS components. Scholars and practitioners had mainly concentrated their research on performance goals and outcomes like patient satisfaction while overlooking an employee's role in guaranteeing the quality. This study would allow public healthcare managers to pay more attention to staff concerns, enable managers to better understand the antecedents of employee satisfaction in the workplace and review the staff's experiences and outcomes. Thus, a manager's understanding of the relationship captured in this thesis would identify weaknesses and prioritise resource allocations judiciously to streamline the hospital's working processes.

Nigeria's public institutions, from employee happiness, will derive their true worth. Therefore, this research model will help public healthcare managers define internal quality enablers, like the TQM practices in this study, linked to employees' delight in the hospitals. The model also draws attention to the need for management to constantly assess the implementation of quality practices, to ensure that the quality of service employees' working life is consistent with progress. As such, employees will work more enthusiastically to deliver high quality service, helping them achieve a higher level of customer satisfaction (Yee, Yeung & Cheng 2011).

• This research played a role in improving employee satisfaction and quality of services in Nigerian general hospitals. In the Nigerian public hospitals, key challenges identified are lack of staff capacity, lack of financial resources, poor integration and collaboration, employees' nonchalant attitude, and neglect of quality. For the Nigerian general hospitals to overcome barriers, there should be a focus on the following practices rated high in this study: leadership, strategy, patients focus, measurement analysis, and knowledge management, workforce, and operations. A proper focus on the study's variables would empower the employees to carry out their job tasks effectively and indirectly impact the patients' level of satisfaction.

• This study encourages the need to promote public healthcare workers' satisfaction to achieve a high standard of service quality. Service quality is just one way to achieve success in public hospitals. Findings show that employee satisfaction improves service quality which is connected to patient satisfaction. Thus, in public healthcare settings where the services are mostly performed through direct employee contact with patients, a climate of operational employee satisfaction and high quality of service delivery can greatly enhance the competitive advantage of the government hospitals and boost its reputation. Furthermore, delivery of high-quality service transpires during the contact stage between employees and customers and among the employees who work and cooperate in the organisation.

• This thesis found the soft (human factors) and the hard (technical) aspects of TQM practices to be important in achieving high employee satisfaction and quality of services in public hospitals. This result is helpful for quality managers that want to improve their internal quality strategies to enhance external quality. Thus, managers within the Nigerian public healthcare should balance soft and hard influences since emphasising one or only a few factors is less effective (Bou-Llusar et al. 2009). Viewing both the soft and hard factors will ensure that the whole quality practices inherent in the organisation are applied, and managers will concentrate

on all performance variables (Curkovic et al. 2000b). In the absence of these variables, managers will inevitably establish many incompatible and unconnected factors (Bou-Llusar et al. 2009). This method's benefit is to enable managers and researchers from various organisations to determine the relative value of all aspects from customers' viewpoint: quality, efficiency, and empathy. This approach lets public healthcare managers in Nigeria develop action plans to enhance any aspect of the service quality.

• This study supports evidence regarding top managers' position towards achieving quality service delivery and eventual patient satisfaction in public hospitals. According to the findings of this study, senior managers' function, amongst other factors, is to ensure that staff is satisfied and that their roles in high quality healthcare delivery are facilitated. Public sector organisations in Nigeria need to be aware of the leadership role in enhancing employee morale and customer satisfaction. Nigerian public managers should also recognise that mutual leadership enhances workers' probability of being involved in important and desirable confidence-building experiences (De Jong & Dirks 2012; Drescher et al. 2014). Top managers should ensure service providers enough space to communicate and benefit from each other's capacity and allow them flexibility when communicating with external clients. Thus, motivating staff and improving their consumer interactivity is highly possible when there is a safe working environment in public hospitals. Managers should make reliable and detailed information available to every operational level staff to deliver services, make choices, and communicate. Timely and accurate data is also needed because, without data, workers will rely on their instincts or personal judgment, particularly when handling customer concerns and problems, lowering work and service level while also decreasing employee satisfaction.

• Employees must be equipped with empathy to carry out their duties. This thesis offers public sector managers in Nigeria the opportunity to define various activities with common performance goals to ensure staff work in a harmonious and cooperative working environment rather than conflict. Besides, this study found employee satisfaction a link to service improvement; thus, managers should define core requirements for selecting individuals to fill positions in public hospitals. Scholars and practitioners have acknowledged that HRM systems can serve as a competitive strategy to concentrate on value creation beyond traditional cost reduction approaches. (Becker and Gerhart, 1996). Increased focus is needed on human resources management in health care to improve the quality of care delivery in developing countries, particularly Nigeria. Also, managers should adopt new approaches to the planning

and in-service training of health workers needed to ensure that the workforce is aware of and qualified to meet Nigeria's current and future needs. A well-educated and knowledgeable workforce is the key to every national health care system. This contribution suggests that the manager, to improve hospital service quality, must be highly focused on the workforce and create a favourable hospital environment that encourages staff's dedication.

• Nigerian patients need healthcare workers' support; thus, they rely on their ability. Therefore, healthcare workers should be highly dependable and show empathic behaviour in discharging their duties. This thesis offers practical guidance to public healthcare administrators to find a good fit between the internal and the external environment and thus align the human resource practises with patients' experiences.

• The finding of this study established various administrative actions that can increase employees' satisfaction. Amongst these administrative actions, it is most important to emphasise the importance of workers' physical and psychological well-being (Brown & Lam 2008). Another main argument is the need to cultivate an organisational atmosphere where service quality is a prime objective and employees' efforts to deliver customer solutions get promoted, appreciated, and rewarded (Brown & Lam 2008).

• The holistic model developed by this research can examine disparities in internal quality operations, employee satisfaction, external service quality, and customer satisfaction in comparative studies of other public service organisations. It can then be decided whether the pattern is more common in various industries. In short, the holistic model has been developed to assess shortcomings in previous literature. There are differences between the public and private sectors regarding priorities, environment, and administrative style. The researcher found and worked on a model for the relationship between employees, service quality, and customers in public healthcare. A notion in line with the idea of the service-profit chain model introduced by Heskett et al. (1994). Significant improvements were made to this current model in terms of variables. While the service-profit chain model comprised three variables of employees, service, and customers, in addition to the use of employee satisfaction (ES) as an intermediate variable, this study added TQM practices as an antecedent of employee satisfaction. Further, the researcher built the measurement tools to measure only healthcare organisations' variables. Finally, this study integrates patient satisfaction in the model, making service quality its antecedent. In other words, the service comes before patients can derive

satisfaction. Thus, customers cannot be satisfied until they've experienced the available services. After the experience, the patients' satisfaction survey could be used to improve the services. This finding gives more justification for service perception in this study, rather than the popular gap model of expectation – perception.

7.7. Recommendations for the Nigerian General Hospitals

- The Nigerian general hospital should ensure staff dress professionally always
- The Nigerian general hospitals' physical facilities must be kept in good condition and continuously maintained as patients found them below standards.
- The hospitals should get modern and upgrade materials associated with their services as patients found these obsolete.
- Reliability was found to be a significant problem in Nigerian general hospitals. Therefore, the hospitals should ensure correct diagnoses and treatment results of the highest quality and timely services.

This study validated core internal enablers that constitute TQM which has a strong positive relationship with employee satisfaction. Thus, careful implementation and continuous monitoring of the practices will be a good boost for the Nigerian general hospitals. Therefore, the following recommendations would be beneficial to the Nigerian hospitals:

- Leadership: The management of Nigerian general hospitals must lead by example by clearly establishing the hospitals' vision and mission and adhering to standards. Only through the personal actions of senior leaders can total capacity be realised. Directly establishing and executing a vision is also a part of leadership. The management will be highly motivated enough to stay on track with the hospital's objectives, continually improve quality with core commitment, and guide employees to give their best effort in line with the hospital's goals.

- Strategy: The Nigerian general hospitals should put their strategy into action and look ahead to consider ways to engage and help employees towards their future goals. In this context, the employee's abilities will develop to accomplish the stated goals. All staff members must understand the strategies and roles of management in the hospitals. Thus, the hospitals are more likely to improve their efficiency through long-term strategic planning.

- Patient focus: The Nigerian general hospitals should invoke strong relationships with customers, which entails setting out the hospital's expectations, earning patients' trust, and finding ways to satisfy them. The hospitals should ensure their long-term relevance, creating new opportunities to improve deficiencies through feedback. Employees of the hospitals should be drilled on the patients' importance and prioritise their needs, strive to listen to the patients, and give the patients helpful information. Patient satisfaction should be the philosophy in the workplace. The managers should tailor the hospitals' services to the patient's preference rather than what managers or the employees deem suitable. A good hospital cannot be maintained without considering the medical needs of the people who use it and providing them with the services required. Thus, management should concentrate on the patients and patients' complaints and solve these complaints.

- Measurement, analysis, and knowledge management: There's a need for better data management, data validation, and data use, which would lead to better results. This entails healthcare managers providing timely, tangible, and valid data to employees to perform their tasks better to achieve the desired quality of care. Employees perform tasks more effectively when they have up-to-date information. Providing employees with the right tools and timely data will enable them to carry out their functions effectively. Also, employees should be trained on new technologies that simplify the working process.

- Workforce focus: The hospitals should endeavour to provide the employees with training, development, good teamwork, recognition, and a supportive working environment that facilitates career growth and engagement. The employees must be engaged to feel empowered to carry out their duties effectively. Good workforce management and engagement positively affect overall hospital performance (Xiong et al. 2017). So, it is crucial to maintain employees' well-being, create a good working environment, and prioritise work autonomy. In terms of recruitment, the hospital should always vet carefully and ensure their recruits have the required skills and knowledge. When hiring, medical staff's experience, abilities, views, qualifications, and ethics are of utmost importance.

- Operations: There should be a focus on critical service delivery from admission to administrative procedures to streamline the employees' tasks and reduce their stress. Managing and improving hospital work processes per patients' needs and requirements is a burden for all stakeholders. Therefore, the hospitals should ensure a smooth working process that allows employees to provide adequate and timely service for patients' satisfaction.

7.8: Limitations and Suggestions for Future Studies

The subsequent sections clarify the study's limitations and recommendations for further studies.

• The study focuses only on two secondary hospitals; therefore, future studies can widen the scope by including primary and tertiary hospitals. The researcher further recommends that future studies include government and private hospitals and compare.

• Due to time constraints and deadlines, the researcher utilised the quantitative method in this study; future research can be carried out using mixed methods, i.e., qualitative findings to inform the quantitative analysis or vice versa.

• The study is cross-sectional, in which data was collected within 2-3 months. Therefore, it's recommended that future researchers attempt the longitudinal method. The longitudinal method can help determine whether changes in employees over time contribute to customers' changes in evaluating the connection between public workers and customers.

• Future studies could explore the direct impact of TQM practices on SQ and conceptualise an inverse relationship between ES and PS, using this study's model.

• Future research could unpack the TQM practices into six distinct constructs and hypothesise a direct relationship between each practice and employee satisfaction.

• Future research can investigate which TQM dimensions have more impact on ES, similarly, which SQ dimensions have more impact on patient satisfaction.

• Future researchers could add a factor of emotional labour (surface acting) as a mediator on the relationship between employee satisfaction and patient satisfaction. While the current study found the relationship between employee satisfaction and patient satisfaction mediated by

service quality, scholars have argued that the relationship is unclear and could be impacted by various factors such as employee surface acting (Dedeoğlu and Demirer, 2015).

7.9: Conclusion

In conclusion, this research aimed to examine the relationship amongst TQM practices, employee satisfaction, service quality, and patient satisfaction in the context of Nigerian general hospitals. The findings were that TQM practises as composed in the MBNQA (Leadership, strategy, patient focus, measurement analysis, and knowledge management, workforce, and operations) have strong impacts on employee satisfaction. More so, the tripartite relationships between employee satisfaction, service quality, and patient satisfaction were found valid. Thus, the study's model comprising four distinct constructs, TQM, ES, SQ, and PS, has been validated. All the study's proposed hypotheses were valid except for H3, linking employee satisfaction and patient satisfaction.

The study's second objective was to determine the perceptual difference in service quality between employees and patients. The result shows that employees' perception differs from that of patients regarding the service dimension in the hospitals.

The study's findings demonstrate that TQM activities are significant and could serve as an internal quality enabler that increases employees' morale towards providing efficient services that would meet the needs and satisfaction of patients. Also, the study's findings reiterate the employees' importance in the organisation, as employee satisfaction is a function of service quality in which patients derive satisfaction. Ignoring inputs that would enable employees to carry out their tasks properly would be detrimental to any organisation. The workforce's satisfaction is the bedrock towards achieving service improvement because the employees are the doers in the organisation. However, the patients' preferences should never be ignored. Hence this study found it adequate to survey satisfaction with service quality using the perception of both the employees and patients. Therefore, to achieve a better public healthcare service in Nigeria, this study's model should be taken seriously. It is hoped that the findings of this study can be used in health workers debate, deliberations, and changes to improve the health services in Nigeria.

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Appendices

Appendix A: Ethics Approval

quest.noreply@vu.edu.au
Thu 8/15/2019 4:13 PM
Dear DR THU-HUONG NGUYEN,

Your ethics application has been formally reviewed and finalised.

» Application ID: HRE19-028
» Chief Investigator: DR THU-HUONG NGUYEN
» Other Investigators: MR Ernest Afene Fiakpa, DR KEITH THOMAS, DR TOBORE GBEMRE
» Application Title: Assessing employees and patients' satisfaction with service quality in Nigerian general hospitals.
» Form Version: 13-07

The application has been accepted and deemed to meet the requirements of the National Health and Medical Research Council (NHMRC) 'National Statement on Ethical Conduct in Human Research (2007)' by the Victoria University Human Research Ethics Committee. Approval has been granted for two (2) years from the approval date; 16/08/2019.

Continued approval of this research project by the Victoria University Human Research Ethics Committee (VUHREC) is conditional upon the provision of a report within 12 months of the above approval date or upon the completion of the project (if earlier). A report proforma may be downloaded from the Office for Research website at: http://research.vu.edu.au/hrec.php.

Please note that the Human Research Ethics Committee must be informed of the following: any changes to the approved research protocol, project timelines, any serious events or adverse and/or unforeseen events that may affect continued ethical acceptability of the project. In these unlikely events, researchers must immediately cease all data collection until the Committee has approved the changes. Researchers are also reminded of the need to notify the approving HREC of changes to personnel in research projects via a request for a minor amendment. It should also be noted that it is the Chief Investigators' responsibility to ensure the research project is conducted in line with the recommendations outlined in the National Health and Medical Research Council (NHMRC) 'National Statement on Ethical Conduct in Human Research (2007).'

On behalf of the Committee, I wish you all the best for the conduct of the project.

Secretary, Human Research Ethics Committee
Phone: 9919 4781 or 9919 4461
Email: researchethics@vu.edu.au

Appendix B: Consent Information for Survey Participants

CONSENT FORM FOR PARTICIPANTS INVOLVED IN RESEARCH

INFORMATION TO PARTICIPANTS:

We would like to invite you to be a part of a study into improving services in the Nigerian general Hospitals. The study aims to improve the satisfaction of general hospital staffs, for better service delivery that would meet the needs and satisfaction of patients. The procedure requires about 20-25 minutes of your time to fill a questionnaire. This research poses no risks to you and you are at liberty to partake or decline. No personal or identifiable data is required in the procedure and every information you give in this research is strictly kept confidential.

CERTIFICATION BY PARTICIPANT

I …….. Participant's Name

Of ……... Participant's Suburb/Area

Certify that I am at least 18 years old* and that I am voluntarily giving my consent to participate in the study:
"Assessing Employees and Patients' Satisfaction with Quality of Services in Nigerian General Hospitals", being conducted at Victoria University by: Dr. Thu-Huong Nguyen.

I certify that the objectives of the study, together with any risks and safeguards associated with the procedures listed hereunder to be carried out in the research, have been fully explained to me by**:** Mr. Fiakpa Ernest and that I freely consent to participation involving the below mentioned procedures:

- Fill, sign and return the informed consent form to researcher
- Fill a questionnaire as required and give to researcher

I certify that I have had the opportunity to have any questions answered and that I understand that I can withdraw from this study at any time and that this withdrawal will not jeopardise me in any way.

I have been informed that the information I provide will be kept strictly confidential.

Signed: ……..

Date: ……...

Any queries about your participation in this project may be directed to the researchers
Dr. Thu-Huong Nguyen, +6199191268 or email: thu-huongnguyen@vu.edu.au
Dr. Tobore Gbemre, +2348090490894 or email: toboregbemre@yahoo.co.uk

If you have any queries or complaints about the way you have been treated, you may contact the Ethics Secretary, Victoria University Human Research Ethics Committee, Office for Research, Victoria University, PO Box 14428, Melbourne, VIC, 8001, email Researchethics@vu.edu.au or phone (03) 9919 4781 or 4461.

Appendix C: Invitation and Information to Research Participants

VICTORIA UNIVERSITY
MELBOURNE AUSTRALIA

INFORMATION TO PARTICIPANTS INVOLVED IN RESEARCH

You are invited to participate

You are invited to participate in a research project entitled "Assessing Employees and Patients' Satisfaction with Quality of Services in Nigerian General Hospitals"**.** This project is being conducted by a student researcher, Fiakpa Ernest, as part of a Doctoral study at Victoria University under the supervision of Dr. Thu-Huong Nguyen, from college of Business.

Project explanation

This study aims to measure the satisfaction of healthcare workers' and patients with service quality in Nigerian general hospitals, in other to ensure effective quality practices that could improve employee morale for better service delivery.

What will I be asked to do?

You will be asked to fill an informed consent form, and a survey questionnaire. The questionnaire will ask questions regarding your level of satisfaction with service quality in the hospital. No identifiable or personal questions will be asked.

What will I gain from participating?

There is no personal benefit to you for participating in this study.

How will the information I give be used?

The information provided will be used in Journals, at conferences and for writing thesis. All information is guaranteed to be kept strictly confidential and used for this study purpose only.

What are the potential risks of participating in this project?

There may be social risk of negative perception in this study. However, if you feel uncomfortable with any of the questions, you can refuse to answer it. *Participation in the study is voluntary, and you can decide not to participate, or withdraw at any time without any repercussion.*

How will this project be conducted?

On approach, the study will be explained, and an informed consent form and questionnaire handed to you. You are expected to fill the consent form and questionnaire at your convenient time, enclosed it in an unmarked envelope and deliver to the researcher. The questionnaire process will take up to 25 minutes.

Who is conducting the study?

Victoria University, School of Business
Chief Investigator: Dr. Thu-Huong Nguyen, +61399191268
Student investigator: Mr. Fiakpa Ernest, +61434589261/+2347039869654

Any queries about your participation in this project may be directed to the Chief Investigator listed above.
If you have any queries or complaints about the way you have been treated, you may contact the Ethics Secretary, Victoria University Human Research Ethics Committee, Office for Research, Victoria University, PO Box 14428, Melbourne, VIC, 8001, email researchethics@vu.edu.au or phone (03) 9919 4781 or 4461.

Appendix D: Employee Questionnaire

College of Business

Doctor of Business Administration

Employee Questionnaire

This survey is part of a Doctoral study in Victoria University that aims to assess employees and patients' satisfaction with the quality of services in Nigerian general hospitals. Your response will be kept anonymous; all the information you provide will be kept strictly confidential and only used for academic purpose. Your participation in the study is completely voluntary. There are no foreseeable risks associated with this project. However, if you feel uncomfortable answering any questions, you can withdraw from the survey at any point. The questions should take around 10 - 20 minutes to complete. Thank you.

SECTION A: Quality Practices

Below are several statements regarding quality practices in hospitals. Please, read each one carefully and indicate to what extent you agree or disagree with the statement. Mark "X" in the appropriate box that best describes your answer.

	Strongly Disagree	Disagree	Not sure	Agree	Strongly Agree
Our leaders stay true to the core values while continuously improving quality	O	O	O	O	O
Our leaders create an environment for empowerment	O	O	O	O	O
Our leaders encourage learning in the hospital	O	O	O	O	O
Our leaders have cordial relationship with other staff members	O	O	O	O	O
Our leaders recognise staff contribution	O	O	O	O	O
Actions of our leaders create a high-performing hospital	O	O	O	O	O
Departments head accept responsibility for quality	O	O	O	O	O
Our leaders place patients first	O	O	O	O	O
Our leaders use performance feedback to improve the quality of care	O	O	O	O	O
Our leaders are focused on the well-being of the community	O	O	O	O	O

	Strongly Disagree	Disagree	Not sure	Agree	Strongly Agree
The hospital has comprehensive strategic objectives	O	O	O	O	O
Strategic objectives are clearly communicated to all staff	O	O	O	O	O
Every staff member is aware of the strategic objectives	O	O	O	O	O
Staff are committed to the strategic objectives	O	O	O	O	O
Strategic decisions are evaluated with objective measures	O	O	O	O	O
Strategic objectives include reducing waste	O	O	O	O	O
Strategic plans are supported by all stakeholders	O	O	O	O	O

There are deadline for achieving its strategic objectives	O	O	O	O	O
Strategies are used to address performance as a health care provider	O	O	O	O	O
Strategies are translated into actions	O	O	O	O	O

	Strongly Disagree	**Disagree**	**Not sure**	**Agree**	**Strongly Agree**
The hospital identifies its target patients well	O	O	O	O	O
Patient-oriented vision is clearly communicated to the staff	O	O	O	O	O
Patients' satisfaction is a top priority	O	O	O	O	O
Patients' opinions are taken seriously	O	O	O	O	O
Staff actively seek feedback from patients regarding services	O	O	O	O	O
We have a well-established communication channel with patients	O	O	O	O	O
We regularly measure the extent of patients' satisfaction	O	O	O	O	O
We compare patients' satisfaction information with that of competitors	O	O	O	O	O
The hospital monitors community health trends	O	O	O	O	O
The hospital provides free services for those who cannot pay	O	O	O	O	O
We strive to be highly responsive to patients' needs	O	O	O	O	O
Patients' preferences are analysed when designing new patient services	O	O	O	O	O

	Strongly Disagree	**Disagree**	**Not sure**	**Agree**	**Strongly Agree**
The hospital ensures staff have rapid access to quality-related data	O	O	O	O	O
The hospital ensures data matches current healthcare needs	O	O	O	O	O
Data accuracy is ensured	O	O	O	O	O
Comparative data is used to analyse performance	O	O	O	O	O
Staff members are trained on data collection techniques	O	O	O	O	O
Staff members are trained on data analysis techniques	O	O	O	O	O
The information systems of the hospital are reliable	O	O	O	O	O
The information systems are user-friendly	O	O	O	O	O
The information systems are standardized across all departments	O	O	O	O	O

	Strongly Disagree	**Disagree**	**Not sure**	**Agree**	**Strongly Agree**
Adequate effort is made to get the opinions of staff members	O	O	O	O	O
Staff are free to discuss work-related issues with their supervisors	O	O	O	O	O
Staff members are involved in decisions that affect their work	O	O	O	O	O
Staff members have access to information needed to serve patients	O	O	O	O	O

There is a comprehensive system to motivate staff	O	O	O	O	O
Staff are given a broad range of tasks	O	O	O	O	O
Staff are given decision-making responsibility	O	O	O	O	O
Staff are rewarded for learning new skills	O	O	O	O	O
The work environment supports the well-being of staff	O	O	O	O	O
The hospital uses various methods to measure staff satisfaction	O	O	O	O	O

	Strongly Disagree	**Disagree**	**Not sure**	**Agree**	**Strongly Agree**
The hospital addresses quality of healthcare in design processes	O	O	O	O	O
The hospital ensures efficiency in its service processes	O	O	O	O	O
The hospital ensures effective service delivery processes	O	O	O	O	O
Patients' participate in the service processes	O	O	O	O	O
There are standardized operating procedures to support daily operations	O	O	O	O	O
There are effective methods for assessing performance to improve service delivery	O	O	O	O	O
There are enough staff to handle workload	O	O	O	O	O
The hospital measures performance of its administrative services	O	O	O	O	O
The hospital establishes long-term relationships with its suppliers	O	O	O	O	O
Quality is an important criterion for selecting suppliers	O	O	O	O	O
Suppliers are involved in designing new services	O	O	O	O	O

	Strongly Disagree	**Disagree**	**Not sure**	**Agree**	**Strongly Agree**
I like my job	O	O	O	O	O
My job gives me much satisfaction	O	O	O	O	O
I feel personal satisfaction when I do my job well	O	O	O	O	O
The nature of the job is satisfactory	O	O	O	O	O
I consider this hospital my first choice	O	O	O	O	O
This is the best hospital for me to work	O	O	O	O	O
I am proud to tell people that am part of this hospital	O	O	O	O	O

I am delighted with the benefits the hospital provides	O	O	O	O	O
I am satisfied with the level of supervision in the hospital	O	O	O	O	O
I am satisfied with my salary in this hospital	O	O	O	O	O
The hospital's on-job training meets my expectation	O	O	O	O	O
I am happy with my co-workers	O	O	O	O	O
The promotion opportunity in the hospital is satisfactory	O	O	O	O	O
I am satisfied with the variety of activities my work offers	O	O	O	O	O
I am very satisfied working in this hospital	O	O	O	O	O

SECTION B: Service Quality Perception

Below are several statements regarding service dimensions in hospitals. Please, read each one and indicate to what extent you agree or disagree with each statement. Mark "X" in the appropriate box that best describes your answer.

	Strongly Disagree	**Disagree**	**Not sure**	**Agree**	**Strongly Agree**
The hospital has modern equipment	O	O	O	O	O
The hospital has a clean environment	O	O	O	O	O
The hospital's facilities are visually appealing	O	O	O	O	O
The hospital's staff look professional in appearance	O	O	O	O	O
The hospital's physical facilities reflect the concept of a hospital	O	O	O	O	O
Materials associated with the hospital's services are visually appealing	O	O	O	O	O

	Strongly Disagree	**Disagree**	**Not sure**	**Agree**	**Strongly Agree**
The hospital diagnoses patients accurately at first attempt	O	O	O	O	O
The hospital gives appropriate treatment at first attempt	O	O	O	O	O
The hospital's staff show sincere interest in solving patients' problems	O	O	O	O	O
The hospital keeps its promise to provide services at the appointed time	O	O	O	O	O
The hospital ensures medical records are free from errors	O	O	O	O	O
The hospital provides services on time	O	O	O	O	O

	Strongly Disagree	**Disagree**	**Not sure**	**Agree**	**Strongly Agree**
Staff are willing to listen carefully to patients	O	O	O	O	O
Staff are always willing to help patients	O	O	O	O	O
Staff respond to patients' needs in a timely manner	O	O	O	O	O

The hospital provides efficient services	O	O	O	O	O
Staff do not hesitate to respond to patients' requests	O	O	O	O	O
Staff respond quickly to an emergency	O	O	O	O	O

	Strongly Disagree	**Disagree**	**Not sure**	**Agree**	**Strongly Agree**
Patients have confidence in the ability of the hospital's staff	O	O	O	O	O
Patients feel safe interacting with staff of the hospital	O	O	O	O	O
Patients are treated with courtesy	O	O	O	O	O
Staff of the hospital are knowledgeable	O	O	O	O	O
Staff of the hospital are highly skilled	O	O	O	O	O
Staff of the hospital have the required training to deliver services to patients	O	O	O	O	O

	Strongly Disagree	**Disagree**	**Not sure**	**Agree**	**Strongly Agree**
The staff understand patients' emotions	O	O	O	O	O
The staff are sympathetic towards patients	O	O	O	O	O
The staff try to understand the specific needs of patients	O	O	O	O	O
The staff have patients' best interests at heart	O	O	O	O	O
The staff have genuine concern for patients	O	O	O	O	O
The staff always try to make patients feel comfortable	O	O	O	O	O
The staff give individual attention to patients	O	O	O	O	O

SECTION C: Demographic Characteristics

Please, tick the appropriate box (✓).

Gender	**Male ☐ Female ☐**
Age Range	**18-29 ☐ 30-39 ☐ 40-49 ☐ 50-59 ☐ 60 and above ☐**
Marital Status	**Single ☐ Married ☐ In a Relationship ☐ Divorced ☐ Widowed ☐**
Profession	**Doctor ☐ Nurse ☐ Administrative staff ☐**
Years in the Job	**1-4yrs ☐ 5-9yrs ☐ 10-14yrs ☐ 15yrs and above ☐**
Level of Education	**Primary ☐ Secondary ☐ Diploma ☐ Undergraduate ☐ Post-graduate ☐**
Religion	**Christian ☐ Muslim ☐ Traditional ☐ Non-believer ☐**

Appendix E: Patients' Questionnaire

College of Business

Doctor of Business Administration

Patients Questionnaire

This survey is part of a Doctoral study in Victoria University that aims to assess employees and patients' satisfaction with the quality of services in Nigerian general hospitals. Your response will be kept anonymous; all the information you provide will be kept strictly confidential and only used for academic purpose. Your participation in the study is completely voluntary. There are no foreseeable risks associated with this project. However, if you feel uncomfortable answering any questions, you can withdraw from the survey at any point. The questions should take around 25 minutes to complete. Thanks for your cooperation.

SECTION A: Service Quality Perception

Below are statements regarding service dimensions in hospitals. Please, read each one carefully and indicate to what extent you agree or disagree with the statement. Mark "X" in the appropriate box that best describes your answer.

	Strongly Disagree	Disagree	Not sure	Agree	Strongly Agree
The hospital has modern equipment	O	O	O	O	O
The hospital has a clean environment	O	O	O	O	O
The hospital's facilities are visually appealing	O	O	O	O	O
The hospital's staff look professional in appearance	O	O	O	O	O
The hospital's physical facilities reflect the concept of a hospital	O	O	O	O	O
Materials associated with the hospital's services are visually appealing	O	O	O	O	O

The hospital diagnoses patients accurately at first attempt	Strongly Disagree	Disagree	Not sure	Agree	Strongly Agree
The hospital gives appropriate treatment at first attempt	O	O	O	O	O
The hospital's staff show sincere interest in solving patients' problems	O	O	O	O	O
The hospital keeps its promise to provide services at the appointed time	O	O	O	O	O
The hospital ensures medical records are free from errors	O	O	O	O	O
The hospital provides services on time	O	O	O	O	O

	Strongly Disagree	Disagree	Not sure	Agree	Strongly Agree

Staff are willing to listen carefully to patients	O	O	O	O	O
Staff are always willing to help patients	O	O	O	O	O
Staff respond to patients' needs in a timely manner	O	O	O	O	O
The hospital provides efficient services	O	O	O	O	O
Staff do not hesitate to respond to patients' requests	O	O	O	O	O
Staff respond quickly to an emergency	O	O	O	O	O

	Strongly Disagree	**Disagree**	**Not sure**	**Agree**	**Strongly Agree**
Patients have confidence in the ability of the hospital's staff	O	O	O	O	O
Patients feel safe interacting with staff of the hospital	O	O	O	O	O
Patients are treated with courtesy	O	O	O	O	O
Staff of the hospital are knowledgeable	O	O	O	O	O
Staff of the hospital are highly skilled	O	O	O	O	O
Staff of the hospital have the required training to deliver services to patients	O	O	O	O	O

	Strongly Disagree	**Disagree**	**Not sure**	**Agree**	**Strongly Agree**
The staff understand patients' emotions	O	O	O	O	O
The staff are sympathetic towards patients	O	O	O	O	O
The staff try to understand the specific needs of patients	O	O	O	O	O
The staff have patients' best interests at heart	O	O	O	O	O
The staff have genuine concern for patients	O	O	O	O	O
The staff always try to make patients feel comfortable	O	O	O	O	O
The staff give individual attention to patients	O	O	O	O	O

	Strongly Disagree	**Disagree**	**Not sure**	**Agree**	**Strongly Agree**
I am satisfied with my stay in the hospital	O	O	O	O	O
I am satisfied with my medical expenses compared to the medical care received	O	O	O	O	O
I feel satisfied that the result of my treatment was the best that could be achieved	O	O	O	O	O
I feel satisfied that the extent to which I was treated produced the best possible outcome	O	O	O	O	O
The medical services have fulfilled my requirements	O	O	O	O	O
I am satisfied with the level of services provided	O	O	O	O	O
I am satisfied with the hospital's admission process	O	O	O	O	O
I am satisfied with medical care provided by the doctors	O	O	O	O	O

I am satisfied with medical care provided by the nurses	O	O	O	O	O
I am satisfied with services provided by the administrative staff	O	O	O	O	O
Overall, I am very satisfied with the services in this hospital	O	O	O	O	O

SECTION B: Demographic Characteristics

Please, tick the appropriate box (✓).

Gender	**Male ☐ Female ☐**
Age Range	**18-29 ☐ 30-39 ☐ 40-49 ☐ 50-59 ☐ 60 and above ☐**
Marital Status	**Single ☐ Married ☐ In a Relationship ☐ Divorced ☐ Widowed ☐**
Level of Education	**Primary ☐ Secondary ☐ Diploma ☐ Undergraduate ☐ Post-graduate ☐**
Employment Status	**Employed ☐ Unemployed ☐ Retired ☐ Student ☐**
Religion	**Christian ☐ Muslim ☐ Traditional ☐ Non-believer ☐**
Duration in hospital	**I night or less ☐ 2-4 nights ☐ 5-9 nights ☐ 10 nights and more ☐**
Category	**Patient ☐ Family member of patient ☐ Friend of patient ☐**
Reasons for admission	**Surgical - You had surgery/operation while in hospital ☐** **Medical - Admitted for ante-natal care, diagnoses or treatment ☐** **Maternity - You gave birth in the hospital ☐** **Not sure ☐**

Appendix F: Letter of Permission from Hospital 1

17/07/2019

To Whom It May Concern

RE: REQUEST FOR PERMISSION TO CONDUCT RESEARCH IN YOUR HOSPITAL

Concerning your letter with the above stated caption, dated 18th of June 2019, I hereby inform you that your request for data collection on employees and patients in our hospital, has been granted.

By this approval, Mr. Fiakpa Ernest is permitted to:

1. Use the premises of the National Hospital for the study purpose
2. Engage with staffs of the National Hospital, who voluntarily agree to participate
3. Engage with patients attending the National Hospital, who voluntarily agree to participate
4. Use the name of the National Hospital in the study and other academic publications.

Thank You.

Osuji Anthony
Head of Department
Research and Development

Plot 132 Central District (Phase II) P.M.B. 425, Garki - Abuja Nigeria
Telephone: 0803-777-9543, 0809-771-9764, 0809752-00022
Email: info@nationalhospitalabuja.net wwww.nationalhospitalabuja.net

Appendix G: Letter of Permission from Hospital 2

DELTA STATE TEL: 053-251182
DELTA STATE HOSPITALS MANAGEMENT BOARD
Warri Medical Zone
Central Hospital
P.M.B. 1004.
Warri.

Your Ref:

Our Ref: Date: 21st June, 2019.

ETHICS AND RESEARCH COMMITTEE
CLEARANCE CERTIFICATE

PROTOCOL NUMBER: CHW/ECC VOL 1/186

PROJECT TITLE: Assessing employees and patients satisfaction with quality services of the Nigerian General Hospitals.

PRINCIPAL INVESTIGATOR(S): Fiakpa Afene Ernest

DEPARTMENT/INSTITUTION: College of business/ Victoria University Melbourne Australia.

SUPERVISOR(S): Dr. Thu-Huong Nguyen
Dr. Keith Thomas

DATE CONSIDERED: 14th June, 2019.

DECISION OF COMMITTEE: Approved.

REMARK:

CHAIRMAN: DR.ONYEMESILI. C
MBBS (Nig) (FWACS)

for SECRETARY: DR. OMU PATRICK
FWACS, FMCOG

Appendix H: Skewness and Kurtosis Result

	Excess Kurtosis	Skewness
L1	0.971	-1.008
L2	0.419	-0.684
L3	0.335	-1.194
L4	-0.202	-0.392
L5	0.372	-0.698
L6	-1.072	0.483
L7	-1.305	0.12
L8	-1.144	-0.377
L9	-1.056	-0.213
L10	-1.286	0.198
S1	-0.303	-0.74
S2	-0.628	-0.523
S3	-1.067	-0.152
S4	-1.087	-0.254
S5	-0.421	-0.636
S6	2.155	-1.658
S7	0.249	-0.633
S8	0.418	-1.08
S9	0.05	-0.495
S10	-1.223	-0.143
P1	-1.293	-0.146
P2	-1.284	-0.284
P3	-0.898	-0.554
P4	-0.859	-0.549
P5	-1.31	0.072
P6	-0.307	-0.305
P7	-0.153	0.059
P8	-0.362	-0.17
P9	-1.445	-0.058
P10	-1.328	0.057
P11	-0.081	-0.127
P12	-0.375	-0.433
M1	-0.227	-0.482
M2	0.049	-1.02
M3	0.876	-0.868
M4	-0.62	-0.706
M5	-1.242	-0.061
M6	-0.003	-0.599
M7	-0.317	-0.419
M8	-1.324	-0.128
M9	-1.171	-0.497

W1	-0.279	-0.497
W2	-0.736	-0.519
W3	-0.895	-0.224
W4	-0.193	-0.437
W5	-0.109	-0.42
W6	0.421	-0.024
W7	-1.218	0.022
W8	-1.215	0.069
W9	-1.194	0.202
W10	-1.048	0.375
O1	-1.365	0.044
O2	-0.874	-0.331
O3	-0.955	-0.485
O4	-1.142	-0.333
O5	-0.387	-0.67
O6	-0.773	-0.568
O7	-0.359	-0.782
O8	0.001	-0.941
O9	-0.587	-0.734
O10	-0.682	-0.459
O11	-0.043	-0.663
ES1	-1.175	0.344
ES2	-1.011	0.298
ES3	-1.1	-0.265
ES4	-1.134	-0.339
ES5	-1.406	-0.045
ES6	-1.168	-0.107
ES7	-1.158	-0.199
ES8	-1.268	-0.03
ES9	-0.586	-0.654
ES10	-0.438	-0.654
ES11	-0.998	-0.289
ES12	0.015	-0.602
ES13	0.131	-0.482
ES14	-1.123	0.158
ES15	-1.192	-0.075
T1	-0.799	-0.553
T2	-1.194	-0.204
T3	-1.072	-0.304
T4	-1.137	-0.276
T5	-1.005	-0.416
T6	-1.19	0.158
R1	-1.177	0.275
R2	-1.166	0.456

R3	-1.477	0.024
R4	-1.148	0.363
R5	-1.522	0.192
R6	-1.349	-0.016
RS1	2.096	-1.168
RS2	-0.764	-0.184
RS3	0.355	-0.808
RS4	-0.897	-0.269
RS5	-0.756	0.097
RS6	-1.058	0.04
A1	-1.175	-0.146
A2	-0.675	-0.733
A3	-0.817	-0.506
A4	-1.107	-0.291
A5	-0.986	-0.381
A6	-0.983	-0.47
E1	-0.818	-0.509
E2	-0.795	-0.561
E3	-1.234	0.22
E4	-1.286	0.066
E5	-1.335	0
E6	-1.321	0.177
E7	-1.097	0.247
Gend	-1.963	-0.248
Age	-0.636	0.293
Marit	-0.79	0.786
Prof	-1.251	-0.199
JobD	-1.237	-0.42
Edu	-1.49	0.207
Relgn	3.366	1.381
GendE	-1.963	0.248
AgeE	-0.636	0.293
MaritE	-0.79	0.786
Prof1	-0.827	-0.28
JobD1	-1.237	-0.42
EduE	-1.49	0.207
RelgnE	3.366	1.381
Tp1	-1.448	-0.084
Tp2	-1.168	-0.387
Tp3	-1.226	-0.236
Tp4	-1.426	0.029
Tp5	-1.446	0.091
Tp6	-1.259	0.499
Rp1	-1.092	0.413

Rp2	-1.239	0.164
Rp3	-1.243	0.485
Rp4	-1.569	-0.131
Rp5	-1.599	0.278
Rp6	-0.7	0.506
RSp1	1.165	-1.234
RSp2	3.485	-1.552
RSp3	1.421	-0.727
RSp4	3.371	-1.579
RSp5	1.03	-1.023
RSp6	-0.474	-0.329
Ap1	-0.938	-0.504
Ap2	-0.959	-0.466
Ap3	-1.133	-0.071
Ap4	-1.159	-0.131
Ap5	-1.158	-0.147
Ap6	-1.408	-0.017
Ep1	2.96	-1.41
Ep2	0.72	-0.875
Ep3	0.894	-1.219
Ep4	1.495	-1.268
Ep5	-0.357	-0.659
Ep6	-1.023	0.525
Ep7	-1.269	-0.385
PS1	-0.594	0.547
PS2	-0.936	0.537
PS3	-1.163	0.463
PS4	-0.489	0.828
PS5	-1.023	0.525
PS6	-0.594	0.547
PS7	-1.301	0.355
PS8	-1.229	-0.228
PS9	-0.591	-0.615
PS10	-0.846	0.392
Gend2	-1.919	-0.324
Age2	-0.785	0.611
Marit2	0.052	0.727
Edu2	-0.877	-0.23
Empl	-1.624	0.124
Relgn2	-1.401	0.159
Durat	-0.159	0.588
Category	-1.022	0.501
Reasons	-0.39	0.409
GenP	-1.919	0.324

AgeP	-0.785	0.611
MaritP	0.052	0.727
EduP	-0.877	-0.23
Empl1	-1.624	0.124
RelgnP	-1.401	0.159
Durat1	-0.159	0.588
Cat1	-1.022	0.501
Reas	-0.39	0.409

Appendix I: Common Method Bias Result

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	10.729	7.201	7.201	10.729	7.201	7.201
2	8.139	5.462	12.663			
3	6.855	4.601	17.264			
4	6.089	4.087	21.350			
5	5.724	3.841	25.192			
6	5.035	3.379	28.571			
7	4.943	3.317	31.888			
8	4.081	2.739	34.627			
9	3.868	2.596	37.223			
10	3.261	2.188	39.411			
11	3.236	2.172	41.583			
12	3.136	2.105	43.687			
13	2.717	1.823	45.511			
14	2.688	1.804	47.315			
15	2.668	1.791	49.105			
16	2.549	1.711	50.816			
17	2.444	1.640	52.456			
18	2.301	1.544	54.000			
19	2.251	1.511	55.511			
20	2.122	1.424	56.935			
21	2.052	1.377	58.312			
22	2.000	1.342	59.654			
23	1.898	1.274	60.928			
24	1.805	1.211	62.139			
25	1.770	1.188	63.327			
26	1.716	1.152	64.478			
27	1.580	1.060	65.539			
28	1.561	1.048	66.587			
29	1.537	1.031	67.618			
30	1.508	1.012	68.630			
31	1.496	1.004	69.634			
32	1.441	.967	70.601			
33	1.388	.931	71.532			
34	1.351	.907	72.439			

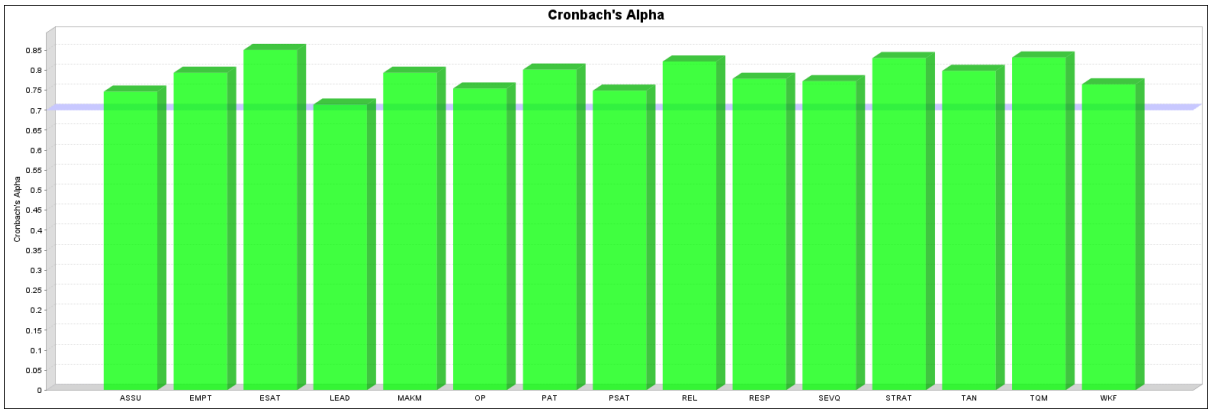
35	1.292	.867	73.306			
36	1.250	.839	74.145			
37	1.241	.833	74.978			
38	1.202	.807	75.785			
39	1.181	.793	76.577			
40	1.150	.772	77.349			
41	1.110	.745	78.094			
42	1.049	.704	78.798			
43	1.038	.696	79.495			
44	.994	.667	80.162			
45	.968	.649	80.811			
46	.935	.628	81.439			
47	.917	.615	82.054			
48	.908	.609	82.664			
49	.862	.579	83.242			
50	.854	.573	83.816			
51	.839	.563	84.379			
52	.793	.532	84.911			
53	.753	.505	85.416			
54	.737	.495	85.911			
55	.707	.474	86.385			
56	.687	.461	86.846			
57	.672	.451	87.297			
58	.660	.443	87.740			
59	.656	.441	88.181			
60	.626	.420	88.601			
61	.599	.402	89.003			
62	.591	.396	89.399			
63	.583	.391	89.790			
64	.558	.374	90.165			
65	.543	.365	90.529			
66	.528	.355	90.884			
67	.491	.329	91.213			
68	.481	.323	91.536			
69	.470	.316	91.851			
70	.465	.312	92.163			
71	.460	.309	92.472			
72	.442	.297	92.769			
73	.434	.291	93.060			
74	.421	.283	93.343			

75	.396	.265	93.608			
76	.380	.255	93.863			
77	.376	.252	94.116			
78	.366	.246	94.361			
79	.360	.242	94.603			
80	.341	.229	94.832			
81	.333	.224	95.055			
82	.322	.216	95.272			
83	.318	.214	95.485			
84	.291	.195	95.680			
85	.289	.194	95.874			
86	.282	.190	96.064			
87	.277	.186	96.249			
88	.267	.179	96.428			
89	.256	.172	96.600			
90	.250	.168	96.768			
91	.248	.166	96.934			
92	.237	.159	97.093			
93	.228	.153	97.246			
94	.206	.138	97.385			
95	.205	.138	97.523			
96	.195	.131	97.653			
97	.191	.128	97.781			
98	.182	.122	97.903			
99	.170	.114	98.018			
100	.167	.112	98.130			
101	.164	.110	98.240			
102	.147	.099	98.338			
103	.143	.096	98.435			
104	.141	.094	98.529			
105	.130	.088	98.617			
106	.127	.085	98.702			
107	.118	.080	98.781			
108	.115	.077	98.858			
109	.110	.074	98.932			
110	.103	.069	99.001			
111	.100	.067	99.068			
112	.095	.064	99.132			
113	.092	.062	99.194			
114	.085	.057	99.252			

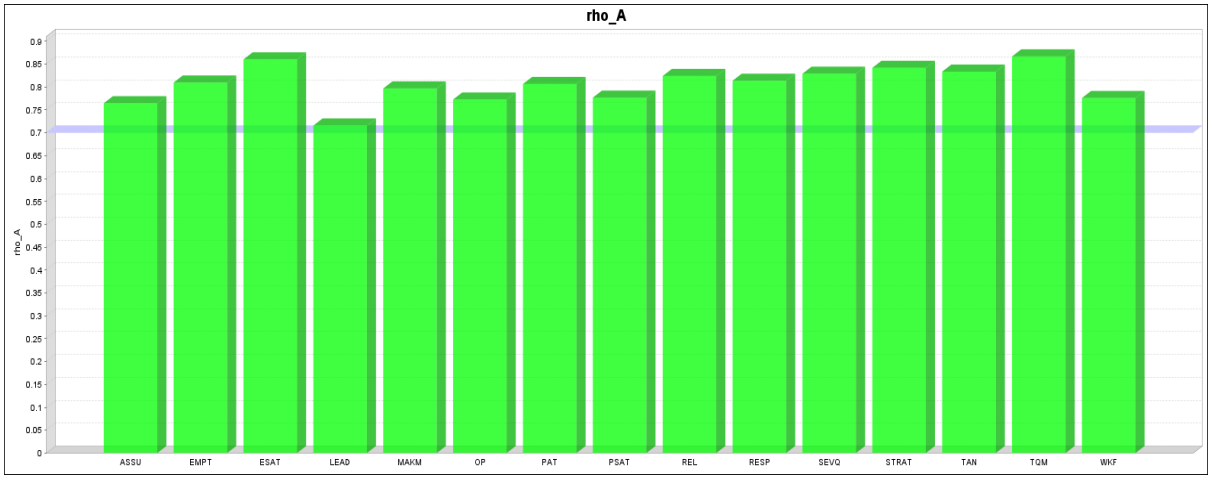
115	.080	.053	99.305			
116	.078	.053	99.358			
117	.074	.049	99.407			
118	.070	.047	99.454			
119	.065	.044	99.498			
120	.062	.042	99.540			
121	.060	.040	99.580			
122	.058	.039	99.619			
123	.056	.037	99.656			
124	.053	.036	99.692			
125	.047	.032	99.723			
126	.045	.030	99.754			
127	.039	.026	99.780			
128	.035	.023	99.803			
129	.032	.021	99.825			
130	.030	.020	99.845			
131	.029	.019	99.864			
132	.026	.017	99.881			
133	.024	.016	99.898			
134	.023	.016	99.913			
135	.021	.014	99.927			
136	.018	.012	99.939			
137	.017	.012	99.951			
138	.013	.009	99.960			
139	.013	.008	99.968			
140	.011	.007	99.975			
141	.010	.006	99.982			
142	.008	.005	99.987			
143	.006	.004	99.991			
144	.005	.003	99.994			
145	.004	.003	99.997			
146	.003	.002	99.999			
147	.002	.001	100.000			
148	6.351E-16	4.262E-16	100.000			
149	-3.634E-16	-2.439E-16	100.000			

Extraction Method: Principal Component Analysis.

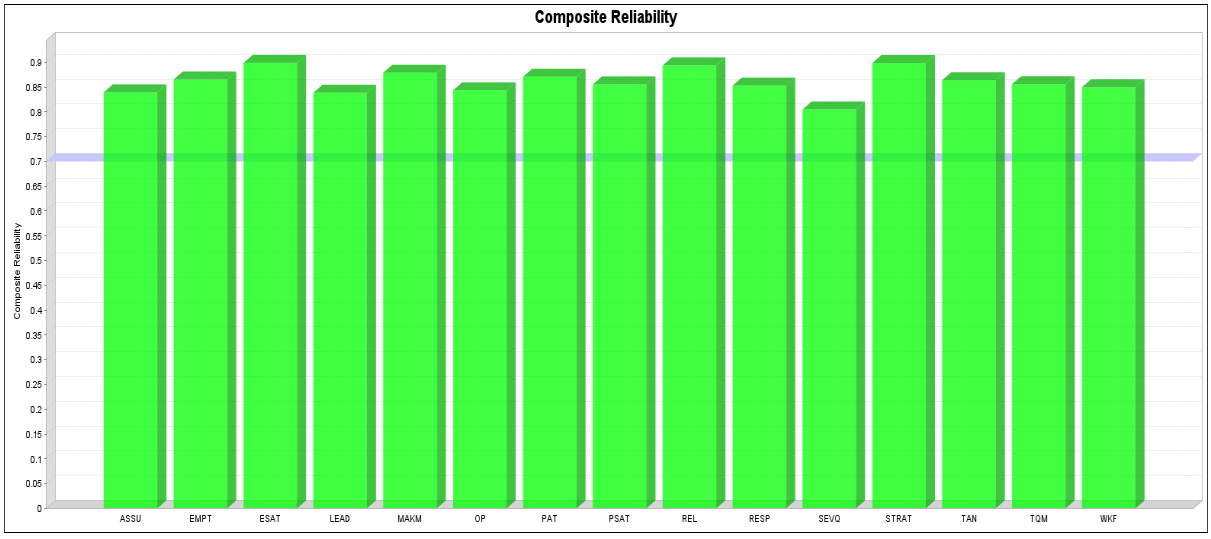
Appendix J: Cronbach's Alpha



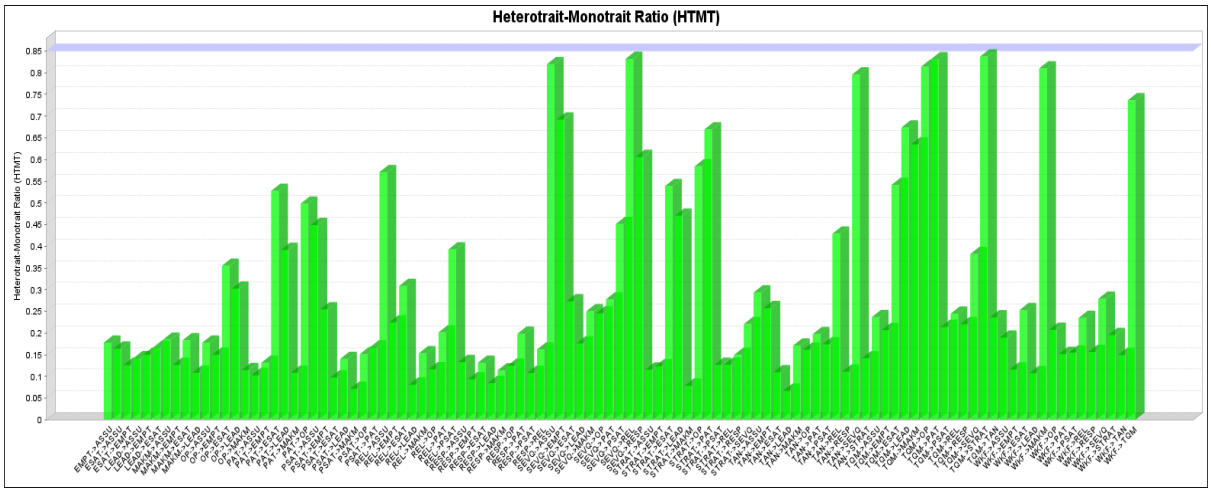
Appendix K: Rho_A



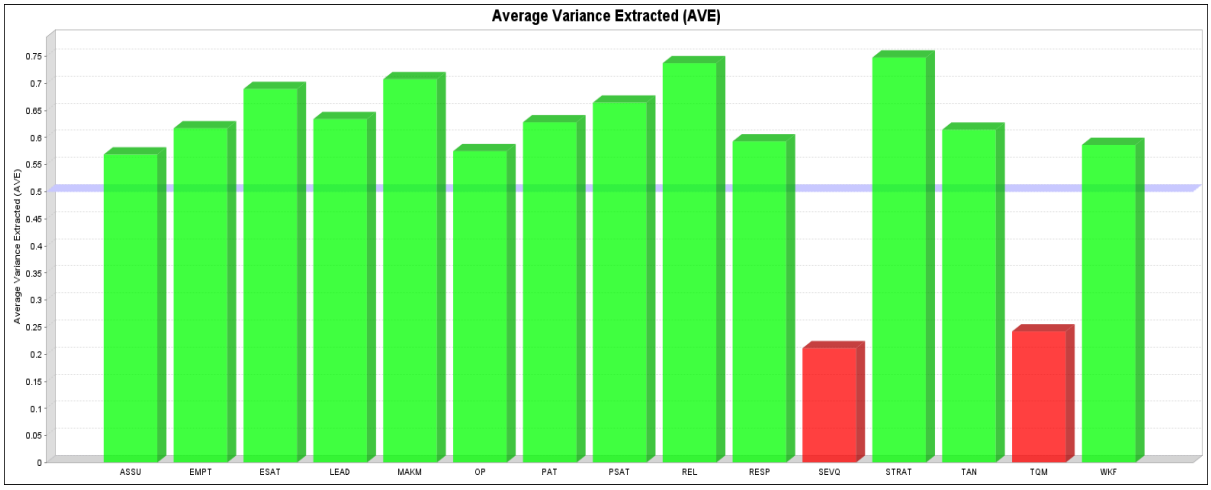
Appendix L: Composite Reliability Graph



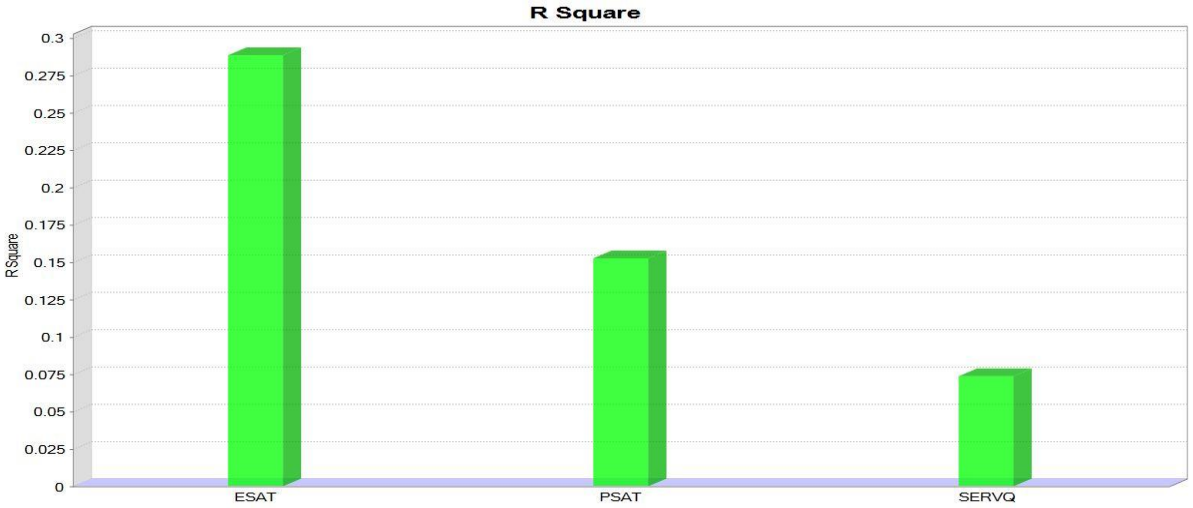
Appendix M: HTMT Graph



Appendix N: AVE Graph



Appendix O: R square Graph



Appendix P: F square Graph