ANALYSIS OF SERVICE QUALITY, QUALITY MANAGEMENT PRACTICES AND ORGANIZATIONAL PERFORMANCE OF PRIVATE HEALTHCARE FACILITIES IN NAIROBI COUNTY, KENYA

BY

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DECLARATION

I declare that this research thesis is my original work and has not been presented in any other university.

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DEDICATION

Special dedication to my parents Mr. Samson Dinda Angila and Mrs. Esther Samson. This work is also dedicated to my friend Bryan Gitau and the entire Dinda's family.

ABSTRACT

Private healthcare has a significant market share, approximately 50% in Sub –Saharan Africa. Private healthcare in Kenya contributed 2.9% of the 4.7% of health investment in the year 2012. The sector contributes 22% of all health services in Kenya. Despite the sector's contribution concerns have been raised about Kenyan private health sector's performance in relation to efficiency, patient satisfaction, financial viability and effectiveness. While quality management practices may enhance the Service Quality-organizational performance relationship, no research has been undertaken in private healthcare facilities in Nairobi, Kenya. The main purpose of this study was to analyze the moderating effect of quality management practices on the relationship between service quality and organizational performance of private healthcare facilities in Nairobi. Specific objectives were: to establish the relationship between service quality and organizational performance; to determine the effect of quality management practices on organizational performance; and to establish the moderating effect of quality management practices on the relationship between service quality and organizational performance. Drawing from the Theory of Quality Trilogy, Gaps Model of Service Quality and Deming's Theory of Quality Management, it was conceptualized that the independent, dependent and moderator variables are service quality, quality management practices and organizational performance respectively. Correlational survey research design and population of 55 private health facilities were used. A census study was used with a response rate of 94.5%. The pilot results *(N=3)* revealed reliability ranged between α=0.700 and α=0.867. Results revealed that service quality had a positive significant effect on organizational performance of private health facilities in Nairobi and accounted for 82.7% (R^2=0.827, p=.000) significant variance in organizational performance. Further, results revealed that quality management practices had positive significant effect on organizational performance and accounted for 80.1% (R^2=0.801, p=.000) significant variance in organizational performance. The relationship between service quality and organizational performance was moderated significantly by quality management practices implying that quality management practices improved organizational performance by 13.7 % (ΔR^2=0.137; *p*=0.000). Thus, it has a positive moderating effect on the relationship between service quality and organizational performance *(β*=0.162, *p*=0.000). This means that enhanced service quality dimensions increase organizational performance. The study concluded that service quality practices were significant predictors of organizational performance. In addition, incorporation of effective quality management practices improved organizational performance significantly. Furthermore, quality management practices moderated the relationship between service quality and organizational performance. The study recommended that private healthcare facilities should enhance service quality dimensions, institute effective quality management practices as these efforts amplify organizational performance. The study provided service quality dimensions which include competence and equity that will aid healthcare policy makers in strengthening the relationship between quality of care and organizational performance.

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ABBREVIATIONS AND ACRONYMS

NHIF	National Hospital Insurance Fund
SERVQUAL	Service Quality
BSC	Balanced Score Card
TQM	Total Quality Management
ICT	Information Communication Technology
HRH	Human Resources for Health
IMR	Infant Mortality Rate
KDHS	Kenya Demographic and Health Survey
KEPH	Kenya Essential Package for Health
KNBS	Kenya National Bureau of Statistics
MDGs	Millennium Development Goals
COM	Chief Operations Manager
NGOs	Non-Governmental Organizations
NHSSP	National Health Sector Strategic Plan
SERVQUAL	Service Quality
ADE	Adverse Drug Event
TQS	Total Quality Service
PMBOK	Project Management Body of Knowledge
L&D	Learning and Development

OPERATIONAL DEFINITION OF TERMS

Private sector: In this study, private sector is defined as including for profit and not-for profit providers

Service quality: In this study Service quality is defined as the ability of a service provider to satisfy customer needs in an efficient manner through which he can better the performance of the organization.

Quality Management Practices: In this study refers to those practices followed to ensure the highest level of customer satisfaction in a delivered service.

Organizational Performance: In this study it refers to the actual output or results of an organization measured against its intended output.

Health Facility: A health facility in this study refers to any location where healthcare is provided. Health facilities range from clinics to large hospitals with elaborate emergency rooms and trauma centres.

Health Investment: In this study refers to activities performed either by institutions or individuals through the application of medical, paramedical, and/or nursing knowledge and technology, the primary purpose of which is to promote, restore or maintain health.

Quality of Healthcare: Refers to the degree or extent to which a health Provider's services improve desired health outcomes to its patients.

Financial viability: In this study it refers to the ability of an organization to generate sufficient income to meet its operating expenses and expansion.

Tangibles:	In this study it refers to the physical appearance of facilities equipment, medical devices and communication materials such as brochures.
Reliability:	It refers to the ability of staff to perform promised services to patients dependably and accurately. Their ability to yield same or compatible results in different clinical delivery, overall consistency of staff.
Responsiveness:	Refers to the willingness of a health facility's staff to assist customers and to provide prompt services.
Competence:	It refers to a cluster of related abilities, commitments, knowledge, and skills that enables healthcare staff to efficiently perform their job.
Equity:	Fairness or justice in the way people are treated, being impartial.
Process Management:	Ensemble of activities of planning and monitoring the performance of a business process.
Workforce Management:	Refers to Integrated set of processes that facilities use to optimize the productivity of employees on the individual, departmental, and organization- wide levels.
Efficiency:	The state of being able to accomplish something with the least waste of time and effort.
Patient satisfaction:	A measure of the extent to which a patient is content with the healthcare which they received from their healthcare providers.
Effectiveness:	Capability of producing desired results. The degree to which objectives are achieved and the extent to which targeted problems are resolved.

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CHAPTER ONE

INTRODUCTION

This chapter introduces the concepts related to service quality, quality management practices and organizational performance.

Background of the study

Service quality means the ability of a service provider to satisfy customer needs in an efficient manner in order to improve performance of the organization. There is no consensus in the definition of service quality. A number of authors have tried to give it different views in their definitions. Philip Kotler and Gary Armstrong (2006), defined the term service quality as "the ability of a service firm to hang on to its customers ". That is, in their opinion customer retention is the best measure of service quality. Parasuraman, Zeithaml and Berry (1985), defined service quality as "the delivery of excellent or superior service relative to customer expectation. Their measure of service quality included five dimensions; reliability, responsiveness, assurance, empathy, tangibility.

Healthcare is directly concerned with human life and therefore health sector is extremely vital in every economy; service quality is a very important aspect in this sector. The role of service quality is recognized as being a critical determinant for the success of an organization in a competitive environment. Service quality is defined as the gap between actual service delivered by a service provider and customers' expectations. A customer will perceive quality positively only when the service provider meets or exceeds his expectations. Improvements in service quality have been linked to increased profit margins, lower costs, and positive attitudes towards the service by customers and willingness of customers to pay price premiums (Zeithaml, 2000). Customer perceptions of service quality for an organization are intimately linked to internal service quality. This study sought to analyze moderating effect of quality management practices on the relationship between service quality and organizational performance. Service quality is a comparison of expectations with performance; it is a matter of knowing your customers; designing services to meet their needs and finally managing the service production and

delivery. This definition concurs with other scholars who defined service quality as the difference between expected service and perceived service (Pai & Chary, 2012).

Many patients conjecture the level of service quality provided by private healthcare facilities to be superior due to high premiums charged by providers, this has not been proven empirically. Additionally, cases of misdiagnosis and wrong prescriptions are still being reported at these facilities with affected patients seeking compensation suggesting a lapse in quality of care. Investing in health is a vital economic and societal catalyst. Private facilities need strategic investment in health not only to deliver better health and improve well-being for more people, but also bolster Kenyan economy, combat complex diseases through technology and enhance their productivity.

Nairobi County has the highest number of private healthcare facilities in Kenya with customer preference being private healthcare. However, it still reports the highest cases of misdiagnosis and wrong prescription as compared to public healthcare facilities (Ministry of Public Health and Sanitation, 2011). This suggests that the service quality of private healthcare facilities in Nairobi County are unsatisfactory. Studies in the healthcare sector which measure service quality, satisfaction of patients and their judgment about service quality both locally and internationally are concentrated on public health facilities (Purcărea, V. L., I. R. Gheorghe, & C. M. Petrescu. 2013; Ojakaa, Olango, & Javis, 2014). This study was devoted to service quality in Kenyan private health sector in terms of tangibility, responsiveness, reliability, competence and equity. Although empirical studies recognize that relationships within a service provider's environment are important, (Krishna Dipankar Rao, David H. Peters, & Karen Bandeen-Roche, 2006), little is known on measurement of service quality focusing on its impact on private health facilities performance.

Identification of service quality dimensions in this study largely followed those used in prior research to allow consistency and comparison. SERVQUAL used five dimensions similar to what was adopted in this study. In comparing the dimensions of this study to prior research addressing service quality dimensions, it was found that there is some

difficulty in gaining consensus about the dimensions used by researchers. However, through comparison and interpretation of terms it was possible to match the dimensions. For example, the term competence as used in this study encompasses the impression of professionalism as identified by Reynoso & Moores, (1995) and equity in this study include the issues related to leadership (Mathews & Clark, 1997). Kang, James & Alexandris (2002) assert that SERVQUAL dimensions with modification are useful in the measurement of internal service quality.

Quality management practices are those practices followed to ensure the highest level of customer satisfaction in a product or service (Juran, 1989). The Project Management Institute (PMI) Project Management Body of Knowledge (PMBOK) and American Society for Quality (ASQ) define quality as the degree to which a set of inherent characteristics fulfill requirements. According to the National Health Sector Strategy (NHSSP) 2005-2010, weak management system is cited as one of the key factors contributing to the decline in the health status of Kenyans.

One of the basic aims of adopting a quality management practice is to consistently improve value to customers (Stamatis, 2004). According to a study by Kay Downey-Ennis et al., (2010), successful implementation of quality management practices rely heavily upon the human factor and competitiveness will result from increased attention to people issues within the organization. They found out that implementation of any quality management initiative should embrace a participatory management style, address the issues of changing attitude and culture, employee involvement and empowerment together with investment in training; development and learning. An empirical study by Rachel Awoku, (2012), on quality management practices, organizational performance and supplier selection in Southern Minnesota manufacturing firms revealed that implementation of quality management practices affect organizational performance positively.

Study by Kay Downey-Ennis *et al. (*2010), was conducted in the context of health sector. However, it did not reveal the relationship between these quality management practices and organizational performance. Study by Rachel Awuoko, (2012) revealed a positive

relationship between quality management practices and organizational performance but was conducted in the context of manufacturing firms that deal with products like electronics and automobiles. Consequently, very little is known on how QMPs such as ICT, process management, workforce management and top management support moderate service quality to improve organizational performance of private healthcare facilities in Nairobi County.

Performance is a contextual concept associated with the phenomenon being studied (Hofer, 1983). Organizational performance comprises the actual output or results of an organization as measured against its intended outputs or goals and objective (Richard, Devinney, Yip & Johnson, 2009). The concept of organizational performance is based upon the idea that an organization is the voluntary association of productive assets, including human, physical, and capital resources, for the purpose of achieving a shared purpose (Barney, 2001). Abas and Yaacob (2006), opine that a single performance measure is inadequate to represent overall organizational performance. Tangen (2002) posits that measurement should be based on a limited number of measures that consist of financial and non- financial parameters. However, a major part of literature has tended to limit itself to considering only financial aspects of performance, ignoring the other outputs such as efficiency, patient satisfaction, effectiveness which are a major focus of this study.

Storbacka *et al* (1994) studied Managing Customer Relationships for Profit: The Dynamics of Relationship Quality. They observed customer - economic relationship issues, more specifically the link between service quality and profitability from a relationship marketing and management perspective. In this perspective the task of marketing is not only to establish customer relationships, but also to maintain and enhance them in order to improve customer profitability. They found out a positive link between customer service and performance. Janet Agbor and Jessica Erickson (2011) studied the relationship between service quality and customer satisfaction in Umea University Sweden. Their findings reveal that service quality is not the only factor that could lead to customer satisfaction and eventually improved performance. Their findings suggest that to provide quality service in order to improve performance organizations

need to improve on the service quality dimensions. This variation in findings suggests that moderator interactions may be involved.

Arasli, Ekiz, & Turan (2008) conducted a study using survey method to develop and compare some determinants of service quality in both the public and private hospitals in Cyprus. They randomly selected 454 respondents who had recently benefited from hospital services in Famagusta. Their study revealed the following regarding service quality to be important: giving priority to the in-patients need, relationships between staff and patients, professionalism of staff, food and the physical environment. Zarei, Arab, Froushani, Rashidian, and Tabatabaei, (2012) conducted a study on the service quality of private hospitals in Iran. Their findings show that the highest expectation and perception of service qality was related to tangibles and the least was associated with empathy among medical staff in private hospitals. Padma, Rajendran, and Sai Lokachari, (2010) studied service quality and customer satisfaction in Indian private hospitals. Findings revealed that patients and attendants treat the interpesonal aspects of care, responsiveness and professionalism to an extent since they cannot fully evaluate the technical aspect of healthcare services.

Above studies focused on external patient satisfaction and did not reveal whether there is any association between patients satisfaction and performance. Their studies also concur that there is no unidiamensionality in service quality dimensions. Service quality dimensions for their studies were tangibles, resposiveness professionalism and interpersonal aspects, they however, did not consider competence and equity as dimensions of service quality nor their effect on performance.

Research by Muthaka (2004) reviewing the private healthcare services in Kenya indicated that the health sector in Kenya is predominantly public and is characterized by inefficient utilization of resources, centralized decision making, inequitable management information systems, outdated health laws, inadequate management skills (at all levels), worsening poverty levels, and rapid population growth. As a result, patients would rather spend more money in private healthcare facilities expecting better services. However, cases of misdiagnosis and wrong prescriptions are still being reported in these facilities.

Lack of empirical research in this sector necessitated this study in order to prove whether or not what patients conjecture as better services exist in private healthcare facilities in Nairobi County.

Both studies considered external respondents and did not explore the impact of patient's perception of service quality on organizational performance. This study investigated the quality of care provided by private healthcare facilities from the providers' perspective and revealed measures that can be adopted by healthcare facilities to increase their customer delight index geared to improved organizational performance.

In order to achieve a higher performance in the process management practice, it is important to increase the feeling of empowerment among employees and to involve the people closest to the process in the quality efforts. A study carried out in Greece by Hur (2009) focused on the influence of management practices on how government organizations work. In Nigeria, Adeoti and Lawal, (2012) studied interpersonal quality among the medical personnel and established that in the healthcare system; quality is influnced by a variety of factors including individual exchanges of the medical personnel and their interactions with patients. In Uganda, Musenze (2013) in a similar study found that the application of quality management practices should focus on improving the quality of personnel.

The context of Hur's (2009) analysis is a government set up; however, it may not be replicable in private healthcare sub-sector. Both studies by Adeoti & Lawal, (2012) and Musenze (2013) focused much on aspects of quality management such as leadership and technology and neglected other aspects such as process management,top management support and workforce management. The studies also ignored the effect of these quality management practices on organizational performance.

Brah and Lim, (2006) conducted a study on the effect of quality management and technology on organizational performance of logistics companies in Singapore. Tiwari and Chaudhari, (2012) carried out a study on the effects of technology on the implementation of TQM in India. Their data was collected from 50 journals related to marketing, finance, information system and research development. The findings of the

comparative study indicated that the adoption of new technology is implemented within a clear context of organizational strategic objectives. Both the studies and other scholars have paid attention to explore the issues of ICT in relation to enhanced training, learning and development (L&D); little is known on how ICT affect efficiency in private healthcare facilities in Kenya.

Vermeulen and Crous (2010) studied organizational factors that facilitate Total Quality Management (TQM) in the Public health sector in South Africa. They found out that managements in public healthcare facilities in South Africa unlike those in the private sector were lacking commitment to employee involvement and the provision of adequate training programs to develop their skills and capabilities. A similar research by Adza-Awude, (2012) in Ghana indicated that co-operation and support by management determined their level of job satisfaction. Previous research in Kenyan hospitals has revealed leadership gaps and poor communication between senior administration and lower cadres as an impediment to achieving better practice (Nzinga, & Amos, 2009). According to a study by Nzinga, Mbaabu and English (2013), management training for senior health professionals has been recognized as a priority.

The above studies were conducted in the context of public healthcare facilites which may not be replicable in private healthcare facilities, Whereas studies have been conducted on the correlation between top management support and effectiveness, no research has tested the effect of these management practices on organizational performance.

Mahour, (2006) carried out a study on the effects of management practices on operational and business results in Iran. A validated and reliable survey instrument was used for the study to collect data from 31 project managers/consultants in the petroleum industry in Iran. The results of the correlation analysis of the petroleum sector indicated that top management support is the major driver of quality management which significantly correlates with other management practices.

The Study by Mahour, (2006) revealed that customer orientation is not significantly correlated with external quality results (profitability).Whereas this study observed service quality as perceived by patients it however did not indicate the impact of patient's

perception of service quality on performance. Both studies concur that top management support, employee training, and employee involvement are statistically significant variables in explaining the variability in internal quality results. These studies however, did not ascertain the moderating effect of these variables on the relationship between service quality and organizational performance.

The private health sector is one of the fastest growing industries in the services sector (Awuor & Kinuthia, 2013). Private healthcare in Kenya contributed 2.9% of the 4.7% of health investment in the year 2012. The sector contributes 22% of all health services (2009/2010 Kenya National Health Accounts). There has been concern from the public and various stakeholders for the government to strengthen and revitalize the management of the health sector in the country especially on the quality of medical personnel hired in hospitals and their capacity in dealing with the numerous health issues that patients have (Jones, 1995). Some practitioners also specialize in the sale of pharmaceuticals but do not carry out any diagnosis of the problem before sale of drug (Leonard & David, 2000; Wangombe, 1998). If quality of healthcare in both public and private hospitals in Kenya continues to deteriorate, the number of Kenyans seeking medical services out of the country is set to increase further reducing the health sector contribution to Kenya's GDP.

The private healthcare sector in Kenya comprises the activities of agents who are largely outside the control of government (Kamilu, 2004). These include individuals who privately own health facilities and seek to make profit in the healthcare sector, clinics and hospitals owned by private employers and those operated by religious missions and other non-governmental organizations (NGO's). These agents play a significant role in provision of health services in Kenya, however the issue of lack of adequate and quality healthcare services is still present (Kamilu, 2004).

Stakeholders in the health sector include; The Government, implementing partners i.e. private-for-profit organizations; private not-for-profit organizations; traditional practitioners and developmental partners; i.e. technical partners; funding partners. Technical and funding partners support financing for health activities in the country either directly or indirectly. Implementing partners play an important role in support and delivery of healthcare to Kenyans (Ministry of Public Health and Sanitation, 2011).

Inadequate working conditions coupled with low job satisfaction and instability, are bound to demotivate health workers and impact retention. Ojakaa, Olango & Jarvis (2014) conducted a study seeking to establish the factors affecting motivation and retention of primary healthcare workers in three different regions in Kenya. Previous research in Kenyan hospitals has revealed leadership gaps and poor communication between senior administration and lower cadres as an impediment to achieving better practice (Nzinga, 2009 &Amos, 2009).

According to Ojakaa *et al*. (2014), adequate training, job security, remuneration, supervisor support, and manageable workload are critical satisfaction and retention factors for healthcare workers. However, their study did not show any association of workforce management and financial viability of healthcare facilities. According to a study by Nzinga, Mbaabu & English (2013), management training for senior health professionals has been recognized as a priority and should be provided. The study by Nzinga, *et al*., (2013) however, did not link service quality, quality management and performance of healthcare facilities. This study, therefore, seeks to establish the moderating effect of management practices on the relationship between service quality and organizational performance.

Quality management practices is instrumental to the improvement of service quality. Both variables could lead to an improvement in the performance of any organization. Good quality management practices could however imply that even in the absence of quality services, or in the event of poor services, these management practices could cover up thus resulting in better performance. In private health care facilities, this scenario cannot remain theoretical. Robust quality management practices by facilities could boost the performance, and amplify the effect of service quality on performance. The reviewed studies have not considered quality management practices as a moderator, therefore it is justifiable to examine the moderating effect of quality management practices on the relationship between service quality and performance of private healthcare facilities in Nairobi County.

1.2 Statement of Problem

Private healthcare has a significant market share, approximately 50% in Sub –Saharan Africa. In Kenya, it contributes 22% of all health services. Despite the sector's contribution, annual percentage growth rate of health investment has been on the decline at 5.2%, 3.5%, 2.3%, 1.7% in 2008, 2009, 2010 and 2011 respectively. This has raised concerns about Kenyan private health sector's performance in relation to efficiency, patient satisfaction, financial viability and effectiveness. While quality management practices may enhance the Service Quality-organizational performance relationship, no research has been undertaken in private healthcare facilities in Nairobi, furthermore, implementation of quality management practices such as ICT innovations have not been adopted despite the widespread potential use in the healthcare facilities. Consequently, private healthcare facilities which are a major source of care in Kenya has given a little impetus to improvement of longevity. Studies on service quality – organizational performance relationship have focused on settings such as public health sector, public institutions of higher learning and other government agencies. Consequently, aspects of this relationship on private health sector are unknown. Many patients conjecture the level of service quality provided by private healthcare facilities to be superior because of high premium charged by the providers this has not been proven empirically. Additionally, studies on service quality and organizational performance reveal both positive and negative findings suggesting that moderator interactions may be involved. The effect of a moderator variable such as quality management practices may amplify the unclear relationship between service quality and organizational performance. Further, little is known on how quality management practices such as ICT, process management, workforce management and top management support influence organization's effectiveness since majority of researchers have based their examination of productivity measures on financial parameters ignoring non-financial aspects. It could be these ignored non-financial indicators such as efficiency, patient satisfaction, and effectiveness that are of significance. It was in view of these that this study focused to analyze the

moderating effect of quality management practices on the service quality - organizational performance relationship.

1.3 Objectives of the Study

1.3.1 General Objective

The general objective of the study was to establish the moderating effect of quality management practices on the relationship between service quality and organizational performance of private healthcare facilities in Kenya.

1.3.2 Specific Objectives

The specific objectives were;

i. To establish the relationship between service quality and organizational performance of private healthcare facilities in Nairobi, Kenya.
ii. To determine the effect of quality management practices on organizational performance of private healthcare facilities in Nairobi, Kenya.
iii. To establish the moderating effect of quality management practices on service quality and organizational performance of private healthcare facilities in Nairobi, Kenya.

1.4 Research Hypotheses

H_{01}: $\beta_1 = 0$ There is no relationship between service quality and organizational performance of private healthcare facilities in Nairobi, Kenya.

H_{02}: $\beta_2 = 0$ There is no effect of quality management practices on organizational performance of performance of healthcare facilities in Nairobi, Kenya.

H_{03}: $\beta_3 = 0$ Quality management practices do not moderate the relationship between service quality and organizational performance of healthcare facilities in Nairobi, Kenya.

1.5 Scope of the Study

In terms of area or geographical scope, Nairobi is the capital city of the Republic of Kenya, it's located in South –Central Kenya, 140 Km (87 Miles) South of Equator. Its coordinates are latitude 1.2921° S and longitude 36.8219° E and covers an area of approx. 696 sq. km. with a population of 3.36M (2009 census). It was chosen in this study because it is a metropolitan County with residents from various cultures, beliefs and practices, it therefore depicts micro- representation of Kenya as a country and thus the most appropriate geographic location for this study.

In terms of subject scope, service quality which is the main focus of this study is part of service marketing in the broad business field of marketing. According to (Johnson, Dotson & Dunlap 1988; Chen, Gupta and Rom, 1994), service quality has become a very important issue in marketing and has received much attention and increased competition e.g. in banking and telecommunication in 1980's; and utilities in 1990's. This study analyzed the moderating effect of quality management practices on the relationship between service quality and organizational performance of healthcare facilities in Nairobi, Kenya. The respondents were Chief Operations managers from each facility. The study was conducted between the year 2011 and 2016 and was limited to 55 private healthcare facilities accredited by National Hospital Insurance Fund (NHIF) in Nairobi County.

1.6 Justification of the Study

Previous studies have revealed mixed results on the relationship between service quality and organizational performance. Furthermore, there is deficiency in research relating to non- financial measures of organizational performance. No previous study has measured the effect of quality management practices on the relationship between service quality and performance in private healthcare facilities in Nairobi County. Quality management practices as a moderator variable was coherent with service quality which is the main focus of this study. Through this moderator it was lucid to articulately demystify the concepts of the main variables through a common theory (quality trilogy). Existing

literature exhibited lack of consensus in measures of service quality, (Reynoso & Moores, 1995; Mathews & Clark, 1995; and Brooks *et al*, 1999). This study explored suitable service quality dimensions in the context of private healthcare sector in Kenya.

The study will empower private healthcare organizations and equip them with knowledge of service quality practices. Managers will understand that unhappy customers tend to complain to other potential customers and thus discourage them from patronizing with the firms. Thus, unhappy customers negatively impact facility's Net Promoter Score. The research has provided a service quality model that will aid healthcare providers in assessing the level of care in their facilities with an aim to improve both internal and external relationships. Clients will benefit from improved quality of healthcare services, while facilities will experience better performance and eventually growth and expansion. The study findings shall serve as a benchmark by which providers can assess their service quality and quality management practices in an effort to swiftly respond to the needs and expectation of the patients in a better way. Government agencies may use the findings in policy reforms geared towards the growth of private healthcare sub-sector. The policy makers and regulators will have an opportunity to understand the prevailing situation in the industry and use their understanding to formulate desirable policies or in planning.

This study has generated new knowledge in the field of service quality, quality management practices and organizational performance by providing a service quality model that include competence and equity as service quality dimensions. Scholars may also find the findings of this study useful as a basis for further research.

1.7 Conceptual Framework

A conceptual framework can be defined as a set of broad ideas and principles taken from relevant fields of enquiry and used to structure a subsequent presentation (Bogdan, 2007). This conceptual framework was adopted from Quality Trilogy Theory by Juran (1989). It perceives service quality as a project with three main stages aimed at bringing change to an organization namely: - planning, improvement and control. Planning in this study is operationalized as the laid down measures by health facilities to ensure quality of service

rendered. Improvement in this study is operationalized to mean organizational performance achieved after effective control through quality management practices. The independent variable is service quality measured by tangibles, responsiveness, reliability, competence and equity. The dependent variable is organizational performance measured by efficiency, patient satisfaction, financial viability and effectiveness. Moderating variable is quality management practices measured by information communication technology, process management, workforce management, and top management support. The independent variable service quality is expected to influence dependent variable organizational performance to be moderated by quality management practices. It is on the basis of this interaction that the various hypotheses were formulated for testing. H_{01} There is no relationship between service quality and organizational performance; H_{02} There is no effect of quality management practices on organizational performance; H_{03} Quality management practices do not moderate the relationship between service quality and organizational performance.

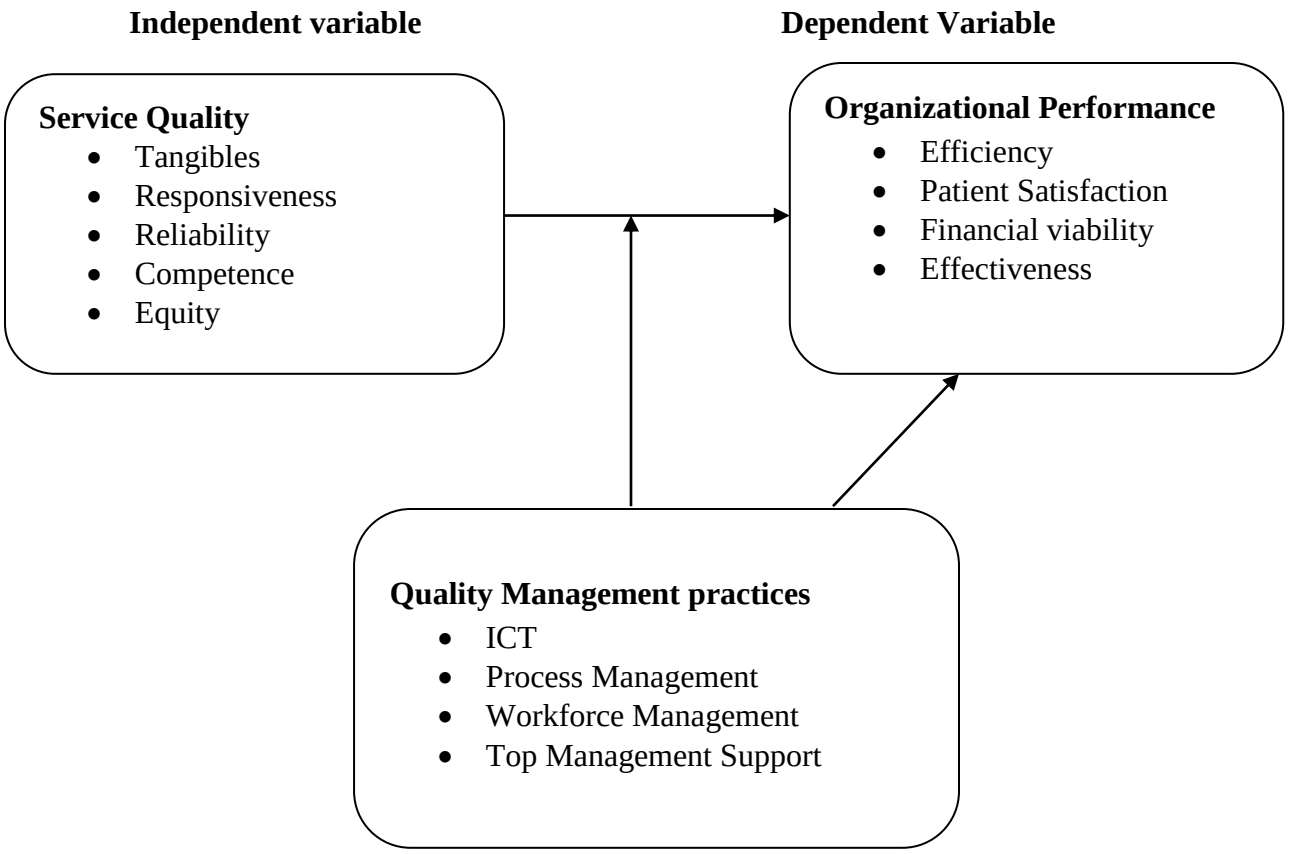


Figure 1.1: Conceptual Framework: service quality and organizational performance, moderating effect of quality management practices in private healthcare facilities in Nairobi, Kenya

Source: Adopted from Juran (1989)

CHAPTER TWO

LITERATURE REVIEW

This chapter reviews the theoretical literature and empirical studies. Theoretical review explores the theoretical foundations of the study. It explains the theories that guided the study and defines concepts and variables giving dimensions of the variables. This study is based on Quality Trilogy as the main theory. Two other theories complemented Quality Trilogy as a guide to the development of objectives and hypotheses. They include Theory of Gaps Model of Service Quality and Deming's Theory of Quality Management. Empirical literature related to service quality, quality management practices and organizational performance are reviewed.

2.1 Theories of the study

2.1.1 Theory of Quality Trilogy

The theory of Quality Trilogy was put forth by Juran (1989). The theory conceptualizes quality as a project that is divided into small bits and acted upon to ensure its success. It perceives quality as a project with three main stages; planning, improvement and control aimed at bringing change to an organization. Planning in this study is operationalized as the laid down measures by health facilities to ensure quality of service rendered. Improvement in this study is operationalized to mean organizational performance achieved after effective control through quality management practices. According to Juran (1989), if a quality improvement project is to be successful, then it is necessary for all quality improvement actions to be carefully planned out and controlled accordingly. There are ten steps to quality improvement. These steps are: awareness of the opportunities and needs for improvement must be created; improvement goals must be determined; training must be provided; initialize projects; monitor progress; recognize performance; report on results; track achievements or improvements.

Service quality is defined as the difference between expected service and perceived service (Pai & Chary, 2012). Providers' services should correspond to the customers'

expectations and satisfy their needs and requirements. According to this study the proponents of service quality includes, tangibles, responsiveness, reliability, competence and equity. Planning in this study is operationalized as the service quality measures such as Tangibles, Responsiveness, Reliability, Competence and Equity practiced by health facilities to ensure high quality of care provided to patients.

Planning from the theory is conceptualized to mean service quality and it compares favourably with study by Abili, Thani & Afarinandehbin (2012) who studied service quality by means of SERVQUAL in Amirkabir University in Iran and found out a positive correlation between service quality and University performance. They found out a positive and significant relationship among the dimensions of service quality and university performance. The planning methodology develops and puts in place the strategic and tactical goals that must be achieved in order to attain financial, operational, and quality results. Setting organizational goals is called strategic planning. Facilities should consider making provisions for information and communication strategies. This must take into account patient needs to achieve customer satisfaction.

Control from the theory is conceptualized to mean quality management practices in this study. Given the nature of hospitals, it is important for hospital staff to have the right kind of information with regards to medical conditions and many other confidential information, such needs to be controlled. At the same time, during emergencies there is need for control on the information that leaves the hospital given the specific emergency. This explains the need for a control mechanism in the quality of information through quality management practices such as ICT, Process Management, workforce Management and Top Management Support. Hospital management in control should ensure that information strategies are taken care of. Through this phase of quality control, the hospital management is able to establish, among other things, specific standards for information dissemination and processes.

The theory compares favourably with the study by Kay Downey- Ennis et al, (2010) who opine that successful implementation of quality management practices rely heavily upon the human factor, and competitiveness will result from increased attention to people

issues within the organization. The discipline of quality management complements project management with a focus on customer satisfaction, prevention of defects over inspection and management responsibility. Proponents of quality management practices comprise of; ICT, process management, workforce management and top management support. The control methodology according to the theory is utilized to eradicate or correct mistakes during service delivery. More precisely, control consists of taking necessary action to correct the defects. Control maintains the standards or requirements defined during the planning stage. Its goal is stability and consistency (Juran, 1989). This explains the need for a control mechanism in the quality of information as part of quality management practices.

Improvement in this study is operationalized to mean organizational performance achieved after effective control through quality management practices. The concept of organizational performance is based upon the idea that an organization is the voluntary association of productive assets, including human, physical, and capital resources, for the purpose of achieving a shared purpose (Barney, 2001). The improvement methodology constructs a breakthrough system to create planned, predictable, and managed change. Breakthrough is a deliberate change; a dynamic and decisive movement to unprecedented levels of organizational performance that are presently active in the plan and maintained by current controls. Breakthrough results in achieving higher targets, meeting competitive standards and specifications, reducing waste, reducing cost, and offering better products and services to customers (Juran, 1989).

Although the theory of quality trilogy breaks down service quality to manageable pieces for easier action, it has not prioritized elements that are significant to project success. The theory has conceptualized service quality as a project and therefore a short term goal of an organization. However, service quality is key to hospital performance therefore it should be conceptualized as a long term goal rather than a project. The theory encompasses all aspects of this study which include, service quality, quality management practices and organizational performance. It concurs with Stamatis view that one of the basic aims of adopting a quality practice is to consistently improve value to customers (Stamatis, 2004).

2.1.2 Theory of the Gaps Model of Service Quality

The Theory of Gaps Model of Service Quality was developed by a group of authors; Parasuraman, Zeithaml & Berry, in 1985. It clearly outlines the two different types of gaps in service marketing, namely the Customer gap and the provider gaps. The latter is considered as internal gaps within a service firm. The theory views the services as a structured, integrated model which connects external customers to internal services between the different functions in a service organization. This theory supports planning mechanism of quality trilogy which is conceptualized as service quality. It therefore complements the theory of quality trilogy by demystifying the dimensions such as tangibles, responsiveness, reliability, competence and equity.

The SERVQUAL model was developed by Parasuraman, Zeithaml, and Berry, in 1988 from the Theory of Gaps Model of service Quality. SERVEQUAL represents the customer gap in the Theory of Gaps Model and defined by Parasuraman *et al.* , 1988 as the difference between patient's perception and expectation of quality of service through the five dimensions namely; reliability, responsiveness, empathy, assurance and tangibles. Theory of Gaps Model helps forecast, foster and pinpoint key factors that necessitate the gap to be adverse to hospitals in meeting and surpassing customer expectations. The theory identifies the various gaps that exist in a service organization both internally and externally, the gaps are further expounded in figure 2 below.

Gap1

Gap between consumer expectation and management perception: This gap arises when the management misinterprets customer wants. For instance the hospital management may opine that patients need comfortable beds while patients may be more concerned with staff competence.

Gap 2

Gap between management perception and service quality specification: From this gap the management might correctly perceive what the customer wants, however, standards, procedures and processes may not be properly set. Timelines may not be properly specified.

Gap 3

Gap between service quality specification and service delivery: This gap may arise due to several reasons regarding the staff. For instance - lack of training, negative attitude, and staff inability to meet the set service standards.

Gap 4

Gap between service delivery and external communication: The gap arises when expectations from communication such as advertisements and brochures are not met. For example if the physical amenities do not reflect what's portrayed in the adverts or brochures.

G**ap 5**

Gap between expected service and experienced service: This gap arises when the consumer misinterprets the service quality. The nurse may keep visiting the patient to show care, but the patient may perceive this as a sign of deteriorating health.

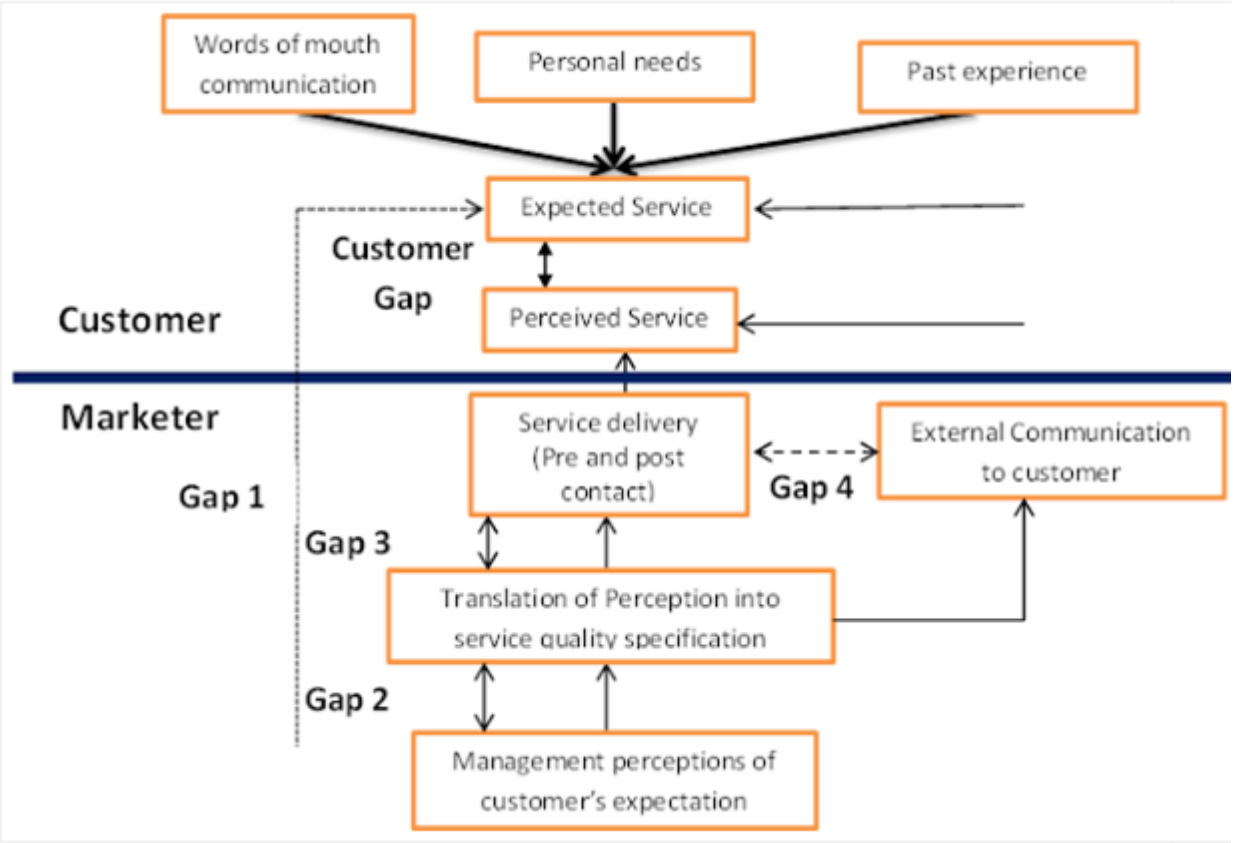


Fig. 2.1; Gap Model of Service Quality; Customer gap and Provider gaps

Source: Adopted from (Parasuraman, Zeithaml, & Berry, 1985)

According to the theory gaps model, service quality is defined as the absence of defects or in service industry it is the difference between perception and expectation of quality of service. From the viewpoint of gaps model proponents, service quality is an achievement in customer service. Understanding service quality is indispensable for service providers aspiring to attract and retain customers. Crosby (1979) defined quality as zero defects, Juran (1980) measured it as conformance to requirement and others measured quality by counting internal and external failures (Garvin, 1983). However, these definitions tend to be better interpreted in manufacturing sectors. Quality of goods, measured objectively by indicators such as durability, defects, reliability, among others is difficult to replicate in service environment (Parasuraman *et al*., 1988). In the service industry, service quality definition as suggested by Parasuraman, Zeithaml & Berry (1985), is the most used and famous model named SERVQUAL. At first, they suggested ten dimensions for service

quality but after some initial study in 1988, they reduced to five dimensions for service quality model. These dimensions include reliability, responsiveness, empathy, assurance and tangibles which have been modified to suit the current study.

The concept of service quality was developed to identify problems in service delivery which defines quality service through customer satisfaction (Uran, 2010). The idea is to identify problems and mistakes through recognizing gaps in the model and trying to avoid them. An organization can influence service delivery by narrowing organizational gaps and by improving service quality and customer satisfaction. The service quality model assumes that the difference between the service that the customers expect and the service they actually get is due to organizational gaps (Candido & Morris, 2000). Service quality has been studied in the area of business management for years because the market is more competitive and marketing management has transferred its focus from internal performance such as production to external interests such as satisfaction and customers' perception of service quality. Theory of the gaps model assumes service quality as an end in itself and fails to connect it to performance and management practices that interact to deliver desired services to customers.

The SERVQUAL model was based on difference between perception and expectation of quality of service through the five dimensions which is similar to the number of service quality dimensions in the present study. In this study planning was operationalized as service quality the Theory of Gaps Model of Service Quality informed this study by explaining the various gaps that exist in an organization particularly in the context of provider.

2.1.3 Deming's Theory of Quality Management

This theory was put forth by Deming (1986). It rests upon fourteen points of management derived from four profound points; system appreciation, knowledge variation, knowledge theory and psychology knowledge. According to Deming, system appreciation entails coming to terms with the procedures that the organization's processes and systems operate. When it comes to variation knowledge, the theory posits that there should be an understanding of the variation occurring and the causes of variation. Knowledge theory is

concerned with the understanding what can be known while on the other hand psychology knowledge deals with human nature. Deming notes that awareness of the various knowledge types in an organization comprises important dimensions of quality management.

Deming theory uses fourteen points to advocate for quality management. The points are: the creation of constancy of purpose, adoption of new philosophies, eradication of dependencies on mass inspections, desist from awarding business based on price, aiming for continuous production and service improvement, bringing cutting edge on-the-job training, implementing cutting edge leadership methods, abolition of fear from the company, deconstruction of departmental barriers, getting rid of quotas and standards, supporting craftsmanship pride, ensuring training and education for everyone and ensuring that the top management structure is supportive.

On the creation of constancy of purpose, Deming advises that this should be done towards the continual improvement of product and service with the objective of becoming competitive and to stay in business. Furthermore, management should be concerned with running the business on a day to day basis while at the same time concerned with the future of the business. This requires clarity on what the organization does and the reason behind the activities of the organization. To establish these facts, the theory posits that the management should be knowledgeable and futuristic as this will enable the distinction between organizational short term and long term goals. In the private hospital context, in a bid to manage quality, hospital management should aim at creating the constancy of purpose toward continuous improvement of products and services, allocation of resources to provide for long range needs, rather than only short term profitability while aiming at becoming competitive, staying in business and to provide jobs. In order to stay in business, private hospitals require a management that spends time on innovation, research and education while constantly improving the design of their products and services.

Deming's theory of quality management advocates for the elimination of dependence on inspection to achieve quality. According to the theory, this can be done by building quality into the product or service. While inspection may sound right, it is not reliable in

quality management. According to Gronroos (2007) routine inspection is equal to planning for defects since through inspection; the management acknowledges that the process is faulty. Deming (1982) advises that inspection does not bring about quality but improvement of the process does. Processes in private hospitals should be improved so that defects are not produced and in the process, the need for inspection is eliminated and quality is built in the processes, services and products offered in the hospital. This theory is applicable in this study since it necessitates process management in the context of healthcare facilities.

According to Kaynak and Hartley (2008) many organizations rely so much on price tags. According to Deming (1982) however, such practices should be done away with and instead, organizations should focus on minimizing costs. Additionally, without adequate measures of quality, organizations are highly likely to drift to the lowest bidder while choosing suppliers resulting in low quality and high cost. According to the theory, price has no meaning without measure of the quality purchased. This means that private hospitals should reduce the number of suppliers of their medical products and minimize variations to increase quality and minimize total cost. Such a move will lead to continuous improvement between both the private hospital and the supply entity and as a result the hospital gets quality supplies at reduced costs.

Deming's theory posits that there should be constant improvement in production and service delivery. By constantly improving the production and service systems, costs will be reduced, thus, quality and productivity are enhanced. One way in which private hospitals can implement this step of quality management is through continual education and improvement of quality in every activity, this will yield a rise in productivity and customer satisfaction. It is hospital management's job to work continually on them without the existence of a stopping point in the process of quality management. The services in the hospital must keep growing indefinitely in order to catch up with the competitive market.

Deming also advocates for the institution of modern training methods on the job as part of quality management. This provides learning and development though training for new skills. However, since people learn in different ways, the training must be totally

customized to suit the needs of the staff being trained. In the context of hospitals, training must be done on the job, learning by doing; going into the work and experimenting with work methods and new ideas, studying the results, and striving for perfection. A trained medical worker is more productive and offers quality services than an untrained one, so giving training sessions will substantially improve the quality of the medical personnel and also directly boost performance with regard to product or service quality.

In relation to this study, managements should aim at supporting employees to achieve organizational goals. This can only be done through proper leadership and not through supervision. Management must ensure that investigation and actions are taken on reports of inherited defects, system conditions, poor tools, fuzzy operational definitions, variation and all conditions detrimental to quality. Managers in private hospitals need to coach their staff and improve the system by spending time in the work reinforcing hospital's commitment to its customers and to quality service delivery. Additionally, measures should be taken to ensure medical staff and the non-medical staffs are working harmoniously and have all the provisions needed to serve the customers. This theory relates to management practices making it applicable in this study.

2. 2 Empirical Literature Review

Studies are reviewed on the level of service quality provided by private healthcare facilities in Nairobi County, relationship between service quality and organizational performance, effect of quality management practices on organizational performance, and moderating effect of quality management practices on the relationship between service quality and organizational performance.

2.2.1 Relationship between service quality and organizational performance

This first objective of the study sought to establish the relationship between service quality and organizational performance of private healthcare facilities in Nairobi County. Service quality measures included tangibles, responsiveness, reliability,competence and equity.

Abili, Thani & Afarinandehbin (2012) measured university service quality by means of SERVQUAL method in Iran. A total of 102 students in five courses (Electronic engineering, Civil engineering, Mechanical engineering, Chemical engineering and MBA) in the international branch of Amirkabir University, were asked to complete a SERVQUAL questionnaire. This questionnaire measured students' perceptions and expectations in five dimensions of service that consists of assurance, responsiveness, empathy, reliability and tangibles. The quality gap of university services was determined based on differences between students' perceptions and expectations. The results demonstrated that in all of the five SERVQUAL dimensions there was a negative quality gap. Responsiveness was the most important dimension for the students but had the largest gap (Abili, Thani, & Afarinandehbin, 2012). The study by Abili, Thani & Afarinandehbin (2012) used the default SERVQUAL dimensions. The current study seeks to empirically ascertain whether different contexts could have varying service quality dimensions.

Ramayah, Samat & Lo (2011) used a descriptive survey design to examine the relationship between market orientation, service quality, and their impact towards organizational performance in Malaysia. They used structured questionnaires to collect data from managers of 101 service organizations in the northern region of Malaysia. The findings revealed that market orientation has a significant effect on organizational performance and service quality. They found that service quality partially mediates the relationship between market orientation and organizational performance (Ramayah, Samat, & Lo, 2011). The study by Ramayah, Samat & Lo (2011) shows the link between market orientation and service quality but does not reveal the significance of service quality on organizational performance.

Arasli, Ekiz, and Turan (2008) conducted a study using survey method to develop and compare some determinants of service quality in both the public and private hospitals in Cyprus. They randomly selected 454 respondents who had recently benefited from hospital services in Famagusta to answer a modified version of the SERVQUAL instrument. They proposed how the Singapore Quality Award (SQA) and the Balanced score Card (BSC) can be integrated to help public sector hospitals implement and manage

performance-based programs. Their study findings identified six factors regarding the service quality as perceived in both private and public hospitals in Northern Cyprus. These are empathy, giving priority to the in patients needs, relationships between staff and patients, professionalism of staff, food and physical environment. Research results reveal that the various expectations of inpatients' have not been met in either the public or private hospitals.

Duggirala, Rajendran and Anantharaman (2008) conducted a descriptive study with an aim to identify dimensions of patient-perceived total quality service (TQS) in the healthcare sector in India. They further investigated the impact of the dimensions of patient-perceived TQS on patient satisfaction. A questionnaire that had been developed based on an extensive literature review of research in service quality and based on responses of the pilot survey among patients recently discharged from hospital was used. Multiple regression analysis was used to examine the impact of the dimensions of patient-perceived quality on patient satisfaction. The study revealed seven distinct dimensions of patient-perceived TQS and the relationships among them. They include infrastructure, personnel quality, processes of clinical care, administrative process, safety indicators, overall experience of medical care and social responsibility. Positive and significant relationships among the dimensions and patient satisfaction were found (Duggirala, et al., 2008). Duggirala, et al. (2008) presents a different perspective away from the traditional five dimensions SERVQUAL. This observation justifies why the proposed study will not use SERVQUAL or theory of gaps model as a stand alone to establish service quality.

Ramsaran-Fowdar (2008) used an augmented SERVQUAL instrument to measure private patients' service expectations and perceptions in Mauritius. A new service quality instrument called PRIVHEALTHQUAL emerged from the study, based on factor and reliability analysis. The "reliability and fair and equitable treatment" factor was found to be the most important healthcare service quality dimension (Ramsaran-Fowdar, 2008). The study by Ramsaran-Fowdar (2008) further serves to illustrate lack of agreement on service quality dimensions. This current study addressed this problem by identifying service quality dimensions that are significant in Kenya health sector.

Buong' et al., (2013) did a study on uptake of community health strategy on service delivery and utilization in Kenya. They developed and tested a Comprehensive Primary Health Care (CPHC) model to facilitate the uptake of essential health services towards Millennium Development Goals (MDGs). The model focused specifically on the principles of inter-sectoral collaboration, community participation and empowerment to enhance access to health care. Their findings showed improvements in governance and management of the health system; service delivery and health outcomes such as immunization coverage, antenatal clinic attendance and health facility delivery.

Mwabu (1984) developed theoretical and empirical frameworks for analyzing choices of healthcare facilities by households during episodes of illness. Data for the study was collected in Meru district of Kenya. The study considered the quality of healthcare facilities and that consumers have partial knowledge. The study established that education, quality of healthcare facilities and religion had a statistically significant effect on the choice of facility. The study also revealed that economic variables such as time and money cost affect the choice in terms of facility selection. This study supports the fact that quality measures may not be standard, they may vary depending on different set up and conditions. It is for this reason among others that SERVQUAL model has been modified and not adopted in this study as default.

Research by Muthaka (2004), reviewing the private healthcare services in Kenya indicated that the health sector in Kenya is predominantly public and is characterized by inefficient utilization of resources, centralized decision making, inequitable management information systems, outdated health laws, inadequate management skills at all levels, worsening poverty levels, increasing burden of disease, and rapid population growth. As a result, patients would rather spend more money in private healthcare facilities and receive quality services within the shortest time possible. As competition intensifies within the healthcare industry, patient satisfaction and service quality are providing the evidentiary basis for patient outcomes.

The study by Arasli *et a*l. (2008) considered patient satisfaction as the only performance measure using Singapore Quality Award which may not be replicable in the context of private healthcare in Nairobi. These studies over emphasized on patient satisfaction and ailments of healthcare sector but did not give any reference or recommendations of

service quality improvements that are much needed in the sector. It is in view of these that this study has focused on private hospitals and other organizational measures such as efficiency, financial viability and effectiveness.

Results of these studies support process simplicity that leads to health service satisfaction, which involves diverse phenomena within the cognitive and emotional domain, revealing that all predictors have a significant effect on patient satisfaction. The studies focused on the relationship between service quality and patient satisfaction, they did not consider other measures such as efficiency, financial viability and effectiveness. These gaps in research were addressed by investigating applicable service quality model in the Kenyan context and to incorporate the effect of service quality measures such as tangibles, reliability, responsiveness, competence and equity on organizational performance.

From the aforementioned literature it can be concluded that studies on the relationship between service quality and organizational performance have yielded mixed results. For instance, Abili, Thani & Afarinandehbin (2012) carried out a study to determine university service quality at the International branch of Amirkabir University in Iran. A total of 102 students in five courses (Electronic engineering, Civil engineering, Mechanical engineering, Chemical engineering and MBA) in the international branch of Amirkabir University, were asked to complete a SERVQUAL questionnaire. This questionnaire measured students' perceptions and expectations in five dimensions of service that consisted of assurance, responsiveness, empathy, reliability and tangibles. The quality gap of university services was determined based on differences between students' perceptions and expectations. The results demonstrated that in all of the five SERVQUAL dimensions there was a negative quality gap ($p<0.05$). Also responsiveness is the most important dimension for the students but had the largest gap. So improvements are necessary and the university must pay more attention to the students' requirements. The study was however conducted among international branch of Amirkabir University, so the results are limited to those faculties, not to the whole of the university. Also, there were many questions in the questionnaire,

which made the students tired and impatient. However, it was concluded that a positive correlation exists between service quality and University performance.

A study by Duggirala, Rajendran & Anantharama (2008) also carried out a study whose purpose was to investigate the impact of the service quality on the overall satisfaction of patients in private hospitals of Tehran, Iran. This cross-sectional study was conducted in the year 2010. The study's sample consisted of 969 patients who were recruited from eight private general hospitals in Tehran, Iran using consecutive sampling. A questionnaire was used for data collection; contacting 21 items (17 items about service quality and 4 items about overall satisfaction) and its validity and reliability were confirmed. Data analysis was performed using t-test, ANOVA and multivariate regression. The study found a strong relationship between service quality and patient satisfaction. About 45% of the variance in overall satisfaction was explained by four dimensions of perceived service quality. The cost of services, the quality of the process and the quality of interaction had the greatest effects on the overall satisfaction of patients, but did not find a significant effect on the quality of the physical environment on patient satisfaction. The study therefore concluded that constructs related to costs, delivery of service and interpersonal aspect of care had the most positive impact on overall satisfaction of patients. Managers and owners of private hospitals should set reasonable prices compared to the quality of service. In terms of process quality, the length of time taken waiting for consultation and admissions must be reduced, and services provided at the fastest possible time. Their study found a positive and significant relationship among the dimensions of service quality and patient satisfaction.

Arasli, Ekiz & Turan (2008) also conducted a study in public and private hospitals in Cyprus using Singapore Quality Award (SQA) and Balance Score Card (BSC). Their findings exhibited correlation between service quality and hospital performance. Ekiz (2008), study sought to examine the relationship between market orientation, service quality, and their impact on organizational performance. A total of 175 sets of structured questionnaires were distributed to managers of 175 service organizations in the northern region of Malaysia, and only 57.71 percent of it, which is 101, was returned. The results showed that market orientation had a significant effect on organizational performance

and service quality. Also, service quality has a significant effect on organizational performance. This study found that service quality partially mediates the relationship between market orientation and organizational performance.

By contrast other studies Ramayah, Samat & Lo (2011) conducted a study on the effect of service quality on organizational performance in Northen Malaysia. Five service quality dimensions used were tangibility, reliability, assurance, responsiveness and empathy. The 22 items SERVQUAL scale based on gap model proposed by Parasuraman, Zeithmal and Berry was applied. A sample size of 200 was taken using quota sampling. Confirmatory Factor Analysis was employed to find the fit of the model and also a comparison between the expectations and perceptions of government and private hospitals was made using mean values with the application of SPSS and AMOS software packages. Through the analysis it was found that the SERVQUAL model is fit for the study. It was also clear from the mean values that people had higher expectations from private hospitals. Their findings concluded that service quality partially mediates the relationship between market orientation and organizational performance but did not reveal its significance on organizational performance. These studies had limitations. For example the study by Abili, Thani & Afarinandehbin (2012), had a weakness in that it replicated SERVQUAL by default using its five dimensions namely; assurance, responsiveness, empathy, reliability and tangibles and were conducted in different sectors from private health sector. These dimensions may not be replicable in the service health sector as patients' perception of quality service delivery may be different, particularly Kenyan patients.

The study by Abili, Thani & Afarinandehbin (2012), used the default SERVQUAL dimensions and thus did not establish any relationship between these dimensions and performance. Arasli, Ekiz, & Turan (2008) identified six factors regarding the service quality as perceived in both private and public hospitals in Northern Cyprus but failed to link the perceived factors to performance of these hospitals. Duggirala, Rajendran & Anantharaman (2008) identified dimensions of patient-perceived total quality service (TQS) in the healthcare sector in India but failed to establish the relationship between the seven TQS and performance of the hospitals while Studies by Ramsaran-Fowdar (2008)

further serves to illustrate lack of agreement on service quality dimensions. Buong' et al., (2013) study on uptake of community health strategy on service delivery and utilization in Kenya indicated an improvement in health but failed to empirically establish the relationship between service quality and performance of the health strategy. These studies coupled with those of Mwabu (1984), Muthaka (2004), Arasli *et a*l. (2008) did not adequately address the relationship between service quality and organizational performance particularly for private health sector that often experience poor service quality in Nairobi County, as the current study sought. Therefore, the effect of service quality on organizational performance is not known.

2.2.2 Effect of quality management practices on organizational performance

The second objective of the study sought to determine the effect of quality management practices on organizational performance of private healthcare facilities in Nairobi County. Constructs of Quality Management Practices included ICT, Process Management,Workforce Management and Top Management support; while Organizational Performance included Efficiency, Patient satisfaction, Financial Viabilty and Effectiveness.

Highly skilled physicians, nurses, administrators, and ancillary staff are critical to producing high-quality outcomes and effective quality improvement hence hospital growth (Argote, 2000). However, this is not what exists in reality in many healthcare facilities. In addition, a good number of private healthcare facilities have not adopted technology in their operations despite the evident, widespread potential of ICT use in the operations of facilities. It's worth noting that the quality of clinical care delivered is highly dependent on the quality of information available but most staff in the private healthcare sector disregard this fact.

Tiwari & Chaudhari (2012), carried out a study on the effects of technology on the implementation of TQM in India. Their data was collected from 50 journals related to marketing, finance, information system and research development. The findings of the comparative study indicated that the adoption of new technology is implemented within a

clear context of organizational strategic objectives. Study by Tiwari & Chaudhary (2012) and other scholars have paid attention to explore the issues of ICT in relation to enhanced training: learning and Development (L&D). Little is known on how ICT can improve organizational performance of private hospitals. In order to achieve a higher performance in the process management practice, it is important to increase the feeling of empowerment among employees and to involve the people closest to the process in the quality efforts.

In Nigeria, Adeoti & Lawal (2012), studied interpersonal quality among the medical personnel and established that in the healthcare system, quality is influnced by a variety of factors including individual exchanges of the medical personnel and their interactions with patients.

In Uganda Musenze (2013), in a similar study found that the application of quality management practices should focus on improving the quality of personnel to improve overall organizational perfomance. (moderator)

Study by Demiberg (2006), in the SME sector in Tobago revealed that investment in employee is a sure way of improving effectiveness in any organization. In Malaysia, Samat (2006) carried out a study on TQM practices and market orientation in a bid to establish the relationship between three key variables, they found out that employee empowerment, employee capacity and contionous improvement had a significant impact on efficiency. Study by Demiberg (2006) and Samat (2006) were conducted in the context of manufacturing industry that may not be replicable in healthcare. Both studies concur that effective leadership can lead to efficiency. By focusing only on leadership, they did not consider other aspects of management practices such as workforce management and their influence on financial viability of an organization.

Vermeulen and Crous (2010) studied organizational factors that facilitate Total Quality Management (TQM) in the Public health sector in south Africa. They found out that management in public healthcare facilities in South Africa unlike those in the private sector were lacking commitment to employee involvement and the provision of adequate training programs to develop their skills and capabilities.

A similar research by Adza-Awude (2012), in Ghana indicated that co-operation and support by management determined their level of job satisfaction. Previous research in Kenyan hospitals has revealed leadership gaps and poor communication between senior administration and lower cadres as an impediment to achieving better practice (Nzinga, 2009 & Amos, 2009).

A study by Nzinga, Mbaabu & English (2013), on the impact of management practices on health delivery services using a computerized search strategy was run in *Pub Med*, *Cochrane library*, *Directory of Open Access Journals Social Science Research Network*, *Eldis*, *Google Scholar* and *Human Resources for Health* website databases using both free-text and MeSH terms from 1980 to 2011. In addition, citation searching from excluded and included articles was used and relevant unpublished literature systematically identified. A total of 23 articles were finally included in the review from over 7000 titles and abstracts initially identified. The most widely documented roles of mid-level managers were decision-making or problem-solving, strategist or negotiator and communicator. Others included being a therapist or motivator, goal setting or articulation and mentoring or coaching. In addition to these roles, the study identified important personal attributes of a good manager, which included interpersonal skills, delegation, accountability, and integrity. The majority of studies included in the review concerned the roles that mid-level managers are expected to play in times of organizational change. The study found that management practices of mid-level managers had a significant contribution in achieving delivery of high-quality services in Kenyan public hospitals and strongly suggests that approaches to strengthen this level of management will be valuable. These studies were conducted in the context of public healthcare facilites which may not be replicated in private healthcare facilities, Whereas studies have been conducted on the correlation between competence and financial viability no research has tested the hypothesis that process management moderates this relationship.

Karani and Bichanga (2012) carried out a study on Quality Management Systems and Organizational Performance in Kenya's Public Sector Organizations using theoretical

reviews and descriptive case study design with a total of 60 employees in the Ministry of Health. The findings indicated a strong relationship with R=0.867 and R2 =0.75 this implies that 75% of the corresponding change in the organizations performance is explained by TQM implementation. Even though this study entailed effect of management practices on organizational performance; it failed to address the main dimensions of quality management practices such as ICT, process management, workforce management and top management support. The present study therefore sought to determine the influence of these management practices on organizational performance.

Abedalfattah Z. & AL-abedallat (2012), carried out a study on the effect of quality management practices on organizational performance in Jordan using a sample size of 22 commercial banks with 600 employees. The main aim of the study was to establish a relationship between quality management practices and organizational performance in the banking sector using correlational design. The main variables of the study were top management, strategic planning, customer focus, process management, and supplier quality. Using correlation and regression methods, the study established that employee relation has been the strongest contribution (B=0. 356; sig. =0. 000; R2 adj=0. 828) which explained with (customer focus and top management) 82.8% of the variation in (OP) the dependent variable, followed by variable top management (B= 0.258; sig. =0. 000; R2 adj=0. 791) which explained with (customer focus) 79.1% of the variation in the dependent variable. The third variable was customer focus (B= 0.249; sig. =0. 000; R2 adj=0. 739) which explained 73.9% of the variation in the dependent variable. The fourth and final variable was strategic planning (B= 0.185; sig. =0. 000; R2 adj=0. 847) which explained with (customer focus, top management and employee relation) 84.7% of the variation in the dependent variable. Nonetheless, process management and supplier quality variable were out of the regression equation which provides confirmation of the previous analysis because of a weak correlation and did not meet the criteria of Multiple Regression. This study confirms that there is a significant relationship between management practices and organizational performance.

Faisal T. (2010), carried out a study on the impact of total quality management in service industry Aligarh Muslim University in India, using literature review from several journal

searches. The objective of the study was an in-depth investigation of the implementation of total quality management, identifying critical factors for adoption of total quality management in these service industries, analyzing how TQM implementation influences an organization performance, identifying and correlating the key elements and aspects of TQM in the service industry, constructing the framework for proper implementation of TQM and exploring what benefits it can bring to these industries. The study established that TQM was highly correlated to organizational performance.

Downey, K., H (2004), conducted a study on the importance of applying total quality management (TQM) and their effects on organizational effectiveness, and particularly hospital effectiveness. The main objective of the study was to investigate the impact of applying TQM on the overall hospital effectiveness in the accredited governmental hospitals in Jordan that are accredited from Health Care Accreditation Council (HCAC). The study population represented all health care professionals working in the five HCAC accredited governmental hospitals who had worked for more than three years in the same hospitals. Study sample included 1290 employees. The response rate was 83.6 % of the total questionnaires distributed. TQM principles were: Leadership commitment to quality, Customer focus, Continuous improvement, Teamwork, Employee involvement, education and training. Study findings showed a significant impact of all TQM principles on the overall hospital effectiveness ($p< 0.05$). Multiple linear regression analysis showed that TQM is a strong predictor of hospital performance (Beta =0.818, t=46.613, R2= 0.669, and p value = 0.000). Taken together, applying the principles of TQM increases the overall hospital effectiveness in the HCAC accredited governmental hospitals in Jordan.

Study by Tiwari & Chaudhary (2012) and other scholars have paid attention to explore the issues of ICT in relation to enhanced training (L&D); little is known on how ICT can improve organizational performance of private hospitals. Adeoti and Lawal (2012), established that in the healthcare system, quality is influnced by a variety of factors including individual exchanges of the medical personnel and their interactions with patients, however, quality emerges as an outcome instead of the percieved relationship between quality management practices and performance in the private health sector. Demiberg (2006), in the SME sector in Tobago revealed that investment in employee is a

sure way of improving effectiveness in any organization, but this is only one dimension of quality management practices which is also not specific to private healthcare. Study by Demiberg (2006) and Samat (2006), were conducted in the context of manufacturing industry that may not be replicable in healthcare. Both studies concur that effective leadership can lead to efficiency. By focusing only on leadership, they did not consider other aspects of management practices such as workforce management and their influence on financial viability of an organization. Adza-Awude (2012), in Ghana indicated that co-operation and support by management determined their level of job satisfaction but failed to establish their effect on organizational performasnce and its link to private health sector. These studies and those of Nzinga (2009), Amos (2009), Karani & Bichanga (2012) failed to etablish the relationship between quality management practices and performance of private hospitals consequently instigating the need for the research that concentrated in Nairobi County, Kenya.

In addition, these studies have their limitations which make them inadequate in addressing the issues on the ground on influence of management practices on organizational performance. First, they do not address the main variables that are discussed in the present study, and secondly, they do not reflect the exact situation as it is in the Kenyan private hospitals. It is with these concerns that the current study sought to fill these gaps by determining the effect of quality management practices on organizational performance of private hospitals in Kenya.

2.2.3 Moderating effect of quality management practices on service quality and organizational performance

The third objective of this study was to establish the moderating effect of quality management practices on the relationship between service quality and organizational performance. It explored the synergic impact of quality management prectices in amplifying the relationship between service quality and organizational performance. The moderator variable was measured by ICT, process management, workforce management and top management support.

Ramayah, Samat & Lo (2011) used a descriptive survey design to examine the relationship between market orientation, service quality, and their impact towards organizational performance in Malaysia. They used structured questionnaires to collect data from managers of 101 service organizations in the northern region of Malaysia. The findings revealed that market orientation has a significant effect on organizational performance and service quality. Service quality was also established to have a significant effect on organizational performance. They found that service quality partially mediates the relationship between market orientation and organizational performance (Ramayah, Samat, & Lo, 2011). The study focused on the moderating role of service quality on the relationship between market orientation and organizational performance however, it did not reveal the significance of service quality on performance

Vinagre & Neves (2008), developed and empirically tested a model to examine the major factors affecting patients' satisfaction that depict and estimate the relationships between service quality, patient's emotions, expectations and involvement in Portugal. The approach was tested using structural equation modeling, with a sample of 317 patients from six Portuguese public and private healthcare centres, using a revised SERVQUAL scale for service quality evaluation. Their findings reveal that respondents show different levels of satisfaction and a different emotional feeling based on the private or public nature of the service provider. Cluster analysis revealed that those with highest positive emotions had higher levels of satisfaction and a higher intension to return; the evidence was much stronger when a private service provider rather than public one was considered. The results support process complexity that leads to health service satisfaction, which involves diverse phenomena within the cognitive and emotional domain, revealing that all the predictors have a significant effect on satisfaction (Vinagre & Neves, 2008). The approach used by Vinagre & Neves(2008), wrongly assumes that quality management practices have no role towards achieving desired service quality and improved patient satisfaction. This wrong assumption is corrected emperically in the current study.

Yesilada & Direktor tested the dimensionality of the SERVQUAL instrument in the Northern Cyprus healthcare industry. They also assessed the service quality provided in

public and private hospitals. They identified the service quality dimensions that play important role on patient satisfaction. Data was collected from 806 systematically selected people above the age of eighteen. Gap analysis showed that private hospitals have smaller gaps than public hospitals in all three service quality dimensions. Findings indicated that in public hospitals tangibles seems to exert no significant influence on satisfaction while functional dimensions positively influence patient satisfaction.

Jabnoun & Rasasi (2005), investigated the relationship between transformational leadership and service quality in United Arab Emirates. Data was collected from 31 project managers/consultants in the petroleum industry in Iran. They first determined the level of satisfaction of patients with the service quality they received. They further analyzed how hospital employees perceived the dimensions of transformational and transactional leadership of their leaders. Study revealed that UAE patients were generally happy with the service quality rendered by their hospitals. Service quality was also found to be positively related to all dimensions of transformational leadership. Mahour (2006), carried out a study on the effects of quality management practices on operational and business results in the Iranian petroleum industry. The results of the correlation analysis of the petroleum sector indicated that top management support is the major driver of quality management which significantly correlates with other management practices.

Although the study by Jabnoun & Rasasi (2005), factored in the role of management practices, it focused only on management styles. Both studies however assumed that management practices have no role towards achieving desired service quality and improved patient satisfaction. It was also found that customer orientation is not significantly correlated with external quality results (profitability). A regression analysis indicated, employee training, and employee involvement as the two statistically significant variables in explaining the variability in internal quality results. The moderating aspect of management practices on the relationship between service quality and performance was not considered. The current study factors in moderating effect of quality management practices measured by ICT, process management, work force management and top management support on the relationship between service quality measured by tangibility, reliability, responsiveness, equity and competence and

organizational performance measured by efficiency, customer satisfaction, effectiveness and employee job satisfaction.

Zhihai (2001), carried out a study on the implementation of total quality management among Chinese manufacturing firms. The study used 900 firms which were randomly selected, they were divided into four groups according to their industrial sectors-301 for machinery building, 180 for chemicals, 97 for electronics, and 322 for other industrial sectors. The Liaoning Provincial Machinery-Building Bureau, the Liaoning Provincial Chemicals Bureau, the Liaoning Provincial Electronics Bureau, and the Liaoning Provincial Quality Control Association respectively sent 301, 180, 97, and 322 questionnaires to their targeted groups along with their respective official documents. These documents (namely, cover letters, drafted by the author), which described the aim of the questionnaire surveys, were issued by the four organizations. The questionnaires were sent by mail directly to quality management departments in these sampled manufacturing firms. Finally, 212 questionnaires were returned. The response rate was 23.6%, normal for such research. The Liaoning Provincial Machinery-Building Bureau, the Liaoning Provincial Chemicals Bureau, the Liaoning Provincial Electronics Bureau, and the Liaoning Provincial Quality Control Association received 97, 44, 21, and 50 questionnaires back, respectively; response rates were 32.23, 24.44, 21.65, and 15.53%, respectively. The study used descriptive and correlational survey design and randomly selected these respondents. It was revealed that to achieve high product and service quality and to pursue successful TQM implementation, top management support is mandatory. This was attributed to the fact that it is the responsibility of the top management to take lead in changing processes and systems as leadership plays an important role in ensuring the success of quality management. Additionally, it is the top management's responsibility to create and communicate vision to move the firm towards continuous quality improvements in services and production. While these findings were true to the manufacturing industries, the same cannot be said without proof for the service industry. Ju and Binshan (2006), carried out a study on the critical factors in TQM implementation in Singapore. The study found that top management commitment, employee participation, supplier quality management, information systems, evaluation, communication and technology are all essential in quality management. Additionally, it is

the responsibility of the management to provide commitment, leadership, empowerment, encouragement and the appropriate support to technical and human processes if quality is to be achieved.

The study findings acknowledge that top management should be in a position to determine the environment and the framework of operations within a firm. The study findings however failed to reveal the importance of top management's active participation in personnel training activities and understanding of the main requirements of quality improvement programs. This study aims to fill this gap by looking at how top management moderates the relationship between personnel training and effectiveness.

Hemsworth, Sanchez & Bidgood (2008), studied quality management practices in purchasing information systems in Columbia. The main objective of the study was to determine the effect of Quality Management Practices in Purchasing (QMPP) on related Information System practices (IS) and their combined effect on purchasing performance. The objective of this study was to advance the literature by providing an empirically evaluated and comprehensive model that relates QMPP with IS and purchasing performance. Measurement scales for these three constructs were developed and assessed for convergent validity, discriminant validity, and reliability. Findings from this study indicated that there is significant evidence to support the hypothesized model in which QMPP has a direct impact on related IS practices and purchasing performance; it also has an indirect impact on purchasing performance mediated through IS. In addition , the study found that workforce management practices gives the implication that employees should be motivated and involved through support groups and rational culture since their values include training and education of employees, participation and performance based incentives.

Chowdhury & Paul (2007), carried out an exploratory study on top management commitment. The purpose of this study was to determine the relationships between leadership styles (transformational leadership style, transactional leadership style and laissez-faire leadership styles), and quality management practices in Saudi public hospitals. The study used a total of 144 hospitals in which stratified random sampling was used to select 108 general hospitals and 36 specialist hospitals which were included

in this study. A quantitative research design was adopted to collect data, test hypotheses, and answer the research questions. A cross-sectional survey method was used to conduct this study. Results of the study revealed that the transformational leadership style has a significant, positive relationship with quality management practices. However, the transactional and laissez-faire leadership styles were found to significantly and negatively relate to quality management practices. According to the findings, top management participation, learning and encouragement, employee empowerment and top management commitment to employee education and training go a long way in the organizations pursuit of product quality and long term business success.

Abdullah et al. (2009), carried a study on the moderator effect of relationship between soft total quality management practices and performance in municipalities using Soft TQM portion of the survey which comprised of five items and 44 questions. A quantitative research design was adopted to collect data. Multiple regression analysis method was used to conduct this study. The findings of the study contributed to both theory and practice. The results of this study had important contributions and implications for practitioners and policy-makers. Empirical evidence revealed that soft total quality management has relationship with performance. The findings also implied that soft total quality management has positive relation with performance,

Both studies observed that lack of top management support demoralizes employees. However, top management commitment is not sufficient on its own as the need for the commitment to go hand in hand with direct participation in various quality management practices. Their study neglected the influence of top management support on training and the effect of the same on effectiveness which will be addressed in the current study.

The study by Ramayah, Samat & Lo (2011), shows the link between market orientation and service quality but does not reveal the significance of service quality on organizational performance. Musenze (2013), found that the application of quality management practices should focus on improving the quality of personnel to improve overall organizational perfomance but failed to empirically affirm his findings in private healthcare hospitals. Ramayah, Samat & Lo (2011), studies focused on the moderating role of service quality on the relationship between market orientation and organizational

performance but failed to reveal the significance of service quality on performance. The approach used by Vinagre & Neves (2008), wrongly assumes that quality management practices have no role towards achieving desired service quality and improved patient satisfaction. Although the study by Jabnoun & Rasasi (2005), factored in the role of management practices, it focused only on management styles. These and other reviewed studies have not established the moderating role of quality management practices on the relationship between service quality and performance of private healthcare facilities in Nairobi County.

2.3 Summary

Three theories have been reviewed in this chapter, they include Theory of Quality Trilogy, Theory of Gaps Model of Service Quality and Deming's Theory of Quality Management. This chapter has also provided a broad perspective of empirical literature as relates to the moderating effect of quality management practices on the relationship between service quality and organizational performance.

The theory of quality trilogy which is the main theory of this study has three main stages aimed at bringing change; planning, control an improvement. Planning has been conceptualized as service quality control as quality management practices and finally improvement as organizational performance respectively. This theory informed the conceptual framework and encompasses all variables of the study. However, it views service quality as a project therefore a short term goal of an organization whereas service quality is very vital to every service provider and should be viewed as a long term goal.

Theory of Gaps Model of Service quality and Deming's Theory of Quality Management complemented the main theory. The Theory of Gaps Model of Service Quality is compatible with this study in that it identifies problems and mistakes through recognizing gaps in the model and avoiding them. It also assumes that the difference between the service that the customers expect and the service they actually receive is due to organizational gaps. This theory informed the independent variable which is service

quality in this study. Deming's Theory posits that there should be constant improvement in production and services. Deming advocates for continuous training and transformational leadership. This theory informed the moderator variable which is quality management practices in this study.

Most of the studies on service quality are concentrated abroad and have adopted SERVEQUAL as default using its five dimensions; reliability, tangibility, responsiveness, assurance and empathy. Whereas this study used five dimensions of service quality it did not replicate SERVEQUAL as default but modified it to suit the Kenyan private health sector. Some of the reviewed studies concur that service quality positively affect performance. However, they have over emphasized customer satisfaction element of performance. This gives a customer-centered perspective without taking into consideration other important elements of performance such as efficiency, financial viability and effectiveness. Studies reviewed have shown little regard to quality management practices and its moderating role in achieving desired service quality and performance. Most studies assume that as long as an organization is seeking to achieve service quality and improved performance, quality management practices are in place. Reviewed studies have not addressed the three variables captured in this study at the same time. Therefore, they have not been able to adequately link service quality, quality management practices and organizational performance. To address these gaps, this study sought to identify dimensions of service quality in private healthcare facilities in Nairobi, Kenya and the moderating effect of quality management practices on service quality - performance of these facilities.

CHAPTER THREE

RESEARCH METHODOLOGY

This chapter covers the methods and procedures that used to achieve the set study objectives. The chapter discusses the research design for the study, study area, target population, sampling and sampling technique, data collection, instrument for data collection, reliability test for data collection instrument, validity test for data collection instrument, data analysis and presentation.

3.1 Research Design

A study design is the plan of action the researcher utilizes for answering the research questions. Positivism research philosophy was adopted. Positivism Paradigm adheres to the view that only factual knowledge gained through observation including measurement is trustworthy. In positivism studies, the research is associated with data collection and interpretation through objective approach and the research findings are usually observable and quantifiable. Trochim (2006), indicates that research design provides the glue that holds the research project together. A design is used to structure the research, to show how all of the major parts of the research project the samples or groups, measures, treatments or programs, and methods of assignment work together to try to address the central research questions (Trochim, 2006). Based on positivism approach, the study adopted correlational survey research design. Mugenda & kare (2003), notes that

Correlational research design involves collecting data in order to determine whether and to what degree a relationship exists between two or more quantifiable variables. This design was useful where predictions were made on effects of quality management practices on the service quality-organizational performance relationship. A correlational research design identifies variables that relate to each other (Jackson, 2010). Use of data collection instruments such as questionnaires was also be possible through this design. Data was first described using descriptive statistics before carrying out correlation analysis

3.2 Study Area

This study took place in Nairobi County. Nairobi is the largest city in the Republic of Kenya. It has a population of 3.138 million (GoK, 2009) and covers an area of 696 km². It's located at Latitude: 1°18'S and longitude: 36°45'E at an altitude of 1798m (5899 ft.) Nairobi County was chosen as the study area, first, because the County has the highest number of private healthcare facilities compared to other Counties in Kenya. Secondly, Nairobi is a metropolitan County that is resident to people from all over the country. It therefore depicts micro-representation of Kenya as a country. Nairobi County host the largest international airport in the Country therefore its susceptible to communicable diseases due to local and international arrivals. Additionally, the moderating effects of management practices on the relationship between service quality and organizational performance has not been investigated in Nairobi County before therefore merited a research on this study topic.

3.3 Target Population

The units of study comprised of private healthcare facilities accredited by NHIF in Nairobi County. The 55 private healthcare facilities accredited by NHIF in Nairobi County outlined in (Appendix VI). 3 healthcare facilities were used in pretesting stage; they included Karen Hospital, Komarock Modern Hospital and St. Anne's Maternity Home as highlighted in appendix iii, therefore target population was 52 healthcare facilities accredited by NHIF in Nairobi County.

3.4 Sampling size andTechnique

Sampling size is a list of elements from which a sample is drawn (Cooper and Schindler, 2001).In this study, the sample size consisted of all the 52 healthcare facilities accredited by NHIF in Nairobi County. Out of the 55 facilities, 3 were used in pretesting. The sample size was selected using census sampling technique. This technique was chosen because the units of study were not too many and these facilities are within the same county and therefore, accessible and not prohibitive in terms of cost, time and other resources (Saunders, 2007). Furthermore, a census survey is suited to development of a

broad industry- based understanding the hitherto intricate problems of the Kenya health sector. Studies involving whole population of firms are common, especially where only specific firm category is being studied (Weguko, 1984; & Mulaki, 2000). Aosa (1992), Bulitia (2014), used more or less similar approach in which samples were made up of firms that they approached and willing to participate. They went ahead to study all the 84 and 65 firms respectively.

3.5 Data Collection Methods

3.5.1 Data Sources

Primary data was collected by use of self- administered questionnaires. Primary data according to Kothari, (2004) is the data collected a fresh for the first time while secondary data is that data that has already been collected and passed through statistical process. Andre, (2004) explained that primary data is data that is used for a scientific purpose for which it was collected. Primary data is sought for due to the truth and control over error, (Copper & Schindler, 2003). The two main types of data were primary and secondary sources. Secondary data was obtained from health facility and government healthcare reports. The main type of data collected was quantitative data through use of questionnaire.

3.5.2 Data Collection Procedure

Structured survey questionnaires were administered to the respondents by the researcher and research assistant. The main study respondents were Chief Operations Managers, who were required to fill the questionnaires by completing all the sections. Total respondents were 52 Chief Operations managers from the 52 facilities excluding respondents for the three facilities used in pretesting.

A sample of the questionnaire is attached as appendix II of this research thesis. The questionnaire contained four sections. Section A sought demographic information, while sections B sought information on service quality; sections C and D sought information on quality management practices and organizational performance respectively. The

respondents were required to tick or complete as per their level of agreement. Mugenda and Mugenda, (2003) posits that the questionnaire tool is the most appropriate where detailed information is required. Respondents included Chief Operations manager because he/she is responsible for the daily operations and routinely reports of the organization, he has in depth information on facility performance and expansion plans. They can obtain information on human capital and are also better placed to provide information on management practices in the organization.

3.5.3 Instrument for Data Collection

Questionnaires are useful in a descriptive study where there is need to quickly and easily get information from people in a non- threatening way (Davies, 1997). Questionnaires had four sections seeking information on demographic, service quality, quality management practices in place and organizational performance. Likert type point scales ranging from strongly agree (1) to strongly disagree (7) were used to capture specific indicators for each objective. In this study a seven point scale was used because it sufficiently provided clear distinction between the points.

3.5.4 Reliability Tests

Reliability refers to the extent to which an experiment, test or any measuring procedure yields the same result on repeated trials. Reliability of a measure thus indicates its stability and consistency (Sekaran 2000). Measurements are reliable to the extent that they are repeatable and that any random influence which tends to make measurements different from occasion to occasion or circumstance to circumstance is a source of measurement error. Cronbach's Alpha coefficient alpha is commonly used as a measure of internal consistency. The value of coefficient alpha ranges from zero (no internal consistency) to one (complete internal consistency) Cronbach, (1951). A reliability coefficient value of 1.00 indicates perfect reliability while 0.00 indicates no reliability. Wherry, (1984) argued that a reliability coefficient of 0.70 is considered "acceptable" in most social science research situations.

In order to determine whether the instruments were reliable, the questionnaire instrument was subjected to intensive phases of review to ensure clarity and avoid any possible ambiguity. Following that, pilot test was conducted using the data collected from three Chief Operations Managers for the three facilities highlighted on appendix iii. To test for reliability and validity of the measures, (Sproull, 2004). While pretest evaluation of questionnaire involved two academicians and professionals, the pilot test comprised respondents from the same pool of respondents of the study from which real data were collected (Bradburn *et al*., 2004). These respondents did not participate in the final study. However, the pilot test was conducted to refine the questionnaire before being distributed to collect the real data of the study. The pilot test was helpful in eliminating ambiguous questions and estimation of the time required to respond to the questionnaire. Additionally, pilot test was used to test reliability and validity of the instrument. To collect data for the pilot study the three Chief Operations Managers were requested to respond to the questionnaire. Moreover, they were asked to comment on the questions asked whether they were easily understandable to avoid ambiguity and eliminate any possibility of misunderstanding. Consequently, some of the questions were rephrased to eradicate uncertainty and improve the quality of study data. Based on the data collected the reliability and validity of the instrument were performed. The results of the pilot study were then subjected to reliability test using the Cronbach's alpha test. Cronbach's alpha coefficients for unstandardized items of the various constructs ranged from 0.700 to 0.857 and the Cronbach's alpha based on standardized items range from 0.726 to 0.867. Normally Cronbach's alpha coefficients of the unstandardized items show the extent to which all items in a test measure the same concept or construct while the Cronbach's alpha of the standardized items, measures reliability of the scale. The computed coefficients fall within the accepted range as suggested by (Wherry, 1984). Reliability test for various dimensions of dependent variables such as efficiency, patients' satisfaction, financial viability and effectiveness. For all the four items, the Cronbach's coefficient alpha ranged 0.710 to 0.856 which is within 0.70 acceptable threshold (Wherry, 1984). The reliability results are shown in appendix IV.

3.5.5 Validity Tests for Data collection Instruments

Validity of a measure is defined as the extent to which construct or a set of measures correctly represents the concept of study, and the degree to which it is free from any systematic or non- random error (Nunally, 1978). Establishing the reliability of a measurement scale should precede an assessment of its dimensionality because the presence of unreliable measurement items enhances a scale's lack of uni-dimensionality (Cortina, 1993). In this regard reliability is, therefore, a necessary condition for validity (Peter, 1981; Peter & Churchill, 1986). Researchers also assert that no single statistic offers a general index of validity of measurements made. Consequently, the basic type of validity was proposed (Sekaran, 2000); content validity whether the measure adequately measure the concept.

A measure has content validity if there is a general agreement among the subjects and that the instrument has measurement items that cover all aspects of the variable being measured. This form of validity subjectively assesses the correspondence between individual items and the concept through ratings by expert judges. The objective of the content validity is to ensure that the selection of construct items extends past empirical issues to include theoretical and practical considerations (Robinson, 1991). In an interactive manner, the expert panel revised the questions and response options until all evaluators concurred that each question and each response option fairly reflected accurately the indispensable underlying dimensions for each construct. Moreover, the pretest subjects indicate that the content of each construct was well represented by the measurement items used.

3.5.6 Tests on the Assumptions of Linearity

Generally statistical tests depend on assumptions about the study variables under the analysis. When the assumptions are violated, the results may be spurious (Osborne & Waters, 2002). Pedhazur (1997) argues that the use of previous research to inform current analyses in detecting non-linearity is important. However, the method is not foolproof. Osborne & Waters, (2002) on the other hand observed that examining residual plots (plots of the standardized residuals as a function of standardized predicted values) would give better results. They further noted that, visual examination of a plot of the

standardized residuals (the errors) by the regression standardized predicted value can also help in detecting the availability and extent of heteroscedasticity.

Weak heteroscedasticity has little effect on significance tests. However, when heteroscedasticity is strong, it can seriously distort findings of the study. The current study employed the approach highlighted in detecting nonlinear relationships and homoscedasticity. Residual histograms were drawn to establish whether or not the residuals showed normal distribution. These were supported by drawing P-P plots. Figures 3.1 shows the residuals histogram used in testing normality of organizational performance. The histogram matches the normal distribution, thus indicating that the residuals showed normal distribution

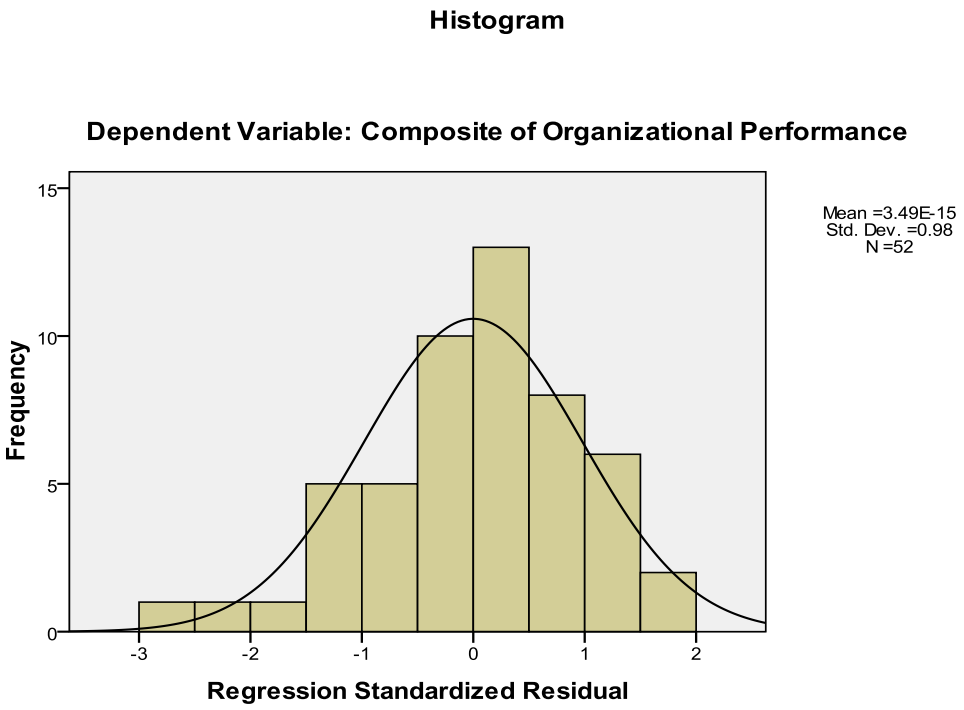


Figure 3.1 Residual Histogram for Organizational Performance

Visual analysis of a plot of the standardized residuals by the regression standardized predicted value can help in detecting heteroscedasticity. The presence of heteroscedasticity is normally confirmed when the residuals are not evenly scattered

around the "0" line (Osbone & Waters, 2002). Figure 3.2, shows plots of the standardized residuals as a function of standardized predicted values for organizational performance. The pattern of data points shows some slight deviation from the normal, which suggests the existence of weak heteroscedasticity. According to Tabachnick and Fidell (2001), weak heteroscedasticity has little impact on significance tests and does not seriously weaken the analysis. The P-P plots in Figures 3.3 and 3.4 also indicate that the distributions were quite normal and to some considerable extent, the plotted points matched the diagonal line drawn in each case.

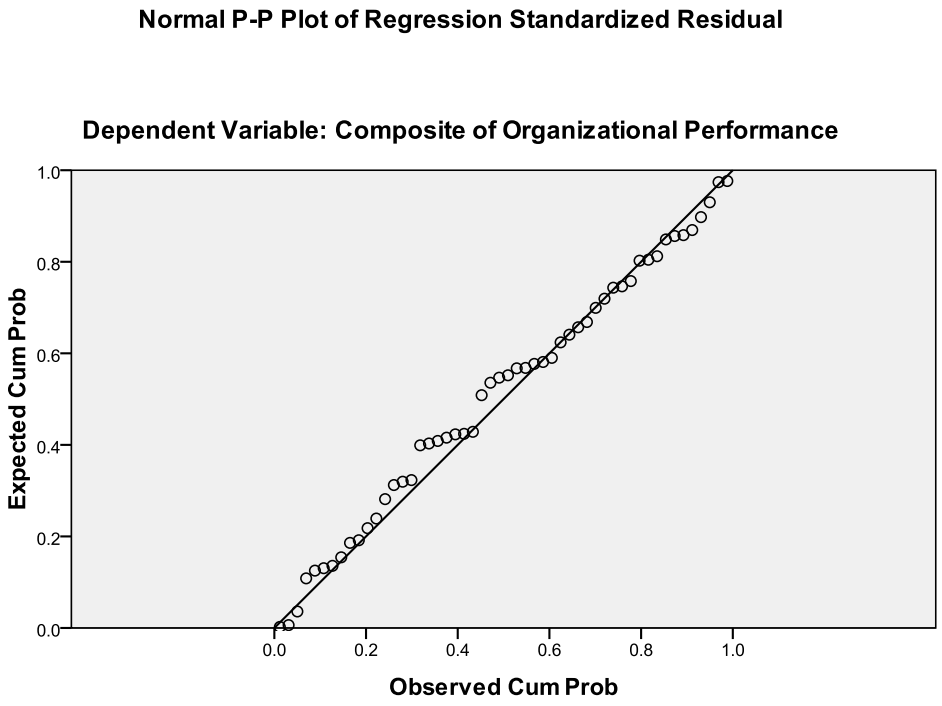


Figure 3.2: P-P Plot for Organizational performance

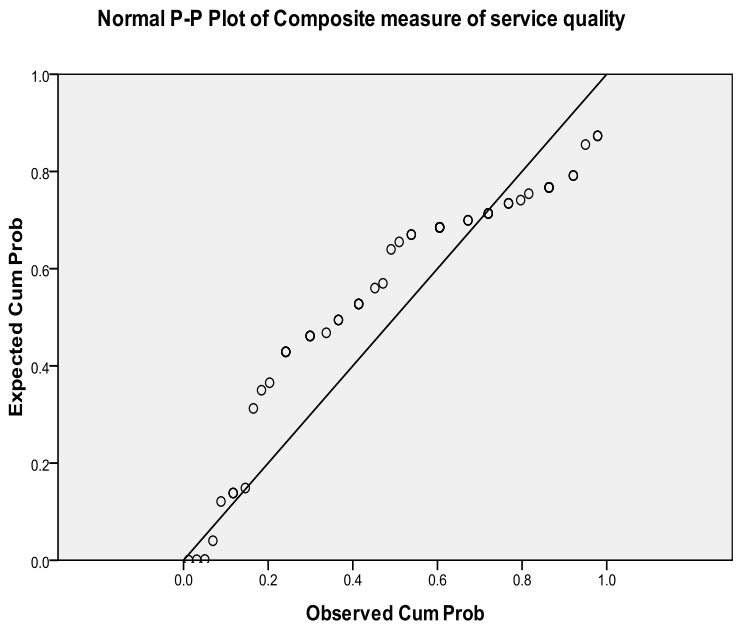


Figure 3.3: P-P Plot for Service Quality

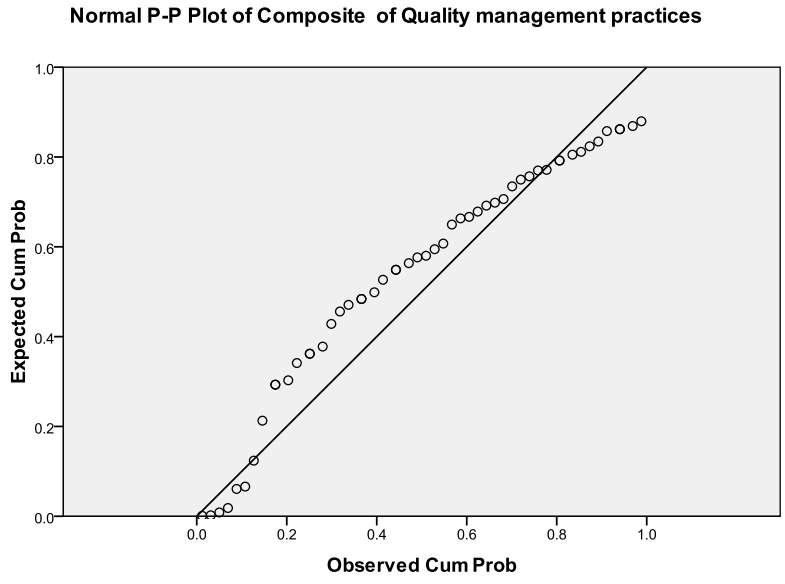


Figure 3.4: P-P Plot for Quality Management Practices

Autocorrelation and multicollinearity were also tested. Autocorrelation is a situation in which the error terms are correlated. If it is violated, the estimates remain biased. In the study, auto correlation was tested using Durbin Watson (D) statistics. A Durbin Watson

statistic which is closer to 2 depicts absence of auto correlation. The "D" statistics computed for the relationship between Organizational performance and service quality was 1.685, Organizational performance and Quality management practices was 2.111 and the joint effect of Quality management practices and Service quality on Organizational performance was 1.828. All the statistics were close to 2 thus, suggesting absence of auto correlation. Multicollinearity was also tested using the Variance of Inflation Factors (VIFs) corresponding to various regression models. A part from the moderated regression model with VIFs ranging from 5.822 to 20.556, all the other models had VIFs less than 10, suggesting absence of multicollinearity. The high VIFs in the moderated regression model are expected because of the product of the moderator variable and the independent variable.

3.6 Data Analysis

Correlation analysis was used to analyze specific objective one to show how strongly service quality and organizational performance relate. Below correlation analysis was used. Cohen *et al.* (2003).

$$r = \frac{n\sum x_i y_i - \sum x_i \sum y_i}{\sqrt{n\sum x_i^2 - (\sum x_i)^2}\sqrt{n\sum y_i^2 - (\sum y_i)^2}}$$

Where;

r = Pearson r correlation coefficient

n= number of values in each data set

$\sum x_i y_i$ = sum of the products of paired scores

$\sum x_i$ = sum of x scores

$\sum y_i$ = sum of y scores

$\sum x^2$= sum of squared x scores

$\sum y^2$= sum of squared y scores

y=dependent variable (organizational performance)

x=independent variable (service quality)

Hierarchical regression analysis was used in objective two to establish the effect of quality management practices on organizational performance and moderating effect of quality management practices on the relationship between service quality and organizational performance which is objective number three. Hypothesis was tested through correlation and multiple regression analysis. Results are presented in tables and charts. The statistical package (IBM SPSS Statistics 20) was used to aid in data analysis. Qualitative data was analyzed using content analysis. Results of qualitative data analysis are presented in descriptive narrative form.

There are three variables namely service quality, quality management, and organizational performance. The indicators of service quality are tangibles, responsiveness, reliability, competence and equity. Quality management has four indicators that include ICT, process management, workforce management, and top management support. There are four indicators for organizational performance. They include efficiency, patient satisfaction, financial viability, and effectiveness.

Inferential data analysis was done using Pearson correlation coefficient and regression analysis. Pearson correlation coefficient was used to measure the strength and direction of the relationship between dependent variable and independent variables. Correlation technique allows the researcher to analyze the degree and direction of the relationship between two variables. Computation of a correlation coefficient yields a statistic ranging from -1 to +1 (correlation coefficient r) and indicates the relationship of the two variables under comparison. The direction of the relationship is indicated by a positive (+) or a negative (-) sign. A positive relationship means that when one variable increases the other one it is being compared with also increases. A negative relationship means an increase in one variable yields a decrease in the other variable that is being compared with. If there is no relationship, the correlation coefficient (r) is equal to zero.

Regression analysis was used to establish the moderating effect of quality management practices on the relationship between service quality and organizational performance. Hierarchical regression analysis was used to establish the moderating effect of quality management practices on the relationship between service quality and organizational performance. The below regression analysis models Whisman and McClelland (2005)

were used; in model two organizational performance was regressed on quality management practices.

$$Y_i = \beta_0 + \beta_1 X_i + \varepsilon \quad \text{..... (1)}$$

$$Y_i = \beta_0 + \beta_2 M_i + \varepsilon \quad \text{..... (2)}$$

$$Y_i = \beta_0 + \beta_1 X_i + \beta_2 M_i + \beta_3 X_i M_i + \varepsilon \quad \text{..... (3)}$$

Where;

Y_i=dependent variable (organizational performance)

X_i=independent variable (service quality)

M_i=moderator variable (quality management practices)

X_iM_i =interaction term (service quality × quality management practices)

β_0 =y intercept in the equations

β_i = change in y as a result of change in the corresponding variables

ε =error term

i = sample respondents

3.7 Data Presentation

The results of quantitative data analysis was presented in charts and tables. Interpretations and explanations was presented in prose format. Bulk raw results of descriptive and inferential data analysis such as correlation and factor analysis tables was presented in appendices.

3.8 Ethical Issues

The research was carried out in accordance with the Research Ethics Policy of Maseno University, and the Data Protection Legislation Act in Kenya. For this research, ethical approval was obtained from the University prior to the field work. This guaranteed that all participants were fully briefed and protected throughout the research process, that is, during data collection, analysis and evaluation of findings, presentation and reporting of findings. Respondents were asked for their consent in the whole process of collecting, analyzing and writing research report. Furthermore, respondents were requested to give consent if the research is presented and published. In undertaking this study, ethical considerations were considered right from the initial stages of the research process, that is, the proposal. There was an informed consent in form of a letter from the University. The letter acknowledged the respondents' rights to voluntarily participate in the study and to withdraw at any time so that they were not forced or coerced to participate in the study.

CHAPTER FOUR

RESULTS AND DISCUSSIONS

4.0 Introduction

This chapter presents the results of the study followed by the discussion of the findings in light of the research objectives. This chapter is divided into two main sections. The first section addresses the descriptive aspects of the data such as the demographic characteristics of the respondents and the description of the measure of the service quality, quality management practices and organizational performance. In the second section, the results of the test hypotheses are discussed beginning with the main effects and ending with the moderating effects of the associated variables.

4.1 Characteristics of the Respondents

Table 4.1 summarizes the distribution of respondents by gender. The majority (53.8%) of the respondents were female compared to 46.2% who were male. This preliminary indication suggests that there are more female chief operations managers who responded to the questionnaire from each facility than their male counterparts.

Table 4.1 Distribution based on Gender of the respondent

	Frequency	Percent
Male	24	46.2
Female	28	53.8
Total	52	100.0

Source: Survey Data (2016)

Further, the above distribution was indicated in figure 4.1 that revealed more (54%) female participant than their male counterpart.

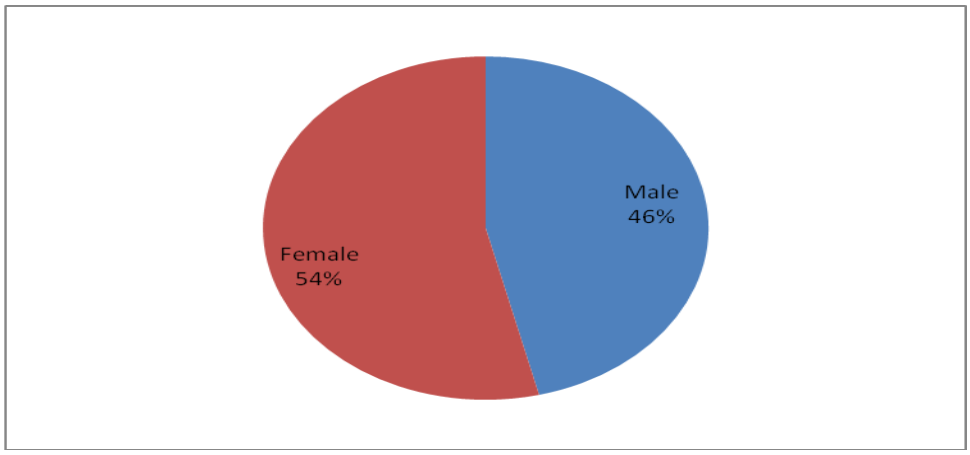


Figure 4.1: Distribution based on Gender of the Respondents

Source: Survey Data, (2016)

4.2 Distribution based on Age group of the respondents

Table 4.2 summarizes the distribution of the respondents by age. Since the vast majority of respondents were between 31-35 years of age, approximately 40.4%, we can conclude that most of the management position in private health facilities are occupied by individuals who are in middle adult age of 31-35 years. This can be attributed to their level of professional training, social status, experience on the job and their high demand for career growth.

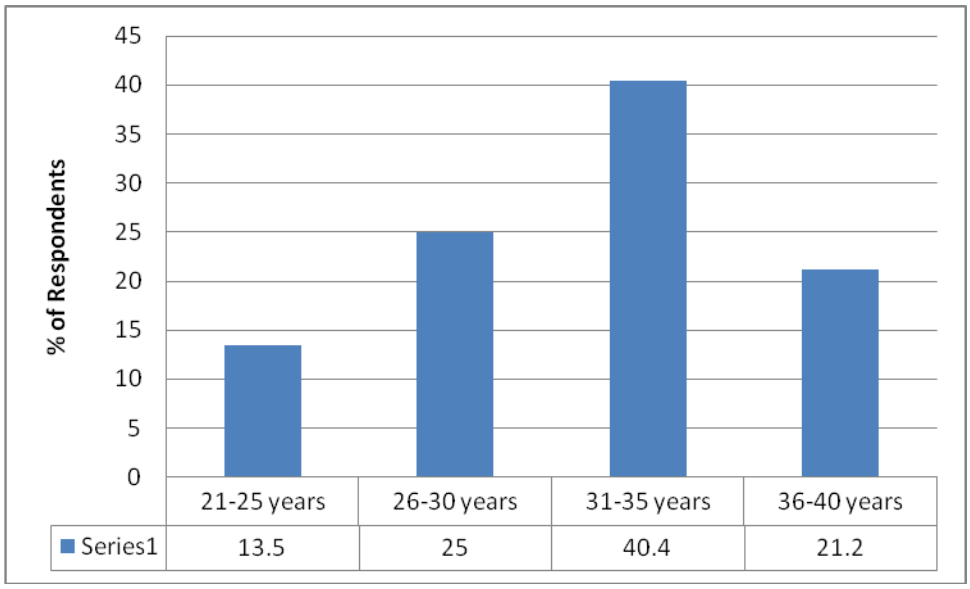
Table 4.2: Distribution based on Age group of the respondent

	Frequency	Percent
21-25 years	7	13.5
26-30 years	13	25.0
31-35 years	21	40.4
36-40 years	11	21.2
Total	52	100.0

Source: Survey Data, (2016)

Additionaly, Figure 4.2 reveals that only 13.5% of the operations managers fell in the category of 21-25 years of age group. The few numbers of managers in this category is justified by the fact that they have less experience on the job and lacked high professional

training to hold such management position.The age of other respondents fell in the categories of 26-30 years and 36-40 years representing 25% and 21.2% respectively.



Source: Survey Data, (2016)

Figure 4.2 Distribution based on the age group of the respondents

4.3 Distribution of Respondents based on the year of work experience

The distribution of respondents based on their year of work experience is shown in Table 4.3. Majority of the respondents representing 55.8% have had a work experience ranging between 5-10 years in their service to private healthcare facilities based in Nairobi County, Kenya. This suggests that most private healthcare facilities in Nairobi are managed by staff with relatively many years of work experience. This was followed by those who stated that they had worked for a period of between 1-5 years representing 30.8%. Others, 5.8%, confirmed that they had worked at the facility for less than 1 year.

Table 4.3 Distribution based on Years of work experience by respondent

	Frequency	Percent
< 1 year	3	5.8
1-5 years	16	30.8
5-10 years	29	55.8
> 10 years	4	7.7
Total	52	100.0

Source: Survey Data, (2016)

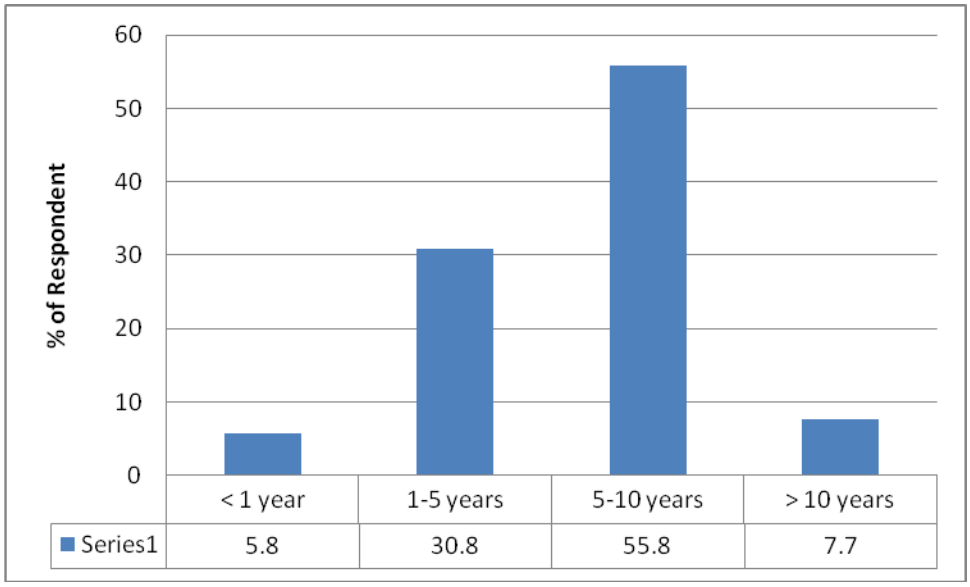


Figure 4.3: Years of work experience by respondent

Source: Survey Data, (2016)

4.4 Measures of Service Quality Practised by Private Health Facilities in Nairobi

Addressing the objectives of the study requires description of several explanatory variables to ascertain their explanatory capacity. This was achieved and presented by frequency distributions, means and standard deviation for each variables consecutively. First, effort was put to establish the extent of service quality practised by private health facilities in Nairobi. To determine this, respondents were asked to indicate their level of

agreement or disagreement on a scale of 1 to 7. In this study, the scale was used to measure five dimensions namely; tangibles, reliability, responsiveness, competence and equity as measures of service quality practiced in private healthcare facilities in Nairobi, Kenya.

4.4.1 Measure of Tangible Dimension of Service Quality

Respondents were asked to indicate their level of agreement or disagreement with whether the facility has modern looking equipment and basic amenities, spacious and secure physical facilities, appealing hospital atmosphere and décor, well groomed and neat appearing staff and neatly arranged materials in the facility such as brochures.

Table 4.4 Measure of Tangible dimension of Service Quality

Response scale **statements**	**1** **F (%)**	**2** **F (%)**	**3** **F (%)**	**4** **F (%)**	**5** **F (%)**	**6** **F (%)**	**7** **F (%)**	**mean**	**std. dev**
1. Facility Has Quality basic amenities and modern looking equipment's	0 (0.0)	0 (0.0)	2 (3.8)	5 (9.6)	8 (15.4)	19 (36.5)	18 (34.6)	5.88	1.114
2. Facility is spacious and secure for both patients and staff	0 (0.0)	0 (0.0)	0 (0.0)	6 (11.5)	12 (23.1)	25 (48.1)	9 (17.3)	5.71	0.893
3. Hospital atmosphere and décor are appealing.	0 (0.0)	0 (0.0)	2 (3.8)	1 (1.9)	16 (30.8)	18 (34.6)	15 (28.8)	5.63	1.004
4. Staff are well groomed and neat in appearance	0 (0.0)	0 (0.0)	0 (0.0)	4 (7.7)	19 (36.5)	11 (21.2)	18 (34.6)	5.83	1.004
5. Materials such as brochures are neatly arranged	0 (0.0)	0 (0.0)	0 (0.0)	3 (5.8)	16 (30.8)	16 (30.8)	17 (32.7)	5.9	0.934
Overall mean								**5.83**	**0.989**

1=Strongly disagree, 2=Disagree, 3= somewhat disagree, 4=Neither agree nor disagree, 5=Somewhat agree, 6=Agree and 7=Strongly agree.

Source: Survey data, (2016)

From Table 4.4, it is evident that with an overall mean score of 5.83 and S.D=0.989, majority of respondents are in agreement that tangible aspect of service quality was a

significant factor in the service quality practice by private healthcare facilities in Nairobi County, Kenya. Furthermore, the mean scores of the individual items ranged between 5.71-5.90, respectively. The overall standard deviation (SD=0.989) was below 1 standard deviation thus implying that there were small variations in the statements thus agreement. This suggests that it is a prevalent service quality practice among private healthcare facilities in Kenya.

4.4.2 Measure of Reliability Dimension of Service Quality

The descriptive measures of reliability dimension of service quality are found in Table 4.5. Respondents were asked to indicate their level of agreement or disagreement with whether the facility staff/doctors consistently exhibit sincere interest in solving patients problem, doctors/staff explain thoroughly medical conditions to patients, treatment is focused towards patients well-being, hospital's admission and billing processes are transparent and dependable, the level of service is the same at all times and from all members of staff.

From table 4.5, it is evident that on overall mean score of 5.84 and S.D=0.936, majority of respondents are somewhat in agreement that reliability is a significant aspect of service quality practiced by private health care facilities in Nairobi County in Kenya. This implies that it is prevalent practice among the private health facilities.

Table 4.5 Measure of Reliability dimension of Service Quality

Response scale statements	1 F (%)	2 F (%)	3 F (%)	4 F (%)	5 F (%)	6 F (%)	7 F (%)	mean	std. dev
1. Doctors/ staff exhibit sincere interest in solving patients problem	0 (0.0)	0 (0.0)	6 (11.5)	3 (5.8)	9 (17.3)	13 (25.0)	21 (40.4)	5.77	1.352
2. Doctors/Staff explain thoroughly medical condition to patients	0 (0.0)	0 (0.0)	0 (0.0)	6 (11.5)	13 (25.0)	25 (48.1)	8 (17.3)	5.67	0.897
3. Treatment is focused towards patients wellbeing and not financial exploitation	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	16 (30.8)	13 (34.6)	23 (28.8)	6.13	0.864
4. Hospital's admission and billing processes are transparent	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	20 (38.5)	21 (40.4)	11 (21.2)	5.83	0.760
5. The level of service is the same at all times and from all members of staff	0 (0.0)	0 (0.0)	0 (0.0)	3 (5.8)	15 (28.8)	24 (46.2)	10 (19.2)	5.79	0.825
Overall mean								**5.84**	**0.936**

1=Strongly disagree, 2=Disagree, 3= somewhat disagree, 4=Neither agree nor disagree, 5=Somewhat agree, 6=Agree and 7=Strongly agree.

Source: Survey Data, (2016)

4.4.3 Measure of Responsiveness Dimension of Service Quality

The descriptive measures of responsiveness dimension of service quality are found in Table 4.6. Respondents were asked to indicate their level of agreement or disagreement with whether the facility has reasonable waiting/consultation time for the service, convenient location and operating hours, quick and prompt services, doctors explain thoroughly medical conditions to their patient and have friendly and courteous attitudes.

Table 4.6 Measure of Responsiveness dimension of Service Quality

Response scale statements	1 F (%)	2 F (%)	3 F (%)	4 F (%)	5 F (%)	6 F (%)	7 F (%)	mean	std. dev
1. Length of time spent at the hospital waiting consultation is reasonable	0 (0.0)	0 (0.0)	2 (3.8)	0 (0.0)	8 (15.4)	9 (17.3)	33 (63.5)	6.37	1.010
2. Facility's operating hours are convenient and its location is easily accessible	0 (0.0)	0 (0.0)	0 (0.0)	3 (5.8)	16 (30.8)	29 (55.8)	4 (7.7)	5.65	0.711
3. Services are offered quickly and promptly	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	13 (25.0)	24 (46.2)	15 (28.8)	6.04	0.740
4. Doctors explain thoroughly medical conditions to patients	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	13 (25.0)	26 (46.2)	13 (28.8)	6.00	0.714
5. The level of service is the same at all times and from all members of staff	0 (0.0)	0 (0.0)	0 (0.0)	3 (5.8)	10 (19.2)	21 (40.4)	18 (34.6)	6.02	0.885
Overall mean								**6.04**	**0.812**

1=Strongly disagree, 2=Disagree, 3= somewhat disagree, 4=Neither agree nor disagree, 5=Somewhat agree, 6=Agree and 7=Strongly agree.

Source: Survey Data, (2016)

From table 4.6, it is evident that on overall mean score of 6.04 and S.D=0.812, majority of respondents agree that responsiveness is a significant aspect of service quality practiced by private health care facilities in Nairobi County in Kenya. This implies that it is a prevalent practice among the private health facilities.

4.4.4 Measure of Competence Dimension of Service Quality

The descriptive measures of competence dimension of service quality are found in Table 4.7. Respondents were are asked to indicate their level of agreement or disagreement with whether their facility has staff who are knowledgeable in their field, staff communicate effectively to both internal and external clients, staff perform their work accurately,

doctors/staff are adequately trained and staff are regularly taken for continuing medical education.

Table 4.7 Measure of competence dimension of Service Quality

Response scale statements	1 F (%)	2 F (%)	3 F (%)	4 F (%)	5 F (%)	6 F (%)	7 F (%)	mean	std. dev
1. Staff are knowledgeable in their fields	0 (0.0)	2 (3.8)	0 (0.0)	1 (1.9)	7 (13.5)	19 (36.5)	23 (44.2)	6.12	1.132
2. Doctors/Staff communicate effectively to clients	0 (0.0)	0 (0.0)	2 (3.8)	1 (1.9)	7 (13.5)	28 (58.3)	14 (26.9)	5.98	0.918
3. Staff perform their work accurately	0 (0.0)	0 (0.0)	0 (0.0)	2 (3.8)	14 (26.9)	20 (38.5)	16 (30.8)	5.96	0.862
4. Doctors/Staff are adequately trained	0 (0.0)	0 (0.0)	0 (0.0)	3 (5.8)	11 (21.2)	18 (34.6)	20 (38.5)	6.06	0.916
5. Staff are regularly taken for continuing medical education	0 (0.0)	0 (0.0)	0 (0.0)	1 (5.8)	14 (26.9)	20 (38.5)	17 (32.7)	6.02	0.828
Overall mean								**6.03**	**0.931**

1=Strongly disagree, 2=Disagree, 3= somewhat disagree, 4=Neither agree nor disagree, 5=Somewhat agree, 6=Agree and 7=Strongly agree.

Source: Survey Data, (2016)

From table 4.7, it is evident that on overall mean score of 6.03 and S.D=0.931, majority of respondents agree that competence is a significant aspect of service quality practiced by private healthcare facilities in Nairobi County, Kenya. The overall standard deviation (SD=0.931) was below 1 implying consistency in the statements thus agreement. This implies that it is a prevalent practice among the private health facilities.

4.4.5 Measure of Equity Dimension of Service Quality

The descriptive measures of equity dimension of service quality are found in Table 4.8. Respondents were asked to indicate their level of agreement or disagreement with whether their facility staff do more than just in their job description, workers from other departments are supportive, colleagues do not detract from ability to perform own duty, staff have competent interpersonal skills and respect amongst co-workers.

Table 4.8 Measure of equity dimension of Service Quality

Response scale statements	1 F (%)	2 F (%)	3 F (%)	4 F (%)	5 F (%)	6 F (%)	7 F (%)	mean	std. dev
1. Staff do more than just what's in their job description	0 (0.0)	0 (0.0)	0 (0.0)	5 (9.6)	5 (9.6)	13 (25.0)	13 (25.0)	6.27	0.992
2. Workers from other departments are supportive	0 (0.0)	0 (0.0)	0 (0.0)	1 (1.9)	19 (36.5)	23 (44.2)	9 (17.3)	5.71	0.757
3. Colleagues do not detract from ability to perform own duties	3 (5.8)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	11 (21.2)	10 (19.2)	5.69	1.336
4. Staff have competent interpersonal skills and respect among co- workers	0 (0.0)	0 (0.0)	3 (5.8)	1 (1.9)	23 (44.2)	13 (25.0)	12 (23.1)	5.58	1.054
5. Management is supportive and recognizes individual effort	0 (0.0)	0 (0.0)	0 (0.0)	5 (9.6)	11 (21.2)	18 (34.6)	18 (34.6)	5.94	0.978
Overall mean								**5.85**	**1.023**

1=Strongly disagree, 2=Disagree, 3= somewhat disagree, 4=Neither agree nor disagree, 5=Somewhat agree, 6=Agree and 7=Strongly agree.

Source: Survey Data, (2016)

It is evident from Table 4.8, that with an overall mean score of 5.85 and S.D= 1.023, majority of respondents somewhat agree that equity is a significant aspect of service quality practiced by private healthcare facilities in Nairobi County in Kenya. This implies that it is prevalent practice among the private health facilities.

4.4.6 Summary of the Measures of Service Quality Practised by Private Healthcare facilities

The results for descriptive statistics as shown in Table 4.9 with N=52 as the total number of respondents. From the findings in Table 4.9, responsiveness dimension of service quality had the highest significant factor with a (mean score= 6.04, S.D=0.812). This

implies that the surveyed private healthcare facilities are highly responsive to the needs of patients in terms of waiting time, convenient and accessible location, prompt services and friendly and courteous attitudes of doctors. However, Tangibles revealed lowest significant factor with a mean score=5.830 and S.D=0.989 suggesting that it was the least prevalent measure of service quality associated with private healthcare hospital services.

Table 4.9 Summary of Overall Service Quality Practices

	Mean	Standard Deviation	N
1. Tangibles	5.830	0.9898	52
2. Reliability	5.838	0.9360	52
3. Responsiveness	6.04	0.812	52
4. Competence	6.028	0.9313	52
5. Equity	5.85	1.023	52
Overall	**5.917**	**0.938**	**52**

Source: Survey Data, (2016)

On the whole, it is evident that the prevalent view among the respondents regarding service quality practices as revealed in Table 4.9 was at an overall mean score of 5.917 (SD.=0.938) suggesting that majority of responses somewhat in support of that view. All variables have mean values around or slightly below the mean composite service quality of 5.917. This further suggests that service quality practices are applied across all its five dimensions meaning that the private healthcare hospitals in Nairobi have adopted service quality practices to moderately significant level. The overall standard deviation (SD=0.938) was below 1 thus implying less variations in the statements thus agreement.

4.5 Examining the Effect of Service Quality on organizational performance

The first objective was to establish whether there was a relationship between service quality and organizational performance of private healthcare facilities in Kenya. This was actualized through the testing of the first null hypothesis stated as; H_o: β_i =0, There is no relationship between service quality and organizational performance of private healthcare

facilities in Kenya. The first step to conducting multiple regression analysis in order to test this stated hypothesis was by conducting correlation analysis. Service quality was measured by five parameters namely: tangibles, reliability, responsiveness, competence and equity. The results of bivariate association between service quality measures and organizational performance are discussed in subsection 4.7.1.

4.5.1 Bivariate Association between Service quality measures and Organizational Performance

In order to assess bivariate association between independent and dependent variable, Pearson Correlation analysis was performed. The correlation matrix of all constructs of service quality was depicted in Table 4.10.

Table 4.10 Correlations between service quality dimensions and Organizational performance

	1	2	3	4	5	6
Organizational Performance (1)	1					
Tangibles (2)	.788**	1				
Reliability (3)	.732**	.710**	1			
Responsiveness(4)	.743**	.534**	.661**	1		
Competence(5)	.796**	.727**	.812**	.630**	1	
Equity(6)	.766**	.645**	.538**	.636**	.617**	1

*. Correlation is significant at the 0.01 level (2-tailed).
Source: Survey data, (2016)

Table 4.10 indicates that there is significant positive association between organizational performance and all the five dimensions of service quality. Specifically, organizational performance has a significant positive association with tangibles ($r = 0.788^{*}$, $p = 0 .000$), organizational performance and reliability ($r = 0.732^{**}$, $p = 0 .000$), organizational performance and responsiveness ($r = 0.743^{**}$, $p = 0.000$), Organizational performance and competence ($r = 0.796^{**}$, $p = 0.000$), as well as organizational performance and equity ($r = 0.766^{**}$, $p = 0.000$) were found to be positive and sufficiently significant at 95% confidence level. The association between some of the independent variables suggest the existence of multicollinearity. However, the estimated variances of inflation

factors indicate that the multicollinearity was not strong enough to introduce errors in the estimated parameters.

However, in an attempt to overcome the shortcoming with correlation results which do not give the direction and magnitude of influence of each dimension and in order to test null hypotheses for the first and second objectives, multiple regression analysis between the five indicators of service quality as independent variable and organizational performance as dependent variable was run. The detailed results of the multiple regression analysis involving all indicators of the service quality and organizational performance are presented in Table 4.11, Table 4.12 and Table 4.13 and discussed in the following subsections.

Table 4.11. ANOVA Results on the Relationship between Service Quality Measures and Organizational Performance

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	11.493	5	2.299	43.862	.000
	Residual	2.411	46	.052		
	Total	13.904	51			

a. Predictors: (Constant), Equity, Reliability, Responsiveness, Tangibles , Competence

b. Dependent Variable: Organizational Performance

Source: Survey Data, 2016.

Table 4.11 presents ANOVA results of the Service quality-organizational performance model. ANOVA table was used to test model significance. The data test revealed that F (5, 46) = 43.862 at p = 0.000, an indication that the model fits the given data well. The F value was 43.862 which is more than 1 implying it wasn't by chance but instead as a result of fitting the regression model. The significance also indicates that indeed the fitted model was significant and thus the hypothesis that there is no relationship between independent variable (service quality) and organizational performance was rejected.

Table 4.12. Summary of Service quality dimensions-Organizational Performance Model

					Change Statistics					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
1	.909	.827	.808	.22892	.827	43.862	5	46	.000	1.685

a. Predictors: (Constant), Equity, Reliability, Responsiveness, Tangibles , Competence

b. Dependent Variable: Organizational Performance

Source: Survey Data, (2016)

The Service quality-organizational performance model summary in Table 4.12 shows that the proportion of variance in the organizational performance explained by the independent variables (all five dimensions of service quality) is 82.7% or R^2=0.827. This variation explained in the model is regarded as sufficiently large (Cohen, 1988). The other variations in organizational performance of 17.3% was explained by other external factors outside this model. The shrinkage between R^2=0.827 and adjusted R^2=0.808 is 0.019 and shows that the suggested model generalizes quite well as the adjusted R^2 is too close to R^2. A shrinkage of less than 0.5 depict that the validity of the model is very good (Field, 2005). The value of Durbin-Watson is 1.685, which is close to 2. This indicates lack of serial correlation.

Table 4.13. Estimated Regression Coefficients for Variables in Service Quality-Organizational performance Model

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
	(Constant)	.216	.413		.524	.603		
	Tangibles	.258	.087	.298	2.954	.005	.370	2.703
	Reliability	.006	.108	.007	.059	.953	.274	3.651
	Responsiveness	.244	.086	.261	2.835	.007	.445	2.247
	Competence	.222	.101	.258	2.206	.032	.275	3.633
	Equity	.248	.093	.245	2.659	.011	.445	2.246

a. Dependent Variable: Composite of Organizational Performance

Source: Survey Data, (2016)

Table 4.13 shows that out of the five dimensions of independent variable, four dimensions which include: Tangibles (β = 0.258, p = 0.005); responsiveness (β = 0.244, p = 0.007); Competence (β = 0.222, p = 0.032) and Equity (β = 0.248, p = 0.011) had positive significant effect on organizational performance. The unstandardized β coefficient of tangibles shows that a one standard deviation change in the level of tangibles causes 0.258 unit increase in organizational performance level and the change is significant as shown by the p-value while a standard deviation change in responsiveness, competence and equity causes 0.244, 0.222 and 0.248 unit change in organizational performance levels of private health care hospitals in Nairobi respectively. This implies that the aforementioned service quality dimensions have an effect on organizational performance of private healthcare facilities. Other variable, Reliability (β = 0.06, p = 0.953) had insignificant positive effects on the organizational performance levels of private health care hospitals in Nairobi. The coefficient of a constant term was at (β = 0.216, p = 0.603) and is significant. The VIF values ranged from 2.246 to 3.651 and these are within the range recommended by Pan and Jackson (2008), and Rogerson (2001). A value of VIF less than 10 and tolerance greater than 0.1 indicates no multi-collinearity. Therefore, since the model met these conditions, it indicates that the data met regression assumption for proper model. Therefore, the regression results indicated that there was a statistically significant positive relationship between service quality practices and

organizational performance of private health care hospitals. Therefore, the null hypothesis stated as H_1: β_i =0, There is no relationship between service quality and organizational performance of private healthcare facilities in Kenya is rejected.

The finding of this study is similar to finding of the study by Muthaka (2004) who while reviewing the private healthcare services in Kenya indicated that service quality is a key driver of an organizational performance. However, the finding of the current study differed from that of the study by (Arasli, et al. 2008) which was conducted on public hospital and considered patient satisfaction as the only performance measure using Singapore Quality Award which may not be replicable in the context of private healthcare in Nairobi. Elsewhere, Abili, Thani & Afarinandehbin (2012) indicate that different contexts could have varying service quality dimensions. Their study revealed negative quality gaps. However, they did not show the link between service quality and performance. However, the current study made a major milestone in terms of contributing to new knowledge by revealing a statistically significant positive relationship between service quality practices modified to suit private healthcare services and combined measure of organizational performance.

4.8 Quality Management Practices

In addition, the study sought to establish existence of measures of quality management practices in private healthcare facilities in Nairobi descriptively as shown in Table 4.14.

Table 4.14 Measures of quality Management Practices

	Mean	Std. Deviation	N
measure of ICT	6.0848	.68629	52
Process management	5.9488	.53009	52
Workforce management	5.9560	.60098	52
Top management support	6.0175	.60343	52
Overall mean	6.1926	.60519	52

Source: Survey data, (2016)

On a seven point Likert scale, respondents were asked to show their level of agreement with four constructs namely: ICT, process management, workforce management and top management support. The finding revealed an overall mean= 6.192 and S.D=0.6051, suggesting that the respondents are in agreement that quality management practices is a prevalent activity in private health care hospitals in Nairobi. The findings revealed further that the measure of ICT with a mean of 6.0848 and S.D=0.68629, had the highest significant factor while Process management with a mean of 5.9488 and S.D=0.53009, had the lowest significant factor as a construct of quality management practices. This finding implies that measures of ICT which includes the adoption of proper information system, adequate ICT facilities in hospitals are adopted and embraced by employees to a greater extent.

4.6.1 Effect of Quality Management Practices on Organizational Performance

The second objective was to determine whether quality management practices across its four dimensions had an effect on organizational performance of private healthcare facilities in Kenya. This was actualized through the testing of the second null hypothesis stated as; H_2: $\beta_i = 0$ There is no effect of quality management practices on organizational

performance of healthcare facilities in Kenya. The first step to conducting multiple regression analysis in order to test this stated hypothesis was by conducting correlation analysis. Quality management practices was measured by four parameters namely: ICT, Process management, workforce management and top management support. The results of bivariate association between quality management practices measures and organizational performance are discussed in table 4.15.

Table 4.15. Correlation between Quality Management Practices and Organizational Performance

	1	2	3	4	5
measure of ICT (1)	1				
Process management (2)	.712**	1			
Workforce management(3)	.719**	.789**	1		
Top management support(4)	.598**	.728**	.744**	1	
Organizational Performance(5)	.794**	.826**	.783**	.751**	1

**. Correlation is significant at the 0.01 level (2-tailed).
Source: Survey data, (2016)

There is significant positive association between organizational performance and all the four dimensions of quality management practices as indicated in Table 4.16. Specifically, organizational performance has a significant positive association with ICT ($r = 0.794^{**}$, $p = 0\ .000$), process management ($r = 0.826^{**}$, $p = 0\ .000$), organizational performance and workforce management ($r = 0.783^{**}$, $p = 0\ .000$), organizational performance and Top management support ($r = 0.751^{**}$, $p = 0.000$) at 95% confidence level.

The direction and magnitude of effect of each of the quality management practices were eventually established using a multiple regression model whose findings were presented in Table 4.16, Table 4.17 and Table 4.18.

Table 4.16 ANOVA Results on Effect of Quality Management Practices on Organizational Performance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	11.130	4	2.783	47.158	.000
	Residual	2.773	47	.059		
	Total	13.904	51			

a. Predictors: (Constant), Top management support, measure of ICT, Process Management and Workforce management

b. Dependent Variable: Organizational Performance

Source: Survey Data, (2016)

Table 4.16 presents ANOVA results of the quality management practices-organizational performance model. The data test revealed that F (4, 47) = 47.158 at p = 0.000, an indication that the model fits the given data well.

Table 4.17 Summary of Quality Management Practices-Organizational Performance Model

					Change Statistics					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
1	.895[a]	.801	.784	.24291	.801	47.158	4	47	.000	2.111

a. Predictors: (Constant), Top Management Support, measure of ICT, Process Management, Workforce Management

b. Dependent Variable: Organizational Performance

Source: Survey Data, (2016)

Table 4.17 gives the model summary which shows that the proportion of variance in the organizational performance that is explained by quality management practices is 80.1% (R^2=0.801). However, 19.9% changes in organization performance could be explained by the other factors outside the model. The shrinkage between R^2=0.801 and adjusted R^2=0.784 was 0.017 and suggests that model was quite stable for prediction as the adjusted R^2 is too close to R^2. The value of Durbin-Watson is 2.111. Generally the value of the Durbin-Watson statistic ranges from 0 to 4. As a rule of thumb, the residuals are

uncorrelated if the Durbin-Watson statistic is approximately 2. A value close to 0 indicates strong positive correlation, while a value of 4 indicates a strong negative correlation. The computed value is also close to 2, which indicates the absence of serial correlation.

Table 4.18 Estimated Regression Coefficients for quality management practices-Organizational Performance Model

	Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
Model	B	Std. Error	Beta	T	Sig.	Tolerance	VIF
(Constant)	.767	.395		1.942	.058		
ICT	.266	.076	.350	3.506	.001	.427	2.341
Process management	.329	.117	.334	2.812	.007	.301	3.327
Workforce management	.089	.107	.103	.836	.407	.282	3.545
Top management support	.192	.090	.222	2.142	.037	.394	2.539

a. Dependent Variable: Organizational Performance

Source: Survey Data, (2016)

Table 4.18 shows that out of the four dimensions of quality management practices , only three dimensions which include: ICT (β = 0.266, p = 0.001); process management (β = 0.329, p = 0.007) and Top management support (β = 0.192, p = 0.037) had positive significant effect on organizational performance. The unstandardized β coefficient of ICT shows that units change in the level of ICT causes 0.266 standard deviation in organizational performance level and the change is significant as shown by the p-value while a unit change in process management and top management support causes 0.329 and 0.192 standard deviation in organizational performance levels of private health care hospitals in Nairobi respectively. Other variable, Workforce management (β = 0.089, p = 0.407) had insignificant positive effect on the organizational performance levels of private health care hospitals in Nairobi. The coefficient of a constant term was at (β = 0.767, p = 0.058) and is significant. The recommended VIF value by Pan and Jackson (2008), and Rogerson (2001) is 5. The VIF values ranged from 2.341 to 3.545 and these

are within the acceptable range. Researcher desires lower levels of VIF as higher levels are known to adversely affect the results associated with multiple regression analysis.

The regression results indicated that quality management practices exert a statistically significant positive effect on the levels of organizational performance of private health care hospitals. Therefore, the null hypothesis stated as; H_2: β_i =0 There is no effect of quality management practices on organizational performance of healthcare facilities in Kenya is rejected.

The finding of the current study concurs with results of the study by (Tiwari and Chaudhari, 2012) who carried out a study on the effects of technology on the implementation of TQM in India. Their study sought to explore the issues of ICT in relation to enhanced training (L&D). However, (Tiwari and Chaudhari, 2012) differed with the current study as they did not explore how ICT can improve organizational performance of private hospitals. In Uganda, Musenze (2013) in a similar study found that the application of quality management practices should focus on improving the quality of personnel to improve overall organizational perfomance. Similar support for the finding was provided by Samat (2006) who carried out a study on TQM practices and market orientation in a bid to establish the relationship between three key variables and found out that employee empowerment, employee capacity and contionous improvement had a significant impact on efficiency.

Both studies by Musenze (2013) and Samat (2006) concur that effective leadership can lead to efficiency. By focusing only on leadership, they did not consider other aspects of management practices such as, ICT, workforce management, process management and their influence on financial viability of an organization. This study concurs with the findings of the study by Rachel Awoku, (2012) on quality management practices, organizational performance and supplier selection in Southern Minnesota manufacturing firms which revealed that implementation of quality management practices affect organizational performance positively. A study by Demiberg (2006) also revealed that investment in employee is a sure way of improving effectiveness in any organization. Research by Adza-Awude, (2012) in Ghana indicated that co-operation and support by management determined employees level of job satisfaction. This study findings also

concur with findings of the study by Karani and Bichanga (2012) on quality management systems and organizational performance which indicated a strong relationship with R=0.867 and R2 =0.75 which implied that 75% of the corresponding change in the organizations performance was explained by TQM implementation.

However, the current research differed from Study by Samat (2006) and Rachel Awoku (2012) which were conducted in the context of manufacturing industry that may not be replicable in private healthcare sector. Both studies by Demiberg (2006) and Adza-Awude, (2012) over emphasized top management support as a dimension of quality management practices ignoring other dimesions such as ICT, process management. To date limited research attention has been focused in operating such practices as process management, workforce management, ICT in the context of private healthcare in Kenya. Empirical literature in this area is concentrated abroad, this study sought to address such deficiencies.

4.6.2 Moderating Effect of Quality Management Practices on the relationship between Service Quality and Organizational Performance

If a moderator is incorporated into a model between independent and dependent variable, it would enhance or amplify the effect of this relationship. Consequently, in this research study quality management practices is applied as moderator to ascertain its moderating impact and how it influences service quality constructs to enhance organizational performance. The main focus of this study is service quality in private healthcare facilities and quality management practices was considered a more valuable moderator in delivering significant performance and the fact that implementation of suitable quality management practices in any organization are considered as a major driver to better output. The thin line between employees and organizations made it satisfactory to consider quality management practices such as workforce management practices, top management support, process management and ICT as moderator constructs in this research study. Moderation analysis has been done as depicted on table 4.19.

The third objective of the study sought to establish whether the relationship between service quality and organizational performance is moderated by quality management practices. This involved testing the null hypothesis three stated as H_3: $\beta_i = 0$ Quality management practices do not moderate the relationship between service quality and organizational performance of healthcare facilities in Kenya. This hypothesis was tested and actualized by use of Moderated Regression Analysis (MRA). The study tested the interaction between service quality and Quality management practices. This procedure involved hierarchical regression which entails entering the mean composite service quality and mean composite quality management practices in step 1, and then entering the interaction variable (which is the cross product between service quality and quality management practices) in step 2. In order to reduce threats of multi-collinearity by reducing the size of any high correlation of service quality and quality management practices with the new interaction, standardized values were used for the interaction variable .The summary regression coefficients are shown in Table 4.20.

Table 4.19: Estimated Regression Coefficients for Moderator variable on the Relationship between Service Quality-Organizational Performance

Model

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.190	.354		.536	.595		
	Quality management practices	.419	.115	.430	3.656	.001	.220	4.541
	Service quality	.561	.127	.521	4.432	.000	.220	4.541
2	(Constant)	4.843	.220		21.983	.000		
	Quality management practices	.010	.037	.010	0.273	.786	.172	5.822
	Service Quality	.793	.67	.736	11.761	.000	.062	16.039
	Interaction term	.162	.070	1.680	23.725	.000	.049	20.556

a. Dependent Variable: Organizational Performance

Source: Survey Data, (2016)

The Table 4.19 shows the standardized (β) and un-standardized (B) coefficients for Service quality and quality management practices with and without the interaction term.

The un-standardized coefficient should be used while reporting coefficient for moderation as they represent simple effects rather than the main effects that are exposed in the additive regression model (Whisman & McClelland, 2005). Without the interaction term, β for Service quality and Quality management practices are 0.561 and 0.419 respectively with both being significant at *(p*=0.000). When interaction term was introduced β coefficients are 0.793, 0.010, and 0.162 for service quality, Quality management practices (moderator) and interaction term respectively. This means that an increase in one standard deviation change in service quality leads to a 0.793 unit increase in performance of private healthcare facilities. As a result, the hypothesized moderation model was confirmed to be;

$\hat{Y}_i = 4.843 + 0.793X_i + 0.010M_i + 0.162\ X_iM_i$……..……..……Equation 4.1

Where Y is the dependent variable (organizational performance), X is the independent variable (service quality), M is the moderator variable (quality management practices and XM is the interaction term between service quality and quality management practices.

In the model, the intercept and the XY slope is influenced by M (the moderate variable) intercepts and slopes of line $\hat{Y}$ X. The un-standardized co-efficient of the moderator model b_3 is 0.162. This means that for each unit increase in M, the slope relating X to *Y* increases by 0.162. This further means that, as quality management practices levels increases by one unit, the organizational performance levels increases by 0.162. The summary statistics for moderator regression model are shown in Table 4.20.

Table 4.20 Model Summary of Effect of Quality management practices on the Relationship Between Service Quality and Organizational Performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df 1	df2	Sig. F Change	
2	.922	.851	.845	.20562	.851	139.925	2	49	.000	
3	.994	.988	.988	.58235	.137	562.876	1	48	.000	1.828

a. Predictors: (Constant), Quality management practices, Service quality

b. Predictors: (Constant), Quality management practices, Service quality, Interaction term

b. Dependent Variable: Organizational Performance

Source: Survey data (2014)

As shown in Table 4.20, the full Model 3 includes service quality as the independent variable, quality management practices as the moderator and the interaction effects. This model is significant at (R^2=0.988, p=.000) thus rejecting hypothesis H_{o1}: β_i =0 Quality management practices do not moderate the relationship between service quality and organizational performance of healthcare facilities in Nairobi. When compared with the reduced Model 2, which only includes predictor variable and moderators (steps 2), the addition of the interaction terms in the full model significantly increases the R^2 by (ΔR^2=0.137; p=0.000 or 13.7%). Although it was small, this change was statistically significant (Aikin and West, 1991). This percentage indicates a positive moderation leading to an improvement in the performance explained by service quality as a result of quality management practices. Therefore, the moderating effect of quality management practices which improves the model's goodness of fit is statistically evident.

Based on results of the third objective it is evident that quality management practices as was practised by private healthcare facilities improved their organizational performance levels through its interactive effect. These findings further imply that dimensions of quality management practices significantly amplify the effect of service quality on performance levels of private healthcare facilities. Therefore, the explanatory power of service quality on organizational performance can be enhanced by aligning and controlling of quality management practices as contingency factors that have a significant influence on this relationship.

4.7 Organizational Performance

In this study, organizational performance dimensions are efficiency, patient satisfaction, financial viability and effectiveness. On a 7 point Likert scale, the respondents were asked to consider their score on their level of agreement with 12 items that were used to measure organizational performance. Table 4.21 illustrates the response to the measure of organization performance**.**

Table 4.21. Descriptive Statistics on performance measures

	Mean	Std. Deviation	N
Efficiency	6.0927	.84112	52
Patient satisfaction	6.0288	.56384	52
Financial viability	5.9415	.57526	52
Effectiveness	6.0629	.56707	52
Overall mean	**6.781**	**0.637**	

Source: Survey data, (2016)

From Table 4.21, it is evident that the prevalent view among the respondents regarding organizational performance as revealed in Table 4.21 was at an overall mean score of 6.781 (SD.=0.637) suggesting that majority of responses are in agreement of the view that performance measures are at high level. All constructs have mean values below the mean composite of 6.787 suggesting satisfaction across all the constructs of performance; efficiency, patient satisfaction, financial viability and effectiveness.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter presents summary of study findings based on each research objective conclusions and recommendations of the study. It discusses the conclusions based on the study objectives and hypotheses. It also presents the limitations of the study and finally, it suggests areas for further study.

5.1 Summary of Findings

This study sought to establish the moderating effect of quality management practices on the relationship between service quality and organizational performance of private healthcare facilities in Nairobi County, Kenya. The findings were in line with the three specific objectives and hypotheses.

The study revealed significant positive relationship between service quality and organizational performance in the private healthcare facilities in Nairobi and service quality explained 82.7% variance in organizational performance. Meaning that the four dimensions of service quality; Tangibles, responsiveness, competence and equity had positive significant effect in the service quality- organizational performance model. The other one dimension; reliability had insignificant positive effect on the organizational performance levels of private healthcare facilities in Nairobi, Kenya. This implies that, of the service quality practices, tangibles, responsiveness, competence and equity are adjudged to highly leverage efficiency, patient Satisfaction, financial viability and effectiveness of the healthcare facilities compared to reliability. Nevertheless, the null hypothesis that there is no relationship between service quality and organization performance was rejected and the alternative hypothesis embraced. The new finding of this study is an empirical evidence linking modified service quality dimensions to improved performance of private healthcare facilities which was previously lacking.

Results exhibited significant positive association between organizational performance and the dimensions of quality management practices. The direction and magnitude of effect of each of the quality management practices were eventually established using a multiple regression model whose findings were presented in the model summary which showed that the proportion of variance in the organizational performance explained by quality management practices is 80.1% (R^2=0.801). The findings reveal that out of the four dimensions of quality management practices, three dimensions which include: information communication technology, process management and top management support had positive significant effect on organizational performance. This means that quality management practices has a significant effect on organizational performance and explained 80.1% change in organizational performance. The study concluded that quality management practices exert a statistically significant positive effect on the levels of organizational performance of private healthcare facilities. As a result, the null hypothesis that there is no effect of quality management practices on organizational performance was rejected and the alternative accepted.

Quality management practices moderated the relationship between service quality and organizational performance significantly implying the interactive effect of quality management practices improved organizational performance by 13.7 %. Further, results indicated significant positive regression interaction with the elements that included ICT, process management, and top management support implying quality management practices is an antecedent of service quality – organizational performance relationship. As a result, the null hypothesis that quality management practices do not moderate service quality – organizational performance relationship was rejected and the alternative hypothesis accepted. Contrary to the results of past studies which did not include the contribution of quality management practices on organizational performance, the finding of this study reveal a service quality - organizational performance model through a moderator investigation.

5.2 Conclusions

This study sought to analyze the moderating effect of quality management practices on the relationship between service quality and organizational performance in Nairobi, Kenya and was based on three specific objectives.

From the first objective it can be concluded that service quality dimensions such as tangibles, responsiveness, competence and equity were most regarded to enhance, efficiency, patience satisfaction, financial viability and effectiveness. Contrary to the previous studies this study findings make an important contribution and is a milestone in terms of modelling service quality - organizational performance relationship as it identifies the variables (Tangibles, responsiveness, tangibility, competence and equity) which can be manipulated to better predict the level of organizational performance arising from the quality of services delivery by private healthcare facilities in the study area.

From the second objective it can be concluded that ICT, process management and Top management support exert a statistically significant positive effect on the levels of organizational performance of private healthcare hospitals. Therefore, the null hypothesis which stated that there is no effect of quality management practices on organizational performance of healthcare facilities in Nairobi, Kenya was rejected and the alternative accepted. Contrary to the prior studies which did not consider these measures, this study findings make an important contribution in terms of identifying variables that constitute quality management practices (ICT, process management and Top management support) that are key in terms of influencing organizational performance levels.

Results from the third objective indicated significant R^2 for the moderator. It can be concluded that adoption of quality management practices by the private health facilities amplifies the relationship between service quality and performance. The positive significance of the three elements of quality management practices which include ICT, Process Management, Top Management Support, excluding workforce management suggesting that organizational performance is a positive predictor of service quality -

organizational performance relationship. Thus, rejecting the null hypothesis quality management practices do not moderate the relationship between service quality and organizational performance of healthcare facilities in Nairobi. Contrary to prior studies which ignored quality management practices as a moderator variable in service quality – organizational performance relationship. Therefore, the explanatory power of service quality on organizational performance can be enhanced by aligning and controlling of quality management practices as contingency factors that have a significant influence on this relationship.

5.3 Recommendations

In view of the findings and conclusions of the study, the following recommendations were made. Based on the first objective of the study which was to establish the relationship between service quality and organizational performance, it is recommended that, in order to intensify the influence of service quality on organizational performance, private healthcare facilities should improve tangibles, responsiveness, competence and equity dimensions of service quality as these were seen to positively enhance organizational performance. Competent and knowledgeable employees are a boost to healthcare facilities, employees should be trained on technical and service quality soft skills so that staff can deliver quick, prompt and exemplary services. Services should be performed accurately without bias and management should be supportive and recognize individual effort. Contrary to previous research, this study has shown that competence and equity are suitable measures of service quality in the Kenyan private healthcare context. Other independent variables and constructs maybe considered in the future.

Based on the second objective which was to determine the effect of quality management practices on organizational performance and the conclusion that quality management practices is a critical antecedent of organizational performance in private healthcare hospitals in Nairobi, the following recommendations are made: First, the private health care facilities should implement proper information and communication systems and equip all the employees with ICT skills as this will greatly enhance organizational performance. Secondly, the private health care hospital should institute proper process management by monitoring processes effectively as this practice will enhance their

organizational performance. Thirdly, Top management should be supportive, and should offer attractive reward systems for employee motivation. They should encourage the spirit of teamwork as this practice will enhance organizational performance. Contrary to prior research, this study revealed the effect of quality management practices on performance improving existing literature. Other measures of quality management practices may be considered in the future.

The following recommendation can be drawn from the third objective: hospital managers should integrate quality management practices with service quality practices so that they can jointly enhance organizational performance in a complimentary manner. Contrary to prior research, this study has shown how quality management moderates the relationship between service quality and organizational performance. Furthermore, the moderator variables should be expanded and validated beyond just quality management practices. Other moderators of the quality/performance relationship maybe considered in the future

5.4 Limitations of the Study

Notwithstanding the immense contributions to the body of the knowledge on service quality practices and organizational performance modelling, it is paramount to evaluate the results in the context of the study limitations. First, given the nature of these facilities, some respondents were not comfortable giving out vital information for the study and equally complained of lack of time and busy schedules. They preferred to nominate other departmental heads as alternative respondents at the first visit. However, they were re-assured of the purpose of the study which is purely academic to avoid any information bias. To avoid transfer limitation given that the respondents for the study were purely chief operations managers, the issue of busy schedule was minimized by offering convenient office hours, follow-up was done via phone and email to secure appointment at their convenience.

Second limitation was concerning collection of data through questionnaires administered to internal respondents who are employees of these facilities. This may give respondents an opportunity to be biased and give responses which are not a true reflection of quality

of service rendered by the facility with an aim to either cushion the facility from defamation or to give it unmerited publicity. However, this was mitigated by selecting a favorable scale that would not generalize their responses and to assure them that neither they nor their facility shall be identified with the information they provided. All information provided shall be treated with utmost confidentiality.

Third limitation was geographical area and choice of survey design as the preferred methodological choice for the study has a profound effect especially on the measurement problems. Surveys and their cross-sectional nature of data will imply that conclusions are generally limited by virtue of being collected at one point in time and do not give the sequence of events. However, studies based on cross-sectional data tend to provide information for subsequent studies in the same areas of interest. Since survey design was employed and the facilities are scattered across Nairobi County, the researcher and the assistants made several visit to ensure the questionnaires were received back on time despite the challenges.

5.5 Suggestions for Further Studies

Based on the foregoing conclusions on the findings of this study, the researcher suggested the following future research directions in the field relating to the service quality-organizational performance relationship.

First, this study used cross-sectional data to test the hypothesis on the relationship between service quality and organizational performance and the subsequent moderating roles of the quality management practices in the relationship. It only provided a snapshot picture at a single point in time. Therefore, there is need to conduct a longitudinal study to provide even more conclusive evidence of the above relationship.

Second, given that the current study is limited to a few organizations in one service industry, the assertion that the relationship between service quality and organizational performance is moderated by quality management practices would need to be validated by further research. Perhaps an effective way to validate this assertion is by focusing

future studies on various other unrelated industry players through comparative studies between the players.

Third, current study is limited to a smaller geographical area, future studies should expand beyond Nairobi County to validate whether similar results can be substantiated for other counties within the country and beyond.

Fourth, future studies may consider testing moderating role on public health sector, increase sample size to include the entire country and alternative respondents such as doctors or clinical officers for future service quality surveys in the health sector.

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APPENDICES
Appendix I: Sample Letter of Introduction

SCHOOL OF BUSINESS AND ECONOMICS
Tel. 254-57-351620
Email: directorpr@maseno.ac.ke

Private Bag,
Maseno.

To…….

Dear Respondent,

RE: PhD ACADEMIC RESEARCH PROJECT; ANALYSIS OF QUALITY MANAGEMENT PRACTICES, SERVICE QUALITY AND ORGANIZATIONAL PERFORMANCE

As part of the requirement for PhD research in Business Administration, the undersigned is undertaking a research to establish the moderating effect of quality management practices on the relationship between organizational performance and service quality in private healthcare facilities in Nairobi, Kenya. In this regard, I am kindly requesting for your support in terms of time by responding to the attached questionnaire.

Your accuracy and candid response will be critical in ensuring objective research. In addition, the findings of the study will be used exclusively for academic research purposes and to enhance knowledge. If need be the research report may be presented to your organization for information and record. All information received will be used for this academic study and will be treated in strict confidence, further confidentiality will be ensured via necessary coding of survey findings, your identity is optional.

Thank you.

Yours faithfully,

Beatrice Dinda

Appendix II: Questionnaire

Preamble

This questionnaire is designed to collect data for a study being carried out to analyze, ***Service Quality, Quality Management Practices and Organizational Performance of Healthcare Facilities in Nairobi County*** *and is strictly for academic purposes only. Neither you nor your facility shall be identified with the information you provide. All information provided shall be treated with utmost confidentiality.*

SECTION A: DEMOGRAPHIC INFORMATION

Instruction: tick (√) the appropriate box

1. Gender

Male	
Female	

2. How many years have you worked in this facility?

Below 1 Year	Between 1-5 Years	Between 5-10 Years	Above 10 years

3. Are you in the age group

Below 20	Between 21-25 years	Between 26-30 years	Between 31-35 Years	Between 36-40 Years	41 and Above

Section B: Measurement of Service Quality using SERVQUAL Scale

The questions in this section are aimed at obtaining your views about service quality of your facility using SERVQUAL SCALE. Please tick the appropriate box that best represent your opinion on the question. The scores are measured on a seven-point Likert scale where ***1=Strongly disagree, 2=Disagree, 3= somewhat disagree, 4=Neither agree nor disagree, 5=Somewhat agree, 6=Agree and 7=Strongly agree.***

Put a **(√)** on your choice of answer.

Tangibles	*Strongly Disagree*						*Strongly Agree*
a) The facility has quality basic amenities and modern looking equipment	1	2	3	4	5	6	7
b) The facility is spacious and secure for both patients and staff	1	2	3	4	5	6	7
c) Hospital atmosphere and décor are appealing	1	2	3	4	5	6	7
d) Staff are well groomed and neat in appearance	1	2	3	4	5	6	7
e)Materials such as brochures, newsletters and flyers are always neatly arranged in this facility	1	2	3	4	5	6	7

Reliability	*Strongly Disagree*						*Strongly Agree*
a) Doctors/ staff consistently exhibit sincere interest in solving patients problems	1	2	3	4	5	6	7
b) Doctors/staff explain thoroughly medical conditions to patients	1	2	3	4	5	6	7
c) Treatment is focused towards patients well being and not financial exploitation	1	2	3	4	5	6	7
d) Hospital's admission and billing processes are transparent and dependable	1	2	3	4	5	6	7
e) The level of service is the same at all times and from all members of staff	1	2	3	4	5	6	7

Responsiveness	*Strongly Disagree*						*Strongly Agree*
a) Length of time spent at the hospital waiting for consultation/treatment is reasonable	1	2	3	4	5	6	7
b) The facility's operating hours are convenient and its location is easily accessible	1	2	3	4	5	6	7
c) Services are offered quickly and promptly	1	2	3	4	5	6	7
d) Doctors / staff explain thoroughly medical conditions to patients	1	2	3	4	5	6	7
e)Friendly and courteous attitudes of doctors / staff instill confidence in patients	1	2	3	4	5	6	7

Competence	*Strongly Disagree*						*Strongly Agree*
a)Staff are knowledgeable in their fields	1	2	3	4	5	6	7
b)Staff communicate effectively to both internal and external clients	1	2	3	4	5	6	7
c)Staff perform their work accurately to ensure better patient outcome without bias	1	2	3	4	5	6	7
d)Doctors/Staff are adequately trained thus have wide spectrum of skills and competence	1	2	3	4	5	6	7
e) Staff are regularly taken for continuing medical education (CEM)	1	2	3	4	5	6	7

Equity	*Strongly Disagree*						*Strongly Agree*
a) Staff do more than just in their job description	1	2	3	4	5	6	7
b)Workers from other departments are supportive	1	2	3	4	5	6	7
c) Colleagues do not detract from ability to perform own duties	1	2	3	4	5	6	7
d) Staff have competent interpersonal skills and respect amongst co workers	1	2	3	4	5	6	7
e)Management is supportive and recognizes individual effort	1	2	3	4	5	6	7

B: Quality management practices

The questions in this section are aimed at obtaining your views about Quality Management Practices in your facility. Please tick the appropriate box that best represent your opinion on the question. The scores are measured on a seven-point Likert scale where ***1=Strongly disagree, 2=Disagree, 3= somewhat disagree, 4=Neither agree nor disagree, 5=Somewhat agree, 6=Agree and 7=Strongly agree.***

Put a (tick) on your choice of answer.

	Strongly Disagree						***Strongly Agree***
ICT							
a)Does proper information system exist in the facility	1	2	3	4	5	6	7
b)Are there adequate ICT facilities	1	2	3	4	5	6	7
c)Employees have embraced technology and have ICT skills	1	2	3	4	5	6	7
Process Management							
a)Employees have a feeling of personal empowerment and ownership of work processes	1	2	3	4	5	6	7
b)Performance of service processes are effectively monitored	1	2	3	4	5	6	7
c)The processes in this facility are flexible to suit different patient demands	1	2	3	4	5	6	7
Workforce Management							
a)Clinical guidelines are regularly provided to staff	1	2	3	4	5	6	7
b)Duty rosters are managed fairly	1	2	3	4	5	6	7

c)Are external emergencies communicated in a timely manner and resourcing to cover emergencies well executed	1	2	3	4	5	6	7
d)Staffs are satisfied by the continuous evaluation and appraisal methods	1	2	3	4	5	6	7
Top Management Support							
a)There are various reward systems for motivating employees	1	2	3	4	5	6	7
b)A spirit of cooperation and teamwork exists	1	2	3	4	5	6	7
c)Facility's policies and practices satisfy employee expectations leading to job commitment	1	2	3	4	5	6	7
d)The hospital has an effective customer relationship management	1	2	3	4	5	6	7

C: Organizational Performance

The questions in this section are aimed at obtaining your views about Organizational Performance in your facility. Please tick the appropriate box that best represent your opinion on the question. The scores are measured on a seven-point Likert scale where ***1=Strongly disagree, 2=Disagree, 3= somewhat disagree, 4=Neither agree nor disagree, 5=Somewhat agree, 6=Agree and 7=Strongly agree.***

Put a **(√)** on your choice of answer.

Efficiency	***Strongly Disagree***						***Strongly Agree***
a)Shorter waiting time	1	2	3	4	5	6	7
b)Reduced repeat visits due to negligence	1	2	3	4	5	6	7
c)Care is personalized and customized to suit each patient's need	1	2	3	4	5	6	7
Patient Satisfaction							
a)Doctors / staff understand the specific needs of customers	1	2	3	4	5	6	7
b)Prompt service is provided to patients	1	2	3	4	5	6	7
c)Patients are treated with dignity and are satisfied with the level of staff competence	1	2	3	4	5	6	7
Financial viability							
a)This facility has the ability to grow, expand and develop	1	2	3	4	5	6	7
b)Financial projection has been met for the past 3 years	1	2	3	4	5	6	7
b)There has been increased clientele	1	2	3	4	5	6	7
Effectiveness							
a)Positive patient feedback	1	2	3	4	5	6	7
b)The facility has strong leadership	1	2	3	4	5	6	7
c)Structures are well in place within the facility	1	2	3	4	5	6	7

Appendix III: Hospitals Accredited by NHIF in Nairobi County

Hospital	Postal Address	Bed Capacity	Dealing Branch
1. AVENUE HEALTHCARE LTD	45280 NAIROBI	**60**	WESTLANDS
2. BLESSED LOUIS PALAZZOLO HEALTH CENTER	656 NAIROBI	**24**	WESTLANDS
3. BRISTOL PARK HOSPITAL	9193 NAIROBI	**100**	NAIROBI
4. CHIROMO LANE MEDICAL CENTRE	73749 NAIROBI	**15**	WESTLANDS
5. CITY NURSING HOME NAIROBI	14591 NAIROBI	**20**	NAIROBI
6. COPTIC CHURCH NURSING	21570 NAIROBI	**37**	NAIROBI
7. DIVINE WORD PARISH HEALTH CENTER	304 NAIROBI	**32**	NAIROBI
8. DORKCARE NURSING HOME LTD	33541 NAIROBI	**15**	NAIROBI
9. EDELVALE TRUST JAMAA HOSPITAL	17153 NAIROBI	**46**	IND. AREA
10. EMMAUS INNERCORE NURSING HOME	78123 NAIROBI	**16**	IND. AREA
11. ENKITOK JOY NURSING HOME	285 KISERIAN	**15**	NAIROBI
12. FAMILY HEALTH OPTIONS	30581 NAIROBI	**20**	IND. AREA
13. GERTRUDES GARDEN CHILDREN'S HOSPITAL NBI	42325 NAIROBI	**72**	WESTLANDS
14. GURU NANAK RAMGARHIA SIKH HOSPITAL	33071 NAIROBI	**85**	WESTLANDS
15. H.H. AGAKHAN HOSPITAL (NAIROBI)	30270 NAIROBI	**165**	WESTLANDS
16. HURUMA NURSING & MATERNITY HOME	72934 NAIROBI	**26**	IND. AREA
17. KAMITI HOSPITAL	40061 NAIROBI	**195**	WESTLANDS
18. KAREN HOSPITAL LTD	74240 NAIROBI	**102**	NAIROBI
19. KAYOLE HOSPITAL	67617 NAIROBI	**40**	IND. AREA
20. KENYATTA NATIONAL HOSPITAL (PRIVATE WING)	20723 NAIROBI	**209**	NAIROBI
21. KILIMANJARO NURSING & MATERNITY HOME	43920 NAIROBI	**26**	NAIROBI
22. KOMAROCK MODERN HOSPITAL	23728 NAIROBI	**24**	NAIROBI
23. LANGATA HOSPITAL	934 NAIROBI	**30**	NAIROBI
24. LIONS SIGHT FIRST EYE HOSPITAL	66576 NAIROBI	**52**	WESTLANDS

25. MADINA NURSING HOME	78370 NAIROBI	**18**	NAIROBI
26. MAGADI SODA COMPANY HOSPITAL MAGADI	10 MAGADI	**50**	NAIROBI
27. MARIA IMMACULATE HOSPITAL	57216 NAIROBI	**28**	WESTLANDS
28. MARIA MAT. & NURSING HOME	34736 NAIROBI	**20**	IND. AREA
29. MARIAKANI COTTAGE HOSPITAL	12535 NAIROBI	**21**	IND. AREA
30. MARIE STOPES KENYA LIMITED	59328 NAIROBI	**19**	NAIROBI
31. MASABA HOSPITAL	53648 NAIROBI	**156**	NAIROBI
32. MATASIA HEALTH CLINIC	185 KISERIAN	**23**	NAIROBI
33. MATER MISERICORDIAE HOSPITAL NAIROBI	30325 NAIROBI	**135**	IND. AREA
34. MELCHIZEDEK HOSPITAL	20085 NAIROBI	**19**	NAIROBI
35. MENELIK MEDICAL CENTER	55164 NAIROBI	**13**	NAIROBI
36. METROPOLITAN HOSPITAL	33080 NAIROBI	**35**	IND. AREA
37. MIDHILL MATERNITY & NURSING HOME	21138 NAIROBI	**28**	NAIROBI
38. MOTHER & CHILD HOSPITAL	12658 NAIROBI	**23**	NAIROBI
39. NAIROBI EQUATOR HOSPITAL	44995 NAIROBI	**40**	IND. AREA
40. NAIROBI HOSPITAL NAIROBI	30026 NAIROBI	**220**	NAIROBI
41. NAIROBI SOUTH MEDICAL CENTRE	74079 NAIROBI	**15**	IND. AREA
42. NAIROBI WEST HOSPITAL	43375 NAIROBI	**66**	IND. AREA
43. NAIROBI WOMEN'S HOSPITAL	10552 NAIROBI	**50**	NAIROBI
44. NATIONAL SPINAL INJURY HOSPITAL	20906 NAIROBI	**30**	NAIROBI
45. NGONG HILLS HOSPITAL	572 NGONG	**40**	NAIROBI
46. OLIVE TREE HOSPITAL	19739 NAIROBI	**16**	IND. AREA
47. PUMWANI HOSPITAL MANAGEMENT BOARD	30108 NAIROBI	**350**	NAIROBI
48. RADENT HOSPITAL	48234 NAIROBI	**20**	WESTLANDS
49. S.S. LEAGUE M.P SHAH HOSPITAL NAIROBI	14497 NAIROBI	**108**	WESTLANDS
50. SINAI MT.HOSPITAL	52874 NAIROBI	**30**	NAIROBI
51. SOUTH 'B' HOSPITAL	49255 NAIROBI	**12**	IND. AREA
52. ST. ANNES MATERNITY HOME – NAIROBI	54337 NAIROBI	**13**	IND. AREA

53. ST. JAMES HOSPITAL	46024 NAIROBI	**63**	IND. AREA
54. UMOJA HOSPITAL	76480 NAIROBI	**13**	IND. AREA
55. UNIVERSITY OF NAIROBI HEALTH SERVICES	30194 NAIROBI	**12**	NAIROBI

APPENDIX IV: RELIABILITY RESULTS

Reliability statistics on various dimensions of independent variables

Variable constructs	A	No. of Items
SERVICE QUALITY DIMENSIONS		
Tangibles:		
Cronbach's alpha based on unstandardized items	0.730	
Cronbach's Alpha Based on Standardized Items	0.731	5
Reliability:		
Cronbach's alpha based on unstandardized items	0.745	5
Cronbach's Alpha Based on Standardized Items	0.753	
Responsiveness:		
Cronbach's alpha based on unstandardized items	0.857	5
Cronbach's Alpha Based on Standardized Items	0.867	
Competence:		
Cronbach's alpha based on unstandardized items	0.709	5
Cronbach's Alpha Based on Standardized Items	0.726	
Equity:		
Cronbach's alpha based on unstandardized items	0.779	5
Cronbach's Alpha Based on Standardized Items	0.826	
QUALITY MANAGEMENT PRACTICES DIMENSIONS		
ICT		
Cronbach's alpha based on unstandardized items	0.744	3
Cronbach's Alpha Based on Standardized Items	0.763	
Process Management:		
Cronbach's alpha based on unstandardized items	0.745	3
Cronbach's Alpha Based on Standardized Items	0.757	
Workforce Management:		
Cronbach's alpha based on unstandardized items	0.700	4
Cronbach's Alpha Based on Standardized Items	0.734	
Top management support:		
Cronbach's alpha based on unstandardized items	0.715	4
Cronbach's Alpha Based on Standardized Items	0.733	

Reliability statistics on various dimensions of Organizational Performance

Variable constructs	A	No. of Items
Efficiency:		
Cronbach's alpha based on unstandardized items	0.710	
Cronbach's Alpha Based on Standardized Items	0.721	3
Patients satisfaction:		
Cronbach's alpha based on unstandardized items	0.725	3
Cronbach's Alpha Based on Standardized Items	0.753	
Financial viability:		
Cronbach's alpha based on unstandardized items	0.847	3
Cronbach's Alpha Based on Standardized Items	0.856	
Effectiveness:		
Cronbach's alpha based on unstandardized items	0.742	3
Cronbach's Alpha Based on Standardized Items	0.813	

Source: Survey data, (2016)

APPENDIX V: RAW DATA

Mean score of various Service quality and Quality management dimensions

Tangibles	Reliability	Responsiveness	Competence	Equity	Composite mean of service quality
5.4	5.8	5.8	6.2	6.6	5.96
6	5.8	5.8	5.4	6.2	5.84
5.8	6.2	6.2	5.6	5.8	5.92
6	6	5.8	6	5.4	5.84
6	5.8	6	6.04	5.6	5.888
5.8	5.4	5.8	5.9	5.8	5.74
5	6	5.8	5.2	5	5.4
4.6	5.6	6.8	6	5.8	5.76
5.8	6	6	6.06	6.2	6.012
6	6	6	6.4	6.4	6.16
5.6	5.8	6	5.8	6.2	5.88
6	5.2	5.6	5.8	6.6	5.84
5.8	6.2	6.2	6.6	6.2	6.2
6	6.2	6.2	6	6.1	6.1
6.4	6.4	6.2	6.2	6.2	6.28
6	6	5.8	6	5.8	5.92
5.8	6	6	6.6	6.2	6.12
6.6	5.8	5.8	6.4	6.2	6.16
5.8	6.2	5.8	6.2	5.8	5.96
6	6.4	6.2	6.2	6	6.16
5.6	6.2	5.4	6.4	5.8	5.88
5.8	5.6	6	5.8	6.2	5.88
5.4	4.8	5.6	4.8	6.4	5.4
6.6	6.6	5.5	6.4	5.8	6.18
6.6	6	5.8	6.4	6.2	6.2
6.6	6.6	6	6.4	6.6	6.44
6.4	6.2	6.6	6.6	6.6	6.48
6.2	6.6	6.6	6.6	6.4	6.48
6.2	6.2	6.6	6	6.4	6.28
6.4	5.6	6.8	6.2	6.2	6.24
6.2	6.4	6.5	5.8	6.25	6.23
6.2	6.2	6.4	6.2	6.4	6.28
6.4	6.4	5.6	6.4	6	6.16
6.2	6	5.2	6.2	6.4	6
5.2	6.2	6.6	5.6	6.2	5.96
6.4	6.2	6.2	6.6	5.6	6.2

6.2	6.2	6.6	6	6.4	6.28
6.4	5.6	6.8	5.8	6.2	6.16
6.2	6.5	6.2	6	6.25	6.23
6.2	6.4	6.4	6.2	6.4	6.32
6.4	6	6.5	6.4	6	6.26
6	6	6.3	6.4	6.2	6.18
6.6	6.4	6.4	5.8	6.4	6.32
6.2	6	6.1	6.4	6	6.14
5.8	6.3	6.3	6.3	6	6.14
4.6	4.8	4.6	4.5	4	4.5
4.2	4.2	4.2	4.2	4.4	4.24
4.8	5.2	5.8	5.2	5.8	5.36
5.8	5.4	5.7	5.75	5.8	5.69
4.4	4	4.4	4	5.4	4.44
4.68	5.53	5.7	5.8	5.4	5.422
5.4	5	5.2	4.6	5.2	5.08

Mean scores of Quality management Practices

ICT	Process management	Work force management	Top management support	Mean composite of service quality
6.33	6	6.1	6.5	6.2325
6.67	6	6.1	5.75	6.13
5.67	5.8	5.9	6.25	5.905
6.67	5.5	6.1	5.5	5.9425
5.7	6.1	6.05	6.5	6.0875
6.33	5.67	5.75	5.5	5.8125
6	5.3	5.5	5.5	5.575
6	6	6	6	6
6	5.89	6.05	6.5	6.11
6.67	6.33	6.45	6	6.3625
5.67	6.08	6.1	6	5.9625
6.67	6.33	6.5	6.5	6.5
6.33	6.67	6.35	6.5	6.4625
6.67	6.67	6.25	6.5	6.5225
6.33	6	6	6.5	6.2075
6.33	6.33	5.75	6.5	6.2275
5.67	6	6.25	6	5.98
6.67	6.33	6.75	6	6.4375
6.67	6	5.25	6	5.98
6.33	6.33	6.75	7	6.6025

5.67	6	6.25	6.5	6.105
6	5.9	5.75	6.5	6.0375
6	5.4	5.5	6	5.725
5.33	5.67	5.75	6.5	5.8125
6	6	6.5	6.5	6.25
6.33	6.27	6.25	6.5	6.3375
6.67	6.33	6.25	6.5	6.4375
6.33	6.57	6.5	6.5	6.475
6.67	6.33	6.25	6.25	6.375
6.67	6.43	6.75	5.75	6.4
6.67	6.67	6	6.25	6.3975
6.67	6.67	6.5	6.5	6.585
6.67	6	6.4	5.2	6.0675
5.67	5.67	5.75	5.75	5.71
5	6.33	5.2	5	5.3825
6.67	6	6.25	6.2	6.28
6.67	6	6.3	6.2	6.2925
6.67	6.33	6.75	6.55	6.575
6.67	5.67	6	6.25	6.1475
6.67	6.67	6.5	6.5	6.585
6.67	6	5.4	6.2	6.0675
5.67	5.67	5.75	5.75	5.71
6.67	6.8	6.75	6.3	6.63
5.67	5.67	6	6	5.835
6.33	6	6.25	6.5	6.27
4.33	4.28	4.25	4.5	4.34
4	4.67	4.75	4.45	4.4675
5	5.33	4.2	5	4.8825
6.33	5.33	5.75	5.72	5.7825
5.33	4.75	4.56	4.25	4.7225
4.33	5.2	5.5	5.75	5.195
5	5.4	5.2	5.09	5.1725

Mean scores of organizational performance

Efficiency	Patient Satisfaction	Financial Viability	Effectiveness	Organizational performance	Interaction term
6.67	6.33	6	5	6	35.76
6	6.67	6	6	6.17	36.0328
5.67	6	5.67	5.67	5.75	34.04
6.63	6	5.33	6	5.92	34.5728
6.3	6	5.3	5.7	6.08	35.79904

6.33	6	5.67	5	5.75	33.005
6.33	5	4.67	5.33	5.33	28.782
6.67	5.33	6.33	6	6.08	35.0208
6	6	6	6.33	6.08	36.55296
6.67	6.67	6.33	6	6.42	39.5472
6.33	6.33	6	6	6.17	36.2796
6.67	6.33	6.67	6.67	6.59	38.4856
6.5	6.33	6.33	6.67	6.46	40.052
7	6.33	6.33	6	6.42	39.162
5.5	6.67	6.67	6.67	6.38	40.0664
6.67	6	6.67	6	6.34	37.5328
6.67	6	5.67	6	6.09	37.2708
6.67	5.67	5.67	6.33	6.09	37.5144
6	6	6.33	6	6.08	36.2368
5.67	6.33	6	6.33	5.83	35.9128
6.67	6	5.67	5.67	6	35.28
5.67	5.67	5.67	6.33	5.84	34.3392
5.33	5.67	5.33	5.67	5.5	29.7
5	6.33	5	6	5.58	34.4844
6.67	6.33	6	6.33	6.33	39.246
6	6	6	7	6.25	40.25
6.67	6	6	6.67	6.34	41.0832
6.67	6	6.67	6.67	6.5	42.12
6.67	6.67	6.33	6	6.42	40.3176
6.67	6.67	6	6.33	6.42	40.0608
7	7	6	6.67	6.67	41.5541
6.33	6.67	6.33	6.67	6.5	40.82
6.67	6	6.67	6.33	6.42	39.5472
5.67	6	6.33	6.67	6.17	37.02
5	5.33	5.33	6	5.42	32.3032
5.67	6	6.67	6.67	6.25	38.75
6.33	6	6.33	6.33	6.25	39.25
6.67	6.67	6	6.33	6.42	39.5472
7	7	6	6.67	6.67	41.5541
6.33	6.67	6.33	6.67	6.5	41.08
6.67	6	6.67	6.33	6.42	40.1892
5.67	6	6.33	6.67	6.17	38.1306
6.67	6.67	6.33	6	6.42	40.5744
6.33	6.33	6	6	6.17	37.8838
6.67	5.5	6.67	6	6.21	38.1294
3	4.67	5	6	4.67	21.015

3.5	4.67	6		4.21	17.8504
5	5.33	5.33	4.8	5.42	29.0512
5.67	6.33	6	5.33	5.83	33.1727
4.33	4.67	4	4.4	4.5	19.98
6.67	5.33	5	5.3	5.67	30.74274
5	5.33	5.33	5	5.42	27.5336

APPENDIX VI: Clearance Certificate from MUERC

MASENO UNIVERSITY ETHICS REVIEW COMMITTEE

Tel: +254 057 351 622 Ext: 3050
Fax: +254 057 351 221

Private Bag – 40105, Maseno, Kenya
Email: muerc-secretariate@maseno.ac.ke

FROM: Secretary - MUERC

DATE: 13th April, 2017

TO: Beatrice Dinda Angila
PG/PHD/00155/2011
Department of Business Administration
School of Business and Economics
Maseno University
P. O. Box, Private Bag, Maseno, Kenya

REF: MSU/DRPI/MUERC/00370/17

RE: Analysis of Service Quality, Quality Management Practices and Organizational Performance of Private Healthcare Facilities in Nairobi County, Kenya. Proposal Reference Number MSU/DRPI/MUERC/00370/17

This is to inform you that the Maseno University Ethics Review Committee (MUERC) determined that the ethics issues raised at the initial review were adequately addressed in the revised proposal. Consequently, the study is granted approval for implementation effective this 13th day of April, 2017 for a period of one (1) year.

Please note that authorization to conduct this study will automatically expire on 12th April, 2018. If you plan to continue with the study beyond this date, please submit an application for continuation approval to the MUERC Secretariat by 13th March, 2018.

Approval for continuation of the study will be subject to successful submission of an annual progress report that is to reach the MUERC Secretariat by 13th March, 2018.

Please note that any unanticipated problems resulting from the conduct of this study must be reported to MUERC. You are required to submit any proposed changes to this study to MUERC for review and approval prior to initiation. Please advice MUERC when the study is completed or discontinued.

Thank you.

DIRECTORATE OF RESEARCH PUBLICATION & CONSULTANCIES 13 APR 2017 MASENO UNIVERSITY

Dr. Bonuke Anyona,
Secretary,
Maseno University Ethics Review Committee.

Cc: Chairman,
Maseno University Ethics Review Committee.