

**SERVICE QUALITY AND PERFORMANCE
IMPROVEMENT IN HEALTH CARE: A CASE OF
KENYATTA NATIONAL HOSPITAL**

BY

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DECLARATION

This research is my original work and it has not been submitted for an award of a degree in any other University.

Signed..... Date.....

Collins Wambura

D61/71044/2014

This research project has been submitted for examination with my approval as the university supervisor.

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DEDICATION

To God and my wonderful family at large especially Dad Christopher Nyamoronga, Mom Hellen Matinde, Bro Teddy, wife Olga and daughter Lucretia. You have been a source of inspiration to me in this journey to be determined and stay focused.

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ABSTRACT

For service organizations to achieve higher performance, quality should never be compromised at all costs. Employing of reliable and a valid instrument of quality measurements are essential for performance improvements. The research focused on the service quality delivery service and performance improvement in healthcare at Kenyatta National Hospital. The findings proved that, Kenyatta National Hospital widely employed the usage of the service quality dimensions in responding to their customers'. The service quality in this regard were; Reliability, Assurance, Tangibility, Empathy and Responsiveness while the performance measurement were determined by structural indicators, process indicators and outcome indicators. Structured questionnaires were administered to personnel working at the facility and patients' to gauge their opinion on the application of these instruments and the results indicated greatest usage of service quality dimensions though the facilities encountered challenges such as inadequacy of the specialists staffs and lack of modern diagnosing tools such as MRIs scan. Furthermore, the staffs to patient ratio were very small where buy accessing the 24hr healthcare service was a problem. The recommendations were; the management to employ the competent staff for quick response to patients' issues, increase the remuneration of its staff, and offer training opportunities to her staffs about service quality. Therefore, it is important to note that, organizations should constantly monitor their performance and employ valid and reliable measurement indicator which are well designed, defined and implemented amicably with scientific rigour.

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LIST OF ABBREVIATIONS

CO- Clinical Officer

CFO- Chief Finance Officer

GDP-Gross Domestic Product

IOS-International organization for standardization

JKIA- Jomo Kenyatta International Airport

KNV 2030- Kenya National Vision 2030

KPMG- Klynveld Peat Marwick Goergdeler

LT-Laboratory Technician

MRIs Scan- Magnetic Resonance Imaging

PN- Proportion

CHAPTER ONE: INTRODUCTION

1.1 Background of the study

The greatest wealth is health; quality of health should be the foundation of human development support which is enhanced through service delivery quality (KNV, 2030). Kenya National Vision is to become regional provider of choice for highly specialized healthcare. The investigation was done at Kenyatta National Hospital facility which is a leading referral centre. The ultimate aims for selecting the study domains are; first, medical care contributes about 5.7% of local GDP (World Bank, 2014). Second, health is an important domain for study both practically and in administrative ways therein establishing particular preceding to be employed as footings for analysis in service delivery quality. According to Brady & Cronin (2001), service delivery quality refers purchaser's judgement regarding concerning firms' how and what the work is delivered to a customer in relations to observed quality of services. Service quality influences the patient choice of selections of hospital (Lyn and Schuler, 2013).

Various definitions have been advanced by different researchers in Medical care in relation to delivery of service quality. However, the most accepted definition was advanced by (Parasuraman, 1985) which are tangibles, assurance, reliability, empathy and responsiveness. Services include; administration services, patient testing, and physician examination. Healthcare firms' employ quality in service provisions as a plan to advance in their competitiveness (Abuya, 2014).

As a major player in economic development health sector proved the ability to make substantial results in international healthiness. Improving of healthcare is therefore significant in fighting diseases and increasing life expectancy which are all essential for long-term firm's success (WHO, 2014). Corporate engagement in health initiatives should also aim towards improvement of a firm's reputation, as well as finding business opportunities, maintaining productive of workers and customers' loyalty and therefore healthcare firms' should leverage on the quality of services delivery to their customers to enhance improvement on their performance (Namamba & Lungazi, 2014). Therefore, the motive of the research was to investigate the delivery service quality dimensions that influences health care service provisions and improvements

at Kenyatta National Hospital. This is important because service quality in health sector is in tandem with KNUV vision 2030 governance goals and the referral's mission is to be a world class in provision of innovative and specialized healthcare.

1.1.1 Service Quality

Service quality is the results of an assessment whereby the purchasers' weigh expectations with the perceptions (Gronroos, 1984). Service quality is the difference between purchases expectations and the judgement of service delivery (Parasuraman, 1988). International Organization Standards (2014) described service quality in healthcare as the entire aspect that meets customers' requirements. Quality in healthcare is when the entire specifications and features of services bear abilities to meet and exceed the stated and unexpected needs (Karatu, 1997).

Service quality dimensions reflect the deviations from expected and perceived specifications about the quality of service delivery processes to a customer (Parasuraman, 1985). Lehtinen and Lintien (1982) described quality in service delivery based on the tangible part of the service and the contact of the service provider and service purchaser (customer) as well as image quality that is, images being portrayed by the service provider to her potential customers. Successful health sectors ensure that they increase benefits to their offerings that not only satisfy the patients but also surprise and delight them which is a matter of exceeding their expectations.

Delivering service quality significantly affect the relationship with customer satisfaction (Swanson & Davis, 2003), profitability (Irving and Dickson, 2004) and growth of the firm (Sohail, 2003). The SERVQUAL model by (Zeithaml, 1985) described quality of service delivery as a function of expected and perceived performance in relation to service delivery quality indicators. A healthcare facility that never compromises their quality in service performance meets their customers' needs and achieves competitive advantage for a long period (Drew, 1991). Service quality is regarded as critical determinant of operational competitiveness and facilitates a firm to distinguish itself from others (Parasuraman, Zeithaml and Berry, 1991).

1.1.2 Performance Improvement

Improvement refers to meeting or exceeding, enhancement of the goals and standards set, and the quality of being better than before. For example sales show a sharp improvement over last year, employees noticing an improvement in their work environment. Performance involves production of a valid result (Merriam - Webster dictionary, 1993).

Performance evaluations is an important measure in health service improvement in enhancing national developments for healthcare transformations in order to be applied into corporate and personal plan as well as to provide targets on effects, and further enhance accountability, (Baines, 2009). For sufficient improvement to healthcare, performance evaluations tools are essentials that enhances Medicare forums and assist providers to fulfill improvement operations, and for the systems to assess their entire performance against agreed plans (Kimotho, 2012). The Successive health industry have sought to address the problems of health systems by adopting a variety of ways approved by the local government and thus act as a blue print for developing and managing health services (MOH, 2014). According to (KPMG, 2013), central to the creation of health care systems, is the devolved ability to use the governance tools to rationalize, integrate and co-ordinate previously autonomous and sometimes competing services. Local health policy (2012) provides guidelines for the degree of Medicare by supporting development of equitable, affordable and quality health and related service at the highest attainable standards to all citizens. County governments provides an enabling environment for the provision of primary care (MOH, 2014)

As healthcare performance improvement results are evaluated, counties need to find the best way to deliver services efficiently and effectively in order to serve the public interest through evaluating their goals and standards of the public policies and provide a yardstick for assessing activities of the government (WHO, 2013). Issues such as equity and accountability be addressed and performance measure indicators developed to act as a check and balance for evaluation of their improvement (KPMG, 2014).

1.1.3 Healthcare Sector

Health industry comprises Individuals and corporations which interrelate and perform their work based on documented guidelines in order enhancement of quality healthcare (MOH, 2014). It comprises; government ministries and departments, hospitals, Public Health & Sanitation, KEMRI, Medicare insurance schemes, pharmaceutical industry and drug wholesale companies (Nzinga, Lairumbi and Mike, 2013). In many developing countries private not- for- profit healthcare providers constitute an important part of health sector (Omondi, 2013). The health sector has been undergoing tremendous transformation globally that influenced the development of national healthcare objectives, plans and customs that enhanced developments in healthcare methods, rules and financial managements.

The objectives are mostly; to better the avenue, decisive fairness and feasibility. The goal of Kenya's vision is, to be fairness in provision of efficient and accessible Medicare at the reliable and manageable measure to her populations (Mbulishe, 2014) This can be achieved only if there is quality in service delivery of health which is a important in enhancing fiscal developments, scarcity abatement and significance towards achievement of the perceptions common objectives (WHO, 2013). In addition, the Kenyan disposition under the Bill of rights that avenue to Medicare is legal to every citizen. It is under this basis that health sector is repositioning itself to fulfill their forecasts of local citizens, through cardinal cooperation, cardinal rules and developed healthcare process. Examples improved health activities such as infrastructure and quality service delivery (MOH, 2013).

1.1.4 Kenyatta National Hospital

The facility is the oldest referral hospital in Kenya, founded in 1901 as a key player in the health sector locally. Its vision is "To be a world class hospital in the provision of innovative and specialized healthcare". It plays a crucial role in healthcare delivery system in the country, across East Africa and in all African globes as stipulated in its mandate (Willis, 2015). The hospital has the most effective and efficient referral system and receives referral cases for specialized healthcare from other healthcare institutions within and outside the country.

Kenyatta National Hospital has 6000 personnel.209 beds are for the private wing out

of 1800 total bed capacity (Abdulla, 1985). Kenyatta national hospital receives 2000-3000 patients in its ward at any given day. The total number of healthcare personnel in the Hospital is 1157 with 100 Doctors, 800 Nurses, 130 Pharmacists, 70 LT, 50 CO, and 5 Dentists as well as 2 Accountants in administrative unit.

The quality of service of the customer care is significance hence through customer care training the firm is able to boost patient satisfaction from 39% to 71% (Patient Satisfaction Survey, 2014). Furthermore, enhancing service quality especially in technical quality of care, patients waiting time, clinical service, admissions procedures and discharge is able to enhance improvement in performance of the firm as well as competitive advantage among other healthcare firms (Wamaitha, 2013).

1.2 Research Problem

One key aspect of human development and for achieving organizational objectives is good health. Service quality delivery is imperative to a firm providing healthcare service as this determines the customers' satisfaction and for the firm to have competitive advantages (KNV, 2030). (Miranda et al., 2010, p.2139) suggested that, service quality for any other service oriented organization is measured through five dimensions proposed by (Parasuraman, 1985), namely; tangibles, reliability, responsiveness, assurance and empathy. In ensuring firms' employ these dimensions in their service then performance measurement is very essential. The facility is a service oriented organization whose mission is "To be a world class referral hospital in the provision of innovative and specialized healthcare". Innovative and specialized healthcare is achieved if their service delivery is quality as this marks the important part to guarantee patients' contentment and allegiance. Managers make the influential decisions that determines success to their firms' and it is through this that they have to maintain effectiveness and efficiencies in their operations and further Improve on their performance as this determines the success of their firms (Chirchir, 2014). To improve on operation performance, a healthcare firm requires an operation manager to understand which components of quality are more significant to consumers' and how they influence the perceived service performance.

Sumathi (2012) investigated service quality in healthcare centres based on the following factors; Medics actions, basis personnel, aerial and organizational

enforcement. Findings indicated the research gap of service quality in healthcare centre is between corporate and non- corporate firms. Charles Holis (2006) conducted a study to assess service quality evaluation in internal healthcare service chains, his findings indicated that there exist multi dimensional nature of internal service quality; equity was found to be an important factor in internal service quality dimensions.

Derroo (2009) researched on general hospitals strategic responses to performance indicators in healthcare. The findings of the study were; an impact of performance indicators on the quality system were; perceived, relevance and reliability, analysis and reporting of current performance data.(Tashonna, 2011) assessed patient healthcare experiences in low- income setting using validity and reliability by factor analysis. His findings were; outpatient experience in hospital care showed similar results with the 13 items loaded in four factors, Reliability showed good to excellent internal consistency for all scale in inpatient and outpatient care. The study indicated invalid measure of patient experience in low income countries.

Ndambuki (2012) investigated The Level of Patients' satisfaction and perception on quality of Nursing of services in the renal unit at Kenyatta National Hospital. His findings were; Low employees' capacity, low technology, Ineffective communication channels, insufficient fund affect the delivery of service quality to patient satisfaction and loyalty. The findings indicated that not much had been achieved in raising the quality of service in public health institutions and is faced with limited knowledge on the instruments that aid the delivery of service quality in public medical facility.

Muchoma and Karanja (2015) investigated effects of Kenyan governance management and operations of the Medicare in Kenya. Sector performance contribution to GDP reduced by the end of the year; the devolved procurement resources, organization leadership, resources allocation as well as policy and regulatory framework greatly contributed to increase in developments of the level four hospitals. However, he reported that the devolution was not fully implemented and its effort as well as its effect not fully experienced in the health sector.

Nyamamba and Waweru (2012) conducted a survey research on the best managerial factors in quality assessments at healthcare facilities in Nairobi County. The research indicated that quality influence healthcare performance at different facilities being

investigated. However, there were gaps in issues relating to quality health service delivery in relation to business performance and growth.

Kimanzi (2015) examined effects of service quality delivery at in private health sector, a case of Nyeri County hospital. He found out that, employee population affect the quality of service delivery. Furthermore, assessing the quality of service delivery at the facility was an issue as personnel had limited information on the factors that aid the delivery of service quality. Although most of the study reported the gaps in service quality literature and the measurement focused on external customers only and yet the quality of service is judged by internal and external customers in a healthcare firm. Based on various theories and literatures investigated, this study aims to leverage on their findings and their resourceful contributions in the area of service quality and performance in healthcare to improve on the relevance of my study. However, the literatures suggest a research gap in service quality and performance improvement in healthcare especially at KNH.

The research study investigated the service quality and performance improvement in healthcare at Kenyatta National Hospital. The study generally populated on the relative importance of service quality enhanced by (Gronroos, 1988) model; technical quality, functional quality and corporate image as well as SERVQUAL model by (Parasuraman, 1985) and how this enhances performance improvement. It therefore answered two important research questions: what were the service quality dimensions and performance measurements in healthcare practiced at Kenyatta National Hospital? What were the extent these service quality dimensions affects performance improvement at KNH Kenyatta National Hospital?

1.3 Research Objectives

The main objective of this study was to assess quality of service delivery in healthcare at Kenyatta National Hospital, while the specific objectives were;

- i) To investigate the service quality dimensions and performance measurements indicators practiced at Kenyatta National hospital.
- ii) To assess the extent to which service quality dimensions influences performance improvement in healthcare at Kenyatta National hospital.

1.4 The Significance of the Report

The report will provide guidelines in ensuring operations managers and other decision makers working in hospitality industry especially in healthcare firms adopt service quality improvement plans for the success of their firms. The findings will provide significance findings about the service delivery quality and improvement of healthcare performance in helping different stakeholders understand the concept of service quality and its effectiveness in improving performance of their firms.

Furthermore, it will be useful for decision makers to make critical decisions on matters affecting customers' perception on quality of services being offered especially in healthcare. Managers in others hospitality industry will benefit with the quality of information about service quality in relation to performance improvement thus act as a mechanism for determining the successful strategy that drives company's success. Scholars and other researchers can utilize on the study findings as a flesh to their study in area of quality, healthcare and performance based on the fundamental findings and recommendations therefore leverage on the information as a reference point for their research study (Researcher, 2016).

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter facilitates discussions on the various theories as well as concepts that provide explanations regarding service quality and performance improvement in healthcare and their relevant studies.

2.2 Theoretical Review

This area focuses on theories advanced on healthcare and performance. The study is anchored on systems theory and contingency theory.

2.2.1 Systems Theory

VonBertalanff (General system, 1930) .He argued that systems are open and also interacts with the environment. Any time a firm utilizes resources from their surroundings such as employees in its fabrication; reflects an open to external services. A firm that frequently relates with its environment, exchanges and process response is an open system corporate structure. Open systems possess open boundaries that are open to the surroundings to receive feedback and unleash the required resources. Those in charge with the control of an open system devise the best guidelines to achieve the goals and objective for the success of an organization. The theory is relevance for my research objectives in the sense that, healthcare is open to the environment in such a way that staffs constantly interacts with various stakeholders such as customers' receives and processes the feedback from them, enabling personnel enhance improvement in quality of service delivery through acting on the recommendations. Furthermore, healthcare being an open system depends on her employees' value and supply chains in addition to competition for research, development and profit information to make an informed decision on what when and how to offer their service delivery.

An organizational structure that effectively catalyzes an open system is free from effective crisis solving by focusing on success of the organization. Constant response and better results enhances best leadership and quality of running of an organization. Through directs feedback and constant improvement, organization effectively achieves quality in planning, smart plan, valuable yields and sufficient management.

2.2.2 Contingency Theory

Contingency theory was proposed by Fred Edward Fiedler (1964) in his contingent model. It promotes the significance of the leaders' characters and the circumstances within their operations. In organizational perspective, this theory claims that there is no greatest way to manage a firm, to direct a corporation and create guidelines. As an alternative, the best possible itinerary is subject on the interior and exterior conditions. A dependant principal successfully generates his design of management to the correct circumstances. It sought to formulate expansive universal on the official firms' structures with the intention linked through best robust technologies.

Woodward (1958) argued that technologies directly enhance the choice of firms' features as an extent of command, centralization of power and the formalization of policies and actions. The premise is linked to the research objective in that Health sector is an open system with different subdivisions internally managed by their own leader. Therefore, in order for them to improve their performance; it requires the leader to find the right method at a given point, to achieve quality in delivery services. Also, healthcare is linked to both internal and external environments that contribute to their value chain. For this theory to hold, it therefore, requires an organization to be an open system that are led by a leader who assure and stabilize the interior desires as well as adopt ecological circumstances; organizations to recognize that there is no excellent manner of managing; the suitable way is based on the type of charge or surroundings one encounters; executive must be alarmed above all else, with generating right and best fits and dissimilar kinds of firms' that are required in diverse conditions. Therefore, Nursing, Doctors and Pharmacy departments should have their own way of managing their operations aim towards common goal of giving service delivery quality in healthcare to her customers'.

2.3 Service Quality and Performance improvement

Service quality is a fundamental importance and offers numerous benefits to service industry as established in the literature. (Gronroos, 1988) proposed a model that describes technical quality and functional quality components used by consumers' to measure the quality of services. He later explained six criteria of evaluating service quality which include; reputation and credibility, behavior and attitudes, accessibility and service recovery. (Parasuraman, 1985) proposed a SERVQUAL model and he

recommended that service quality is evaluated through five functional magnitude which are; tangibles, reliability, responsiveness, assurance and empathy. Tangible dimension is “physical facilities, tools, and look of workforce”; “reliability is capacity to do the promised service dependably and precisely”; “responsiveness is readiness to assist clientele and offer timely service”; “assurance is `knowledge and politeness of employees and their skills to motivate trust and confidence” and “empathy is gentle, the self attention the firm offers to her customers” (Parasuraman, 1985). The model identifies five service quality gaps which are among customers’ expectations and management opinions of what the customers wants, managements’ perceptions of customers service quality specifications; service quality specifications and service delivery; service delivery and external communications to customers’ ,expectations and perceived service variations.

A firm achieves or guarantees an improvement in the quality of the service delivery if customers’ regard its offering as superior quality. Although there is no best fit definition about service quality, consensus among several researchers reported that consumers’ evaluate quality with distinguishable of the service they’ve received from the firm (Parasuraman, 1985) against what they thought. When actual service delivery exceeds expectations then service quality is achieved and therefore leads to an improvement in performance of the firm otherwise there is a service quality gap. A study by (Brogowicz & Berry, 1990) presents a synthesized model of service quality describing the managerial activities of the firms that improves the quality of services.

The findings of the study indicated that managers can improve performance of the firm if they establish what their customers expect (technical quality) and how they expect to receive (functional quality) of the service offering. Basing on Gronroos model, they defined quality in terms of what customers’ receive during the moment of interaction with the firm. Which describes features such as knowledge and skills, employees’ technical ability, technical solutions of products and company reputation (image) and credibility hence these components enhances performance improvement of the firm.

Functional quality evaluates the manner in which a customer obtained the service

which is determined by employee; attitudes and behaviours, consumer interaction/contact, service mindedness, convenience and flexibility, dependability and honesty as well as service improvement. Managers must plan, implement and control both technical and functional service dimensions (Brogowicz & Berry, 1990). It is also established in the study that a service quality gap occurs when technical service exceeds functional service delivery.

According to (YogeshPai & Chary, 2012), in healthcare, service quality is about giving to patients what they want and what they need doing so by means of least possessions exclusive of error, delay, waste furthermore within advanced guidelines.

According to (Parasuraman, Berry and Zeithaml, 1988) healthcare has ten dimensions that are used to measure service quality; Physical environment and infrastructure which evaluates the patient's reactions so hospital service delivery in regards to the tangible aspects of facility. Personal quality- contact personnel enhances decisions in patient assessment of the service received.

The personnel dealing with patients' are doctors, nurses and support staff hence they need to offer services in Courtesy, competency, friendly and caring (MOH, 2014). Corporate Image-the image reflects patients' perceived link of the physician and the hospital thus the dimension captures the availability of good doctors, reputation of the hospital and ethics followed in providing medical services.

Trustworthiness/dependability- this measures the sense of wellbeing patient feels and influences his confidence in hospital. Support- is measured in terms of the level of contribution to society in terms of free medical services needy. Process of clinical care is based on the experience of patient with clinical processes. The dimensions assess the faultiness in assessing patient condition, instruction, diagnosis and advices provided, time spent in examining. Communication- involve the sending of information among a service source and clientele, the magnitude of contact and the point of joint communication such as physician-patient, doctors to doctors, family members among others. Relationship- closeness and the strength acknowledged between provider and customer, closeness such as trust or mutual liking exist. Personalization refers to customization and individualized attention for example the way doctors' address by name, treatment by hospital staffs. Administration

Procedures-addresses factors to do with waiting time, appointment procedures records, accessibility of information among others.

Performance measurement indicators in healthcare evaluate certain health structures, processes, and outcomes. They can be rate- or- mean-based, enhancing quantitative measures for quality improvement, or a guard, examining the dimensions of care that triggers additional investigations. They can evaluate dimension of the structure, procedure or result of healthcare. Furthermore, dimensions can be broad indicators that are significance in evaluations of mostly patients or illness- exact, showing the quality of concern for patients with exact diagnosis.

2.4 Summary of the Literature Review

Authors	Topic	Findings	Gaps
Kumpar (2013)	association among service quality and customer fulfillment in hotel industry in Japan	Encouraging association between service quality and customer satisfaction in hotel industry	perceptions and expectation of service quality
Bill (2012)	A survey study on factors affecting service quality and performance in UAE Banks	Banks that operate within a framework of constraints such as skills, knowledge, experience, people, culture and technology can impede operations manager in banking industry to improve operational performance	Customers' perception and expectation of quality of life.
Sureshchandar (2012)	The association involving service quality and	service excellence and client contentment are free	customers' perception and expectations of the service quality

	customer satisfaction a case of Indian banks.	but are strongly related, implying that an amplify in one is expected to enhance an augment in another	
Lukong (2010)	Leveraging on SERVQUAL model evaluate service quality and client satisfaction, a case of grocery stores in India.	SERVQUAL was unreliable tool to evaluate service quality since a few items of the indicators have common characteristics, exception also exceeded perception	perception and expectation of service quality
Githu (2013)	the effects of service quality and performance in hotel business in Nakuru County	performance in hotel industry is influenced by the quality of services that personnel provides which is evaluated based on customer reaction of the quality of service delivery	Insufficient personnel contributes to lower level of performance
Githanja (2006)	The perception of service quality in JKIA	Customers' perception influences the delivery of quality services	customers perception and the service expectations
Inyo (2013)	Service quality and operational performance of tour operators in	There exist a positive relationship between technical quality and image,	few studies examined how to achieve operational performance using

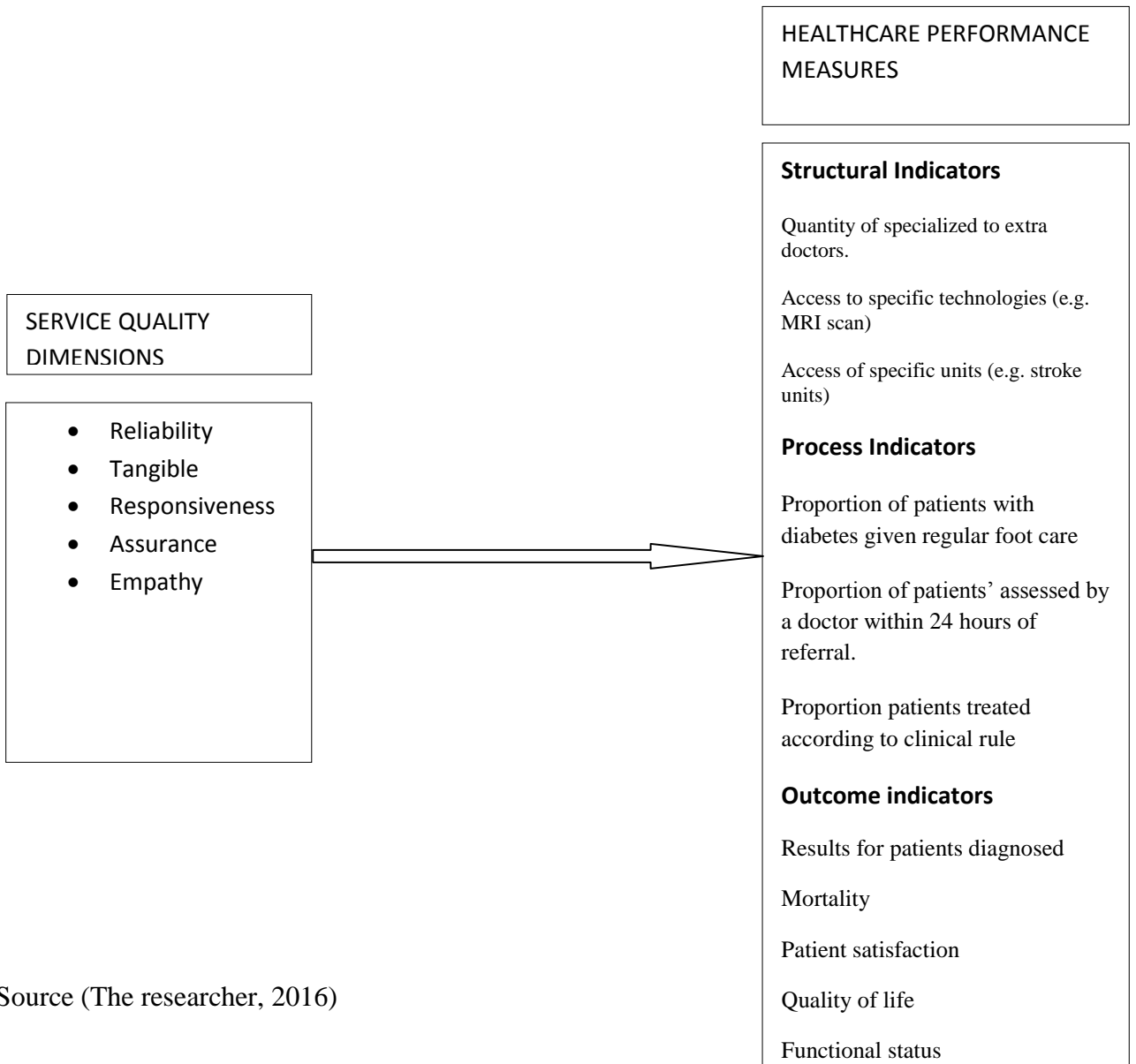
	Kenya.	functional quality and service quality performance as well as functional quality and image.	service quality components suggested by (Gronroos, 1988) model.
Wambugu (2010)	Effects of service quality dimensions on consumers' choice of Petroleum retailing in Thika.	Consumer preference on the choice of petroleum retailing is influenced by the quality of service provided by the service provider.	There was a gap between the consumer preference of petroleum retailing as influenced by the quality of service provided by the service provider

2.5 Conceptual Framework

The study investigated the service quality dimensions and how it influences performance improvement in healthcare at Kenyatta National Hospital.

INDEPENDENT
VARIABLE

DEPENDENT
VARIABLE



Source (The researcher, 2016)

CHAPTER THREE: THE RESEARCH METHODOLOGY

3.1 Introduction

The section covered the procedure and the methodology used to conduct the research. It explains the research design, population, sampling design and frame, data collection method and data analysis techniques employed.

3.2 Research Design

Researcher used a descriptive statistics. Cooper & Schindler (2006) defined descriptive as the kind of research design aim in finding out, who, what, where, or how much events or conditions are interrelated. Mugenda and Mugenda (1999) described descriptive research as identification of possible behavior, attitudes, and values characteristics with emphasis on frequency of occurrence. The descriptive statistics method was suitable since it ensured total report of the circumstance, minimizing biasness in the data collection and finding out the what, where and how of an occurrence (Kothari, 2008)

3.3 Population of the Study

According to Mugenda & Mugenda (2003), a population represents a whole collection of individuals, proceedings or substance with observable characteristics. The population under study was 105 respondents working in administrative unit.

Table 3.1 Target Population & Sample Size

Category	population	Percentage	Sample
Doctors	10	0.05	5
Finance & Accounting	10	0.08	10
Nurses	15	0.15	15
Research department	20	0.20	20
Patients	50	0.49	50
Total	105		100

Source, (Researcher, 2016)

3.4 Sampling Design

Researcher employed stratified random sampling to select the desired test; the values were selected based on Krejcie & Morgan (1970). According to Kothari (2006), the technique produces strata of overall population parameter with precision and ensures a more representative sample is derived from a relatively homogeneous population.

3.5 Data Collection Methods

The researcher used primary techniques. The data were collected first from all the employees of the departments working in administrative units. The questionnaires were drafted on three sections. Section A captured the general information of the firm and the respondents. Section B assessed the service quality and performance improvement in healthcare at KNH and Section C captured questions about the relationships between service quality and performance improvement in healthcare. Drop and pick method was employed and the questionnaires were administered to the whole sample of 105 respondents using structured questionnaires.

3.6 Data Analysis

The data collected were prepared and checked for consistency, completeness and accuracy. It was then coded and data tabulated and analyzed their Frequencies and. The descriptive statistics in this regard consisted of the mean and standard deviation. The mean value is the average value for the various dimensions of service quality and performance measurements indicators. The statistical Package for Social Science version 20 and excel 2007 was used to analyze the data. The regression analysis was performed to test the relationships between service quality and performance. Kothari (2004) defined regression analysis as the procedure used to find the pertinent features of independent and dependent variables.

3.6.1 Regression Model

$$Y = B_0 + B_1 + B_2 + B_3 + E$$

Y- Signifies Performance Improvement

B₀. Represents the regression constant (Y-intercept)

B₁, B₂ & B₃. Represents Graphs Slopes for Performance improvement

E= Residual (Error Term)

CHAPTER FOUR: DATA ANALYSIS, INTERPRETATION AND ANALYSIS

4.1 Introduction

This section explains data analysis, interpretation as well as discussions of the findings; it comprises response rate, the respondents' opinions on the relationship between service quality and performance measurement indicators in healthcare at Kenyatta National Hospital

4.2 General Information

Table 4.1: Response Rate

Category	Sample Size	Respondents	Response Rate *100
Doctors	5	5	5.00
Clinical Officers	10	8	8.00
Nurses	15	15	15.00
Pharmacists	20	20	20.00
Patients	50	50	50.00
Administrators	2	2	2.00
TOTAL	102	100	

Table 4.2.1 indicates the response rate and from the observation the sample size of 102 responded though 100 questionnaires were correctly filled and met the necessary requirements and gives the response rate of 100%.

4.3 SERVICE QUALITY AT KENYATTA NATIONAL HOSPITAL

The results indicated that Kenyatta national hospital is practicing service quality dimensions advanced by (Parasuraman,1985); Reliability, Assurance, Tangibility, Empathy and Responsiveness. The summary of their findings is listed in the table below.

Table 4.2: SUMMARY OF THE SERVICE QUALITY AT KNH

		Statistics				
		tangibility	responsiveness	reliability	assurance	Empathy
N	Valid	100	100	100	100	100
	Missing	0	0	0	0	0

The results indicated that the service quality dimensions are practiced at the Kenyatta National Hospital which is shown by the frequency table from the 50 personnel

working at Kenyatta National Hospital and the opinions from the patients treated at the facility.

The results indicated that service quality dimensions exist at Kenyatta national Hospital as the response rate from the working personnel is 50%. The summary of the various dimensions with their frequencies and percentage results is shown below.

Table 4.3 Frequencies of the Service quality Dimensions

		tangibility			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	50	50.0	50.0	50.0
		50	50.0	50.0	100.0
	Total	100	100.0	100.0	

		responsiveness			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	50	50.0	50.0	50.0
		50	50.0	50.0	100.0
	Total	100	100.0	100.0	

		reliability			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	50	50.0	50.0	50.0
		50	50.0	50.0	100.0
	Total	100	100.0	100.0	

		assurance			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	50	50.0	50.0	50.0
		50	50.0	50.0	100.0
	Total	100	100.0	100.0	

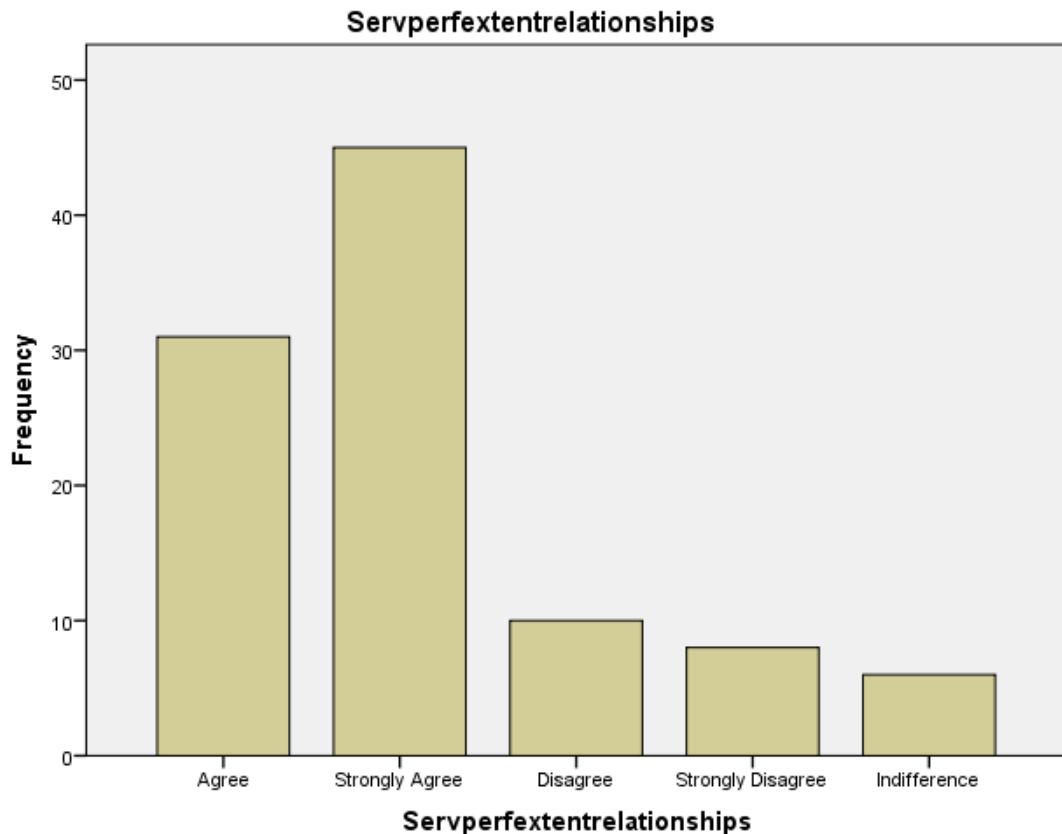
Empathy				
	Frequency	Percent	Valid Percent	Cumulative Percent
	50	50.0	50.0	50.0
Valid yes	50	50.0	50.0	100.0
Total	100	100.0	100.0	

4.4 Extent of Service Quality at Kenyatta National

The study investigated the degree to which Kenyatta National Hospital offer quality of service delivery. The respondents' were asked to rate on a scale of 1 (Agree), 2 (Strongly Agree), 3 (Disagree), 4 (Strongly Disagree) and finally 5 (indifference).

Table 4.4 Extent of service quality dimensions

Extent of Service delivery quality				
	Frequency	Percent	Valid Percent	Cumulative Percent
Agree	31	31.0	31.0	31.0
Strongly Agree	45	45.0	45.0	76.0
Disagree	10	10.0	10.0	86.0
Strongly Disagree	8	8.0	8.0	94.0
Indifference	6	6.0	6.0	100.0
Total	100	100.0	100.0	



From the above results, it was observed that that the respondents’ strongly agreed with the quality of service delivery in healthcare at Kenyatta National Hospital with many appreciating the service delivery met their expectations. Few disagree with quality of service delivery especially patients who went to seek treatment at the facility while others were not concerned with the service delivery quality what they wanted was to get treated and leave the facility.

The overall means of service quality is 1.9486 which is above average. The summary and explanations of each dimensions is explained below.

4.4.1 Reliability

This dimension rated various aspects on reliability of the service provided ranging from; accuracy of the treatment, speed of the registration process, provision of services as promised and accuracy of patients’ records. The summary of the findings are summarized below

The Overall mean is 1.583 with the standard deviation of 0.094648. Kenyatta referral admits many inpatients and outpatients per day which require them to improve the registration procedure. That’s why the result indicated the higher mean of 1.45 and standard deviation of 0.725 to show speedy in registration process.

Table 4.5: Summary of the Reliability

Reliability	MEANS	std dev
Promised service delivery	1.5	0.75
Speedy patients' registration	1.45	0.725
Accurate treatment	1.8	0.9
Overall MEAN & std deviation	1.583	0.094648

4.4.2 Assurance

From the results below, it is seen that at Kenyatta National Hospital Doctors and Nurses have knowledge, courtesy and ability to inspire trust and confidence which is indicated by the mean of 1.60 and the standard deviation of 0.76. The overall mean is 1.86 which is above average to indicate how widely this dimension is practiced at the facility. However, the result indicates that the rooms are always not secure as the patients are always advised to ensure the safety of their belongings. The summary of the findings is shown below.

Table 4.6: Assurance Dimension

Assurance	Means	Std dev
Doctors & Nurses instilling confidence	1.6	0.76
Rooms always secure	2.15	1.07
Satisfactorily attitude of the Nurses	1.83	0.869
Overall MEAN & std deviation	1.86	0.130564

4.4.3 Tangibility

The overall mean is 2.5843 with the lowest standard deviation of 0.312 to show the data was distributed around the mean. The mean is above the average to show Kenyatta National Hospital practiced this dimension. There is availability of modern equipments at the facility which account to 1.60 with its standard deviation of 0.76 followed closely by smart working professionals. While availability of emergency powers indicates the lower mean score of 3.0 to show that sometimes there is a power failure in the facility. The dimension's result is shown in the table. 4.5.

Table 4.7: Tangibility Dimensions

This dimension rated service

Tangibility	Means	Std dev
Ability to handle patients' problem	2.6	1.24
Visually appealing facilities	2.45	1.16
Availability of modern equipments	1.6	0.76
Correct food portion and clean rooms	2.84	0.689
Smart working professionals	2.4	1.14
Power back up	3.2	1.52
Availability of emergencies power	3.0	1.43
Overall MEAN & std deviation	2.5843	0.31264

4.4.4 Empathy

In the Empathy dimension it is observed that at KHN, the Doctors commit themselves in caring to patients' by ensuring there is individualized attention to patients by making follow ups every day. However there is a problem in convenient consulting hours for seeing the health personnel especially during the night where some of them are not accessible. The average mean score is 1.7667 which is above average thus the dimension is widely practiced at Kenyatta National Hospital. The summary of the results is summarized from the table below.

Table 4.8: Empathy Dimension

Empathy	Means	Std dev
Attentiveness of the Nurses	1.8	0.86
Conveniently consulting hours	1.8	0.86
Caring of Doctors to the patients'	1.7	0.81
Overall MEAN & std deviation	1.7667	0.028868

4.4.5 Responsiveness

The overall mean is 1.4867 and the standard deviation is 0.015275. This clearly demonstrates wide adoption of this dimension in healthcare at KNH as the mean is above average. Personnel are willing to help patients as suggested by its mean score of 1.45 and even willing to provide prompt services to customers as indicated by the

mean of 1.5. However, not all personnel are willing to provide individualized services to the patients' as many patients' sometimes are advised to seek alternative solutions. The summary of the findings is illustrated from the table 4.9

Table 4.9: Responsiveness Dimension

Responsiveness	Means	Std dev
Response to patients'	1.5	0.75
Willingness in helping patients'	1.45	0.73
Individualized services to patients'	1.51	0.76
Overall MEAN & std deviation	1.4867	0.015275

4.4.6 Overall Evaluation of the Service Delivery Quality Dimensions

The overall assessment of the various dimensions in the healthcare facilities is shown in the

Table 4.10 Overall Rankings of the Dimensions

Dimensions	Overall Mean	Ranks
Tangibility	2.5843	5
Reliability	1.583	2
Responsiveness	1.4867	1
Assurance	1.860	4
Empathy	1.7667	3

In the table 4.9 the highest mean score dimension is Responsiveness with an overall mean of 1.4867 followed closely by Reliability with a mean score of 1.543 and finally the lowest mean score dimension is Tangibility with a mean score of 2.5843. This

means that at Kenyatta National Hospital healthcare staffs are willing to assist patients' and offer timely service and possess skills to perform what they promise dependably and accurately. However the issue of modern equipments sometimes is an issue like in adequate MRIs scan and sometimes failure of power backups.

4.8 The performance Improvement measurement Indicators

For the purpose of improvement in healthcare, KNH established the following measurement mechanisms; Structural indicators, Process indicators and Outcome indicators. Their modes of testing are illustrated below and summary of their findings is listed in their respective table. Mean and Standard deviation is also calculated.

4.8.1 Structural indicators

The overall mean is **6.17857** which is above the average mean score. This suggests that KNH utilize the instrument in measuring their performance. From the table below, it is observed that there is available guidance and counseling department to respond to HIV, surgery, Accident and Emergency victims, Drugs Addicts among others. This has the highest mean score of 4.0 followed closely by Accessibility to MRI scan to identify pain in brains, spine and bones for effective treatment this has the mean score of 6.0. However Kenyatta National Hospital experience insufficient specialists to doctors proportion who work permanently at the facility. This has the mean score of 8.0. The summary of the findings is listed in the table below.

Table 4.11: Structural Indicators

Structural Indicators	MEANS	Std dev
Specialists to doctors proportion	8.0	4.00
Access to specific technologies (MRI scan)	6	2.0
Access of specific units (e.g. stroke units)	6.5	2.55
Clinical Guidelines revised every 2nd year.	6.0	2.2
Physiotherapists assigned to specific units	6.55	3.0
Availability of safety committee	6.2	2.25
Availability of Guidance and Counseling dept	4.0	1.98
Overall MEAN & std deviation	6.17857	0.7237

4.8.2 Process Indicators.

This indicator has the mean score of 8.00 which is above the average. It therefore means that Kenyatta National Hospital employs the instrument in measuring their performance. It is observed that, the healthcare staffs adhered to the hospital guidelines in treating and responding to patients. This has a mean score of 4.00 which is above the average. However, accessibility of Doctors at the facility full time is an issue as suggested by the mean score of 12.0. This is attributed to low number of specialists attending to patients at a given time therefore they are not able to be at the patients' dispensation full time. The summary of the results is listed in the table 4.12.

Table 4.12: Process Indicators

Process Indicators	Means	Std Dev
Patients with diabetes for regular foot care Proportion	8.00	4.00
Referral patients' assessed by doctors within 24 hrs	12.0	6.00
Patients treated according to clinical guidelines	4.00	3.55
Overall MEAN & std deviation	8.00	1.32288

4.8.3 Outcome Indicators

The following measurement indicators shows an average mean score of **5.14167** which is above average to indicate that the measurement is widely applied at the facility. Also, the results indicated that, there is low mortality rate experienced at the facility as check and balance measure is adhered from the moment a patient enters the facility and when he leaves. This has the mean score of 1.85 which is followed closely by testing on the blood sugar level in analyzing HbA1c results of diabetes. This is done since research has proved that diabetes is a killer disease for both young and old and its effect is rampant hence calls for controlling measures. However, the results indicated that, quality of treatment does not exceed customers' perception which has a lower mean score of 10.00. This is attributed to low number of modern facilities especially the new scanning tool such as MRIs scan. The summary of the findings is listed in the table 4.13.

Table 4.13: Outcome Indicators

Outcome indicators	Means	Std Dev
HbA1c results for diabetics	2.45	2.0
Blood pressure results for hypertensive patients	4.55	3.0
Mortality	1.85	1.95
Functional status	6.00	3.95
Health status measurement	4.00	2.45
Quality of treatment	8.00	5.55
Patient satisfaction	10.00	5.3
Overall MEAN & std deviation	5.14167	1.5076

4.9 The Relationship between the Service Quality and Performance Improvement.

In this part service quality and performance was evaluated. The five dimensions of service quality were determined against the three indicators of the performance in healthcare in fulfillment of the second objective of finding out the relationship between service quality and performance improvement in Medicare.

The findings of the regression analysis are summarized below. The results indicated that the independent variable had a high correlation with performance (R= 0.9906) as shown in the table 4.14 below as suggested by adjusted R Square statistics of 0.98135. The result of regression analysis explains the relationship between service quality and performance improvement in healthcare at KNH.

$$Y = 1.583 + 0.9989x_1 + 1.386x_2 + 0.284x_3 + 1.757$$

Table 4.14 Summary Output of Regression Analysis

SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.990633
R Square	0.981354
Adjusted R Square	0.481354
Standard Error	0.937392
Observations	3

Table4.15:ANOVA

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	92.49259	92.49259	105.2602	0.061856
Residual	2	1.757409	0.878704		
Total	3	94.25			

Table4.16:Coefficient Model

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	0	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
X Variable 1	3.490286	0.340196	10.25964	0.009367	2.026542	4.954031	2.026542	4.954031

RESIDUAL OUTPUT

<i>Observation</i>	<i>Predicted Y</i>	<i>Residuals</i>	<i>Standard Residuals</i>
1	5.23543	0.76457	0.998945
2	5.060915	-1.06092	-1.38613
3	6.282516	0.217484	0.284153

The study investigated the relationship between the service quality and performance improvement. The results indicated that service quality had a significant effect on the performance from the slope of dependent variable B_1 (0.9989) at level of confidence of 5%. That is $0.9989 < 5\%$. This means that service quality influences the performance. Furthermore, the result indicated a relationship from the predictor variable $B_2 = 1.38613$ which is less than confidence level of 5%. Finally $B_3 = 0.284$ is also less than the level of confidence at 5%. This greatly indicates performance is influenced by adoption of service quality in the facility. Table 4.15 test the relationship using ANOVA, Significance F-test demonstrates the usefulness of the overall regression model at 5% level of confidence. Since the P-value is less than alpha ($0.0093 < 5\%$). This clearly indicates that there was a significant relationship between the dependent and independent variable. Table 4.15 indicate that regression only accounted for a less than a dormant number of variations in performance

(92.50%) out of 94.25. the rest of the variation being accounted by other factors external to the model(Residual) error as indicated by the sum of the squares. The ANOVA results show that F statistics was significant at 5% confidence level. Therefore, the model was useful in explaining the relationship

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This section comprises of the review of the findings as well as the discussions. Furthermore, it contains the recommendations on the results found. Finally, it contains a section on suggested areas for more investigation.

5.2 Summary

The research indicated that, the level of service delivery quality in healthcare at Kenyatta National Hospital is very high. However they are faced with the constraints such as in adequacy of the specialists' personnel to attend to the large number of referrals patients in the facility. The various indicators of service quality measurements are; Reliability, Assurance, Tangibility, Empathy and Responsiveness.

Furthermore, the results showed that Patients' feel that the quality of service delivery still does not meet their quality perceptions and thus they do not satisfactorily approve the service delivery at the facility. This has been seen in situation where there are not sufficient and specialized doctors to meet the customers' needs.

The study showed that healthcare is a continuous process therefore the activities for the patients treatment are interrelated such that one process lead to the other for example Registration procedures to patients' diagnosis and treatment. Furthermore, in measurement of the performance in healthcare all the three very important indicators must be evaluated concurrently. The measurements indicators used in the facilities are structural indicators to examine the type and amount of resources used by health system to deliver services and programs Examples staff, money, supplies and premises.

Outcome dimension assessed the impact of care procedures, fitness and wellbeing of patients and populations. Finally, Process dimensions evaluated what the provider did for the patients and how well it was done.

5.3 Conclusions

The study has proved that there is service delivery quality at Kenyatta National Hospital which influences the performance in healthcare at the facility. (Parasuraman,

1985) suggested five dimensions to be used in any service organization namely; Reliability, Assurance, Tangibility, Empathy and Responsiveness. They have been tested at the facility and the results indicated that an improvement on the performance service delivery firm, quality should never be compromised at all costs. At KNH responsiveness had the highest overall mean score among the others which indicated that the staffs such as Doctors and nurses are willing to help customers and provide prompt services (Oluoch, 2016).

However, as much as the result reported significance observation of serviced delivery quality, the facility it is still being faced with the challenges arising from Low level of specialists to doctors proportions, insufficient modern equipments such as MRIs scan as well as constant failure of power backups. The results has also showed that for the facility to improve on their performance, all the process should be viewed as the interrelated systems such that when evaluating the quality of service delivery, the structural, Process, and outcome measurement indicators should be employed (Mwende, 2016)

Finally the relationship between the service quality and performance improvement in healthcare at Kenyatta National Hospital was tested and the result indicated the highest a positive correlation in responsiveness dimension in relation to performance measurement indicators. This suggests that performance in healthcare will only improve if there is an improvement in quality of the service delivery (The researcher, 2016) .

It is important to note that, Service organizations especially healthcare should constantly monitor their performance and create the basis for quality improvement plans as well as priotization in healthcare system. In addition, they need to ensure that if at all reliable and valid health care dimensions are employed, they must be designed, defined, and implemented with scientific rigour (Kilonzo, 2016).

5.4 Recommendations

The healthcare staff and any other personnel working at KNH should be guided on ensuring that quality is never compromised in their work delivery. This should be enhanced by training all the personnel on the importance of service quality delivery.

Also Kenyatta National Hospital should endeavor to employ the competent staff to provide services at the facility and increase remuneration for the permanent staff working at the facility to encourage them to give their best. The County government should allocate funds to the facility for them to purchase the modern facilities such as MRIs scan.

The facility should implement the suggestions from the customers' feedback about the quality of their service which should be enhanced by constantly reviewing their suggestions during their visits. Furthermore, the facility should also increase the social staffs to ensure rooms are kept clean all the time. Finally, the facility should minimize the long registration procedures by trying to establish supportive centres during registrations.

5.5 Limitations of the Study

The study has few limitations whereby most of the respondents were not present or too busy to fill the questionnaire, thus the researcher had to make constant follow ups.

Some questionnaires were not returned and the one returned were incomplete filled. Most researchers were of the view that service quality should be viewed and reported from the customers' point of view. However, it is imperative to note that, this research evaluated service quality from management point of view. Finally, the Facility did not disclose their financial performance records for analysis.

5.6 Suggestions for Further Research.

The research investigated the service quality delivery and performance improvement in healthcare at Kenyatta National Hospital. Further, research may be conducted by assessing the quality of services practices between the private hospitals in Nairobi focusing on the ten dimensions suggested by Parasuraman, Berry and Zeithaml (1985). Furthermore, the research in service quality can also be conducted in E-systems to establish the quality of service delivery about best hospital internationally. Further, research should be conducted in healthcare basing the research at Customers' point of view.

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APPENDICES

APPENDIX 1: Authorization for Data Collection


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TO WHOM IT MAY CONCERN

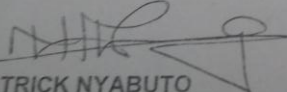
The bearer of this letter COLLINS WAMBURA
Registration No. D61171044/2014


is a bona fide continuing student in the Master of Business Administration (MBA) degree program in this University.

He/she is required to submit as part of his/her coursework assessment a research project report on a management problem. We would like the students to do their projects on real problems affecting firms in Kenya. We would, therefore, appreciate your assistance to enable him/her collect data in your organization.

The results of the report will be used solely for academic purposes and a copy of the same will be availed to the interviewed organizations on request.

Thank you.


PATRICK NYABUTO
SENIOR ADMINISTRATIVE ASSISTANT
SCHOOL OF BUSINESS


UNIVERSITY OF NAIROBI
SCHOOL OF BUSINESS
03 OCT 2016
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654870

APPENDIX 2: QUESTIONNAIRE

This questionnaire is designed to collect data about service quality and performance improvement at Kenyatta National hospital. The data will be used for academic purposes only and will be treated with strict confidence. As the researcher I will be grateful if you take a few minutes of your busy schedule to respond to questions/statements presented in the questionnaire to facilitate my research report.

Section A: General Information

Q 1 (a) Names

(b) Please indicate your position in the organization.....

(Section B: To find out the service quality dimensions and performance measurement indicators in healthcare at Nairobi hospital.

Q 2 (i) Does the hospital personnel possess abilities to perform the promised service dependably and accurately? Yes No

(ii) Does the hospital possess the physical facilities, equipments, and personnel?
Yes No

(iii) Does the hospital personnel willing to help Customers' and provide prompt services?

Yes No

(iv) Does employees possess the right skills, courtesy and knowledge and have ability to inspire trust and confidence? Yes No

(v) Does the hospital employees show caring and individualized attention to customers'? YES No

Q2 (i) Service Quality and Performance Improvement

In this Section the researcher aims to find out the extent in which service quality and performance improvement in healthcare is established at KNH. Please tick where appropriate.

Structural Indicators	Agree	Strongly Agree	Disagree	Strongly Disagree	Indifference
Specialists to doctors proportion					
Access to specific technologies (MRI scan)					
Access of specific units (e.g. stroke units)					
Clinical Guidelines revised every 2nd year.					
Physiotherapists assigned to specific units					
Availability of safety committee					
Availability of Guidance and Counseling dep't					
Process Indicators					
Patients with diabetes for regular foot care proportion					
Referral patients' assessed by doctors within 24 hrs					
Patients treated according to clinical guidelines					
Outcome indicators					
HbA1c results for diabetics (diabetes testing)					
Blood pressure results for hypertensive patients					
Mortality					
Functional status					
Health status measurement					
Quality of life					
Patient satisfaction					

(ii) Service Quality Dimension

In this section the researcher seeks to find out the extent to which the following indicators is employed in the facility at KNH

Reliability	Agree	Strongly Agree	Disagree	Strongly Disagree	Indifference
Promised service delivery					
Speedy patients' registration					
Accurate treatment					
Assurance					
Doctors & Nurses instilling confidence					
Rooms always secure					
Satisfactorily attitude of the Nurses					
Tangibility					
Ability to handle patients' problem					
Visually appealing facilities					
Availability of modern equipments					
Correct food portion and clean rooms					
Smart working professionals					
Power back up					
Availability of emergencies power					
Empathy					
Attentiveness of the Nurses					
Conveniently consulting hours					
Caring of Doctors to the patients'					
Responsiveness					
Response to patients'					
Enthusiasm in helping patients'					
Individualized attention to patients'					

APPENDIX 2: Krejcie and Morgan table (1970)

N	S	N	S	N	S
10	10	220	140	1 200	291
15	14	230	144	300	297
20	19	240	148	1 400	302
25	24	250	152	1 500	306
30	28	260	155	1 600	310
35	32	270	159	1 700	313
40	36	280	162	1 800	317
45	40	290	165	1 900	320
50	44	300	169	2 000	322
55	48	320	175	2 200	327
60	52	340	181	2 400	331
65	56	360	186	2 600	335
70	59	380	191	2 800	338
75	63	400	196	3 000	341
80	66	420	201	3 500	346
85	70	440	205	4 000	351
90	73	480	210	4 500	354
95	76	480	214	5 000	357
100	80	500	217	6 000	361
110	86	550	226	7 000	364

N= Population Size S= Recommended Sample Size

Sample Size for any given population
Krejcie & Morgan (1970: 608)