

**TOTAL QUALITY MANAGEMENT AND
OPERATIONAL PERFORMANCE OF PUBLIC HEALTH
FACILITIES IN MAKUENI COUNTY**

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DEDICATION

This work is especially dedicated to all my family members for their inspiration and prayers. Your support brought me this far

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ACRONYMS AND ABBREVIATIONS

SPSS: Statistical Package for Social Scientists

TQM: Total Quality management

ABSTRACT

The implementation of Total Quality Management in healthcare is aimed at creating a quality system that improves an organization's performance. A quality system can be defined as processes, procedures, responsibilities, resources and structure that an organization needs to improve on quality of its goods or services. Quality mainly focuses on policies, procedures, strategies, human resource, quality of activities and clients. The study objective was to ascertain total quality management practices used in public health facilities in Makueni County. Descriptive design of cross sectional type was used in this study to collect data on population thoughts, behaviors, attitudes and characteristics through acquiring responses to a set of prepared questions. The study used primary data. A questionnaire with both open and close ended questions was used to collect primary data where a response rate of 79% was realized. Analysis of the tabulated data was done using correlation, descriptive and regression statistics with the aid of SPSS version 22. The study used regression model to measure the relationship between independent variable and dependent variables. The study established a strong positive correlation between Operational performance which was the dependent variable and Leadership, Customer Focus, People Management, Process Management and Strategic planning which were the independent variables. The study concluded that total quality management and operational performance of public health facilities in Makueni County are positively related and that 72% of the changes in operational performance was contributed by the predictor variables (strategic planning, people management, leadership, customer focus) while 28% was influenced by other factors. The study recommends that the facilities implement actions necessary to achieve planned results, everyone in the organization should be involved in quality initiatives and staff should be regularly trained on total quality management practices. The study also recommended that there should be a defined way of getting customer feedback, customer complaints should be studied to establish a pattern and prevent further occurrences, the facilities especially Health Centres and Dispensaries should invest in technology and initiatives to continually offer new services or products to customers should be a main focus by all facilities. The study recommended further research to be conducted on total quality management and operational performance in other counties, and government ministries and in Makueni county using different variables to cover the 28% missing gap.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Any organization operating as an open system requires some form of a quality program that has been introduced by the top management, accepted and appreciated by everyone at all levels in that organization. While the requirements of each function or unit within an organization could be unique to that unit, it's important to note the quality processes for each of these units should be designed in a way that they all help in achieving the overall goal of the organization. One such quality program that encompasses several subsystems all designed towards achieving one goal, the goal of the organization, is Total Quality Management; commonly referred to as TQM. The focus of TQM, according to Goetsch and Davis (2014), is to ensure that efforts are put in place to improve quality at all organizational levels in an integrated manner. This is achievable if the top management of an organization initiates total quality management or improvement goals, provides resources required to implement TQM and clearly communicates these goals and expectations to all employees, who in turn appreciate these initiatives and work towards achieving them. In the process, a culture of quality is formed in the organization.

The implementation of TQM in healthcare is aimed at creating a quality system that improves a health facility's performance. A quality system can be defined as processes, procedures, responsibilities, resources and structure that an organization needs to improve on quality of its goods or services. Quality mainly focuses on policies, procedures, strategies, human resource, quality of activities and clients (Goetsch & Davis, 2014). In healthcare, quality indicators can be patient confidence with a healthcare facility, professionalism by health managers, timeliness in attending

to patients by health managers and other staff, timeliness in attending to emergencies by ambulance services and health managers and affordability of the services provided by healthcare facilities. In October 2016, the County Government of Makueni introduced the Universal Healthcare programme labeled MakueniCare. This was after a successful implementation of the pilot phase where all Makueni citizens aged 65 years and above received free treatment in all county hospitals beginning May 2016. The aim of this programme being to provide equitable, affordable and quality healthcare to all Makueni citizens through provision of curative and rehabilitative health services offered at all public health facilities within Makueni County free of charge. Quality management therefore focuses on the product and service quality as well as the processes involved.

Quality Management is an organization wide effort performed with top management support. The top management makes available resources and information required to successfully implement quality management (Augusto, Lisboa & Yasin, 2014). These approaches ensure flexibility, efficiency, effectiveness and competitiveness in an organization are achieved with the main goal being improved performance by the organization. Therefore, adoption and successful implementation of TQM requires attitude change, organizational cultural change and change in processes.

1.2 Total Quality Management Practices

Satisfying both the present and future needs of a customer is the overall goal of a quality strategy (Deming, 2013). Quality is conformance to requirements. These requirements include responsiveness, empathy, assurance, reliability and physical attributes (Juran, 2016). Application of TQM approach, developed by Deming after the Second World War, as a means to quality improvement is the focus of many organizations. TQM focuses on zero defects and continuous improvement aimed at

meeting customer needs. National Round Table on Health Care Quality, USA established the way to improve the serious and extensive patient care problems facing healthcare quality requires Continuous quality improvement.

Total Quality Management practices give an organization a competitive advantage. Leadership, People Management, Strategic Planning, Customer Focus, Information and analysis, Continuous improvement and Process management are the main Total Quality Management Practices. Leadership practice holds that top management's support in availing resources and information on organizational quality and communicating to employees at all levels is key to the organization's success in TQM implementation. Strategic planning involves factoring in changes in the environment and including employees in making short, medium term and long term goals on quality implementation, continuous review and monitoring of these goals and taking necessary actions. Customer focus involves actions taken by an organization to continually keep on assessing the needs and requirements customers and factor them in the organization's quality improvement efforts. People management involves communication, training, development, reward and recognition and team spirit initiatives aimed at creating awareness and empowering employees at all levels on what is expected of them.

1.2.1 Operational Performance

Operational performance is the process through which every business unit in an organization works together with all other units, with the aim of achieving the business objectives. The stakeholders within the health sector include doctors, nurses, management, shareholders and the general community within which the health facility exists. According to Herzallah et al. (2014), Customer service, organizational learning

and quality of internal processes are some of the long term activities that can create value in an organization's performance.

Several approaches that many Performance Management systems borrow from include Benchmarking, Balanced Scorecard and Business Process Re-engineering (BPR). If Operational Performance in terms of effectiveness and efficiency is to be evaluated and assessed accurately, Measurement should be part of the Performance Management system (Khanam, Siddiqui & Talib, 2016).

1.2.2 Public Health Facilities in Makueni County

Located in the former Eastern Province of Kenya, Makueni County has a population of 884,527 as per 2009 census. Currently, Makueni County has one County Referral Hospital located in Wote Town, the headquarters of Makueni County. There are eight sub-county hospitals, thirty eight health centers and one hundred and five dispensaries. The total number of operational public health facilities in Makueni County is currently at one hundred and fifty two. There are also seventy one private health facilities in Makueni County but for this study, focus will be on the public health facilities in Makueni County.

In October 2016, the county government of Makueni launched the Universal Healthcare Plan aimed at ensuring that healthcare services are accessed by more resident citizens. In this program, every household pays registration fee of Ksh. 500 then accesses healthcare services at all public health facilities within the county, at no cost.

1.3 Research Problem

In an organization, each stakeholder group is likely to have a different view of organizational performance therefore making it necessary that the researcher selects the perspective of performance that best relates to the stakeholder. These perspectives result in different interpretations of a successful performance (Mohammad, 2014). Further, organizations operate in different environments making performance measurement situational.

The Ministry of Health has made continuous efforts and developed policies and reform agenda to ensuring health and socio economic development (Doherty, 2015). This has been done by ensuring involvement of key stake holders in the planning processes through consultative workshops within the Ministry of Health and with the stakeholders in the ministry including Teaching and research institutions, development partners, the private sector, NGOs, communities and users of Health Services.

However, despite these efforts, transforming the health sector using interventions and operations outlined in the National Health Strategic have not been fully implemented (Ojaka, Olango & Jarvis, 2014). This may be as a result of several factors including lack of proper consultations with key stakeholders, poor management systems, inadequate consultations among staff, poor institutional co-ordination, and lack of motivation by staff at all levels and poor resource accountability.

A study by Arshida and Agil (2012) In Tanzania public sector performance establishes commitment by top management in all stages as an important aspect in ensuring TQM is implemented seamlessly. Varghese (2013) emphasizes that if initial adoption of TQM can be related to introduction of a new policy in an organization. Thus, learning of new way of doing things is inevitable.

Thus, this study focuses on the TQM practices in public health facilities in Makueni County Government and seeks to answer the questions as to what the total quality management practices being implemented by health facilities in Makueni County are, What relationship is there between TQM practices and operational performance of public health facilities in Makueni County, and lastly what challenges do these health facilities face during TQM implementation.

1.4 Research Objectives

The general objective of the study was to ascertain total quality management practices used in public health facilities in Makueni County; the specific objectives were:

- i. To establish total quality management practices implemented by health facilities in public health facilities in Makueni County
- ii. To determine the relationship between total quality management practices and operational performance of public health facilities in Makueni County
- iii. To identify the constraints faced by public health facilities in the implementation of TQM practices

1.5 Value of the Study

The health sector has recorded remarkable growth in Kenya. The desire to efficiently and effectively gain a competitive advantage by offering quality modern health services in the sector has triggered need for implementation of quality management practices. This study will be very resourceful in providing health institutions with information on the best quality management practices that can be implemented and their effect on organizational performance as well as the challenges faced while implementing these Quality management practices in health facilities.

Academicians/Researchers interested in doing research in the area of Quality and Quality management can use this research as a form of reference or basis for further research. Other firms interested in improving quality management can use this research to get insights on how to implement Quality management practices in order to increase productivity and competitiveness.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Presented in Literature is a review of theories relating to TQM and organization performance. Secondly, a review of empirical studies that shows TQM practices in organization of public health facilities in Makueni County and the conceptual argument. A summary of the literature review and the gaps identified which form the basis of study is presented at the end of this chapter.

2.2 Theoretical Literature Review

A theory is defined as coherent statements or set of ideas that explains observed facts or phenomena and organize knowledge about the world (Neuman, 2010). To determine if a theory is suitable for researching a phenomenon, it should meet certain criteria. Specifically, this sub-section briefly examines theories that are pertinent to the study variables based on their functionality and flexibility. These theories are discussed below:

2.2.1 Leadership Based Theory

The theory suggests that leadership plays an important contributor to successful implementation of Total Quality Management. Follett (1940) suggested "the law of the situation" and that managers needed to shift concentration to improving methods. Lussier and Achua (2015) developed the "moral factor about leaders and specified a leader's responsibilities to employees by subordinating individual interest to the good of the whole organization"

Leadership is imparting influence on people to endeavor willingly in order to achieve group goals. (Antonakis & House, 2013). A leader's effectiveness is based on the prominence on task and people behavior in relation to the task. Approaches to leadership change over time; from telling or coaching to involvement then to delegation. In the same way, TQM changes over time, from first encouraging individuals to participate in Quality management or quality improvement programs to these individual willingly participating in the quality design process.

2.2.2 Institutional Theory

Institutional Theory states that actions and processes of an organization are driven by actors in its environment and therefore organizational actors dictate strategy implementation (Dacin et al., 2007). Organizations try to fit in with the norm by adopting strategy implementation that validates them as part of the organizational field. Powerful influences within organizations are structured by organizational the field in which an organization operates (Ahmad et al., 2014).

The adoption of a system such as strategy implementation depends on the extent to which an organization has adopted practices that conform to the institutional environment including culture and regimes that have a central authority system (Augusto et al., 2014). Institutions provide accounts of the social and legal structure for each individual entity. When organizations adopt the culture or borrow from the culture within their operational areas, the nations and practices take shape over time and how the organization handles its day to day activities will be based on the culture around the organization. Studies on institutional theory should focus more on the public sector organizations, which are more inclined to institutional forces than their profit-oriented counterparts (Jensen, William & Mackling, 1976).

2.3 Total Quality Management Practices

Application of TQM practices in each organizational aspect is the goal of TQM. There are eight practices that should be taken in TQM implementation. These are Process Management, Customer Focus, Culture, Leadership, People Management, Continuous Improvement, Strategic quality planning.

2.3.1 Process Management

Process management is found on the view that an organization's product is as a result of several activities. If the flow of these activities is to be standardized, whether performed by people or machines and the benefits of these activities are to be realized, they need to be organized in a way that the interrelationship between each one of the activities is understood and the business objective is achieved. This organization is done through business processes management (Chang, 2010). In Process Management, an organization endeavors to make performance better through activity management and optimization.

If processes are understood and properly managed, they become an asset to the organization because they deliver value added products and services to customers (Weske, 2012). Continuous improvement of these processes by introduction of new technology and new way of doing things, proper management and control of all business activities improves the organization's performance by increasing efficiency and value-addition of the products and services offered. As a result, customer needs are met and the organization is ready to face changes in the environment giving the organization a competitive advantage. It's important for organizations to understand that process improvement must be guided by a clear understanding of customer needs and expectations.

2.3.2 Customer Focus

The ultimate role of any organization is to attract, serve and retain customers. Organizations operate in a dynamic environment with even more dynamic customer preferences yet an organization's process, service or product cannot have significance without customers. Activities done by an organization are done for the customer. Customers not only help an organization to outline its quality perception but also provide direction and guidance on quality improvement efforts (Cai, 2009). Customer requirements keep on changing due to reasons often uncontrollable and unpredictable. This means that organizations should continually keep on assessing the needs and requirements of its customers and factor them in the organization's quality improvement efforts because if they do not do so, there is a risk of losing their customers to their competitors. To achieve this, organizations need to have a way of measuring customer's satisfaction levels to their product or service, understand the customer's present and future needs as well as a way to integrate the needs of their internal customers with those of their external customers (Sousa, 2003).

Customer focus affects the production and operational outcome of any organization which consequently affects the financial performance. For organizations to deliver superior quality compared to their competitors, understanding their customer preferences well should come before making any changes in their systems, products, services and processes. Organizations have come up with different ways of addressing customer needs. Some have customer service plans which help in learning what the customer needs and also what the organization's strengths and weaknesses are, what products customers would want changed, improved or modified. Others conduct customer satisfaction reviews that encourage feedback from customers on what their needs, concerns and hopes are. Others have customer service charters well displayed

in all departments and pathways. All these efforts have the objective of establishing customer preferences and any weakness area within the organization that can have an impact on the quality of products or services offered by the organization with the view of meeting and exceeding customer expectations (Sousa, 2003). Once customer needs and expectations are understood, a way of balancing these needs with those of other stake holders is devised, these needs and expectations communicated to every employee in the organization to ensure every employee's commitment to meeting these expectations, then continuous monitoring, evaluation and acting on results is conducted to manage customer relations.

2.3.3 People Management

One of the key tenets of TQM is continuous improvement. People, often referred to as human resource, play a major role in TQM implementation (Weske, 2012). This implies that management and staff at all levels are very important for the success of quality implementation in any organization. People management involves communication, training, development, reward and recognition and team spirit initiatives aimed at creating awareness and empowering employees at all levels on what is expected of them.

Training and education of employees about Quality improvement at all organizational levels creates awareness and provides information related to the organizations Quality vision, mission and the desired quality path, Zakuan et al. (2012). Through training, employees acquire skills, competences and knowledge on what is required of them and what the organization desires to achieve. It also ensures that Quality becomes a part of each employee's personal lives thus creating a culture of Quality in the whole organization. When organizations create an environment where employees feel

empowered and appreciated, these employees feel indebted and stay longer in the organization and this leads to retention of existing skills and talent by the organization and total commitment creating a competitive edge. This leads to an increase in efficiency levels by the employees (Cabrera & Cabrera, 2005).

Another aspect of people management is promotion of teamwork. Teamwork is a key element in successful TQM implementation. Teams provide fast and better solutions to problems. In operations and process improvement, teams provide more permanent solutions (Ngeta, 2009). People usually bring up problems or challenges encountered when in teams as they will get solutions or help from other employees across the teams.

2.3.4 Leadership

In any key organizational decision, Leadership plays a significant role. As a result, an organization's decision success highly depends on the commitment and support of top management (Arshida & Agil, 2012). This is done by providing the required resources, creating quality policy for the whole organization, creating a culture of Quality within the organization, communicating this policy to all and managing the entire process through close monitoring and evaluation.

The commitment of top management is necessary in ensuring success in implementation of TQM (Arshida & Agil, 2012). It is the role of the top management to come up with a clear quality mission, quality goals and quality values then communicate to all employees (Okwiri, 2012). Therefore, from the initial stages all through the whole process, an organization's top management has to champion the process of managing quality.

2.4 Operational Performance

When waste is reduced, quality improved and efficiency enhanced as a result of successful TQM implementation and continuous improvement, customer satisfaction, stakeholders satisfaction, profitability and market share increases, thus enhancing overall organizational performance. Since customer preferences keep on changing, the quality of a product or service should also change (Ngeta, 2009). Therefore, continuous improvement especially on inputs and organizational processes is a principle that organizations should adopt if their operational performance is to improve (Varghese, 2013).

Customer satisfaction and subsequent loyalty will be enhanced through quality, and this will lead attraction and retention of more new customers generating more repeat business and giving an organization a competitive advantage. Successful TQM Implementation ensures that inefficiencies are eliminated, customer satisfaction is enhanced, everything is done right the first time and the best practices are achieved. All these help in promoting operational performance since costs associated with waste and rework and overall cost of production are eliminated. Other TQM principles that have a positive impact on operational performance include education and training, relationship with stakeholders, continuous improvement and organizational culture.

2.5 Total Quality Management Practices and Operational Performance

If an organization successfully implements TQM practices, the outcome will be more satisfied customers. This will again lead to customer loyalty and repeat business will be assured. New customers will also be attracted into the organization's offering through word of mouth, reducing costs associated with marketing (Wiklund & Edvardsson, 2013). Reduced wastes and costs, enhanced customer loyalty due to

satisfaction, increased market share and increased profitability are all products of improved operational performance created as a result of successful TQM implementation.

The philosophy of TQM emphasizes on devolving authority to the front line staff by ensuring everyone participates in the decision making process through teamwork (Wiklund & Edvardsson, 2013). This way, employees own the whole process and innovations geared towards improving quality are encouraged. Every employee will also ensure that they do their work right the first time minimizing cost, improving efficiency and creating value to the customer. All these ensure a stable production process, encourage continuous improvement, and promote achievement of best practices thus enhancing operational performance.

An organization can limit of suppliers it uses and equip them with necessary technology and training required in their quality improvement effort. This approach, if efficient, reduces the total cost of production because suppliers will meet the expectations of the organization and will also be in line with the total inclusion of all stakeholders in total quality approach. There is also the aspect of having an integrated way of analyzing an organization's operations through the production process and customer satisfaction.

2.6 Empirical Review

By determining a vision and developing commitment by healthcare service providers, the Organizational leaders will have shaped effective quality performance and this will influence positively on these individual's performance on quality activities set by the health care organization (Deborah, 2010). Across all sectors, a successful TQM implementation helps improve an organization's performance such that a successful TQM implemented in manufacturing can provoke healthcare stakeholders to study whether if implemented in the healthcare sector, the results would be improved healthcare service delivery, if patients would be satisfied, if the attitude of caregivers is positively improved and if the time taken to attend to patients is reduced without compromising on the quality of service rendered.

In a research that adopted both qualitative and quantitative research methods to discover the critical success factors that affected TQM implementation in Libyan construction companies in 2015, Lussier and Achua based their findings on the 200 questionnaires distributed to general and quality managers in forty five construction contracting companies in both private and public sectors within the town of. 130 responses were realized in the structured survey. To analyze the data, Factor analysis was used. The results identified five TQM elements namely training and development to improve quality, organization management, employee involvement and recognition in quality initiatives, culture and communication to improve quality (Lussier & Achua, 2015).

Zakuan et al. (2012) studied the critical success factors of TQM implementation in Health Institutions basing their study on reviewing relevant literatures in relation to implementation of TQM. The study focused on adoption and implementation of TQM in Health institutions, the impact of TQM implementation on these institutions and the

most encouraged indicators in TQM adoption. The study found out that an organizations strategy of managing quality involves identification, classification, analysis and reaction to changes in quality management contributed to the success of TQM implementation in that organization.

Shipton et al. (2008) carried out a study in Zambian tourism industry with an objective to discover the factors that lead to successful TQM implementation on the operational and organizational performance. Employing phone interviews and documentation as the data collection methods, they identified TQM factors to include how top management has embraced quality practices, customer focus, the level of employee involvement in quality management systems, the process of quality improvement and tools and techniques used in quality implementation. Based on their findings, the above factors affected, to a great extent, customer satisfaction, market share, internal processes and the environment consequently affecting the industry's performance.

Wanderi (2015) studied the factors influencing implementation of TQM in construction companies in Rwanda. Considerations by the study were Organization culture, Employee education and training, top management commitment and communication. A descriptive research design was used. The sample size was determined using Stratified random sampling. Structured questionnaires were administered to the respondents in order to get primary. A Cronbach alpha coefficient was computed using SPSS and generated the value of 0.843. Comparing this value with the threshold of 0.7 ensured reliability of the questionnaire. The study revealed that the factors under consideration contributed to successful TQM implementation in Construction Companies in Rwanda. The study recommended that strategic measures should be taken by organizations implementing TQM to ensure that commitment and participation by top management to quality initiatives is achieved all through.

2.7 Summary and Gaps

From the literature review most studies are associated with TQM adoption and implementation in other sectors and focus is on adoption of organizational quality policies, tools and procedures. There is limited research if any on the TQM practices among the health facilities in Kenya. This is a gap which needs to be filled up and this study aims at filling the gap.

Author	Study	Findings	Gap/Conclusions
Deborah (2010)	<i>The impact of effective leadership on quality</i>	The study found the effective leadership is closely related with efficiency in work place	Failed to connect TQM practices with effective leadership
Lussier and Achua (2015)	<i>Leadership: Theory, application, & skill development.</i>	Effective leadership is related with accurate application of skills and TQM practices	Failed to suggest some of the theoretical perspective of effective leadership
Zakuan et al. (2012)	<i>Critical success factors of total quality management implementation in higher education institution:</i>	Concluded that management, leadership commitment effect TQM implementation in schools and other institution	Generalization aspect of the study which is not applicable in all sectors
Shipton et al (2008)	<i>The impact of leadership and quality climate on hospital performance</i>	TQM factors to include how top management has embraced quality practices, customer focus, the level of employee involvement in quality management systems, the process of quality improvement and tools and techniques used in quality implementation	Lack of clear precision of the factors impacting on TQM implementation
Wanderi (2015)	<i>Factors Influencing Implementation Of Total Quality Management In Construction Companies In Rwanda</i>	Organization culture, Employee education and training, top management commitment and communication contributed to successful TQM implementation in Construction Companies in Rwanda	Lack of wide range of test of data reliability and other test

2.8 Conceptual Framework

The relationship between the dependent variable and the independent variable is established by the conceptual framework. In this study, the TQM practices are the independent variables. They include Leadership, Customer Focus, Process Management, People Management and strategic planning. The independent variable is Operational performance with Efficiency, Customer Satisfaction, Workload, Effectiveness and Waiting time being Operational performance indicators under study.

2.8.1 Conceptual Model

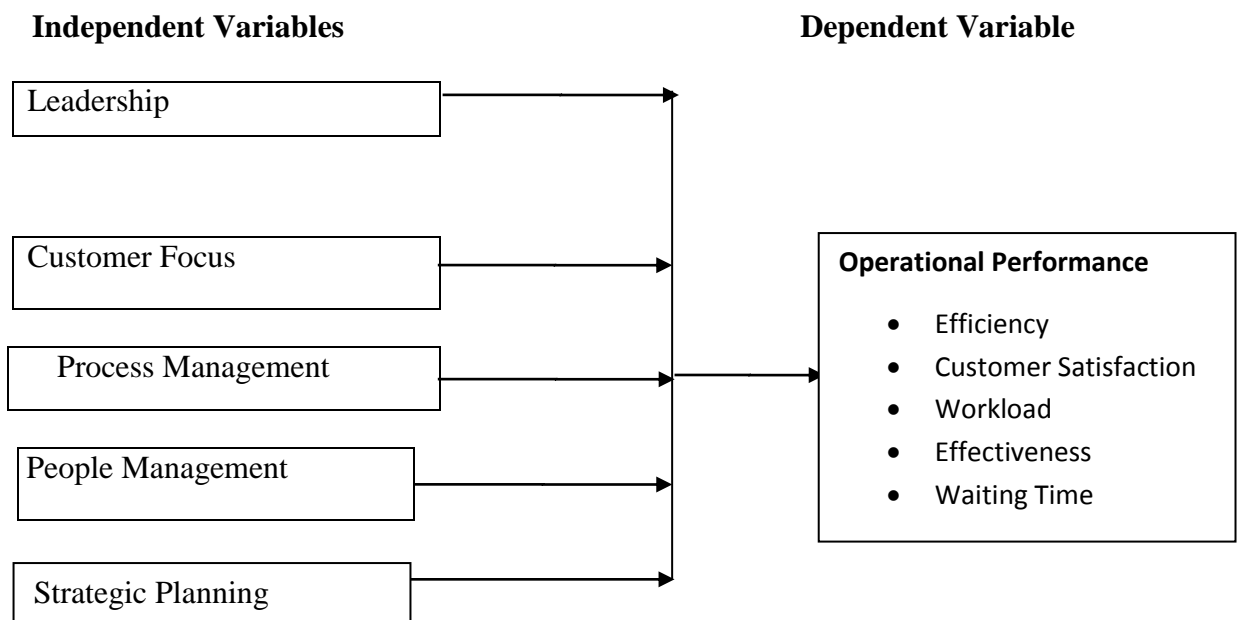


Figure 2.1: Conceptual Framework

Source: Researcher (2017)

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

Research methodology refers to the techniques used by the researcher in the field while collecting and the techniques used to examine the collected data. The design of the research, the population the researcher was targeting, the sample size that the researcher worked with, the procedure the researcher used while sampling and the technique the researcher used to collect and analyze data are all major concerns in Research methodology.

3.2 Research Design

Descriptive design of cross sectional type was used in this study to collect data on population thoughts and behaviors, attitudes, characteristics through acquiring responses to a set of prepared questions. In Descriptive research, data is systematically collected using research instruments which can have open or close ended questions or both. Interviews and observations are also instruments used in descriptive research. The instruments are then administered to a representation of the population. In terms of cost and time, this research design is less expensive thus ideal (DeVault, 2015). In addition, the data that collected will be of high quality since similar questions are asked to all participants thus reducing any bias.

3.3 Population of the Study

All operational health facilities in Makueni County formed the study population. Currently, there are 152 operational health facilities spread across the county of Makueni.

3.4 Sample Design

A sample of 46 health facilities was chosen using proportionate stratified random sampling. The sample size was 30% of the population size in each strata. The strata consisted of the County Referral Hospital, Sub-County Hospitals, Health Centers and Dispensaries.

Strata	Population	Sample
County Referral Hospitals	1	1
Sub-County Hospitals	8	3
Health Centers	38	11
Dispensaries	105	31
Total	152	46

Source: Researcher (2017)

3.5 Data Collection

The study used primary data. A questionnaire with both open and close ended questions was used to collect primary data. In the sub-county and county referral hospitals, the questionnaires were administered to the Hospital Medical Superintendents, Nursing Officers in Charge and Health Administrative Officers. In the Health Centers and Dispensaries, the questionnaires were administered to the facility-in-charges in this case Registered Clinical Officers for Health Centers and Community Health Nurses for Dispensaries. Responses provided to the close ended questions formed a basis for computation and analysis of this data with ease. Responses from the open ended questions allowed a bigger depth of response which added quality to the collected data. The questionnaire was divided into sections. The first section had the respondent's bio data, The second section sought to ascertain the TQM practices used in Public Health facilities in Makueni, The third subdivision

sought to determine the relationship between TQM and operational performance of public health facilities in Makueni County and the fourth section sought to identify the challenges faced by public Health facilities in Makueni during TQM implementation.

3.6 Data Analysis

Data analysis involves systematically searching and arranging interview responses, responses to questionnaires and any other material obtained from the field, with an aim of increasing the level of understand of the inform as well as enable the researcher present this data to others (Mackey & Gass, 2015)

The purpose of data analysis is to bring structure, order and meaning to the information collected in mass. The first step once the researcher is through with the field is to adequately check if the questionnaires are all filled; for data verification. Data is then tabulated and classified in line with the research objectives. This data is then subjected to qualitative analysis and quantitative analysis (Flick, 2015).

The outline of the questionnaire guided the researcher in arranging data collected in a chronological way thus ensuring the right code was keyed in for the correct objective and tabulated correctly. Analysis of the tabulated data was done using correlation, descriptive and regression statistics with the aid of SPSS version 22. Quantitative data was analyzed through statistical techniques. The data was generated with the help of SPSS and presented using tables. Qualitative data was analyzed using descriptive statistics.

The study used regression model to measure the correlation between independent variable and dependent variables.

The model was as follows;

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon, \text{ Where,}$$

Y = Operational Performance

β_0 = constant (coefficient of intercept)

X_1 = Leadership

X_2 = Customer Focus

X_3 = Process Management

X_4 = People Management

X_5 = Strategic Planning

CHAPTER FOUR

DATA ANALYSIS, FINDINGS AND DISCUSSIONS

4.1 Introduction

This chapter presented data analysis and discussions. The study objective was to establish the relationship between total quality management and operational performance of public health facilities in Makueni County.

A total of forty eight questionnaires were sent to the hospital administrators, medical superintendents and health facility in charges. Thirty eight questionnaires were filled and returned representing a response rate of 79%. A high response rate assures more accurate results and validity of data according to (Warner, 1988). This response rate was considered precise and a true representation of the facts on the ground.

4.1.1 Age of the Respondents

The study established that the respondent's age was as follows;

Table 4.1: Age Distribution of the Respondents

	Frequency	Percent
20 years and below	2	5.3
21-30 years	14	36.8
31-40 years	12	31.6
41-50 years	8	21.1
51 years and Above	2	5.3
Total	38	100.0

The study established that the majority were between 21-30 years at 36.8%, 31-40 years at 31.6%, 41-50 years at 21.1% , 20 years and below 5.3% and 51 years and above were 5.3%. This indicated that majority of the respondents had attained the age of majority.

4.1.2 Level of Education of the Respondents

The study established that the respondent's education level was as follows;

Table 4.2: Education Level

	Frequency	Percent
Certificate	5	13.2
Diploma	12	31.6
Degree	15	39.5
Masters	6	15.8
Total	38	100.0

The study established that the education level of the respondents was as follows: the holders of degree were 39.5%, diploma 31.6%, Masters 15.8% and Certificate 13.2%, This indicated that majority of the respondents were knowledgeable and could understand the area of the study.

4.1.3 Work Experience of the Respondents

Respondent's work experience in healthcare was established as follows:

Table 4.3: Work Experience

Work Experience	Frequency	Percent
5 years and below	13	34.2
6-10 years	16	42.1
11-15 years	6	15.8
16 Years and above	3	7.9
Total	38	100.0

The study established the work experience of the respondents as follows: those between 6-10 years were 42.15%, 5 years and below were 34.2%, 11-15 years 15.8%, 16 Years and above 7.9%. This indicated that the respondents had adequate knowledge of the job field and they could understand the area of the study.

4.2 Descriptive Statistics

4.2.1 Total Quality Management Practices

The study sought to establish the total quality management practices implemented by public health facilities in Makueni County.

Table 4.4: Total Quality Management Practices

Total Quality Management Practices	Mean	Std. Deviation
The facility has defined it's processes to ensure that they meet the expectations of patients	4.0000	.77110
The facility has defined it's processes to ensure that they meet the expectations of suppliers	3.8421	.97333
The facility has defined it's processes to ensure that they meet the expectations of the Ministry of Health	3.7895	1.01763
The facility monitors it's processes to ensure that they meet the expectations of the Ministry of Health	3.7105	.86705
The facility has measures in place to ensure that they meet the expectations of all stakeholders	3.73684	1.057386
The facility has put in place measures to continuously improve the quality of services rendered	2.6842	1.29667
Customer complaints are studied to establish a pattern and prevent further occurrences	3.7632	.97077
Staff are regularly trained on Total quality Management practices	4.2105	1.25543
A culture of Integrity, ethics and trust has been cultivated in the facility	4.1053	1.35147
The facility implements actions necessary to achieve planned results and continuous improvement	4.2368	1.19536
Staff have been trained on Total quality Management practices	4.2105	1.27678
The facility has put in place measures to reduce any errors during service delivery	4.0526	1.45095

The above statements were measured using a likert scale of 1-5 where 1 = No extent, 2 = Small Extent, 3 = Neutral, 4 = Great Extent, 5 = Very Great Extent. The study established that to a great extent, the facilities had defined their processes to make sure

that they met the expectations of patients, suppliers, the ministry of health and that the facilities monitor their processes to ensure that they meet the expectations of the ministry of Health($M = 4.00, SD = 0.77$) ; ($M = 3.84, SD = 0.97$) ; ($M = 3.78, SD = 1.01$) and ($M = 3.71, SD = 0.86$) respectively.

On customer satisfaction, the respondents agreed to a great extent that the facilities had put measures in place to ensure that they meet the expectations of all stakeholders and customer complaints were studied to establish a pattern and prevent further occurrences ($M = 3.73, SD = 1.05$) and ($M = 3.76, SD = 0.97$) respectively. The respondents also agreed that the facilities had put measures in place to continuously improve the quality of services offered ($M = 2.68, SD = 1.29$).

On leadership and people management, the study established that a culture of integrity, ethics and trust had been cultivated in the facilities, staff are regularly trained on Total quality management practices and the facilities implement necessary actions to achieve desired results and continuous improvement to a great extent ($M = 4.10, SD = 1.35$) ; ($M = 4.21, SD = 1.25$) and ($M = 4.23, SD = 1.19$) respectively.

4.2.2 Operational Performance

The study sought to establish operational performance of public health facilities in Makueni County against stated measures of performance. A likert scale of 1 to 5 whose 1 = Strongly Disagree , 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree, was used.

Table 4.5: Operational Performance against Stated Measures of Performance

Measure	Std.	
	Mean	Deviation
The facility has invested in technology	4.4211	1.19981
Use of technology has improved efficiency and effectiveness	4.7105	.69391
Technology used is current and helps in service delivery	4.8684	.34257
Customer complaints are addressed promptly	4.4211	1.26559
The facility has a system for receiving customer feedback	4.2895	1.37365
The facility has initiatives to continually offer new services or products to customers	4.237	1.4784

The study established that majority of the respondents strongly agreed that the use of technology has improved efficiency and effectiveness and the technology used is current and helps in service delivery (M = 4.71, SD = 0.69) and (M = 4.86, SD = 0.34) respectively.

The study also established that majority of the respondents agreed that their facility has invested in technology and that customer complaints were addressed promptly (M = 4.42, SD = 1.19) and (M = 4.42, SD = 1.26). Also, the respondents agreed that the facilities have a system for receiving customer feedback and that facilities have initiatives to continually offer new services or products to customers (M = 4.29, SD = 1.37) and (M = 4.23, SD = 1.47) respectively.

Further, the study sought to establish the facilities operational performance against stated objectives that were measured in a likert scale of 1-5 with 1 = Much Worse, 2 = Worse, 3 = Neutral, 4 = Better, 5 = Much Better as shown in the table below;

Table 4.6: Operational Performance against Stated Objectives

Operational Performance	Std.	
	Mean	Deviation
Average waiting time for patients coming to the facility for procedures	4.3947	1.26362
Average waiting time for patients coming to the facility for outpatient services	4.4474	1.20129
Time taken by the facility's ambulance services to respond to emergencies within the county	4.7632	.75101
Workload in relation to set targets	4.7368	.75995

The study established that workload in relation to set targets and the time taken by a facility's ambulance services to respond to emergencies within the county were much better (M = 4.73 , SD = 0.76) and (M = 4.76 , SD = 0.75) respectively.

The study further established that the average waiting time for patients coming to the facility for procedures and the average waiting time for patients coming to the facility for outpatient services was better (M = 4.39 , SD = 1.26) and (M = 4.44 , SD = 1.20) respectively.

The study is in agreement with that of Varghese (2013) that continuous improvement especially on inputs and organizational processes is a principle that organizations should adopt if their operational performance is to improve.

4.3 Relationship between Total Quality Management and Operational Performance

The study sought to establish the relationship between Total Quality Management practices (i.e. leadership, customer focus, process management, people management and strategic planning) and operational performance. To achieve this, correlation and multiple regression analyses were performed on the data with the following results:

4.3.1 Correlation Analysis

Pearson's product moment of correlation was used. The study assessed the independent variables' influence on operational performance of health facilities in Makueni County at 99% level of confidence.

Table 4.7: Correlation Analysis

		Operational Performance	Leadership	Customer Focus	Process Management	People Management	Strategic Planning
Operational Performance	Pearson Correlation	1	.573**	.507**	.577**	.468**	.670**
	Sig. (2-tailed)		.000	.001	.000	.003	.000
	N	38	38	38	38	38	38
Leadership	Pearson Correlation	.573**	1	.541**	.548**	.619**	.227
	Sig. (2-tailed)	.000		.000	.000	.000	.171
	N	38	38	38	38	38	38
Customer Focus	Pearson Correlation	.507**	.541**	1	.872**	.973**	.253
	Sig. (2-tailed)	.001	.000		.000	.000	.125
	N	38	38	38	38	38	38
Process Management	Pearson Correlation	.577**	.548**	.872**	1	.897**	.375*
	Sig. (2-tailed)	.000	.000	.000		.000	.020
	N	38	38	38	38	38	38
People Management	Pearson Correlation	.468**	.619**	.973**	.897**	1	.210
	Sig. (2-tailed)	.003	.000	.000	.000		.205
	N	38	38	38	38	38	38
Strategic Planning	Pearson Correlation	.670**	.227	.253	.375*	.210	1
	Sig. (2-tailed)	.000	.171	.125	.020	.205	
	N	38	38	38	38	38	38

*. Correlation is significant at the 0.05 level (2-tailed).

The results indicate show a positive and significant correlation between all the Total Quality Management practices studied and operational performance:

Leadership and operational performance, $r(46)=.573$, $P=.000$; Customer focus and operational performance, $r(46)=.507$, $P=.001$; Process management and operational performance, $r(46)=.577$, $P=.000$; People management and operational performance, $r(46)=.468$, $P=.003$; Strategic planning and operational performance, $r(46)=.670$, $P=.000$.

4.3.2 Regression Analysis

The influence among predictor variables was tested using multiple regression analysis as shown in the tables below:

Table 4.8: Model Summary

Model	R	R Square	Adjusted Square	R Std. Error of the Estimate
1	.853 ^a	.728	.685	.50974

a. Predictors: (Constant), Strategic Planning, People Management, Leadership, Process Management, Customer Focus

From the model, it was ascertained that 72% of the changes in operational performance is contributed by the predictor variables (strategic planning, people management, leadership, customer focus) while 28% is influenced by other factors.

This is in agreement with Varghese (2013) who stated that successful TQM implementation should ensure that inefficiencies are eliminated, everything is done right the first time, the best practices are achieved and continuous improvement especially on inputs and organizational processes is a principle that organizations should adopt if their operational performance is to improve.

4.3.3 Analysis of Variance (ANOVA)

Analysis of Variance (ANOVA) was carried out to test for the significance of the variables on the overall model.

Table 4.9: ANOVA

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	22.238	5	4.448	17.117	.000 ^b
Residual	8.315	32	.260		
Total	30.553	37			

a. Dependent Variable: Operational Performance

b. Predictors: (Constant), Strategic Planning, People Management, Leadership, Process Management, Customer Focus

The results show that the model was significant, $F(5,32)=17.12, P=.000$ confirming further that the Total Quality Management practices studied are good predictors of operational performance.

The results are in agreement with several scholars on the total quality management practices as good predictors of operational performance. Weske (2012) stated that if processes are understood and properly managed, they become an asset to the organization because they deliver value added products and services to customers.

Cai (2009) stated that customers not only help an organization to outline its quality perception but also provide direction and guidance on quality improvement efforts. When organizations create an environment where employees feel empowered and appreciated, the employees feel indebted to stay longer in the organization leading to retention of existing skills and talent by the organization thus creating a competitive edge (Cabrera & Cabrera, 2005).

4.3.4 Significance of Regression Coefficients

The strength and significance levels of the variables was tested using Multiple Regression Coefficient as shown in the table below.

Table 4.10: Significance of Regression Coefficients

Model	Unstandardized		Standardized		
	B	Std. Error	Beta	T	Sig.
(Constant)	1.310	.477		2.744	.010
Leadership	.422	.104	.526	4.072	.000
Customer Focus	.740	.270	1.226	2.742	.010
Process Management	.283	.146	.455	1.933	.062
People Management	-1.016	.361	-1.541	-2.817	.008
Strategic Planning	.338	.096	.393	3.528	.001

a. Dependent Variable: Operational Performance

The results show that Leadership, Customer focus, people management and strategic planning significantly predicted operational performance. However, Process management, whose level of significance is greater than 0.05 did not significantly influence operational performance.

With regression model $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \epsilon$ the study established that ;

$$Y = 1.310 + .422 X_1 + .740 X_2 + .283 X_3 - 1.016 X_4 + .338 X_5 \text{ where:}$$

Y= Operational Performance

β_0 = constant (coefficient of intercept)

X_1 = Leadership

X_2 = Customer Focus

X₃= Process Management

X₄= People Management

X₅=Strategic Planning

Wiklund and Edvardsson (2013) stated that the philosophy of TQM emphasizes on devolving authority to the front line staff by ensuring everyone participates in the decision making process through teamwork. This way, employees own the whole process and innovations geared towards improving quality are encouraged. Every employee will also ensure that they do their work right the first time minimizing cost, improving efficiency and creating value to the customer. All these ensure a stable production process, encourage continuous improvement, and promote achievement of best practices thus enhancing operational performance. Thus, managing the processes alone is not enough.

4.4 Challenges faced in TQM Implementation

The study sought to establish the challenges faced by public health facilities in Makueni County while implementing Total Quality Management practices. This was measured using a likert scale of 1-5 thus, 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree as shown in the table below;

Table 4.11: Challenges faced in TQM Implementation

Challenges faced in TQM Implementation	Mean	Std. Deviation
The top management in the ministry shows commitment to quality	4.7368	.72351
The facility has a quality manual	4.3421	1.38088
The facility involves all employees in decision making	4.3421	1.25798
The facility communicates it's objectives to all employees	4.4474	1.08297
The facility has a way of measuring quality performance	4.5263	.97916
The facility implements actions necessary to achieve planned results and continuous improvement	4.4474	1.08297
Staff have been trained on Total quality Management practices	4.4211	1.22213
Teamwork is encouraged at all times	4.4211	1.22213
Everyone in the organization is involved in Quality initiatives	4.3421	1.38088
The facility has attempted to get accreditation	4.3421	1.38088
The management supports research and collection of wide range of data and information about quality to make continuous improvements	4.0526	1.59301
Organizational objectives are communicated to all staff members	4.4474	1.13179

The study established that majority of the respondents strongly agreed that the top management in the ministry shows commitment to quality ,most facilities have a quality manual, the facilities involve all employees in decision making and the facilities communicate their objectives to all employees ;

(M = 4.73 , SD = 0.72) , (M = 4.34 , SD = 1.38) , (M = 4.34 , SD = 1.25) and (M = 4.44 , SD = 1.08) respectively.

The study further established that majority of the facilities have a way of measuring quality performance, staff have been trained on total quality management practices ,teamwork is encouraged at all times, everyone in the organization is involved in quality initiatives, majority of the facilities have attempted to get accreditation, the management of most of the facilities supports research and collection of wide range of data and information about quality to make continuous improvements and organizational objectives are communicated to all staff members in most of the facilities; (M = 4.52 , SD = 0.97) , (M = 4.42 , SD = 1.22) , (M = 4.42 , SD = 1.22) , (M = 4.34 , SD = 1.38) , (M = 4.34 , SD = 1.38) , (M = 4.05 , SD = 1.59) and (M = 4.44 , SD = 1.13) respectively.

The study is in agreement with Deming (2013) who stated that satisfying both the present and future needs of a customer is the overall goal of a quality strategy Quality is conformance to requirements. These requirements include responsiveness, empathy, assurance, reliability and physical attributes (Juran, 2016).

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This study focused on total quality management and operational performance of public health facilities in Makueni County.

5.2 Summary of the Findings

The study established that staff are regularly trained on total quality management practices, a culture of integrity, ethics and trust has been cultivated in the facilities, the facilities have put in place measures to reduce any errors during service delivery. The processes in these facilities have also been defined in a way that ensures patient, supplier, stakeholder and the Ministry of Health's expectations are all met.

The study also established that the facilities involve all employees in decision making, they communicate their objectives to all employees, the facilities have a way of measuring quality performance, everyone in the facilities is involved in quality initiatives and the management supports research and collection of wide range of data and information about quality to make continuous improvements.

The study further established that majority of the facilities had invested in technology and use of technology has improved efficiency and effectiveness, customer complaints are addressed promptly and the facilities have initiatives to continually offer new services or products to customers.

5.3 Conclusion

The study concluded that total quality management and operational performance of public health facilities in Makueni County are positively related. The study established that quality management and operational performance of public health facilities in Makueni County had a strong significance level at 0.000 which is less than 0.005. The study model indicted that 72% of the changes in operational performance is contributed by the predictor variables (Strategic Planning, People Management, Process Management, Leadership, Customer Focus).

5.4 Recommendations

The study recommends that the facilities implement actions necessary to achieve planned results, everyone in the organization should be involved in quality initiatives and staff should be regularly trained on total quality management practices.

Also the study recommended that there should be a defined way of getting customer feedback, customer complaints should be studied to establish a pattern and prevent further occurrences, the facilities especially Health Centres and Dispensaries should invest in technology and initiatives to continually offer new services or products to customers should be a main focus by all facilities.

5.5 Areas for Further Study

The study recommended further research to be conducted on total quality management and operational performance of public health facilities in Makueni County to cover the missing gap of 28% using other different variables.

Again, the study recommended further research to be conducted on total quality management and operational performance in other counties, and government ministries.

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APPENDICES

Appendix I: Introduction Letter



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Telephone: 020-2059162
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P.O. Box 30197
Nairobi, Kenya

DATE: 23rd OCTOBER 2017

TO WHOM IT MAY CONCERN

The bearer of this letter PENINJAH NJUTINDI NYUNGA

Registration No. 061/68390/2013

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



Appendix II: Questionnaire

Dear Sir/Madam,

Dear respondent, I am conducting a research study on Total Quality Management and Operational Performance of Public Health facilities in Makueni County. The questionnaire items are about the study and you are kindly requested to participate in responding to the questions below. The information given will be treated as confidential and the results of the study will be used for academic research purposes only.

SECTION A: DEMOGRAPHIC INFORMATION

The following are some personal questions about you that will be used for statistical purposes only. Kindly tick (√) what applies to you. Your answers will be held in the strictest confidence.

1. What is your age?

20 years and below _____

21-30 years _____

31-40 years _____

41-50 years _____

51 years and Above _____

2. What is your level of education?

Certificate _____

Diploma _____

Degree _____

Masters _____

PhD _____

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

Less than five years _____

5 – 10 years _____

11– 15 years _____

Over 15 years _____

SECTION B: TOTAL QUALITY MANAGEMENT PRACTICES

6. Please indicate the extent to which your facility has embraced the following aspects of TQM in respect to service delivery. Please tick (√) on the extent column key numbers based on the key below:

1 = No extent, 2 = Small Extent, 3 = Neutral, 4 = Great Extent, 5 = Very Great Extent

Statement	1	2	3	4	5
1. The facility has defined it's processes to ensure that they meet the expectations of patients					
2. The facility has defined it's processes to ensure that they meet the expectations of suppliers					
3. The facility has defined it's processes to ensure that they meet the expectations of the Ministry of Health					
4. The facility monitors it's processes to ensure that they meet the expectations of the Ministry of Health					
5. The facility has measures in place to ensure that they meet the expectations of all stakeholders					
6. The facility has put in place					

measures to continuously improve the quality of services rendered					
7. Customer complaints are studied to establish a pattern and prevent further occurrences					
8. Staff are regularly trained on Total quality Management practices					
9. A culture of Integrity, ethics and trust has been cultivated in the facility					
10. The facility implements actions necessary to achieve planned results and continuous improvement					
11. Staff have been trained on Total quality Management practices					
12. The facility has put in place measures to reduce any errors during service delivery					

SECTION C: OPERATIONAL PERFORMANCE

7. Indicate the extent to which you agree or disagree with following statements regarding the following measures of performance (where 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree)

Statement	1	2	3	4	5
Operational Performance and Total Quality Management practices					
1. The facility has invested in technology					
2. Use of technology has improved efficiency and effectiveness					
3. Technology used is current and					

helps in service delivery					
4. Customer complaints are addressed promptly					
5. The facility has a system for receiving customer feedback					
6. The facility has initiatives to continually offer new services or products to customers					

8. Please indicate your health facility's performance against stated objectives of the health facility (where 1=Much Worse, 2= Worse 3= Neutral, 4 = Better, 5 = much Better)

Statement	Much Worse	Worse	Neutral	Better	Much Better
Operational Performance					
1. Average waiting time for patients coming to the facility for procedures					
2. Average waiting time for patients coming to the facility for outpatient services					
3. Time taken by the facility's ambulance services to respond to emergencies within the county					
4. Workload in relation to set targets					

Are there any actions or initiatives that the facility undertakes to improve employee productivity? Kindly explain

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In your opinion, does implementing Total Quality Management practices have any impact on operational performance in your facility? Kindly explain

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SECTION D: CHALLENGES FACED IN TQM IMPLEMENTATION

9. Indicate the extent to which you agree or disagree with the following statements regarding challenges of TQM implementation in your health facility (where 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree)

Statement	1	2	3	4	5
1. The top management in the ministry shows commitment to quality					
2. The facility has a quality manual					
3. The facility involves all employees in decision making					
4. The facility communicates it's objectives to all employees					
5. The facility has a way of measuring quality performance					
6. The facility implements actions necessary to achieve planned results and continuous improvement					

7. Staff have been trained on Total quality Management practices					
8. Teamwork is encouraged at all times					
9. Everyone in the organization is involved in Quality initiatives					
10. The facility has attempted to get accreditation					
11. The management supports research and collection of wide range of data and information about quality to make continuous improvements					
12. Organizational objectives are communicated to all staff members					

In your own opinion, which are some of the challenges experienced during implementation of Total Quality Management practices in your facility?

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End

Thank you for taking time to complete the questionnaire