Global Scientific JOURNALS

GSJ: Volume 8, Issue 1, January 2020, Online: ISSN 2320-9186
www.globalscientificjournal.com

IMPLEMENTATION OF TOTAL QUALITY MANAGEMENT AT AGA KHAN UNIVERSITY HOSPITAL, NAIROBI CITY COUNTY, KENYA

Jedidah Gatwiri Serafino

P140/CTY/ PT/22993/2011

Department of Health Management and Informatics

A Research Thesis Submitted For The Degree of Master of Science In Health Management In The School of Public Health of Kenyatta University.

December 2019

DECLARATION

This thesis is my original work and has not been presented for a degree in any other university.

Signature: _____Date: _____

Name: Jedidah Gatwiri Serafino

P140/CTY/PT/22993/2011

This thesis has been submitted for review with our approval as University Supervisors.

Signature: _____Date: _____

Name: Dr, Andre Yitambe

Health Management and Informatics Department

Signature: _____Date: _____

Name: Dr, Kenneth K. Rucha

Health Management and Informatics Department

ACKNOWLEDGEMENT

Nobody has been more important to me in the pursuit of this project than the members of my family. I would like to thank my Mum Mrs Patricia Serafino, whose love and guidance are with me in whatever I pursue. She is the ultimate role model. Most importantly, I thank my wonderful daughter Stacey who provided unending inspiration. Thanks to my lecturers at Kenyatta University; My Supervisors Dr Andre Yitambe and Dr Kenneth Rucha for their effective guidance during and throughout the preparation of the proposal. I am grateful to my site supervisor Dr Boniface Mativa Director Quality at AKUHN for the intellectual guidance. And Ms Jemimah Kimeu, The Chief Nursing Officer AKUHN for her enormous support.

DEDICATION

I dedicate this study to my family for encouraging me throughout the study.

TABLE OF CONTENT

LIST OF TABLES

LIST OF FIGURES

ABBREVIATIONS AND ACRONYMS

ANSI	-	American National Standards Institute
ASQ	-	American Society for Quality
CAP	-	College of American Pathologist
CQI	-	Continuous Quality Improvement
CWQC	-	Company Wide Quality Control
ISO	-	International Organization for Standardization
JCIA	-	Joint Commission International Accreditation
QI	-	Quality Improvement
TQM	-	Total Quality Management
AKUHN	-	Aga Khan University Hospital, Nairobi
NHS	-	National Health Service
MBNQA	-	Malcolm Baldrige National Quality Award

x

DEFINITION OPERATION OF TERMS

Implementation of TQM: This is the adoption of firms to put in place TQM in health care organizations focusing on; management commitment to quality and taking a leading role, customer focus and total involvement of staff in quality management (Creech, 2014).

Critical Success Factors for TQM: These are key important areas that has always go correct for the business to succeed as they will make sure competitive and successful performance for the organization. The organizations achievements will not be met if these factors are not clearly defined (Feigenbaum, 2013).

Employees Training: This is equipping the employees with relevant knowledge and skills to implement TQM taking into to account the cadre, the need for training and how many times the training should be conducted (Ishikawa, 2015).

The Organizational Culture: beliefs, values and practices which controls the employee's operations in an organization (Rehder and Ralston, 2014).

Top management commitment: This is senior leadership's promise, actions and commitment in ensuring that TQM is implemented and that they will provide critical resources and enabling working environment (Feigenbaum, 2013).

Communication: These are structures and systems used in an organization to share information (Ishikawa, 2015).

ABSTRACT

The terms Total Quality Management and Continuous Quality Improvement are no longer used to show high class or feel good attitude but are practices put in place to gain an edge in the business, and have become woven into the very fabric of hospital operations. The role of Total Quality Management in a firm is to ensure integration of all organizations functions and processes to achieve customers' satisfaction and meet organizational objective. This study sought to examine critical attributes for TQM implementation in Kenyan healthcare industry. The research study investigated the internal factors that drive quality then identify and describe the key ingredients that have contributed to the achievements of a high performing hospital. It was guided by four specific objectives; To identify the extent to which top management involvement affect implementation of TQM, find out how staff training affect implementation of TQM, determine the extent to which organizational culture affect implementation of TQM and determine how communication affects TQM implementation. A cross sectional research design employed. The study population was made up of staff working in Aga Khan University Hospital, Nairobi. Proportionate sampling was used to determine the sample size and select the study subjects. Primary data was collected from management, Medical doctors, nurses, allied health workers, hospitality, finance, Marketing, procurement, maintenance, and Quality assurance staff using a semi structured questionnaire. Data analysis was done with aid of statistical package for social sciences (SPSS) version 20, in conjunction with computer excel programme. Inferential statistics will be calculated using regression analysis done at 95% confidence level to determine the relationship between the study variables. The findings of the study indicated that all the four variables had a significance influence on the implementation of total quality management in Aga Khan University Hospital. Analysis from a regression output of the entire four variables is considered valid ($F(5, 224) = 97.656$, $P < .0001$) which means that the Total Quality Management factors (Top Management Commitment, Employee Training, Organization Culture and Communication) can be used as predictors explaining differences in the implementation of Total Quality Management at Agha Khan University Hospital. The study recommended that as much as there is top management involvement in TQM, it is important for the facility top leadership to establish how best they can be involved in the implementation of Total Quality Management and find out how to implement TQM at all levels of operations. There is need to ensure that almost a quarter of the staff that has not been trained in quality management to be trained in order to ensure that all staff at all levels are aware of the role and obligation in delivering quality in internationally acceptable standard. The training needs to be designed in a way that it recognizes the present quality expectations in health organizations. Finally, there is need for improved communication of quality expectations in service delivery that include effective dissemination of information at every levels of management.

CHAPTER ONE: INTRODUCTION

1.1 Background of the study

With the expansion of globalization and growth of the emerging market economies, most corporations in all the work disciplines have been urged to putting more effort on maintaining a sustainable, competitive and cutting edge in their day today work. The paradigm shift in the global operational trends pushes the businesses to put in place practices that are in tandem with the prevailing economic environment. This in turn will directly relate to the observation and sustainability of quality both in terms of service delivery and also the productivity of the company.

This is only possible if an organization engages in services that can compete effectively in the current prevailing market economy which is characterised by stiff competition and high customer demands and expectations. Organizations should invent unique competitive strategies as well as provide products and services that continuously and effectively meet, satisfy, and surpass the clients' desires (Balasubramanian, 2016).

There are many approaches that management can put in place to always attain quality improvement, Total Quality Management (TQM) being among them. It requires effective co-ordination coupled with the execution of efforts by all staff aimed at increasing clients' satisfaction, staff involvement and working together with supplier. It also includes the facilitation of the firms working environment for continuous quality improvement (Arshida & Agil, 2013). The search for quality health care is a worldwide phenomenon and globally hospitals are looking for initiatives to provide and improve quality of services to their clients. These initiatives also include strategies geared towards achieving effective quality in health care provision. Andaleeb (1998)

notes that the health care sector is a service industry that is fast growing, and strategic ways of carrying business will separate the competitors.

Hospitals by nature are complex organizations which are widely perceived as having service deficiencies and not meeting the client's expectations. The clients in hospitals are already undergoing a problem that needs to be solved quickly and any delay in doing so affects the whole outcome.

TQM has been earmarked by most organizations and held as an important component of long term strategic initiative that will aid in continuous improvement of quality in health service resulting in customer satisfaction. It starts with top management (Chakravarty, Parmar, & Rayal, 2001). The footprints of quality assurance initiatives in healthcare can be traced to Florence Nightingales' time who worked at the time of Crimean war which took place between the year 1854-1856, when nutrition, sanitation and infection control approaches were introduced in war health care facilities and saw the death rate decline from to 43% to 10%.

Quality is defined in many ways as can be mentioned here. The American National Standards Institute (ANSI) & American Society Quality (ASQ) describe quality as holistic composition of attributes of care or service that is able to satisfactorily meet specified requirements. Crosby stresses that quality is the adherence to expected 'Zero defects'. JURAN refers to quality as capability of goods and service to meet customer needs and the fitness for use. On the other hand, quality is most popularly described as attaining or surpassing the client's expectations (Evans & Lindsay, 2009).

Hospitals in highly competitive market environment are more likely to explore ways to provide greater service quality in order to differentiate themselves from their competitors.

Therefore, a quality system that explores and stresses on continuous improvement in Customer satisfaction index and provides ways of offering and monitoring quality is desired. Such a system will deal with value analysis and conformance to the laid down specifications in conformance with global practice. This might even comprise of Total Quality in terms of performance that has direct relation to healthcare components of safety and security. It will also look at the nursing perception and the significance of doctors in the multidisciplinary approach of providing healthcare services. These affect quality in relation to time; which includes the appointments time to the clinics, delaying time in accessing the care, service time, and timing in relation to medical treatment and surgery (Patel, 2009).

TQM is therefore an important part and a fulcrum of all the hospitals' competitive strategy. Thus, TQM, which put in place improves customer satisfaction and value addition, gains the prospect and dealings of great market share and profitability.

1.2 Statement of the problem

Total quality management is essential for every organization. However, despite the advantages of TQM implementation, there have been challenges and some levels of failures have been reported during its implementation. These challenges need to be addressed amicably to enhance the success of TQM. In a report of Institute of medicine entitled 'To err is to human', it is approximated that 44,000 and 98,000 individuals lose their lives unnecessarily annually in the inpatient admitting facilities due to medical errors (Meyer, Silow-Carroll, Kutyla, Stepnick, & Rybowski, 2004).

USA stated that the challenges in health care quality are great and extensive and proposed on going quality improvement as an important strategy to ensure that healthcare quality is improved (Garvin, 1988).

The health care sector in Kenya has registered rapid expansion over the last few years. The sector has almost doubled to Kshs.91.4 billion as per last year's Economic Survey data from Kshs.51.4 billion in 2005.The growth in the economy has led to more people entering the middle income bracket which has in turn led to greater demand for quality and affordable healthcare services. It should be noted that consumers and insurance companies demand high quality of services at value for money rates.

According to Talib, Rahman, and Qureshi, 2010, Total Quality Management implementation takes time and is a complex process. Many health institutions experience challenges in implementing TQM. For the health service industry, it is noted that there are some cultural and traditional styles of leadership that pose as barriers within the physicians and senior management during the implementation of TQM, asserts (Talib, Rahman, & Qureshi, 2010). Few empirical studies have been carried out on implementation of TQM in health sector.

1.3 Justification of the Study

Total quality management with its long and proven record of success in manufacturing and other service industries, has been underutilized in health care relative to other industries. Factors leading to this situation are poorly understood as a result of limited research. TQM is manifest in the health service industry in form of quality certifications and accreditations. In Kenya, these are limited to International Organization for Standardization (ISO) certification and recently, the Joint

Commission International Accreditation (JCIA) and College of American Pathologist (CAP) Accreditation

The Aga Khan University Hospital, Nairobi is the first hospital in Kenya and the first in East and central Africa to have the three marks of quality above. Given the success of TQM in pioneering health care organizations, many more health institutions are expected to implement in the coming years. An understanding of the relationship between the principles of TQM and successful implementation of TQM from this study will present crucial information relevant for TQM implementation in the industry.

1.4 Research Questions

i. How does top management commitment influence implementation of total quality management in an international accredited university hospital?
ii. To what extent does employee training influence hospital total quality management in an international accredited university hospital?
iii. To what extent does organizational culture influence implementation of total quality management in an international accredited hospital?
iv. What is the influence of communication on implementation of total quality management in an international accredited hospital?

1.5 Hypothesis of the Study

Ho: There is no influence of management commitment on the implementation of total quality management in an international accredited university hospital.

Ho: There is no influence of employee training on the implementation of total quality management in an international accredited university hospital.

Ho: There is no influence of organizational culture on the implementation of total quality management in an international accredited hospital?

Ho: There is no influence of communication on implementation of total quality management in an international accredited hospital?

1.6 Research Objective

1.6.1 General Objective

The aim of this study was to investigate the influence of TQM principles on TQM implementation at Aga Khan University hospital, Nairobi.

1.6.2 Specific objectives

i. To identify how top management commitment influence implementation of total quality management in Aga Khan University Hospital, Nairobi
ii. To find out the extent to which employee's training influence implementation of total quality management in Aga Khan University Hospital, Nairobi.
iii. To determine the extent to which organizational culture influence implementation of total quality management in Aga Khan University Hospital, Nairobi
iv. To determine the influence of communication on implementation of total quality management in Aga Khan University Hospital, Nairobi

1.7 Significance and Anticipated Output

An understanding of the relationship between the principles of TQM and successful achievement of TQM will provide insight for implementation of total quality management in other hospitals. Additionally, this study results will provide knowledge related to TQM implementation in health care sector which will provide workable solutions to the challenges faced in TQM implementation in hospitals.

1.8 Delimitation and Limitation

1.8.1 Limitation

Some respondents were unwilling to provide accurate and reliable information for fear of victimization given that information of this nature is normally sensitive with many not wishing to share. The researcher assured the respondents that the information would be kept confidential and would be used strictly for only the reasons provided. The hospital was also in the process of staff restructuring and some of the staff in the affected departments were reluctant to participate in the study.

This study was only limited to critical components of total quality management implementation and did not address the level of TQM implementation in Aga Khan University hospital, Nairobi. The study was limited to TQM implementation principles of, Top management commitment, Employee training, Organizational culture, and Communication.

The other limitation of the study was non-response, where by the study registered a response rate of 69.6%. While this would be considered as a good response in a homogenous population, it presented a challenge when the population is heterogeneous. The study ensured that all the stratus in the study population was well represented as much as possible as indicated in table in the sample determination Appendix V1.

1.8.2 Delimitation

This study only focused on Aga Khan University hospital; Nairobi City County Kenya with special focus on the staff working at the institution who consented to the study. This was relevant in collecting data required as it was the only hospital that was

internationally accredited by the Joint commission. Staff that did not consent ware not enrolled due to ethical considerations.

1.9 Assumptions of study

The main Assumptions of the study are:

1. TQM has already been adapted by Agha Khan University Hospital.
2. TQM is being implemented at Agha Khan University Hospital.
3. The target populations who were the staff in the facility would freely corporate and provide the necessary information accurately.
4. Time allocated for the study was enough to complete the study.

1.10 Conceptual /Theoretical Framework

1.10.1 Theoretical Framework

The Deming's theory of profound knowledge is referred to as a management philosophy based in systems theory. The theory is anchored on the principle that suggests that every organization is made up of a system of related processes and persons that together comprise a system's components. Effectiveness of the entire team within the system relies on the leadership's capability to demonstrate a fragile balance of each component for optimization of the entire system (Talib, Rahman, & Qureshi, 2010).

This system relies on appreciation and understanding of the organisation's processes and procedures, variety of knowledge to conceptualize the happenings and the reasons for their happening, the theoretical comprehension of quality programs and understanding of the human characteristics. In his fourteen points, Deming concluded that with the inclusion of other points, top leadership involvement, encouraging corporate culture, staff's understanding, training and effective communication channel are utmost in implementing TQM in any firm.

1.10.2 The Donabedian model

The Donabedian model can be referred to as a conceptual model which presents guidelines for evaluating health services and assessing quality of health care. As indicated in the mode, data concerning the quality of care may be harvested from three areas: "structure, process, and outcomes. Donabedian's (2005) identified three elements approach as crucial in assessing the quality of care that are important assessments for improvement. Assessment of areas to be improved includes one more element which is balancing measures. Donabedian trusted that structure measures will influence the process measures that will then influence the outcome measures. These combined then form the basis for the things necessary for an effective suite of measures. Notably, cause and effect are complicated, especially within the NHS with so much variability from one patient to another.

The outcome measures that the organization will realize will depend on the structures that the organization puts in place and the process measures that the Health Organization facility puts in place. As the organization puts in place appropriate structure, and adapts the required process then the health organization will be able to achieve the necessary outcomes in term of performance. The TQM implementation in the health facility ensures that the right structures are in place, the process is effective and that is able to achieve the desired outcome.

1.10.3 Conceptual framework

The dependent variable in this study are the practices in TQM whereas the factors that influence implementation of TQM are the independent variables as shown in the variables relationship below.

INDEPENDENT VARIABLES **DEPENDENT VARIABLES**

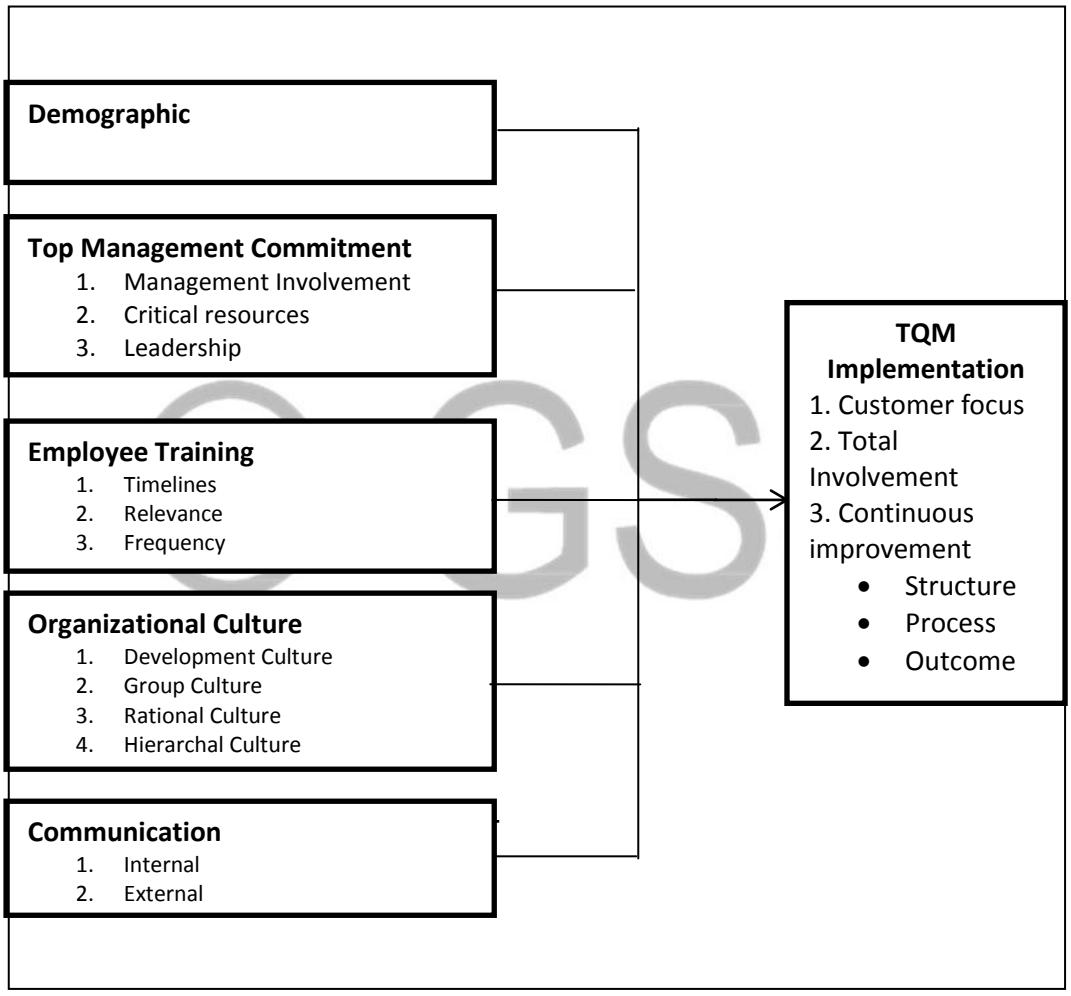


Figure 1.1: Conceptual framework - Source: Adapted and Adjusted from the Literature Review (2016)

CHAPTER TWO: LITERATURE REVIEW

2.0 Introduction

This chapter, contains reviews from other literatures focusing on the related areas and was guided by the study objectives as presented in the study. It specifically discusses key principles of TQM implementation which are: The commitment of senior management and their leadership, staff's competence and training, the culture in the organizational and how they communicate.

2.1 Top Management Commitment and TQM Implementation

Zakuan*et al,* (2012), states that Top Management plays key role in business's decision making in an organization. Subsequently, the impact of any harsh decisions made in a firm depends greatly on top management backing and assurance. A pivotal role must be played by the senior management by availing resources and instituting quality policy which is properly articulated to the stakeholders across the organization. Setting up quality management plan and running the whole process in a closely monitored manner and carrying out post implementation evaluations. There must be open communication, assisted by the organizational culture of open communication and cooperation and team work amongst the stakeholders (Sharp, Sharif, Kutucuoglu, & Davies, 2000).

According to Deming (1986) as cited in Zakuan*et al*, (2012), the organization management needs to establish a leadership that will guide the quality change initiative process. Parameshwa, Srikantia, and Case in their 2000 article conferred two kinds of leadership; Leadership that is transformational and a leadership that is transactional. The first leadership according the article is one whose ideologies are

based on vision while the second kind of leadership is one that is anchored on reward, control mechanism and underscores the clarity of roles, goals, and the expected outcome thereafter to ensure the achievement of the set goals. Those who are innovative leaders who portray transformational leadership behaviour as the leaders tend to influence others using well designed strategies in their work environment that positively impact on the others.

As opined by Arshida and Agil (2012) the commitment of top leadership is a crucial consideration for ensuring that total quality management is fully implemented. The top leadership must from the initial stages of implementation, show that they are deeply involved in quality management and that they are at the forefront. According to Omware (2012), the general adoption of quality systems starts with putting in place new policies, steps and other tools that are supposed to be mastered by the staff for the success of the implementation.

The change processes involved in the implementation of TQM are always associated with resistance, confusion, and instability. This therefore requires a carefully designed implementation process where the involvement and support of senior management is consistent. This is in line with Samir (2003) who noted that senior leadership must come up with clear goals, quality mission, establishes quality attributes and made it known to all the staff. There must be appropriate and well defined processes, planning, dedications and good management to enables the proper implementation of TQM in the health facility.

2.2 Employee Training and TQM Implementation

Training is referred as significant elements which that promote employee morale and efforts in achieving the desired improvement (Zaukuan, Muniandy, & MdArif, 2012). According to them, provision of quality trainings will include staff capacity building at all levels in the health facility from the lower cadre to the highest. The intention of such training should be to broaden the employee awareness and acquaintance with the expectations. The training of the employees will provide them with the required knowledge on quality and the important information concerning organizations' quality mission, vision, core values, and other general required information.

Jamali, Ebrahim, and Abbaszadeh (2010), states training of employees are of utmost importance for the success of TQM implementation. Management personnel must understand their roles in TQM implementation and must be equipped with compression of quality dimensions and management. Continuous staff training and development on quality management need to be ensured; taking to account that market quality requirement vary and are volatile and dynamic. As cited by Baidoun (2003) employee training that has been structured to cover and focus on quality management produces the desired end result where quality initiatives are implemented and maintained. While Omware (2012) cited two aspects that needs to be put into account before carrying out employee training on quality, and they include: Having the knowledge to understand the quality management procedures and the quality management tools. The employee training initiatives should provide them with the understanding of the TQM processes and how they fit and participate in the program.

2.3 Organizational Culture and TQM Implementation

Culture is referred to as a combination of people's beliefs, values, principles, norms and the similar understanding that is shared among a specific group of the society. Erkutlu (2011) as cited by (Nazhad, Mosavi, & Kordabadi, 2012). In an article by Waliand Boujelbene (2011), organizational culture is defined as a set of organizational practices that are considered as characteristics for a firm. It provides the morals, customs, and principles that provide guideline on how daily activities in the organization are ran.

Nazhad et al., (2012), in their discussion pointed out four dimensions forming the organizational culture: Firstly, the group culture which outlines that the employees must be flexible and unified in the quest to provide quality. And also ensures that the senior leadership allows staffs engage freely in the health facility decision making procedures. Secondly, the organization allows adjustment to its course as per the prevailing external environment. Thirdly, provide a rational working external in a bid to remain focused and in tandem with the external factors and its influence on the internal operations. And lastly, have a culture that is geared towards improving its internal focus process but cognisant of the external regulations and adhering to them.

On the other hand, Wali and Boujelbene (2011) discussed the organizational culture within five orientations that include: Innovation, stability, results/outcome orientation, people orientation and communication orientation. It is of importance to note that firms need to develop quality culture that needs to integrate with other aspects of culture for effective implementation of TQM initiative. It is emphasised that how any firm's handles their quality processes has a way that it affects the process of TQM implementation given that it provides clear quality practices and norms that guide the

organization staff in their daily engagement. According to Jamali*et al.,* (2010) organizational quality culture has a significance influence on the staff's confidence when it comes to TQM implementation.

2.4 Communication and TQM Implementation

Monoo and Kasongo (2010) define communication to be interchange of views, messages or information between individual via the use of different media; speech, signals, or writing. They stated that for any organization to perform well depends on how its employees communicate. And if there is a hindrance or communication breakdown, then the entire organization suffers.

Organizations need to develop appropriate communication channels which enable the exchange of information horizontally, vertically, downward and upward. Both internal and external communication is critical in implementation of quality programs (Murphey, 2009). Communication makes it possible for stakeholders both from inside and outside the farm to have deeper knowledge of quality and how it can be managed. According to Murphey (2009), senior management needs to translate quality information into easy to comprehend form that is understandable to all stakeholders, and develop a feedback mechanism that supports communication in two-way.

2.5 Total Quality Management

The main objective for implementing total quality systems is to ensure that there is progressive improvement in the organization's process where the staffs, systems, processes and the working environment are in conformity with the set standards. The aim being to attain an improved client's service and benefits through firm's efficiency and effectiveness as a whole (Bahri, Hamzah, & Yusuf, 2012). Many view the successful adoption of TQM to bring tremendous gains both to the company and their customers. It is thereby referred to as double sided competitiveness tool that benefits

both the client and the proprietor. It is crucial to note that companies wishing to implement Total Quality Management may do so regardless of their size, operations, or location. However, the effective implementation of TQM in any organization relies on the way the firm comprehends the processes and the initiatives they have embraced. One guiding principal in TQM implementation is that the process needs to be cascaded to the whole organization. Schulman (1997) stated that the entire employees and all the departments in the company need to be involved in the process with the top leadership being in the frontline in the programme implementation and sustainability.

Total Quality Management implementation process is elaborate and takes time and resources. It is evolving and tedious and as such needs to be commenced and followed through by the senior management. This process is basically based on establishing what the client's needs are, meeting and exceeding those needs/expectations by involving everyone in the company and through on going quality improvement guided by the audit findings. The process needs staff with unique skills and team work. As such, these staff must have on-going training and career development (Oluwatoyin & Oluseun, 2008). Malcom Baldrige National Quality Award (MBNQA) as elaborated by Wali and Boujelbene (2011) came up with 6 procedural practices that TQM performance can be measured on. They include leadership, strategy planning, client focus, information and analysis, persons and process management.

It is of great importance to acknowledge that there are challenges and bottlenecks which might hinder the proper implementation of total quality management. Arshida and Agil, (2013) refers to these bottlenecks to be hindrances to the implementation of TQM. The factors are, uncommitted senior management involved that does not provide the necessary critical resources and the required leadership. This will hence

lead to less staff engagement, empowerment and motivation, ineffective organizational vision and plan statement that do not properly support staff's efforts in quality programs. One of the other crucial factors is the government's influences which are related bureaucracy and other slow systems while seeking approvals or direction. Poor quality policy coupled with inadequate government support for quality initiatives make it difficult in the firm's adaptation and implementation of quality programs.

2.6 Total Quality Management in Healthcare

The philosophy of total quality systems was purposed to attain excellence in the organization and it involves the participation of all the staff. In the healthcare set up, high level of performance is measured in treatment outcomes and how a patient is satisfied after receiving the service. There are five concepts that are often mentioned in studies about TQM in healthcare. These are; client focus, frequent and on-going improvement and learning, participation and staff involvement and teamwork, senior management commitment and process approach to the health facility business challenge.

A classic study in 1996 on TQM by healthcare management review established that smaller health facilities performed better than the larger facilities in quality improvement implementation. In recent years, there is an increasing interest to apply TQM to improve customers' quality of service and care. Aquino (2012) noted that up to date inadequate research has been focused on deterrents involved in adopting TQM practices in healthcare. Among the reasons for this failure include inadequate support of health professionals, non-committed leadership and the tendency to look at TQM in isolation other than putting it at the core of the organizations strategy (Rad, 2005).

There are various obstacles to TQM success in healthcare. This is attributed by the strongly departmentalized, bureaucratic, and hierarchical structure, professional independency, pushes, and pulls for managers and professionals and the challenges that are included in assessing healthcare processes and outcome (Rad A. M., 2005). Other hindrance to TQM in healthcare performance involves lack of consistent managers and staff commitment, ineffective leadership that is influential, absence of quality-based culture, inadequate training, and resources. Understanding the critical components for TQM implementation in a hospital that has successfully implemented TQM will enable and encourage other hospitals that it is still possible to implement TQM in health care institutions.

2.7 Summary of Literature Gaps

Radnay, (1997) and current research highlighted health care quality issues that are discrepant from the TQM philosophy presented in literature review. As a result, some practitioners have questioned the usefulness of TQM theory in such setting due to the discrepant contexts.

It is therefore understandable that CQI is not easily applied in health care today. A CQI environment in health care demands that many changes be made to the traditional structure of hospitals. Specifically, a shift in attitudes regarding multidisciplinary work teams, customer focus and senior management involvement in the quality process is needed in order to adequately implement CQI in hospitals.

Such findings demonstrate that the traditional health care notion of physicians' professional authority over patients is at odds with the principle of customer focus. (Radnay 1997), as quoted in Joyce, 1998. Physicians and hospital administrators alike

fear what TQM represents, as their achievements can seem devalued in light of CQI implementation.

Finally, there is also lack of organizations against which hospitals attempting TQM can benchmark themselves. This lack of available examples or models may lead to uncertainty about the possible success of quality effort in a health care setting. As a result, it is necessary to determine to what extent the TQM variables are applicable in health care context in a 3rd world country. Specifically, this issue allows the development of the study's research question. On the other hand, as much as a few studies have been focused on health sector, these have been in other setting and not in Kenya. They cannot therefore form the basis for generalization.

This study will therefore establish the Influence of the TQM principles on its Implementation in health care sector. Specifically, this issue allows the development of the study's research question. 'What is the influence of Top management involvement, Employee training, Organizational culture and Communication on TQM implementation in Aga Khan University Hospital, Nairobi?'

CHAPTER THREE: MATERIALS AND METHODS

3.0 Introduction

This chapter contains the methodology that was used in the study that comprise of the research design, target population, sample size, and sampling procedure, data collection instruments and procedure, validity and reliability, analysis and also the data analysis methods.

3.1 Research Design

The study adopted descriptive cross sectional research study design. Kothari and Garg (2014) indicate that descriptive research is a description of the actual and real state of affairs in its present form. The study sought to establish critical components for TQM implementation and adopted a case study survey. The research includes serious and effective observation assessment of an element in its relationship to any other element in the group (Kothari & Garg, 2014). A survey design is related and based on quick collection, analysis, and interpretation of observation (Mugenda & Mugenda, 1999).

3.2 Variables

3.2.1 Independent Variables

The independent variables that were covered by the study comprised of Top management commitment, Employee training, Organizational culture and Communication

3.2.2 Dependent Variable

Total Quality Management implementation was the dependent variable in the research.

3.3 Location of the study

This research was conducted at Aga Khan University Hospital Nairobi Kenya (AKUHN). The hospital was established in 1958 with an aim of providing basic health care services in Kenya. The hospital has grown over time and today is a health facility

that provides secondary and tertiary level health care services and is one of the biggest hospitals in Kenya. The hospital upgrading to a tertiary level teaching hospital was meant to increase the facilities response to the health services requirement of the people across East Africa. AKUHN is a leading provider of ambulatory care and quality in patient services, comprising of critical health services among others. In recent years, the Hospital has embarked on an extensive expansion program. The Hospital expansion programme has emphasised on the raising of quality of care to international standards. The Hospital is located in Nairobi city county, Westland's Division.

3.4 Study Population

The study Population comprised of all employees of Aga Khan University Hospital, Nairobi City County- Kenya. Target population was top management, doctors, nurses, allied health workers and support staff employed at the hospital whose total number is 2,200, given that they are all important categories in the implementation of TQM and TQM is the responsibility of each and every staff in the organization.

3.5 Sampling Techniques and Sample Size

3.5.1 Sampling Techniques

Proportionate Random sampling was used to select the proportion of respondents from each department. This method reduces sampling error by ensuring the respondents are represented in respect to their proportion since the population is heterogeneous. Systemic random sampling was used since the population members are similar to one another on important characteristics i.e. TQM is the responsibility of each and every staff in the organization.

3.5.2 Sample size determination

Ray (2011) proposed a stratified formula for establishing the sample sizes as emphasized by Yamane in his 1967 publication. The sample for this study comprised of selected staff drawn from all cadres and sections of the sampled hospital. This is because TQM is the concern of all organizations staff. Yamane's formula of sample size determination was as follows;

$$n = \frac{N}{1 + e^2}$$

Where:

n = the desired sample size

e **= Probability of error (i.e. the desired precision e.g. 0.05, for 95% confidence level)**

N = the estimate of the population size.

$$N = \frac{(1 - 96)^2 (0.5)^2}{(0.05)^2} = 385$$

$$N = 2026$$

$$n = \frac{2026(385)}{2026 + 384} = 329$$

3.6 Data Collection Instruments

The study used a 5 point Likert scale structured questionnaire that presents for more extensive solution that was essential in reducing acquiescence biasness in cases that respondents agree with statements in a scale or instrument. The questionnaire was divided in to two section where Section one was on the general questions while section two contained the questions on the study variables. It was divided into five part with each section involving questions on each of the five variable (Independent Variables: top leadership commitment, employees training and development, organizational

culture and communication, dependent variable: total quality management). Cooper and Schindler (2001), points out that it is appropriate in administration OF structured questionnaires to collect data from large samples where the analysis of the data collected is easy.

3.7 Pilot Study and Pre-Testing of the instrument

A pilot study was done in one of the Aga Khan Outreach centers. This aided the researcher in identifying any weaknesses emerging based on the nature of responses obtained from the instrument used upon which appropriate adjustments was done.

3.7.1 Validity of the Instrument:

Validity establishes if the research items evaluate exactly the intended items to be measured or how factual the results are (Golfshani, 2003). To test validity, expert's opinion was sought. Questionnaire items were developed to represent each variable. Expert's opinion was factored in the study tools to ensure that the questions were appropriately constructed and would therefore meet the study objectives and answer the study questions.

3.7.2 Reliability of the Instrument:

Golfshani (2003) describes reliability as degree to which study findings are consistent if repeated and portray accurate representation of the total population. Toke (2012) also states that reliability analysis is meant to establishing the extent to that an analysis procedure would yield similar findings if the process is repeated several times within the same circumstances. Cronbach's coefficient alpha (CA) was used to measure the reliability and the inter-item consistency. Cronbach alpha coefficient was computed

using SPSS computer software. The coefficient value above 0.82 was established that then shows that measurement process was reliable.

3.8 Data Collection Techniques

A structure questionnaire was employed as the principal data collection instrument for the study. It contained structured questions as per the objectives of the study and were self-administered to all the respondents. Drop and Pick method was used in the administration of the questionnaire. The structured questionnaires as shown in the appendices were self-administered by the researcher to all levels of staff. The researchers then collected the data.

3.9 Data Analysis:

The data collected were entered in summary as codes and analyzed by use of SPSS version 20 database tools. The descriptive statistics such as means, standard deviation and percentages were used to outline critical components for TQM implementation. Pearson correlation and regression analysis were used for inferential statistics where conclusions were drawn on the relation between Top management commitment Employee training, Organizational culture and Communication and TQM implementation at Aga Khan University hospital.

In the regression analysis the data used in the study was categorical given that the mean of the responses were computed and regressed based on the various variables (independent and dependent) under investigations. The data was based on the mean values from descriptive statistics.

3.10 Logistical and ethical considerations

The permission to carry out research was sought from Kenyatta University Graduate School where the ethical review committee provided clearance. The other entities who

provided ethical clearance included; Ministry of Higher education, Science and Technology and Aga-Khan University Hospital ethical committee. Informed consent was sought directly from the research respondents, voluntary participation was encouraged. Confidentiality was observed all time during the research.

CHAPTER FOUR: RESULTS

4.0 Introduction

The aim of study research was to establish the influence of the principles of TQM on its implementation at Aga Khan University hospital, Nairobi. This chapter therefore includes analysis of the study from the data collected from the questionnaires; as the study sought the views and opinions on the influence of the principles of TQM on its implementation at Aga Khan University hospital, Nairobi. The study was based at one of the biggest tertiary private health facility not only in the country but in the region.

There are four parts in this chapter that include the demographic data of the respondents; Section two has the descriptive statistics of the variables under investigation. The third section covers the linear correlation analysis including all the variables while Section four covers the inferential analysis.

4.1 Response Rate

Out of the 329 respondents targeted by the study and issued with questionnaires, 229 responded, representing a response rate of 69.6%. This is suspected to have resulted from outsourcing and laying off of some cadres of staff which happened during the time of the study and may have led to low staff morale and response apathy. That notwithstanding, a response rate of 69.6% was representative enough of all the strata sampled for the study as shown in Table 4.1. Furthermore, Arora, (2003), stated that a questionnaire based study that targets a large sample and produces above 65% response, is rated as a well participated study.

4.2 Demographic Reponses

The demographic characteristics assessed in the study were the gender of the respondents, position held by the respondents in the organization, department of the respondents and the years served in employment by the respondents.

4.2.1 Demographic Characteristics of the Respondents

These respondent demographics are represented in table 4.1 below. Intere (2013) contended that demographic information such as gender is expected to guide the research on the conclusion regarding the congruence of response to the demographic characteristics of the respondents.

Table 4.1 Demographic Characteristics of the Respondents

Category	Total N (%)
Gender of the Respondents	
Male	87(38.0)
Female	142(62.0)
Total	**N=229, 100.0%**
Position in the Organization	
Top Management	4(1.7)
Middle Management	63(27.5)
Others	162(70.7)
Total	**N=229, 100.0%**
Department	
Medical	28(12.2)
Nursing	78(34.1)
Hospitality	67(29.3)
Allied Health	14(6.1)
Finance	11(4.8)
Marketing	9(3.9)
Procurement	11(4.8)
Quality Assurance	2(0.9)
Maintenance	9(3.9)
Total	**N=229, 100.0%**
Number of years worked in the organization	
2 years and below	60(26.2)
2-5 years	49(21.4)
6-9 years	48(21.3)
10 years and above	72(31.1)
Total	**N=229 , 100.0%**

Source: Study Findings (2019)

The study targeted the staff at Aga Khan University hospital, Nairobi. The results show that out of the 329 respondents who were sampled for the study, 229(69.6) participated in the study where 87(38.0) of the respondents were male and 142(62.0) were female. From the study, it can be concluded that there were more females than male employees in the institution. This can be explained by the fact that most of the medical staff in health care institutions is nursing which is female dominated profession. It is worth noting that out of 572 nursing staff, only 92 are male representing 16% of the total nursing staff.

Further analysis indicates that various strata in the employment hierarchy was as follows: 4(1.7%) were from the top management, 63(27.5%) were from the middle management while 162(70.7%) were from other line departments. On the basis on the duration of employment, 60(26.2%) of the total study participants had been working at the health facility for 2 years or less, 49(21.4%) had been with the health facility for more than 2-5 years while 48(21.3%) had worked in the facility for 6-9 years and Majority of the staff 72(31.1%) had worked in the health facility for 10 years or more. This shows that the respondents had been with the health facility for long enough and therefore had the necessary knowledge on the issues under investigation.

Based on department of deployment, 28(12.2%) were from the Medical staff department that include doctors and pharmacists, 78(34.1%) were from the nursing department, 67(29.3%) were from the hospitality department, 14(6.1%) were from the allied department, 11(4.8%) were from the finance department, 9(3.9%) were from the maintenance department, 11(4.8%) were from the procurement department, 9(3.9%) were from the marketing department while 2(0.9%) were from the quality assurance

department in the health facility. The study, therefore, was sufficiently representative of the all the departments in the organization hence the findings reflect the issues under investigation.

4.3 Implementation of Total Quality Management at Agha Khan University Hospital

The study sought to establish whether Agha Khan University Hospital has adopted and implemented Total Quality Management by adopting the key pillars of TQM. The findings are as shown below.

Table 4.2 Total Quality Management implementation at Agha Khan University Hospital

	A&SA	Neutral	D&SD	Mean	STD
	N (%)	N (%)	N (%)		
Top Management commitment and leadership					
Top management takes a leadership role in management of quality health facility	150(65.5)	64(27.9)	15(6.6)	3.85	.957
Satisfied customers have long term relationship with your organization	164(71.6)	50(21.8)	15(6.6)	3.88	.912
Cultural Change					
The health facility has a Total Quality Management culture	152(66.8)	51(22.3)	25(10.9)	3.83	.989
The quality culture in your organization encourages innovation	137(59.8)	64(27.9)	28(12.2)	3.71	1.050
Customer Focus					
The health facility strives to meet and surpasses clients' expectation	153(66.9)	64(27.9)	12 (5.2)	3.93	.927
The health facility maintains close link with the clients	162(70.7)	49(21.4)	18(7.9)	3.91	.896
Your organization take into account the	156(68.1)	56(24.5)	17(7.4)	3.91	.932

customer needs in developing and providing services					
Total Involvement					
All the staff in the health facility are always involved in quality management programs	131(57.2)	71(31.0)	23(10.2)	3.66	1.031
All sections of the organization are fully involved in quality management programs	158(69.0)	48(21.0)	23(10.0)	3.81	1.006
Continuous Improvement					
The organization often assesses and improves its quality management programs	164(71.7)	50(21.8)	15 (6.6)	3.97	.936
Your organization continuously improves its quality management programs	175(76.4)	41(17.9)	13(5.7)	4.06	.901
Your organization continuously monitors their quality management programs.	176(76.9)	31 (13.5)	22(9.6)	3.96	.940
Average	67.7%	12.59	8.24	3.87	0.956

Source: Study Findings (2019)

On the effects of top management commitment and leadership on Total Quality Management, the findings of the study indicate that on average, the respondents affirmed the top management was sufficiently committed and provided leadership in TQM implementation. 150(65.5%) respondents felt that top management is leading in the management of quality in the health facility, 15(6.6%) disagreed while 64(27.9%) were neutral on the issues with a mean of 3.85 and a standard deviation of .957. Study findings also show that 164(71.6%) of the respondents perceived that satisfied customers have long term relationship with the health facility, 15(6.6%) disagreed while 50(21.8%) of the respondents were neutral on whether satisfied customers have

long term relationship with the organization with a mean of 3.88 and a standard deviation of .912

On TQM culture, overall, the respondents affirmed that the organization was compliant. 152(66.8%) of respondents agreed that the health facility has a Total Quality Management culture, 25(10.9%) disagreed while 51(22.3%) were neutral on whether the health facility has a Total Quality Management culture with a mean of 3.83 and a standard deviation of .989. It emerged that 137(59.8%) agreed that the quality culture in the organization encourages innovation while 28(12.2%) of the respondents disagreeing that the quality culture in the health facility encourages innovation as 64(27.9%) were undecided. The analysis recorded a mean of 3.71 and a standard deviation of 1.050.

On customer focus factors the findings of the study indicated that overall, the respondent affirmed that the health facility focuses on customer. Deeper analysis demonstrated that 153(66.9%) of respondents agreed that the health facility strived to surpass clients' expectations. There was 12 (5.2%) disagreement on the issue while 64(27.9%) were undecided on whether the health facility striving to meet and exceed customer needs with a mean of 3.93 and a standard deviation of 1.031. The highest agreement on customer focus factors as indicated in the Table 4.7 above was 162(70.7%) agreement that organization maintains close link with its customers and the lowest agreement being and 153(66.9%) agreement that organization strives to surpass clients' expectations for respectively. The lowest mean score was 3.91 with the highest standard deviation at .932 being seen on the responses on whether the organization takes into account the customer needs in designing and providing health care.

The findings of the study in this part indicates that 131(57.2%) agreed that all employees in the health facility are always involved in quality management programs, 23(10.2%) disagreed while 71(31.0%) were neutral on whether the health facility are always involved in quality management programs. On involvement of all sections of the organization in TQM, 158(69.0%) were in agreement while 48(21.0%) were neutral while 23(10.0%) disagreed that all sections of the organization are fully involved in quality management programs indicating a mean of 3.81 and a standard deviation of 1.006.

With regard to whether the facility continued evaluation and improvement of its quality management system, results shows that 164(71.7%) of the respondents agreed that the organization continuously assesses and improves its quality management programs, 50(21.8%) were neutral while 15 (6.6%) disagreed that the organization continuously assesses and improves its quality management programs with a mean of 3.97 (equivalent to agree on the Likert scale) and a standard deviation of .936. 175(76.4%) of respondents agreed that organization continuously improves its quality management programs, 13(5.7%) disagreed while 41(17.9%) of the respondents were neutral on whether the organization continuously improves its quality management programs. The response in this part indicated a mean of 4.06 which was the highest in this part and a standard deviation of .901.

Finally on analysis to establish whether the organization continuously monitors their quality management programs, results indicates that 176(76.9%) of the respondents agreed that organization continuously monitors their quality management programs, 31 (13.5%) were undecided while 22(9.6%) disagreed that organization continuously monitors their quality management programs with a mean of 3.96 and a standard

deviation of .940.The findings of the study establish that the organization considers Total Quality Management critical in its service delivery. In recent years, there is an increasing interest to apply TQM to improve customers' quality of service and care as noted in the literature review.

The findings of the study indicated that agreement that AKUH, N embraced Total Quality Management was at 67.7%. While the TQM levels were generally above average, there is opportunity for further improvement. Individual TQM levels factors indicated that Top Management commitment and leadership was at 68.6%, Cultural Change was at 63.3%, Customer Focus was at 68.6%, total Involvement at 63.1% while Continuous Improvement was at 75%.

The study findings indicated an overall mean of 3.87(equivalent to agree on the Likert scale); continuous improvement indicated the highest mean of 3.99, which indicated highest agreement amongst respondents.

In order to further evaluate Total Quality Components at Aga Khan University Hospital, Nairobi, the researcher used the three Donabedian components which included the structure, the process, and the outcome.

Table 4.3 Total Quality Management Components

	A&SA	Neutral	D&SD	Mean	Standard Deviation
There are appropriate structures to support TQM	152(66.8)	51(22.3)	25(10.9)	3.17	.945
Continuous improvement of structure is necessary for the hospital to meet its quality requirement needs.	137(59.8)	64(27.9)	28(12.2)	3.66	.921.
The process is very fast	162(70.7)	36(15.7)	31(13.5)	3.85	1.042
The process should be improved to ensure that meets the required international standards	140(71.1)	62(27.1)	27(11.8)	3.69	1.053
The quality of services are good	112(44.9)	70(30.6)	47(20.5)	3.45	1.111
The quality of services meet the international ISO standards	126(55.0)	52(22.7)	51(22.3)	3.65	1.135
Average	61.83%	24.4	78.24	3.58	1.034

The study sought to establish whether there are appropriate structures to support TQM. The findings of the study indicate that 152(66.8%) agreed that there are appropriate structures to support, TQM, 25(10.9%) disagreed while 36(15.7%) were neutral on the issues with a mean of 3.17 and a standard deviation of .945.

Results also show that 137(59.8%) of the respondents felt that ongoing improvement of structure is necessary for the hospital to meet its quality requirement needs, 28(12.2%) disagreed while 64(27.9%) were neutral on whether ongoing improvement of structure is necessary for the hospital to meet its quality requirement needs with a mean of 3.66 and a standard deviation of .921.

The study indicates that there was a 162(70.7%) agreement that the process is very fast, 31(13.5%) disagreed while 51(22.3%) were neutral on whether the process is very

fast with a mean of 3.83 and a standard deviation of .989. 140(71.1%) of respondents agreed that the process should be improved to ensure that it is per the international standards while 27(11.8%) of the respondents disagreeing that the process should be improved to ensure that it is per the international standards as 62(27.1%) were undecided. The response recorded a mean of 3.69 and a standard deviation of 1.053.

On the quality of services, the findings of the study indicated a 112(44.9%) agreement that the quality of services are good, there was 47(20.5%) disagreement on the issue while 70(30.6%) were undecided on whether the the quality of services are good with a mean of 3.45 and standard deviation of 1.111. This is a real opportunity for the organization to improve perception and impact TQM.

On whether the quality of services is per the international ISO standards, there was 126(55.0%) agreement that the quality of services meet the international ISO standards while 51(22.3%) disagreed and 52(22.7%) were neutral with a mean of 3.65 and a standard deviation of 1.034.

The study results indicate that there was 61.83% agreement that Total Quality Management was implemented at health facility. This although is above average, the health facility has opportunities for improvement. Overall, the mean perception was 3.58 with a standard deviation of 1.034 with the highest mean being on the process being very fast while the lowest was that there are appropriate structures to support TQM that indicated a mean score of 3.17 and a standard deviation of .945.

4.3.1 Top Leadership Commitment

Table 4.4 Top Leadership Commitment

	A&SA	Neutral	D&SD	Mean	STD
Top Leadership Commitment Factors	**N (%)**	**N (%)**	**N (%)**		
The health facility's top leadership is committed to quality	174(76.0)	14(11.4)	29(12.7)	3.89	1.168
The health facility's senior leadership of the health facility's provides a leadership role in quality management initiatives	162(70.7)	36(15.7)	31(13.5)	3.85	1.042
Important resources required are always made available for the implementation of quality initiatives	140(71.1)	62(27.1)	27(11.8)	3.72	1.023
Staff's ideas on ways to improve quality are welcomed by the senior leadership in the health facility.	118(51.5)	28.4(28.4)	46(20.1)	3.38	1.123

Source: Study Findings (2019)

The findings of the study indicate that 174 (76.0%) of the respondents agreed that the facility's senior leadership is committed to quality, 14(11.4%) were neutral on whether the that the health facility's top management is committed to quality while 29(12.7%) disagreed that the health facility's senior leadership is committed to quality with a mean grade of 3.89 and a standard deviation of 1.168.

Further, 162(70.7%) of the respondents agreed that the organization's top management provides a leadership role in quality management initiatives, 36(15.7%) were neutral on the issue while 31(13.5%) of the respondents disagreed that health facility's top management provides a leadership role in quality management initiatives. The response to this question showed a mean of 3.85 and a standard deviation of 1.042.

On consistent availability of important resources for the implementation of quality initiatives, the findings of the study show that 140(71.1%) agreed while 27(11.8%)

disagreed that critical resources required are always made available for the implementation of quality initiatives with 27(11.8%) having been neutral on the matter. The response showed a mean of 3.72 and a standard deviation of 1.023.

118(51.5%) of the respondents agreed that the staffs ideas on ways to improve quality are welcomed by the top management in the organization, only 46(20.1%) disagreed while another 28.4(28.4%) were neutral on whether employee's ideas on ways to improve quality are welcomed by the senior leadership in that the health facility. This part the study indicated a mean of 3.38 and a standard deviation of 1.123, implying indifference on overall respondent perception.

Table 4.5 Top Leadership Involvement

Top Leadership Commitment Factors	A&SA	Neutral	D&SD	Mean	STD
	N (%)	N (%)	N (%)		
senior leadership participates in all quality management in the organization	152(66.3)	34(14.8)	43(18.8)	3.65	1.148
senior leadership takes part at all stages and levels in the quality management programs	164(71.6)	40(17.5)	25(10.9)	3.88	1.017
The health facility has an organizational quality mission and policies	181(79.1)	25(10.9)	23(10.0)	4.07	1.100
The health facility has a formal quality management structure	188(82.1)	31(13.5)	10(4.4)	4.22	.931
The health facility provides quality services	171(74.7)	24(10.5)	34(14.8)	3.99	1.219

Source: Study Findings (2019)

4.3.2 Top Leadership Participation

In this part the study, 152(66.3%) of respondents agreed that top management participates in all quality management in the health facility, 43(18.8%) disagreed while 34(14.8%) were neutral over the issue under investigation. The response in this part returned a mean of 3.65 and a standard deviation of 1.148. 164 (71.6%) of respondents

agreed that top management takes part at all stages and levels in the quality management programs, 25(10.9%) were in disagreement on this while 40(17.5%) of the respondents were neutral. The response registered a mean score of 3.88 and a standard deviation of 1.017.

On the whether the health facility has an organizational quality mission and policies, the findings of the study indicated that 181(79.1%) of respondents were in agreement, 23(10.0%) disagreed while 25(10.9) of the respondents were neutral on the matter, with a mean of 4.07 and a standard deviation of 1.017. 188(82.1%) of respondents agreed that the health facility has a formal quality management structure, 10(4.4%) disagreed, while 31(13.5%) were neutral. The mean was 4.22 (equivalent to agree on the Likert scale) which was the highest level of agreement in this section and a standard deviation of .931.

On provision of high quality services, 171(74.7%) of respondents agreed that the health facility provides quality services, 34(14.8%) disagreed, while 24(10.5%) of the respondents were neutral on the matter. The response registered a mean of 3.99 (equivalent to agree on the Likert scale) and a standard deviation of 1.219. The findings of the study in this part indicate that respondents perceive top management as committed to provision of high quality services. This is in keeping with the position held by in Zakuan *et al.* (2012) where he pointed out that the organization management needs to establish a leadership that will guide the quality change initiative process.

4.3.3 Employee Training and Development

Training in quality management is an important consideration in the implementation total quality management. Zaukuan, Muniandy and MdArif (2012) points out that training is considered as a significant factor in promoting employee morale, capacity,

and efforts towards improvement. The study had sought to establish how training influenced the implementation of TQM in the Health Facility and the following were the responses as indicted below.

Table 4.6 Employees Training and Development

Category	Total N (%)
Trained on any Quality Management Programs	
Yes	170 (82.1)
No	42(17.9)
Total	**212(100.0)**
Place of Training	
In the current organization	169(90.3)
In another institution	18(9.7)
Total	**187(100.0)**
Trained on ISO standards	
Yes	186(81.2)
No	43(18.8)
Total	**229(100.0)**
Trained on JCIA standards	
Yes	212(92.6)
No	17(7.4)
Total	**229 (100.0)**
Trained on Total Quality Management	
Yes	128(55.9)
No	101(44.1)
Total	**229(100.0)**
Trained on any other quality management program that is not mentioned	
Yes	43(19.6)
No	176(80.4)
Total	**219(100.0)**

Source: Study Findings (2019)

On inquiry about access of employees to training and development related to Quality Management Programs, the study findings indicate that 170 (82.1%) had training on some Quality Management Programs with 169(90.3%) having trained in the organization while 18(9.7%) of the respondents had trained elsewhere. 186(81.2%) of

the respondents had trained on ISO standards with another 212(92.6%) of the respondents having trained on JCIA standards. Moreover, 128(55.9%) had trained on TQM while only 43(19.6%) had trained in any other unspecified quality management program. At least 92% of the staff at health facility had been trained on some aspect in Quality Management Programs, with many trained on ISO standards, JCIA standards and TQM. Many of the trainings had been done by the institution while a substantial number of employees had trained elsewhere.

An analysis on the aspects of staffs training and development yielded the results summarized in table 4.7 below:

Table 4.7 Aspects of employees training and development

Aspects of employees training and development	A&SA N (%)	Neutral N (%)	D&SD N (%)	Mean	STD
All the employees in the health facility are trained on total quality management	126(55.0)	52(22.7)	51(22.3)	3.38	1.250
The staff in the organization are frequently trained on total quality management	117(55.5)	58(25.3)	44(19.2)	3.48	1.161
The Employees in the health facility usually get timely training on total quality management	112(44.9)	70(30.6)	47(20.5)	3.35	1.109
The training provided to the employees equips them with understanding of TQM and their role in its implementation	136(59.4)	60(26.2)	33(14.4)	3.54	1.126
The staff are always involved in the Total Quality Management training programs	136(59.4)	60(26.2)	33(14.4)	3.71	1.142

Source: Study Findings (2019)

126(55.0%) of respondents agreed that staff in the health facility are trained on total quality management, 51(22.3%) disagreed while 52(22.7%) were, with a mean of 3.38 and a standard deviation of 1.250. Of the respondents, 117(55.5%) agreed that staff in the health facility are frequently trained on Total Quality Management, 58(25.3%)

were neutral over the issue while 44(19.2%) disagreed. The mean in agreement was 3.48 (Neutral on the Likert scale) and a standard deviation of 1.161. On whether the staff the health facility usually get timely training on Total Quality Management, the findings of the study indicate that 112(44.9%) were in agreement, 47(20.5%) disagreed while 70(30.6%) were neutral with a mean of 3.35 and a standard deviation of 1.109.

Amongst respondents, 136(59.4%) agreed that the training provided to the employees with the required knowledge of TQM and their role in its implementation. 60(26.2%) were neutral in perception 33(14.4%) disagreed that the training provided to the employees equips them with understanding of TQM and their role in its implementation. The response to that question had a mean of 3.54, and a standard deviation of 1.126. Similarly, 136(59.4%) of respondents agreed that the staff are always involved in the Total Quality Management training programs, while 60(26.2%) were neutral and 33(14.45) in disagreement, with a mean of 3.71 (a score of agree on the Likert scale) and standard deviation of 1.142.

4.3.6 Organizational Culture

It is of importance to note that firms need to develop quality culture that needs to integrate with other aspects of culture for effective implementation of TQM initiative. This part the study had sought to establish the extent to which various organizational Culture aspects influence Total Quality Management implementation and the results are summarized in table 4.8 below.

Table 4.8 Organizational Culture

	A&SA	Neutral	D&SD	Mean	STD
Group Culture	**N (%)**	**N (%)**	**N (%)**		
The organization you work in has a flexible organizational culture	117(51.1)	87(38.0)	25(10.9)	3.51	.985
There is utmost unity among the employees in the health facility	125(54.5)	61(26.6)	43(18.8)	3.46	1.049
The staff in the health facility are empowered	119(52.0)	78(31.4)	38(16.6)	3.46	1.130
The staff are encouraged to participate in decision making	114(49.8)	74(32.3)	41(17.9)	3.44	1.117
Developmental Culture					
Organizational culture is in place and flexible to internal changes in your organization	139(60.7)	68(29.7)	22(9.6)	3.61	.943
The organizational culture accommodates external changes	140(61.2)	58(25.3)	31(13.5)	3.63	1.038
Rational Culture					
The health facility has an organizational culture that focuses on control	161(70.9)	41(18.1)	25(11.0)	3.80	.956
The health facility has an organizational culture that focuses on stability	169(73.8)	37(16.2)	23(10.0)	3.84	.989
Hierarchical culture					
The health facility has an organizational culture that encourages internal efficiency	153(66.8)	55(24.0)	21(9.2)	3.82	.963
The health facility has an organizational culture that encourages adherence to company policy and the law	171(74.7)	27(11.8)	31(13.5)	3.86	.996

Source: Study Findings (2019)

On group culture, the findings of the study indicate that 117(51.1%) of the respondents agreed that the organization they work in has a flexible organizational culture, 25(10.9%) disagreed while 87(38.0%) were neutral on whether the organization they work in has a flexible organizational culture. The response mean was 3.51 (a score of agree on the Likert scale) and a standard deviation of .985.The highest agreement on group culture factors was 125(54.5%) where the respondents agreed that there is utmost unity among the employees in your organization while the lowest agreement,

114(49.8%), was that the staff are encouraged to participate in decision making. The mean response on whether employees are encouraged to participate in decision making was 3.44 with the highest standard deviation at 1.117 being seen on the organization the respondents work in has a flexible organizational culture. Indicating a higher variability from the mean.

139(60.7%) agreed that the organizational culture is in place and is flexible to internal changes in the health facility, 68(29.7%) were neutral on the issue while 22(9.6%) disagreed, with mean of 3.61 and a standard deviation of .943. Further, it was found that 140(61.2%) agreed that the organizational culture accommodates external changes, 58(25.3%) were neutral while 31(13.5%) of the respondents disagreed.

On rational culture, 161 (70.9%) agreed that the health facility has a culture that focuses on control, 25(11.0%) disagreed while 41(18.1%) of the respondents were neutral. The mean was 3.80 with a standard deviation of .956. On whether the health facility has a culture that focuses on stability, results indicate that 169(73.8%) of the respondents agreed, 37(16.2%) were neutral while 23(10.0%) disagreed, with a mean of 3.84 and a standard deviation of .989.

The study had sought to establish the hierarchical culture effects on total quality management. The findings were that 153(66.8%) of the respondents agreed that the health facility has an organizational culture that encourages internal efficiency, 21(9.2%) disagreed while 55(24.0%) of the respondents were neutral, with a mean of 3.82 (equivalent to agree on the Likert scale) and a standard deviation of .963.

171(74.7%) agreed that the health facility has an organizational culture that encourages adherence to company policy and the law, 27(11.8%) were neutral on the

issue while another 31(13.5%) disagreed. The response in this question had a mean of 3.86 (agree) and a standard deviation of .996.

4.3.7 Communication

Monoo and Kasongo (2010) stated that for any organization to perform well depends on how its employees communicate, and if there is communication breakdown, organization suffers. The findings of this study are in concurrence, as shown below.

Table 4.9 Communication factors

Internal Communication	A&SA	Neutral	D&SD	Mean	STD
	N (%)	N (%)	N (%)		
Your organization has a well-developed internal communication systems	155(67.7)	43(18.8)	31(13.5)	3.83	1.048
There is free flow of information between the departments in the health facility	135(58.9)	66(28.8)	28(12.2)	3.69	1.045
There is free flow of information from top to bottom	142(62.0)	48(21.0)	39(17.0)	3.69	1.082
There is bottom up information flow about quality management from the departments	143(62.4)	50(21.8)	36(15.7)	3.72	1.042
There is free flow of quality management information from staff to their leaders	143(62.4)	54(24.5)	30(13.1)	3.73	1.010
There is a structured feedback mechanism in your organization	131(57..5)	59(25.9)	38(16.7)	3.64	1.076
External Communication					
The health facility has well developed external communication	145(65.0)	51(22.9)	27(12.1)	3.72	.938
The health facility gets timely information about customer satisfaction	167(73.0)	49(21.4)	13(5.7)	3.98	.939
The health facility gets customer complaints in time	152(66.4)	60(26.2)	17(7.4)	3.87	.994
Your organization gives timely response to customer quality concerns	135(58.9)	75(32.8)	19(8.3)	3.76	.985

Source: Study Findings (2019)

The findings on the various factors of Internal Communication indicate that 155(67.7%) agreed that organization have well developed internal communication

systems, 31(13.5%) disagreed, while 43(18.8) were neutral on the issue, with a mean of 3.83 (equivalent to agree) and a standard deviation of 1.048.

On internal communication factors 155(67.7%) respondents were in agreement that the health facility has well developed internal communication systems and 143(62.4%) agreed that there is free flow of quality management information from staff to their leaders respectively. The lowest agreement was 131(57.5%) on the existence of a structured feedback mechanism in the health facility studied. The lowest mean score was 3.64 and the standard deviation ranged from .938 to 1.010.

On external communication factors, results show that 145(65.0%) of the respondents agreed that the health facility has well developed external communication, 51(22.9%) disagreed, while 27(12.1%) were neutral on the matter. The mean was 3.72 and a standard deviation of .938. The highest agreement on internal communication factors was 167(73.0%) attesting that the health facility gets timely information about customer satisfaction while the lowest agreement was 135(58.9%) indicating that the health facility gives timely response to customer quality concerns to a lesser extent.

The lowest mean score was 3.72 on whether the health facility gets timely information about customer satisfaction with the highest standard deviation at .994 on whether the health facility receives complaints from clients in time.

4.4 Factors associated with TQM implementation: Bivariate Linear Correlation Analysis

In this section are correlation results on whether each of the independent variable: top management commitment (X1), employee Training (X1), Organization Culture (X1), and communication (X1), influence the implementation of Total Quality Management

at Agha Khan University Hospital under investigation. The findings for each variable are given by Pearson Correlation (r) and its corresponding p-value. When it is less than 0.05, then we conclude that there is a significant relationship between the variables.

Table 4.10 Factors associated with TQM implementation: Bivariate Linear Correlation Analysis

		Y	**X1**	**X2**	**X3**	**X4**
Total Quality Management (Y)	Sig. (1-tailed)					
	N	**229**				
Top Management Commitment (X1)	Pearson Correlation	.566	**1**			
	Sig. (1-tailed)	.0001	-			
	N	**229**	**229**			
Employee Training (X2)	Pearson Correlation	.630	.515	**1**		
	Sig. (1-tailed)	.001	.001	-		
	N	**229**	**229**	**229**		
Organization Culture (X3)	Pearson Correlation	.744	.621	.720	**1**	
	Sig. (1-tailed)	.0001	.0001	.0001	-	
	N	**229**	**229**	**229**	**229**	
Communication (X4)	Pearson Correlation	.781	.653	.711	.869	**1**
	Sig. (1-tailed)	.0001	.0001	.0001	.0001	-
	N	**229**	**229**	**229**	**229**	**229**

Table 4.9 shows the bivariate linear correlation between the various principles of TQM (independent Variable) influence on the implementation of Total Quality Management at Agha Khan University Hospital, Nairobi. The study had sought to establish whether there is a relationship between senior leadership commitment and implementation of Total Quality Management, the findings of the study shows that senior leadership commitment (X1) has a significant influence on the implementation of Total Quality Management at Agha Khan University Hospital, Nairobi (r=.566, $P< .0001$). This

shows that Total Quality Management is an outcome of the top management commitment at AKUH, N.

In evaluating the relationship between employee training and implementation of Total Quality Management at Agha Khan University Hospital, Nairobi, the findings of the study show that employee training (X2) has a significant influence on the implementation of TQM (r=.630, $P<$ .0001). This confirms that implementation of Total Quality management has been significantly impacted through employee training and acquisition of skills in Total Quality Management at AKUH, N.

On the effect of organization culture on the implementation of Total Quality Management at Agha Khan University Hospital, Nairobi the findings of the study indicate that organization culture has a significant influence on implementation of Total Quality Management (r=.744, $P< 0.$ 0001). This shows that respondents perceive AKUH, N to have an organization culture that positively impacts implementation of TQM. The more the health facility adapts an enabling culture in Total Quality Management the more likely it will be able to implement the TQM requirements in their operations.

Finally, the study had sought to establish whether communication affects the implementation of Total Quality Management at AKUH, Nairobi. The findings of the study indicated a positive and significant influence of communication on the implementation of Total Quality Management at AKUH, N (r=.781, $P<$ 0.0001).

In conclusion, the findings of the study show that the four factors (Top management commitment, Employee Training, Organization Culture and Communication have a significant influence on the implementation of TQM at the health facility.

4.5 Relationship Between TQM Factors and TQM Implementation: Inferential Statistical analysis

Multiple regression analysis was used to determine whether independent variables; Total Quality Management Factors (X1), Top Management Commitment (X2), Employee Training (X3), Organization Culture (X4), Communication influence the dependent variable (Implementation of Total Quality Management) This sub-section, examines whether the multiple regression equation explains the effects of the above Total Quality Management Factors on the implementation of Total Quality Management at Agha Khan University Hospital. The model used for regression analysis was expressed in the general form as given below

$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \acute{\varepsilon}.$

Where;

Y = Implementation of Total Quality Management (Dependent variable)

β_0 = Constant (Co-efficient of intercept)

X_1 = Top Management Commitment (independent variable)

X_2= Employee Training (independent variable)

X_3= Organization Culture (independent variable)

X_4= Communication (independent variable)

e =Error term

B1 ……. B4= Regression co-efficient of four variables.

Table 4.11 Total Quality Management factors influence on the implementation of Total Quality Management: ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	94.082	5	23.520	97.656	.0001
	Residual	53.950	224	.241		
	Total	148.032	229			

a. Dependent Variable: Y
b. Predictors: (Constant), X1, X2, X3, X4

Multiple regression analysis was used to test the combined influence of the Total Quality Management factors (Top Management Commitment, Employee Training, Organization Culture, and Communication) on the implementation of Total Quality Management at AKUH. The table above shows a regression output of the entire four variables as valid (F (5, 224) =97.656, *P*<.0001). This means that the Total Quality Management factors (Top Management Commitment, Employee Training, Organization Culture, and Communication) can be used as predictors explaining the variation in the implementation of Total Quality Management at the health facility.

Table 4.12 Total Quality Management factors that influence the implementation of Total Quality Management: Model Summery

Model	R	R Square	Adjusted RSquare	Std. Error of the Estimate	Change Statistics	
					R Square Change	F Change
1	.797[a]	.636	.629	.49076	.636	97.656

a. Predictors: (Constant), X1, X2, X3, X4

The table 4.13 show the regression results that indicate a significant influence of the Total Quality Management factors that influence the implementation of TQM. The study used the coefficient of determination (R^2) which is a statistical measure in a regression model that determines the proportion of variance in the dependent variable that can be explained by the independent variable. The coefficient of determinant (R-squared) of .636 that presents a 63.6% of the total variation in the implementation of LTotal Quality Management can be explained by the four variables. On the other hand, the Adjusted R Squared of 0.629 indicates these Total Quality Management factors, in exclusion of constant variable, explained in the changes in the implementation of Total Quality Management at AKUH by 62.9 %. The remaining (37.1%) can be explained

by the other factors not included in the multiple regression model under investigation. The average deviation of the independent variable from line of the best fit is (0.49076)

Table 4.13 Total Quality Management factors that influence the implementation of Total Quality Management: Regression Coefficient

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.656	.190		3.456	.0001
	Top Management Commitment	.065	.050	.069	1.287	.020
	Employee Training	.187	.111	.101	1.681	.044
	Organization Culture	.215	.088	.209	2.435	.016
	Communication	.453	.082	.482	5.509	.0001

a. Dependent Variable: Y (Implementation of Total Quality Management)

The table 4.14 shows a multiple regression results that indicates that all the TQM factors have a significant influence on the implementation of TQM at AKUH, N, covered by the study (Top Management Commitment ($X_{1:}$ β_1 =.065, $P<$ .020), Employee Training ($X_{2:}$ β_2 = 0.187, $P<$ .044), Organization Culture ($X_{3:}$ β_3 =0.215, $P<$ .016) and Communication ($X_{4:}$ β_4 =0.453, $P<$ .0001)) are significant to, and have a positive influence on the implementation of TQM. This indicated that .065 changes in Top Management Commitment, .187 changes in Employee Training, .215 changes in Organization culture and .453 changes in communication would influence a unit change each in the implementation of TQM at the health facility.

CHAPTER FIVE: DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter contains the summary of findings obtained from other respondents, conclusions made, recommendations, and suggestions for future studies on the influence of the principles of TQM on its implementation at Aga Khan University hospital, Nairobi.

5.1 Discussions

From the study results, it can be concluded that senior leadership commitment is critical to the implementation of TQM in the organization. This is in keeping with the position held by Zakuan et al, (2012) where he pointed out that the organization management needs to establish a leadership that will guide the quality change initiative process. The respondents agreed on three leadership commitment factors under investigation which included top management commitment to quality with a mean of 3.89, provision of leadership with a mean of 3.85 and provision of critical resources with a mean of 3.72. However, they were neutral on whether their ideas on ways to improve quality are welcomed by and suggestions for future studies on the influence of the principles of TQM on its implementation at Aga Khan University hospital, Nairobi in the health facility with a mean of 3.38.

The findings of the study indicate that the employee training program on TQM significantly influences the implementation of Total Quality Management at Aga Khan University Hospital, Nairobi. The findings confirm the position of Jamali, Ebrahim, and Abbaszadeh (2010) where they emphasized that training of the staff is of utmost requirement for the success of TQM implementation. Training of the employees

provides them with the required knowledge on quality and the important information about the organizations' quality mission, vision, core values, and other general required information.

The respondents agreed that training equips them with understanding of TQM and their role, with a mean of 3.54, and that they are always involved in TQM training programs with a mean of 3.71. The respondents were however neutral on three aspects of training under investigation i.e. Timeliness and frequency of training with a mean of 3.35 and 3.45 respectively, and that all employees are trained with a mean of 3.38. Equipping the staff in total quality management is vital in quality service delivery as it presents the staff with the understanding of the TQM processes and skills to fit and participate in the program (Omware, 2012).

The study also established that organizational culture significantly affects the implementation of Total Quality Management at Aga Khan University Hospital. The findings on the various aspect of organization culture indicate that organization culture has an influence on the implementation of Total Quality management in Aga Khan University Hospital. Jamali*et al.,* (2010) emphasize that the health facility quality culture usually influences the process of TQM implementation given that it provides clear quality practices and norms that guide the organization staff in their daily engagement. The respondent was agreeable with all aspects of developmental, Hierarchical and rational culture with an average mean of 3.6, 3.8 and 3.8 respectively. However, they were neutral on two aspects of group culture which included presence of utmost unity and empowerment with a mean of 3.46 on both aspects.

The findings of the study revealed that effective communication was impactful in the implementation of Total Quality Management at Aga Khan University Hospital, Nairobi. This position is supported by Murphey (2009) where in his study finding, pointed out communication as making it possible for stakeholders both from inside and outside the organization to have deeper knowledge of quality and how it can be managed. The respondent agreed with all the ten aspects of communication under investigation with a mean of between 3.64 and 3.98.

The inclusion of all players in quality management and effective involvement of top management in Total Quality Management concurs with Deming's theory where he concluded that with the inclusion of other points, top leadership commitment, positive corporate culture, staff's education, training and effective communication channel is utmost for the implementation of TQM in any organization.

Analysis from a regression output of the entire four variables is considered valid ($F(5, 224) = 97.656$, $P < .000$) which means that the Total Quality Management factors (Top Management Commitment, Employee Training, Organization Culture and Communication) can be used as significant predictors to the variation in the implementation of Total Quality Management at Aga Khan University Hospital, Nairobi.

The four factors (top management commitment, employee Training, Organization Culture and communication have a significant influence on the implementation of Total Quality Management at Aga Khan University Hospital, Nairobi. This means there is a significant and positive relationship between the Total Quality Management

factors and the implementation of Total Quality Management at Aga Khan University Hospital.

5.2 Conclusion

The study established that AKUH, N's senior leadership is committed to quality, provides a leadership role in quality management initiatives, and provides critical resources required for the implementation of quality initiatives. However, the respondent was neutral that their ideas on ways to improve quality are welcome by the senior leadership in the health facility.

Results also indicate that there was high percentage of agreement among respondents that senior leadership involved in all quality management in the health facility, senior leadership participates in every stages and levels in the quality management programs, and that the health facility has an organizational quality mission and policy. Most of the respondents agreed that the health facility has a formal quality management structure and that the health facility provides quality services.

From the findings, most of the employees at Aga Khan Hospital, Nairobi had been trained in the area of Quality Management Programs, with many trained on ISO standards, Total Quality Management and JCIA standards. The finding of the study also indicated that many of the training had been conducted in the institution with a smaller number of employees having been trained elsewhere and in other Total Quality management systems apart from the ones listed.

The respondent was neutral that the staffs are frequently trained on Total Quality Management and usually get timely training on total quality management but agreed

that the training equips the staff with the knowledge of TQM and their role in its implementation.

The respondent agreed that there is flexible culture in the organization but was neutral that there is Empowerment and utmost unity among the staff and those employees are encouraged to participate in decision making at AKUH, N. on matters of TQM. A positive and enabling organizational culture is in place and is flexible to internal changes in the organization and that the organizational culture accommodates external changes. The culture focuses on control, stability and encourages internal efficiency. The respondents largely agreed that organization has a culture that encourages adherence to company policy and the law.

The study confirms that the health facility has well-developed internal communication systems, and that organization has a well-developed external communication. The findings of the study also indicated that timely response is given to customer quality concerns respectively.

5.3 Recommendations

5.3.1 Recommendations from the Study

As much as there is senior leadership involvement in TQM implementation in the Aga Khan University Hospital, Nairobi, there is need for the organizations top management to welcome the employee suggestion to improve quality and improve the availability of important resources to achieve higher levels of TQM implementation.

In terms of employee training, there is need to address the timeliness and frequency of training in TQM. This is to ensure that almost a quarter of the staff that has not been trained in quality management are trained and certify that all staff at all levels

understands their role and obligation in continuous quality improvement in the study hospital.

While the facility has done extremely well on rational, hierarchical and developmental culture, there is need to place more emphasis on group culture especially in the aspects of utmost unity and Empowerment.

Finally, as much as the facility has put in place the required internal and external communication structure, it is recommended that more emphasis be placed on internal communication to achieve higher levels of TQM implementation.

5.3.2 Recommendation from the study to the Implementing Agencies

From the study, it is clear that the TQM practices are important for the successful implementation of TQM in the health care institutions. Based on the findings of this study, the recommendations to implementing agencies are that TQM is all about focused on on-going quality improvement and customer focus. To achieve this, the organizations top management must be fully committed and involved to create a quality organizational culture and ensure total involvement of all staff. This has to be achieved by ensuring that over 90% of employees are trained on quality standards. The organization must embrace effective internal and external communication to be sure that information is received in timely manner and is clear.

5.3.3 Recommendations for Further Research

While it is evident that the Aga Khan University Hospital has implemented TQM based on its ISO Certification and JCIA accreditation status and study findings, the researcher suggests further study to evaluate the level of TQM implementation in the

hospital and how it influences the clinical outcomes and service quality in the health facility.

There is also need to establish the modern challenges in Total Quality Management implementation in health care set up.

REFERENCES

Aljama, R. (2011). Impact of Organizational culture on TQM Implementation Bariers. *The TQM MAgazine*.

Andaleeb, S. S. (1998). Determinants of Customer Satisfaction with Hospitals, A Managerial Model. *International Journal of Health Care Qaulity Assurance Vol 11 (6-7)*, 181-187.

Arshida, M. M., & Agil, S. O. (2013). Critical Success Factors for Total Quality Management Implementation within Libyan Iron and Steel Company. *Tun Abdul Razak University, Graduate School of Business*.

Bahri, S., Hamzah, D., & Yusuf, M. R. (2012). Implementation of TQM and its effects on organizational performance of manufacturing industries through organizational culture in South Sulawesi. *Journal of Business and Management*.

Baidoun, S. (2003). Am impirical Study of critical factors of TQM in Palestinian Organizations. *Logistics Information Management 16 (2)*, 156 - 171.

Balasubramanian. (2016). Total Quality Management in the Healthcare Industry - Challenges, Barriers and Implementation. *Science Journal of Public Health, Vol 4 No 4*, 271 -278.

Bless, P. A. (1990). Fundamentals of Social Research Methods, Lusaka. *Governement Printers, Zambia*.

Brunel Business School. (2011). Brunel Business School. *Doctoral Symposium*. Brunel Business School.

Creech B (2014), *The Five Pillars of TQM: How to Make Total Quality Management Work for You*, Truman Talley Books/Dutton, Newyork, USA,p. 4,

Chakravarty, A., Parmar N, K., & Rayal, R. K. (2001). *Total Quality Management - The new paradigm in health care management*. Retrieved from http://www.ncbi.nlm.nih.gov/pmc/articles

Chu, S. J. (2000). Critical Factors Affecting the Implementation, Desicion and Process of ISO Quality Management Systems in Taiwanese Public Sectors. *Institute of Public Affairs Management, National Sun, Yat-sen Unoversity*.

Evans, J. R., & Lindsay, W. M. (2009). The Management and Control of Quality. In *The Management and Control of Quality 3rd Edition* (p. 838). New York: West Publishing Company.

Feigenbaum,A.V(2013), *Total Quality Control (3 ed.),* McGraw-Hill Inc, Newyork,USA

Garvin, D. A. (1988). Managing Quality. *Free Press, New York.*

Golfshani, N. (2003). *Understanding Reliabilty and Validity in Qualitative Research.* The Quality report.

J P Sharp, I. S. (2000). *Factors Affecting Successful implementation of ISO 9001:2000.* School of Management, University of Salford, UK.

Ishikawa, K (2015), *What Is Total Quality Control? The Japanese Way (1 ed.),* Pretence –Hall, Eaglewoodcliffs, New Jersey,

Jamali, G., Ebrahim, M., & Abbaszadeh, A. M. (2010). TQM Implemtation, An investiagation of critical success factors. *International Conference on Education and Management Technology.* International Conference on Education and Management Technology.

Joyce R. 1998. TQM Implementation in Health Care. Retrieved from:

https://www.collectionscanada.gc.ca/obj/s4/f2/dslk2/ftpo1/MQ39974.pdf.

Kaziliunas, A. (2010). The Implementation of TQM in Service Organizations. *MykolasRomeris University, 34*, 71 - 82.

Kenya Institute of Management. (2009). *Total Quality Management, Theory, Concepts and Practice.* Macmillan Publishers.

Kothari, C. R., & Garg, G. (2014). Research Methodology; Methods and Techniques. *New Age International Publishers Ltd, 3rd Edition - New Delhi*.

Ligami, C, (2013). East African Daily. Retrieved from:

http://www.theeastafrican.co.ke/business/Aga-Khan-receives-top-hospital-accreditation/2560-2001676-dim0u9/index.

Masuku, A. S. (2014). Sampling Techniques and Determination of sample size in applied statistics research, An overview. *International Journal of Economics, Commerce and Management, Vol II Issue 11*.

Meyer, J. A., Silow-Carroll, S., Kutyla, T., Stepnick, L. S., & Rybowski, L. S. (2004, July). *Hospital Quality; Ingredients for success - overview and lessons learned*. Retrieved from WWW.commonwealthfund: http://www.commonwealthfund.org/usr_doc/761_meyer_overview.pdf

Momani, A. M., & Maryan, A. S. (2013). Factors Affecting Total Quality Management implementation in Jordanian Commercial Banks. *Institute of Interdisciplinary Business Research 4 (10)*, 345-361.

Monoo, M., & K Kasongo. (2010). Factors that lead to successful TQM implementation, A case study on the Zambian Tourism Industry.

Mugenda, M. O., & Mugenda, G. A. (1999). Research methods, Quantitative, and Qualitative approaches. *Central Graphics Services, Nairobi Kenya*.

Murphey, J. F. (2009). Total Quality Management; An assessment of implementation in Florida Municipal Police Agencies. *National Committee for Quality: Essentail Guide to Quality Health Care*.

Nachmias, F., & Nachmias, D. (2008). Census Bureau. *American Community Survey*.

Nazhad, M. B., Mosavi, J. S., & Kordabadi, S. S. (2012). Organizational Culture and Quality Management (ISO/9001) Case Study Tehran University Employees. *Journal of Basic and Applied Scientific Research 2 (12)*, 12590-12599.

Nyaoga, R. B., Nyamwage, O., Oger, R. N., & Ombti, T. O. (2010). Quality Managment Practices in Kenya Educational Institutions; The Case of University of Nairobi. *African Journal of Busness and Management 1 (2010)*, 14-28.

Oluwatoyin, A., & Oluseun, A. (2008). Total Quality Management, A test of the Effect of TQM on performance and stakeholder Satisfaction. *Blekinge Institute of Technology, School of Management*.

Omware, Q. (2012). *Determinants of Quality Management Pratices.* University of Nairobi.

Parameshwa, S., Srikantia, P., & Case, S. S. (2000). *Factors affecting Implemetnation of TQM in Knoeledge ork Environment, An Integrated Framework.* Weather Head School of Management.

Patel, G. (2009). Total Quality Management in Helath care. *The Midas Journal*, 1-4.

Rad, A. M. (2005). *Barriers to successful implementation of TQM in health care organizations*. Retrieved from Emerald Insight: www.emerald.insight.com/authors

Rad, A. M. (2006). The Impact of Organizational Culture on sucessful implementation of taotal Quality Managment. *The TQM Magazine Vol 18Iss*, 606 -625.

Ray, W. J. (2011). *Methods Towards a Science of Behaviour and Experience.*

Rehder R and Ralston, F (2014) Total Quality Management: A Revolutionary Management Philosophy, *S.A.M. Advanced Management Journal.*

Sculman, H. (1997). Quality Management and Competitiveness, the diffusion of ISO 9000 Standards in Latin America and recommendations for Government Strategies. *United Nations Division of Production, Productivity and Managment Santiago, Chile*.

Sharp, J. P., Sharif, I., Kutucuoglu, K., & Davies, J. (2000). Factors Affecting Successful Implementation of ISO 9001:2000. *School of Management, University of Salford, UK*.

Talib, F., Rahman, Z., & Qureshi, M. N. (2010). *The Relationship between Total Quality Management and Quality Performance in the Service Industry: A Theoretical Model.* Social Science Research Network.

Toke. (2012). An empirical study of green supply chain management in Indian perspective. *International Journal of Applied Sciences and Engineering Research Vol 1 No 2*.

Wali, S., & Boujelbene, V. (2011). Cultural Influences on TQM Implementation and Financial Performance in Tunisian Firms.

Zaukuan, N., Muniandy, S., & MdArif, N. Z. (2012). Critical Success Factors of Total Quality Managment Implementation in Higher Education Institution, A Review. *International Journal of Academic Research in Business and Social Sciences, 2 (12).*

APPENDIX I: AUTHORIZATION LETTER

KENYATTA UNIVERSITY
GRADUATE SCHOOL

E-mail: dean-graduate@ku.ac.ke
Website: www.ku.ac.ke
P.O. Box 43844, 00100
NAIROBI, KENYA
Tel. 020-8704150

Internal Memo

FROM: Dean, Graduate School **DATE:** 12th September, 2017

TO: **Ms. Jedidah Gatwiri Serafino** **REF:** P140/CTY/PT/22993/11
C/o Health Management & Informatics Department

SUBJECT: APPROVAL OF RESEARCH PROPOSAL

This is to inform you that Graduate School Board, at its meeting on 6th September, 2017, approved your Research Proposal for the M.Sc. Degree entitled, **"Implementation of Total Quality Management at Aga Khan University Hospital, Nairobi City County, Kenya."**

You may now proceed with your Data collection, subject to clearance with the Director General, National Commission for Science, Technology & Innovation.

As you embark on your data collection, please note that you will be required to submit to Graduate School completed Supervision Tracking Forms per semester. The form has been developed to replace the Progress Report Forms. The Supervision Tracking Forms are available at the University's Website under Graduate School webpage downloads.

Thank you.

KENYATTA UNIVERSITY OFFICE OF DBA 14 SEP 2017 GRADUATE SCHOOL P.O. BOX 43844-00100 NAIROBI

JACKSON LUVUSI
FOR: DEAN, GRADUATE SCHOOL

CC. Chairman, Health Management & Informatics Department

Supervisors:

1. Dr. Andre Yitambe
   C/o Department of Health Management & Informatics
   Kenyatta University

2. Dr. Kenneth K. Rucha
   C/o Department of Health Management & Informatics
   Kenyatta University

JL/ewm

APPENDIX II: APPROVAL FROM NACOSTI

THIS IS TO CERTIFY THAT:
MS. SERAFINO JEDIDAH GATWIRI
of KENYATTA UNIVERSITY, 0-100
Nairobi,has been permitted to conduct
research in *Nairobi County*

on the topic: *IMPLEMENTATION OF TOTAL QUALITY MANAGEMENT AT AGA KHAN UNIVERSITY HOSPITAL, NAIROBI CITY COUNTY, KENYA*

for the period ending:
8th November,2019

Permit No : NACOSTI/P/18/20868/20933
Date Of Issue : 8th November,2018
Fee Recieved :Ksh 1000

.....
Applicant's Signature

.....
Director General
National Commission for Science, Technology & Innovation

THE SCIENCE, TECHNOLOGY AND INNOVATION ACT, 2013

The Grant of Research Licenses is guided by the Science, Technology and Innovation (Research Licensing) Regulations, 2014.

CONDITIONS

1. The License is valid for the proposed research, location and specified period.
2. The License and any rights thereunder are non-transferable.
3. The Licensee shall inform the County Governor before commencement of the research.
4. Excavation, filming and collection of specimens are subject to further necessary clearance from relevant Government Agencies.
5. The License does not give authority to transfer research materials.
6. NACOSTI may monitor and evaluate the licensed research project.
7. The Licensee shall submit one hard copy and upload a soft copy of their final report within one year of completion of the research.
8. NACOSTI reserves the right to modify the conditions of the License including cancellation without prior notice.

National Commission for Science, Technology and innovation
P.O. Box 30623 - 00100, Nairobi, Kenya
TEL: 020 400 7000, 0713 788787, 0735 404245
Email: dg@nacosti.go.ke, registry@nacosti.go.ke
Website: www.nacosti.go.ke

REPUBLIC OF KENYA

National Commission for Science, Technology and Innovation

RESEARCH LICENSE

Serial No.A 21781

CONDITIONS: see back page

APPENDIX III: QUESTIONARE

Dear respondent,

This questionnaire is for collection of research data for a study on Total Quality Management Implementation at Aga Khan University Hospital, Nairobi. You have been selected as one of the participants for this research. Kindly be honest, open, and exhaustive in filling the questionnaire.

Instruction: Please place a tick and fill the provided spaces as appropriate.

1. Gender

b) Male ☐

c) Female ☐

2. Position in the organization

a) Top management ☐

b) Middle management ☐

c) Other ☐

3. Department

a) Medical ☐

b) Nursing ☐

c) Hospitality (Catering, Housekeeping, Laundry) ☐

d) Allied health (Physiotherapy, Pharmacy, Dietetics, Radiology,) ☐

e) Finance ☐

f) Marketing ☐

g) Procurement ☐

h) Quality ☐

i) Maintenance ☐

4. Number of years worked in the organization (Aga Khan University Hospital, Nairobi)

2 years and below ☐ 2 to 5yrs ☐ 6 to 9yrs ☐ 10yrs and above ☐

SECTION B: FACTORS AFFECTING IMPLEMENTATION OF TOTAL QUALITY MANAGEMENT

PART I: TOP LEADERSHIP COMMITMENT

The following statements relate to critical components for Total Quality Management Implementation. Using the keys (Where: 1 - Strongly Disagree; 2 - Disagree; 3 - Indifferent; 4 - Agree; 5 - Strongly Agree), appropriately place a tick according to the extent to which you agree or disagree with the statements.

Statement	**Your Rating**				
	1	**2**	**3**	**4**	**5**
Top Management Commitment					
The organization's top management is committed to quality					
The organization's top management of your organization provides a leadership role in quality management initiatives					
Critical resources required are always made available for the implementation of quality initiatives					
Employee's ideas on ways to improve quality are welcomed by the top management in the organization					
Top management participates in all quality management in the organization					
Top management takes part at all stages and levels in the quality management programs					
Your organization has an organizational quality mission and policies					
Your organization has a formal quality management structure					
Your organization provides quality services					

PART II: EMPLOYEES TRAINING AND DEVELOPMENT

Below are statements and questions regarding training and personal development. Kindly fill in the spaces or place a tick as appropriate.

5. Have you ever been trained on any Quality Management Programs?

a) Yes ☐

b) No ☐

6. If the answer is yes above, where were you trained?

a) In the current organization ☐

b) In another institution ☐

7. Have you ever been trained on ISO standards?

a) Yes ☐
b) No ☐

8. Have you gotten training on JCIA standards?

a) Yes ☐
b) No ☐

9. Do you have any training on Total Quality Management?

a) Yes ☐
b) No ☐

10. Do you have any training on any other quality management program that is not mentioned in the ones above?

a) Yes ☐
b) No ☐

11. If the answer is yes in number 6 above, kindly give specifics

……
……
……

12. By using the keys (Where: 1- Strongly Disagree; 2- Disagree; 3- Indifferent; 4- Agree; 5- Strongly agree). Tick as appropriate to the extent at which you agree or disagree with the statements on Employees Training and Development.

Statement	**Rating**				
	1	**2**	**3**	**4**	**5**
All the employees in the organization are trained on total quality management					
The employees in the organization are frequently trained on total quality management					
The Employees in your organization usually get timely training on total quality management					
The training provided to the employees equips them with understanding of TQM and their role in its implementation					
The employees are always involved in the Total Quality Management training programs					

PART III: ORGANIZATIONAL CULTURE

The statements below relate to the organizational culture. Using the keys provided (Where: 1- Strongly Disagree; 2- Disagree; 3- Indifferent; 4- Agree; 5- Strongly Agree). Tick as appropriate the extent to which you agree or disagree with the statements.

Statements	**Your Rating**				
	1	**2**	**3**	**4**	**5**
Group Culture					
The organization you work in has a flexible organizational culture					
There is utmost unity among the employees in your organization					
The employees in the organization are empowered					
Employees are encouraged to participate in decision making					
Developmental Culture					
Organizational culture is in place and flexible to internal changes in your organization					
The organizational culture accommodates external changes					
Rational Culture					
Your organization has an organizational culture that focuses on control					
Your organization has an organizational culture that focuses on stability					
Hierarchical culture					
Your organization has an organizational culture that encourages internal efficiency					
Your organization has an organizational culture that encourages adherence to company policy and the law					

PART IV: COMMUNICATION

The statements below relate to communication. Using the key (Where: 1- Strongly Disagree; 2- Disagree; 3- Indifferent; 4- Agree; 5- Strongly Agree) Tick appropriately according to the extent to which you agree or disagree with the statements.

Statements	**Your Rating**				
	1	**2**	**3**	**4**	**5**
Internal Communication					
Your organization have well developed internal communication systems					
There is free flow of information between the departments in your organization					
There is free flow of information from top to bottom					
There is bottom up information flow about quality management from the departments					
There is free flow of quality management information from staff to their leaders					
There is a structured feedback mechanism in your organization					
External Communication					
Your organization has well developed external communication					
Your organization gets timely information about customer satisfaction					
Your organization gets customer complaints in time					
Your organization gives timely response to customer quality concerns					

PART V: TOTAL QUALITY MANAGEMENT IMPLEMENTATION

The following statements relate to Total Quality Management implementation at AKUH, N. Using the keys (Where: 1- Strongly Disagree; 2- Disagree; 3- Indifferent; 4- Agree; 5- Strongly Agree) Tick appropriately according to the extent which you agree or disagree with the statements.

Statements	**Your Rating**				
	1	**2**	**3**	**4**	**5**
Top Management commitment and leadership					
Top management takes a leadership role in management of quality in your organization					
Satisfied customers have long term relationship with your organization					
Cultural Change					
Your organization has a Total Quality Management culture					
The quality culture in your organization encourages innovation					
Customer Focus					
Your organization strives to meet and exceed customer needs and expectations					
Your organization maintains close link with its customers					
Your organization take into account the customer needs in developing and offering their services					
Total Involvement					
All employees in your organization are always involved in quality management programs					
All sections of the organization are fully involved in quality management programs					

Continuous Improvement					
Your organization continuously assesses and improves its quality management programs					
Your organization continuously improves its quality management programs					
Your organization continuously monitors their quality management programs.					
Structure Measures					
There are appropriate structures to support TQM					
Continuous improvement of structure is necessary for the hospital to meet its quality requirement needs.					
Process Measures					
The processes are very fast					
The process should be improved to ensure that meets the required international standards					
Outcome Measures					
The quality of services are good					
The quality of services meet the international ISO and JCIA standards					

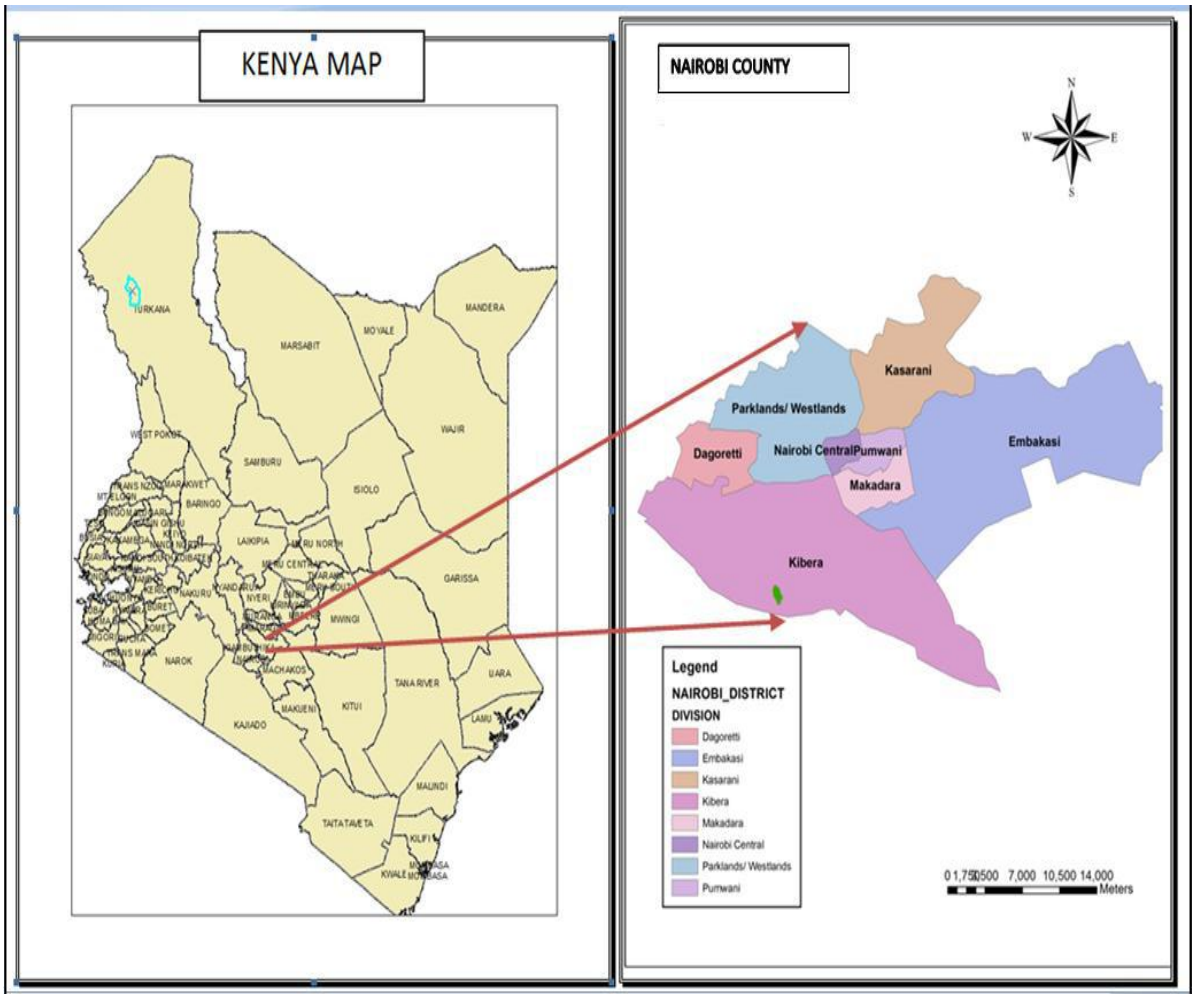
Thank You for your Participation

APPENDIX IV: SAMPLE DETERMINATION

Department	Population	Sampled Population	Response	Response Rate
Medical	264	43	28	58.3
Nursing	572	93	78	83.9
Hospitality	641	104	67	64.4
Allied Health	111	18	14	77.8
Finance	118	19	11	57.9
Marketing	94	15	9	60.0
Procurement	96	16	11	68.8
Quality Assurance	25	4	2	50.0
Maintenance	105	17	9	52.9
Total	**2026**	**329**	**229**	**69.6**

Source: Human Resource, Aga Khan University Hospital, Date: 2017

APPENDIX V: MAP OF STUDY LOCATION (STUDY WILL BE DONE IN NAIROBI COUNTY.



Source: Researchgate.net/figure/A-map-of-Kenya-and-Nairobi-city County