

**TOTAL QUALITY MANAGEMENT IN KENYA'S HEALTHCARE  
INDUSTRY**

**BY  
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## **DECLARATION**

I declare that this research project is my original work and has not been submitted for any degree qualification of this or any other university.

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

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## **DEDICATION**

This study is dedicated to all health facilities in Kenya, to my son Ryan, my brother Kagiri and my parents Mercy and Robert.

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I acknowledge the power of God, the maker and the provider of finances and knowledge for enabling me complete my studies in the right spirit.

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## **ABBREVIATIONS/ACRONYMS**

KNH	Kenyatta National Hospital
KDHS	Kenya Demographic Health Survey
TB	Tuberculosis
HIV	Human Immuno Deficiency Virus
TQM	Total Quality Management
USA	United States of America
EFQM	European Foundation for Quality Management
WHO	World Health Organization
	United Nations Educational, Scientific and Cultural
UNSECO	Organization
AIDS	Acquired Immuno Deficiency syndrome

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## ABSTRACT

The role of Total Quality Management in an organization is to seek to integrate all organizations functions to focus on meeting customers' needs and organizational objective. TQM has steadily become popular and it maintains that organizations must strive to continuously improve the processes by incorporating the knowledge and experience of workers.

The study sought to examine factors affecting TQM implementation in Kenyan healthcare industry. It was guided by four specific objectives to establish the extent to which financial resources affect implementation of TQM, examine the extent to which staff affect implementation of TQM, establish the extent to which leadership and commitment by managers affect implementation of TQM and finally establish the extent to which staff empowerment and education on TQM affects its implementation.

The study employed a cross sectional research design. The population consisted of staff working in KNH and Nairobi hospital in various departments. Primary data was collected from management, doctors, nurses, clinical officers and junior staff using a semi structured questionnaire.

Data analysis was done using factor analysis, mean mode, standard deviation and chi square. The study found out that Total Quality Management had been implemented to a moderate extent by the Kenya's healthcare industry. 5 factors that influence Total Quality Management were identified through factor analysis. These include risk perception, staff training, top management support and customer satisfaction. Risk perception, staff training, top management support and customer satisfaction had a positive influence with TQM implementation.

It was recommended that health Care industry should seek ways to enhance TQM adoption within the industry and ensure TQM is fully implemented. Further since implementing strategy is a key driver, management should facilitate empirical studies to be conducted to help health care understand the importance of implementing strategy with TQM adoption. Future studies should consider expanding the topic to include other medium sized and small hospital and also include moderating variables like firm size and firm age.

# CHAPTER ONE

## INTRODUCTION

### 1.1 Background of The Study

Since independence, Kenya has worked to improve the health of its population people, 75.19% of who live in rural areas (World Bank, 2013). In 1994 the government published the Kenya health policy framework paper, which envisions providing “quality healthcare that is acceptable, affordable and accessible in Kenya by 2010” ( Page 15).The Kenya ministry of health sets policies develops standards and allocates resources for healthcare services. The government reports that there are more than 5,000 health facilities in Kenya. Government over sees 41% of health centers, NGOs runs 15 % and the private sector operates 43 %.( Health sector working group report, 2014). Kenya faces a significant shortage of physicians with only 4,500 in the entire country. According to the world health organization .whereas the United States counts on 26 physicians per 10,000 people, Kenya has just one doctor per 10,000 people, a ratio that is below average for the African region. 50 % of the physicians practice in Nairobi, only 1,000 of the physicians work in the public sector. Nurses supplements physicians care, also traditional midwives, pharmacists and community health workers. Traditional doctors are the only “healthcare” workers in the areas.(World Bank 2013).

Health care workers are also migrating to private sector where there are higher paying jobs or away from Kenya entirely. The few health personnel in the country compromise the quality of health care services (Health sector working group report,2014).Other factors affecting

quality of services include lack of adequate facilities, lack of financial resources and poor communication processes.(Akacho,2014).Total quality management in health care seeks to improve effectiveness of treatment and increase patients' satisfaction with the services. With the rise in population, healthcare is gaining increased attention. A health care system comprises of medical clinics or consultation rooms, pharmacies and hospitals. All these components need to provide quality services for the system to work properly. Effective quality management is focused on the needs of the patients because their getting well will determine the effectiveness of treatments and appropriateness of the service. Patients' needs and expectations change over time, quality management calls for constant monitoring of patients progress and satisfaction with service. e.g. by use of medical tests, results and patients opinion of effectiveness of treatment. An effective quality delivery of healthcare also relies on motivated employees. Quality management is all about delivering consistent quality that requires reliable processes. Reliability requires the existence of performance goals, risk reduction procedures, quality improvement system and reward mechanism. Delivering quality healthcare calls for quality management system that complies with external regulations and adopts latest technologies and the required knowledge for effective application of those technologies (Sarkissian, 2008)

The health sector in Kenya is made up of the ministry of health and private hospitals. The ministry of health runs the public hospitals where KNH is one of them. There are also private hospitals that are run privately. Kenya epidemiological profile shows that disease burden is still high (KDHS, 2008/2009). There are emerging in healthcare for instance TB and malaria have proven problematic. Deteriorating security pose a significant and growing threat to

national security with serious implications for public health. Threats from Ebola and acts of terrorism have potential of affecting health and loss of lives. The health sector is guided by the vision 2030 plan , the Kenya health policy 2012-2030,the health sector strategic plan 2013-2017 and the constitution of Kenya 2010.under the constitution of Kenya ,Kenyans have the right to life and the highest attainable standards of health which includes the right to quality health care services ,reproductive health, emergency care ,clean safe and adequate water for all, reasonable standards of sanitation, food of acceptable quality and a clean healthy environment(Constitution/GOK,2010)

The challenges in health care have been complicated by the establishment of the 2 levels of government, the national and 47 county governments (Kenya health statistics, 2011).This is because some of the people and systems involved in the restructuring have been in existence for decades and transferring them to counties is a hard task. There has also been confusion on how the national and county government should share responsibilities.

#### **1.1.1 Total Quality Management conceptual background implementation**

Total quality management is a management philosophy that seeks to integrate all organizations functions to focus on meeting customers' needs and organizational objective.TQM views an organization a collection of processes. It maintains that organizations must strive to continuously improve the processes by incorporating the knowledge and experiences of worker. Total quality management (TQM) is a management approach that originated in the 1950s and has steadily become more popular since the early 1980s.Total quality is a description of the culture, attitude and organization of a company

that strives to provide customers with products and services that satisfy their need (Nayanatara,2011). Quality has two components-content and delivery in healthcare. Content quality is concerned with the medical outcome that is achieved. Delivery quality reflects individual reflects an individual customer's interaction with the health care system; for a patient, was the hospital clean, were the nurses caring and informative? Were the service delivered rapidly, cheerfully and with understanding of the patient's individual needs and preferences?

To be successful implementing TQM an organization must concentrate on 8 key elements; Ethics, integrity, trust, training, teamwork, leadership, recognition, communication. Quality ensures things are done right the first time and defects and wastes are eradicated from operation. The simple objective of TQM is "do the right things, right the first time, every time." TQM is a way of managing to improve the effectiveness, efficiency, cohesiveness, flexibility and competitiveness of a business as a whole. As defined by British standard institution, TQM consists of "management philosophy and company practices which aim to harness the human and material resources of an organization in the most effective way to achieve the objective of the organization. (Chaston, 1994).

There are seven prime factors affecting the implementation of TQM (Mann, 1995).These are; process factors, type of employees, shared values, management style, organizational structure, number of employees and industrial relations. Organizations should give these factors special consideration when developing TQM approaches and provide guidelines to show how these factors are likely to affect implementation of TQM. Process factors focus on

the 'how to' aspect. They deal with the specific skills and /or components necessary to build effective working relationship for successful implementation of quality management. The parties involved must be aware of how to go about it (Takitonda and Montaya, 2001). The end results of the process factor are a whole system of unified parts acting in harmony to execute tasks to achieve goals effectively and efficiently. All team members should be aware of their responsibilities. If the process factor is not conducted well in implementation of quality management, the results may yield confusion, frustration, loss of efficiency and limited effectiveness.

The type of employee will also determine the success implementation of TQM. Necessity, commoner or parasites are the common type of employees (Kim and Sikula, 2005). The type of employee will determine the success of TQM in that the necessity will do all they can to ensure the success, the commoner will do the bare minimum and the parasite will not push themselves to ensure the success. The study from "Health Care Management Review" notes that "Hospitals whose staff associates perceive an intense competitive environment will experience more implementation success than will hospitals whose staffs do not feel economically threatened.

For proper implementation, all employees and management must have shared values, management style, organizational structure; number of employees is all very important factors. Industrial relations will also determine successful implementation of TQM.

### **1.1.2 Healthcare Issues in Kenya**

Kenya is one of the sub-Saharan African countries that battle various life threatening diseases that can be prevented by the right combination of education and resources. HIV/AIDS affects 7% of the population. The National HIV/AIDS prevalence doubled from 5.1% in 1990 to 10.6% in 2002. The situation is striking in Western/Nyanza region where awareness level remains low, traditional customs that spread the virus and medical facilities are few and far between. (Health sector working group report, 2014). Malaria kills more Kenyans than any other communicable disease. 70% of the population is susceptible to the threat therefore it's a countrywide problem. (Kenya demographic Health survey, 2006). Infant and fewer than 5 mortality rates are 79 and 111 per 1000 per year respectively. Other major causes of morbidity and mortality include acute respiratory infection, malnutrition, diarrhea disease and TB. (Census Kenya, 2004) Sanitation and safe drinking water coverage is estimated at 42% and 48% respectively. Car accidents cause the highest number of deaths in the world with 510 accidents per 100,000 vehicles (census Kenya, 2004). Top five causes of outpatients' morbidity are malaria diseases of the respiratory system, skin diseases, diarrhoea and accidents accounting for 70% of morbidity.

Health sector faces a number of challenges i.e. few health workers in comparison with the growing population, over reliance on external funding, high child malnutrition status, and low budgetary allocation to the sector. This compromises quality on services rendered. The government of Kenya removed all charges at dispensaries and health centers in year 2012/2013 to enable the poor access medical services. The government introduced free maternal deliveries in public health facilities. Due to this there is an increased number of



patients who seek health services and hence quality is compromised. Although significant progress towards containing communicable diseases e.g. HIV and AIDS, malaria, pneumonia, TB and cholera have been made the burden is still high. There is also a rise in non-communicable diseases e.g. cancer, hypertension, heart diseases and diabetes due to changes in lifestyles. Road traffic Accidents are also significant causes of death and disability. All this calls for a change in thinking in healthcare.(Kenya demographic health survey,2006)

Access to healthcare is unequally distributed across the country with central province and Nairobi considered having the best facilities whereas North Eastern province is found to be the most underdeveloped. (Wamai, 2006).Poor people in rural areas who become sick usually seek medical services at primary care facilities which are under staffed, under equipped and have limited medicines. Most ill Kenyans are hindered by cost (44%) and 18% are hindered by long distances to the nearest health facility. (World Bank, 2008). The central government in collaboration with county governments has commenced a program of upgrading healthcare infrastructure and modernizing equipment. The recently launched managed equipment services project will ensure that every county in Kenya has two hospitals fully equipped with the state of the art healthcare facility. Kshs.4.5 billion has been allocated for the financing of healthcare equipment for year 2015/16.Since the introduction of free maternal services, cases of maternal deaths in the country have reduced.([www.treasury.go.ke](http://www.treasury.go.ke)). The approved sector allocation increased from Kshs77 billion in 2011/12 to Kshs94 billion in 2012/13 and reduced to 48 billion in 2015/16 due to transfer of devolved health function to the county governments. The government long term economic blue print, Vision 2030 and its second

medium term plan 2013-2017 has deliberately committed to undertake development processes aimed at making Kenya a globally competitive middle income country.(Budget statement,2015). Under the social pillar, the government has committed to improve quality of life of all Kenyans by ensuring equitable, affordable and quality healthcare (Republic of Kenya medium plan 2013-2017). Despite the commitment these has not been achieved by the healthcare industry in general. This is contributed by limited information on the factors that affect delivery of quality services in the hospitals and the government concentrating more on quantity rather than quality.

### **1.1.3 Total Quality Management Implementation in Healthcare**

Hospitals are by nature complex organizations and the complexity is seen in service hospital with perceived notion of service deficiencies. TQM has been accepted as a major long term strategic initiative towards continuously improving quality in healthcare. It starts with top management. (Mjafi, 2001). The roots of quality assurance initiatives in healthcare extends at least as far back as the time of Florence Nightingale's work during the Crimean War(1854-1856),when the introduction of nutrition, sanitation and infection control initiatives in war hospitals contributed to reduction in the death rate from 43% to 10%.TQM can be an important part of hospitals' competitive advantage. In health care settings, excellence is measured in health outcomes and patient satisfaction. Even in small businesses, such as physician practices and home health care providers, these factors can be tracked and turned into a competitive advantage. Quality of performance in healthcare includes safety, security; attitude of nursing, role of doctors in terms of 'time' includes appointment, delay time, service time, timing with regards to medical treatment and surgery. (Patel, 2012)

Total quality management aims to improve services rendered to patients and also to provide quality health services to patients at affordable price within reasonable time, Applying zero errors to all patients services; maintaining a continuous error prevention program; Training employees in medical care on such aspects as error prevention, reducing delay time and providing prompt reasonable services to patient's needs; the management system has to always to realize the true nature of the quality of healthcare and to be motivated towards improving this quality ( Bhat,2007).

## **1.2 Research Problem**

The health care sector in Kenya has been growing rapidly in the recent past. The industry 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. This has in turn led to greater demand for quality and affordable health care.USA has concluded that problems in health care quality are serious and extensive and has advocated continuous quality improvement as a major strategy to move the healthcare towards improving quality. (Galnn, 1998). TQM application in western countries has shown great improvement in services offered to patients. Department of clinical epidemiology at Latter Day saints hospital, Salt Lake city used TQM to reduce the rate of post-operative wound infection from 1.8% to 0.4%.(Koska ,2001). A New England Multi hospital project used quality improvement techniques to reduce mortality among patients undergoing cardiovascular surgery by 24% in 3 years (O'Connor et al 1996).

From the study on quality management for public hospitals in Kenya carried out by Dr. Kenneth Wanjau and Beth Muiruri (2012) the study concludes that public health sectors should improve the level of adoption of technology and willingness to invest and advance in modern technology in order to facilitate service assessment, improve process and communication which are essential for effective and efficient service quality in public health sectors in Kenya. In all the previous studies; the focus is on public healthcare facilities. The previous studies considered different indicators that affect TQM including finances, leadership knowledge on TQM, commitment of leaders, staffing and communication processes .Hence; this study seeks to answer the questions; what factors influence the adoption and implementation of total quality management in Kenyan Healthcare Industry and to what extent the TQM implementation has been achieved in the private and public sector.

### **1.3 Research Objectives.**

The research objectives of this study are to:

- i. Establish the extent to which financial resources affect implementation of TQM in Kenyan Healthcare Industry
- ii. Examine the extent to which staffing affect implementation of TQM in Kenyan Healthcare Industry
- iii. Establish the extent to which leadership and commitment by managers affect implementation of TQM in Kenyan Healthcare Industry
- iv. Establish the extent to which staff empowerment and education on TQM affect its implementation.

#### **1.4 Value of the Study**

This study is expected to be of value because it will ensure hospitals in Kenya come up with strategies to ensure full implementation and adoption of TQM and where there are gaps so that they can be dealt with. It will be of significance to the management and policy makers in these specific hospitals because it will inform decisions on policy regarding TQM and its full implementation. The study will also identify areas for further study

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.0 Introduction**

This chapter presents and past studies as well as theories related to TQM. The purpose of the study is to examine factors affecting implementation of TQM in Kenyan Healthcare Industry. This is organized as follows; we look at theoretical foundation of TQM, global survey of healthcare, review of literature of TQM adoption and implementation, benefits of TQM adoption challenges of adoption of TQM in the health sector and finally the conceptual framework.

#### **2.1 Theoretical Foundation of Total Quality Management Adoption and Implementation**

TQM is considered as one of the most crucial aspects in service delivery. TQM helps to offer advantages for those organizations which implement it properly (Samson and Terziovski 1999). TQM is considered as the process of managing the whole process in order to accomplish excellence. TQM seeks to improve all the procedures and at the same time meet and exceed the needs of the customers (Talukder and Ghosh, 2004). TQM is a management philosophy; a paradigm, continuous improvement approach to doing business through management model.

TQM was first developed in Japan then spread in popularity. Adoption and implementation of TQM is influenced by several factors. A number of theories and models have been

developed to explain TQM adoption and implementation. Some of these theories and models include; Deming's theory, Crosby's theory, Joseph Juran's theory, THE EFQM framework, Ishikawa's Theory, Six sigma theory just to name but a few. According to Deming's theory there are 14 points that serve as guidelines for appropriateness organizational behavior and practice regarding quality management (AOM, 1994). Organizations are recognizing the importance of quality management. Many organizations have concluded that effective quality management can enhance their competitive abilities (Business Week 1992).

Edward Deming was one of the strongest proponents of quality management who contributed to the rapid revitalization of the Japanese Economy after World War II (Deming, 1986, Walton 1986, Yoshida, 1989). The Deming management method is currently embraced by many firms around the world (Hodgson, 1987). However, the role that this method has played in the formalization and advancement of management theory remains a relatively unexplored issue. The new knowledge that Dr. Deming introduced to the world is being re-introduced to some healthcare organizations that are serious about providing better value to patients and at an affordable costs. These healthcare organizations are learning about a model for better management from companies like Toyota (Hunter, 2014).

Crosby made a point much like Deming that if you spend money on quality, it is money well spent. Crosby redefined quality to mean conformity to standards set by the industry or organization that must align with customers' needs. (Principle of management, 1994). Juran theory emphasized on quality planning, quality control and quality improvement. Healthcare organization especially large healthcare systems, began studying and adopting industrial

quality management methods in the late 1980s (Berwick , 2002).Early applications focused primarily on establishing programs and infrastructure to measure quality and enhancing organizational culture surrounding quality issues. Some hospitals used TQM methods to implement process improvement and redesign both non-clinical and clinical work flows/ (Young, 2001). Examples of specific TQM interventions included the formation of cross-disciplinary teams to examine and improve work processes, training employees to identify quality improvement opportunities and the use and application of statistical method for process improvement (George, 2002)

## **2.2 Healthcare; a Global Survey**

Healthcare has lagged behind other industries in proactively reaching out to its consumers. Medical costs continue to rise globally although the trend has slowed in some regions. Rising medical costs continues across the globe. Drivers include scaling back of public benefits in many countries which has put additional pressure on private entities. This has also been contributed by an increase in lifestyle diseases globally because of the increase in aging population. ([www.millennium-project.org](http://www.millennium-project.org);2010). Globally the medical conditions causing highest prevalence are cardiovascular disease and cancers. (Watson, 2014). The improvement in health and medical services over the past 20 years could be reduced by the ongoing economic problems, previous health strategies, sustained growth in health budget and improving living standards over the past 20 years has resulted in at least 30% fewer children under 5 dying in 2010 than in 1990, total mortality from infection disease fell from 25% in 1998 to less than 16% in 2010, and world mortality fell from 4% in 1990 to 2% in 2010.the number of malaria cases fell by 23 % in 105 countries between 2000 and 2009 and number of



deaths by 38%.the number of measles death fell by 78% between 2000 and 2008.international collaboration to reduce HIV,SARS and H1NI has build better global health system.( UNESCO,2010). Cardiovascular diseases are now the leading cause of death in both the developed and developing countries. Infectious diseases are the second largest killer and cause about 67% of all preventable deaths of children under 5 globally. These include pneumonia, diarrhea, malaria and measles (Sofi, 2012).

Poverty, urbanization, travel, immigration, trade, increased encroachment to animal territories trigger new pandemics. 20 diseases are now drug resistant and old diseases have reappeared e.g. cholera, Chikungunya, yellow fever, plague, dengue fever meningitis and diphtheria. Antiretroviral therapy has changed the AIDS epidemic. According to the 2011 UNAIDS report, new HIV infections declined by 21% over the past 12 years. HIV incidence has fallen in 33 countries, 22 of them in sub-Saharan Africa (UNESCO, 2010). With 12 % of the world's population, Africa has 25% of world's disease burden. A new strain of whooping cough in Australia has potential of becoming a global epidemic. China is investing in new health infrastructure to improve the health of its citizens. Asia remains an epicenter of emerging epidemics. WHO Europe (Health 2020) is changing its focus towards prevention. The aging population of Europe continues to pressure government resources. (www.millennium-project.org, 2010).

In North America, hospitals are increasingly merging to form insurance like providers. The US is upgrading its electronic health records. About 33 % of children in the US are overweight or obese. The survey showed that children aged 8-18 years spend an average of 7.5 hours a day with entertainment media (Sofi, 2012)

### **2.3 Factors influencing Total Quality Management Implementation**

Research into the implementation of TQM identified a few factors that influence its application. Joint ventures, ownership, leadership styles and quality experiences are the most influential factors that contribute in the TQM implementation. Communication plays a key role in the TQM implementation (Jaafari, 1996). Nevertheless, communication is one of the important problems of current management. It seems to play a key role in the managerial and organizational effectiveness (Ghobachia, Gallear, 1996). In contrast, Nelson et al (1999) conclude that communication has a non-significant effect on TQM implementation. Competition is another factor that influence firms to implement TQM. The higher the level of competition faced by the firm, the higher the implementation scale of TQM practices (Chong and Rundus, 2004). Previous experiences affect adoption of managerial innovation. If an organization had a good positive impact on quality, they will be able to have a smooth implementation (Jaafari, 1996).

The size of the company also affects TQM implementation. According to research done by Hendricks and Singhal (2001), Taylor and Wright (2003) they found out that firm size affects the extent to which TQM practices are implemented. Taylor (1997) proved that the small companies are more likely to confuse TQM with quality assurance. They are less knowledgeable about TQM as strategic approach to attracting customers Benson, Saraph and Schroder (1994) did not find any relationship between size of the company and implementation of TQM practices. Hongvi Sun (1999) found out that firms that are multinational are likely to implement TQM practices. TQM is a challenge to traditional

management practices therefore managers are confronted with resistance from employees due to new management practices adoption Benson et al (1997), Sebastianelli and Tamimi (2003) found out that the more managers adopt a participating leadership style of management the higher the success in implementation of TQM.

#### **2.4 Benefits of Total Quality Management**

If TQM is effectively implemented, it will lead to benefits to the organization in the long term. TQM will lead to lower costs, higher revenues, satisfied customers and empowered customers. This was stated by Juran (2001). A study in New Guinea found that customer satisfaction and efficiency are the most valuable benefits of TQM (Bhanugopan 2002). It also helps an organization maintain its competitive advantage, improving customer satisfaction, increasing awareness of quality and improving operating procedures. This was by a study done by Gol and Yeo (1994). When TQM is successfully implemented an organization will gain the benefits of continuous improvement in products, processes and services, a reduction in costs, enhanced productivity and customer satisfaction.(Al-Asiri,2004)

According to a study done by Hughes and Maddox, 2002, successful implementation of TQM leads to reduced scrap and rework, elimination of defects, reduced level of costs, increased level of productivity and efficiency and better employee morale (Chin and Pun, 2002) stated that TQM implementation will lead to improved products, satisfied employees and customers, reduced costs and improvement in financial performance of an organization. In summary; the studies above indicate the benefits of successful implementing TQM leads to strengthened competitive position, higher productivity, enhanced market image,

elimination of defects and waste, reduced costs and better cost management, higher profitability, improved customer focus and satisfaction, increased customer loyalty and retention, increased job security, improved employee morale and enhanced shareholder and stakeholder value and improved innovative processes.

## **2.5 Total Quality Management Implementation Hurdles**

It is essential to recognize and understand the hurdles that may hinder the success of TQM implementation. Given the issues and weakness with traditional management it is surprising to find that TQM implementation may face some obstacles. A number of inhibitors have been examined in a number of published academic research articles. It is therefore important for organization to avoid these inhibitors both before and during TQM implementation. A survey in USA found that insufficient human resources management and development, lack of quality leadership, lack of planning for TQM implementation, lack of customer focus and inadequate TQM resources are the main inhibitors (Sebastianelli and Tamin, 2003). Other studies indicate that the main barriers are insufficient time, poor communication and lack of employee authorization as the main barriers (Salegna and Fazel, 2000).

A study done by Masters (1996) found out that the main inhibitors to successful implementation of TQM are inability to change organization culture, lack of permanent training and education, lack of commitment by management, improper planning for implementation, lack of access to data and results, adequate measurement techniques, isolated individuals and departments and incompatible organizational structure, paying insufficient attention to external and internal customers and insufficient use of team work and

empowerment. A study in Qatar indicated the following inhibitors; lack of commitment and support from top management, resistance from employees, negative work environment, lack of resources to implement changes, lack of Knowledge and skills in senior management (Al-Khalifa and Aspirnwall,2000).

In health care a study done by Mosadeghrad (2013) indicated the main barriers to successful implementation of TQM as strongly departmentalized organization, bureaucratic and hierarchical structure, professional autonomy, tension between managers and professionals and difficulties involved in evaluating healthcare processes and outcomes, lack of consistent managers and employee commitment in TQM implementation, poor leadership and management , lack of quality oriented culture, insufficient training and inadequate resources.

## **2.6 Total Quality Management In Healthcare**

TQM is a philosophy aimed at achieving excellence involving all organizations employees. In healthcare settings, excellence is measured in health outcomes and patient satisfaction. Five concepts are consistently cited in studies of TQM in healthcare i.e. focus on customers, continuous improvement and learning, participation and teamwork by all employees, commitment by top management and process approach to the organizations business challenge.(Aquino,2012). A classic 1996 study on TQM by healthcare management review noted that smaller hospitals were more successful than larger hospitals in implementing quality improvement. (Brumley, 2012)

In recent years, there is an increasing interest to apply TQM to improve customers' quality of service and care. To date limited research attention has been given to challenges involved in

adopting TQM practices in healthcare (Aquino, 2012). Some of the reasons for failure can be traced to the insufficient support of health professionals, lack of leadership commitment and the tendency to look at TQM in isolation rather than putting it at core of the institutions strategy (Hanna and Sethuraman, 2005). There are various obstacles to TQM success in healthcare. This is attributed by the strongly departmentalized, bureaucratic and hierarchical structure, professional autonomy, tensions between managers and professionals and the difficulties involved in evaluating healthcare processes and outcome (Mosadeghrad, 2013). Other obstacles to TQM in healthcare success include lack of consistent managers and employees' commitment, poor leadership and management, lack of quality-oriented culture, insufficient training and inadequate resources. Understanding the factors that obstruct TQM implementation will enable an organization develop more effective strategies for implementing TQM in healthcare.

## **2.8 Summary and Research gaps.**

Total quality management is essential in any organization. However, despite the advantages of TQM implementation, there have been challenges and some failures have been reported during its implementation. This challenges need to be addressed to enhance the success of TQM. Past studies conducted have revealed a number of factors that influence success of implementation of TQM. Some of these factors include communication, leadership styles, competition and size of the company. The study is supported by a few theories and concepts i.e. Deming's theory, Crosby's theory, Joseph Juran's theory, THE EFQM framework, Ishikawa's Theory, Six sigma theory. However it was noted that most of the studies had been

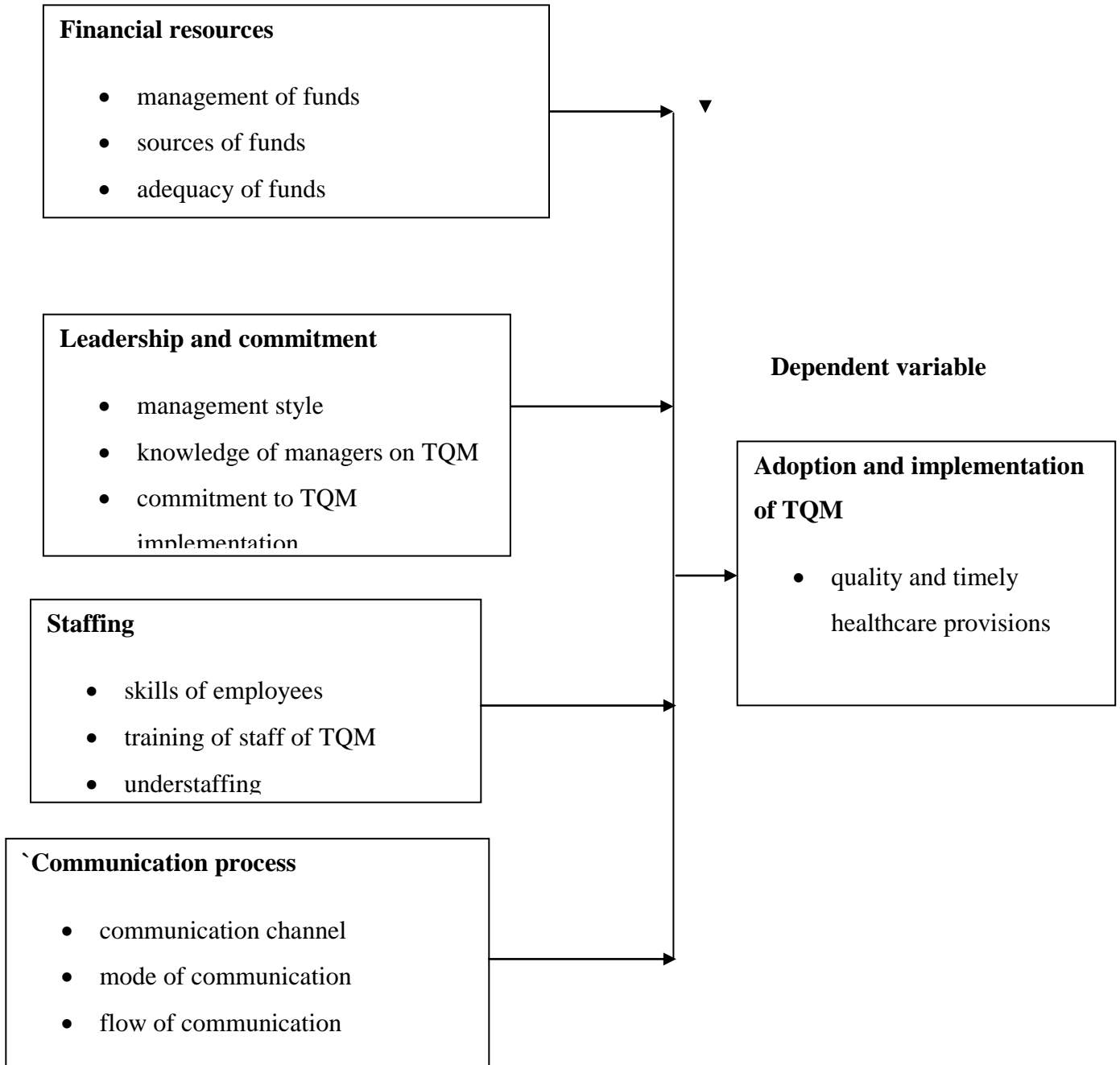
carried out in developed countries in the healthcare sector hence there is need to carry out similar research based on developing country context.

## **2.9 Conceptual Framework**

Based on extensive review of the vast literature on TQM, The study has identified several dimensions as being critical for effective implementation of quality management. The present work aspires to provide a basis for ensuring health care facilities develop more effective strategies to ensure successful implementation of TQM. The study is guided by a conceptual framework that describes the interrelationship between the variables as presented in figure 2.1.

**Figure 2.1: Conceptual framework**

**Independent Variables**



Source: Research data (2015)



## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter presents the methodology that was used in the study. It is organized as follows, it starts with presenting the research design ,then the population, sample frame, the research design, sampling techniques, data collection instrument, data collection procedures and finally data analysis.

#### **3.2 Research Design**

The study used cross sectional research design. The research design was most appropriate since the objective of the study is to establish the factors that influence the adoption and implementation of TQM in Kenyan Healthcare. The focus was two Kenyan hospitals; that is Nairobi Hospital and Kenyatta National Hospital. The study gives guidance on implementation of TQM in healthcare, these being the largest private and public hospital in Kenya. It is appropriate because it can be used for describing the characteristic of a large population and also the design allowed use of questionnaire as tool for data collection.

#### **3.3 Population of the Study**

The unit of the study was the KNH and Nairobi hospital .The population under study were the staff working in KNH and Nairobi hospital under various departments that include the managers and heads of each ward in the hospital.

According to Oso and Onen (2009), a sample is part of the target population that has been selected to represent it. The study population is not homogenous hence the sample size of this study will include a total of fifty staff members from the hospitals.

### **3.3.1 Study Context**

The Nairobi hospital is a hospital in Nairobi. It was built as a European hospital. It was later renamed the Nairobi hospital. It is a private nonprofit institution that provides ambulatory care and quality in patients' services including critical care. The hospital provides a broad range of secondary and tertiary care including diagnosis of disease and team management of patients care. In recent years, the hospital has grown, expanding services and upgrading facilities. The expansion programme has emphasized the introduction of new diagnostic services and the raising of quality of care to international standards. Nairobi hospital is a very strong brand name which attracts patients. This has been made possible by the hospital visions and mission which is "is to provide a regional centre of excellence for quality healthcare, through efficient services and facilities" and implementation of its objectives geared toward this goal. The hospital has embraced many techniques and concepts for the improvement of quality over the years.

Kenyatta National hospital is a public hospital which is Kenyans largest national referral and teaching hospital. For some years Kenyatta National hospital has experienced problems with overcrowding, quality of care and shortages of equipment, supplies and committed well trained staff. It is the largest public hospital in Kenya. In addition to its primary mandate to provide specialized health care services to patients on referral from provincial and district level hospital, the hospital facilitates medical training and research and participates in

national health care planning. The Kenya Health Policy (1994-2010) framework places Kenyatta national hospital at level six; the apex of the national health care delivery system. Therefore, the level of efficiency with which the hospital delivers services to the public is a matter of national importance. The hospital is also expected to set high standards of health care delivery that other public and private hospitals may emulate.

### **3.4 Data Collection**

Primary data was used in the study. A semi-structured questionnaire was used to collect the data. This was most appropriate because it allowed participant to give feedback that is more expansive than a simple closed ended question but which also is much easier to quantify than a completely open ended response (Cooper, 2009).

The questionnaire contained both open-ended and closed-ended questions. The questionnaire was administered to the participants at their place of work. A follow up was done by the researcher through telephone calls to ensure that they have finished filling the questionnaire at the time that was agreed upon.

#### **3.4.1 Pilot Test**

The questionnaire was subjected to a pilot test to check whether it would help achieve the objectives of the study. A convenient sample of 5 respondents was selected and given the questionnaire to fill in the presence of the researcher.

The results were used to check for face validity of the tool and refine tool for clarity and also assist in clearing any ambiguities and ensure the questions posed measure what it's intended to measure.

### **3.5 Data Analysis**

After the questionnaires had filled by the respondents and collected by the research assistants, they were coded and examined for completeness. Those with too many missing entries were discarded.

Factor analysis was used to identify the underlying factors. Descriptive statistics was used to summarize the results of each of the variables i.e. mean, mode and standard deviation. Mean and mode show point of consensus, standard deviation show variability of responses. The level of adoption and implementation of TQM is the dependent variable.

For the independent variables; chi square was used to determine the extent to which leadership and lack of commitment from managers affect TQM implementation. The extent to which finances influence TQM implementation, level of staffing and communication process were tested by use of Chi square.

## **CHAPTER FOUR:**

### **DATA ANALYSIS, RESULTS AND DISCUSSIONS**

#### **4.1 Introduction**

This chapter presents the data analysis results as well as interpretation and discussion of findings. The overall objective of this study was to examine the extent of TQM implementation and establish factors influencing implementation of TQM in Kenya's Healthcare Industry. Data analysis was done using frequencies, chi square as the primary tools of analysis. Results are presented in tables and charts.

#### **4.2 Response Rate**

The study targeted 50 respondents at the hospitals, 43 out of 50 responded to the questionnaire representing an 86% response rate. This response rate was considered high enough and representative (Letting, 2011)

#### **4.3 Background Information**

##### **4.3.1 Department**

The respondents were asked to indicate the departments they work in. Table 4.1 presents the response.

**Table 4.1 Distribution of respondents by departments**

	Frequency	Percent	Cumulative Percent
Admin	5	11.63%	11.6
Accounts	8	18.60%	30.2
ICT	5	11.63%	41.9
Sales	1	2.33%	44.2
Marketing	2	4.65%	48.8
Medical	9	20.93%	69.8
customer service	3	6.98%	76.7
Quality management	2	4.65%	81.4
Pharmacy	1	2.33%	83.7
Operations	1	2.33%	86.0
HR	3	6.98%	93.0
Credit control	2	4.65%	97.7
Laboratory	1	2.33%	100.0
Total	43	100.00%	

Source: Research data (2015)

From table 4.1 shows all the departments in the hospital were well represented.

However this does not reflect the employee distribution in hospitals in Kenya because majority of staff in Kenyan Healthcare industry are medical personnel e.g doctors, nurses, pharmacist etc.

### 4.3.2 Gender

The respondents were asked to indicate their gender. Table 4.2 presents the responses.

**Table 4.2 Distribution of respondents by gender**

	<b>Frequency</b>	<b>Percent</b>
male	24	55.8
female	19	44.2
<b>Total</b>	<b>43</b>	<b>100.0</b>

Source: Research data (2015)

From the Table 4.2, majority (55.8%) of the respondents were male while only 44.2% were female. This suggests a near equal distribution of respondents by gender as expected in Kenyan healthcare facilities.

### 4.3.3 Level of Education

The study sought to establish the highest level of education of the respondents. The respondents were asked to indicate their highest level of education. Table 4.3 presents the responses obtained.

**Table 4.3: Distribution of respondents by education level**

	Frequency	Percent
Secondary	1	2%
Diploma	7	16%
Undergraduate	24	56%
Postgraduate	11	26%
<b>Total</b>	<b>43</b>	<b>100%</b>

Research data (2015)

From Table 4.3 above, majority (56%) of the respondents had undergraduate degrees while 26% had postgraduate degrees. Only 16% had college diplomas. These findings indicate that the respondents were highly educated and thus could easily respond to the questions posed informatively. The data also reflects the demand for high level of education by the Kenyan health care sector.

#### **4.3.4 ISO Certification**

The study also sought to find out the knowledge of the employees on whether the hospital is ISO certified. Table 4.4 indicates the level of knowledge on ISO Certification.

**Table 4.4 Distribution of respondents by knowledge on level of ISO Certification**

	Frequency	Percent
Yes	34	79%
No	9	21%
<b>Total</b>	<b>43</b>	<b>100.0</b>

Source: Research data (2015)



From Table 4.4, majority (79%) of the respondents indicated that the hospitals were ISO certified. Hence it was an indication the hospitals being targeted were keen on Total Quality Management.

#### 4.3.5 Who do you benchmark with?

The study sought to establish the providers that the hospitals benchmarks with as indicated in Table 4.5.

**Table 4.5 Distribution of respondents by knowledge of providers they benchmark with**

	Frequency	Percent
None	25	58%
Nairobihospital	4	9%
KenyattaNationalHospital	1	2%
AgaKhan	12	28%
Mater	1	2%
<b>Total</b>	<b>43</b>	<b>100%</b>

Source: Research data (2015)

From Table 4.5, the majority (58%) indicated that they do not benchmark with any provider while 28% indicated that they benchmark with Aga Khan Hospital, 9% benchmark with Nairobi hospital while only 2% benchmark with KNH and Mater hospital. This is an indication that the respondents' perceived Aga Khan Hospital to be offering quality services.

#### 4.4 Total Quality Management adoption

The study sought to establish the extent to which TQM has been adopted. The respondents indicated their responses as illustrated by table 4.6.

**Table 4.6 Do you think the hospital has adopted TQM**

	Frequency	Percent
Yes	37	86.0
No	6	14.0
<b>Total</b>	<b>43</b>	<b>100.0</b>

Source: Research data (2015)

The majority (86%) of the respondents indicated that the hospital had adopted TQM while 14% indicated that the hospital had not adopted TQM. In comparison with the response received on ISO certification, this is a confirmation that the hospital has adopted TQM. The response on ISO certification knowledge was at 79% which is close to the response on TQM adoption which is at 86%.

#### 4.4.1 Total quality Management Implementation

The study sought to establish the extent of TQM implementation. The respondents were asked to rate their level of agreement with various statements which were used as indicators of TQM implementation in a scale of 1-5. The ratings were computed and displayed in

Table 4.7

**Table 4.7: Extent of TQM implementation**

	N	Minimum	Maximum	Mean	Std Deviation
The hospital has the support of management in TQM implementation	48	1.00	5.00	3.0625	1.08
There is consistency by all employees in implementation of TQM	48	1.00	5.00	2.9375	1.19
The culture in hospital does not affect TQM implementation	48	1.00	5.00	2.8333	1.12
There is proper tools in the organization to evaluate TQM	48	1.00	5.00	2.8125	0.95
TQM has been fully implemented	48	1.00	5.00	2.7008	0.99
Valid N(Listwise)	48				

Source: Research data (2015)

From Table 4.7, all TQM implementation indicators were rated between 2.51 and 3.5 indicating that TQM had been implemented to a moderate extent by the hospitals. Specifically the highest rated aspect was the support of management (mean, 3.06), followed by consistency by staff in TQM implementation (mean, 2.9). Additionally the following aspects were rated as applying to a moderate extent: the culture in the hospital does not affect TQM implementation (mean, 2.8), there is proper tool in the organization to evaluate TQM (mean, 2.8) and the least rated was that the hospitals have fully implemented TQM (mean, 2.7).

These findings thus indicate that TQM has been implemented to a moderate extent by Kenyan Healthcare industry. This outcome was not a surprise because as per the literature review, published academic research on TQM had shown the same outcome.

#### 4.5 Factors Affecting Implementation of TQM

The study sought to find out the factors that influence TQM implementation. The respondents were asked to rate their level of agreement with 19 items which were indicators of the factors that influence TQM, on a scale of 1-5 where 1 was strongly disagree and 5 was strongly agree. The 19 items were subjected to factor analysis with varimax rotation and the results obtained were as shown in Table 4.8.

**Table 4.8: Factor loadings and univariate descriptive of identified factors**

<b>Underlying factor 1: Risk Perception</b>	<b>Factor Loading</b>	<b>Mean</b>	<b>Std Deviations</b>
Adopting TQM does not negatively impact on existing corporate culture	0.863	3.354	1.02084
TQM is easy to implement and not disruptive	0.829	3.062	1.07992
TQM is prone to risk and can disrupt operations	0.864	3.125	0.91384
TQM implementation limits the org operations	0.926	3.225	1.08422
TQM operations is costly	0.931	3.145	0.94508
<b>Underlying factor 2 : Staff Training</b>			
Employees are highly trained on effectively implementing TQM	0.791	3.083	1.10768
There is a continuous training and awareness on new ways of TQM implementation	0.747	3.062	0.97645
Staff are receptive of TQM	0.846	2.895	1.11545.
There is sufficient information to staff regarding TQM	0.763	2.791	0.087418

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**Underlying Factor3 : Top Management Support**

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There is support from top management in TQM implementation	0.838	3.083	0.9587
The hospital has adequate resources for all staff involved in TQM	0.874	2.958	1.1254
Funds have been set aside toward TQM implementation	0.936	3.416	1.02546

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**Underlying Factor4 : Implementation Strategy**

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TQM implementation is in line with mission and vision of the organization	0.823	3.958	0.87418
TQM implementation has been part of our long term goals and strategy	0.888	3.770	0.83129
There is a team tasked with matters TQM	0.752	1.958	0.7707
The organization is headed towards greater achievement in implementation of TQM	0.788	1.958	0.68287

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**Underlying Factor5 : Customer Satisfaction**

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There is an Avenue for feedback on satisfaction	0.685	3.562	0.84818
The hospital maintains very close relationship with its customers	0.923	2.3125	0.85443

---

Source: Research data (2015)

From Table 4.8 factor analysis identified 5(five) underlying variables. The first variable identified was risk perceptions measured by 5 items with means lying between 3.0 to 3.6.

These indicate the perception was moderate.

The second factor was staff training which had 4 items with means ranging between 2.7 to 3.0 these also indicate that the staff training has been undertaken to a moderate extent.

The third variable identified was top management support with 3 items with means ranging from 2.9 to 3.4 indicating that top management support towards implementing TQM was average.

The fourth factor was implementation strategy with 4 items with means ranging from 1.9 to 3.9 indicating that the hospitals faced challenges in TQM implementation and implementing strategy.

Finally customer satisfaction was identified as an underlying variable with 2 items with means ranging from 2.3 to 3.5 indicating that customer satisfaction in regard to TQM implementation was average. From the literature review, this means that perception on quality affect TQM Implementation, staff training, top management support, implementation strategy all influenced TQM implementation and finally customer satisfaction was an indication of whether TQM was implemented fully or not.

**Table 4.9 Which hospital do you think offers quality services**

	Frequency	Percent
No response	7	16.3
Aga khan Nairobi hospital	8	18.6
Avenue KNH	16	37.2
Karen Mater Nairobi Women	1	2.3
Meridian MP Shah	6	14
	1	2.3
	1	2.3
	1	2.3
Total	43	100

Source: Research data (2015)

From Table 4.9, majority (37.2) respondent stated that Nairobi hospital offered quality services while 18.6 stated that Aga Khan Hospital offers quality services and 14 % stated that KNH offers quality services. This is an indication that the major large private hospitals in Kenya healthcare have adopted TQM more in comparison with public hospitals and small providers.

#### **4.6 Relationship between the identified factors and TQM implementation**

The study sought to establish the joint relationship between the factors identified from factor analysis with TQM implementation. Chi square test was used to analyze the identified data as independent variables and TQM implementation as the dependent variable. The results were as shown below

CHI Square Test

Hypothesis to be tested;

H<sub>0</sub>: Cost of TQM has affected implementation of TQM

H<sub>1</sub>: Cost of TQM has not affected implementation of TQM

TQM implementation is costly \* how would you rate the extent to which TQM has been implemented in your organization Cross tabulation

**Table 4.10 cost of implementation of TQM**

		how would you rate the extent to which TQM has been implemented in your organization					Total
		very low	LOW	MODERATE	HIGH	VERY HIGH	
TQM implementation is costly	strongly disagree	0	0	2	3	1	6
	moderately disagree	0	1	3	0	0	4
	Neutral	0	0	9	3	1	13
	moderately agree	0	2	4	3	1	10
	strongly agree	1	2	1	3	3	10
<b>Total</b>		<b>1</b>	<b>5</b>	<b>19</b>	<b>12</b>	<b>6</b>	<b>43</b>

Source: Research data (2015)

**Chi-Square Tests**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	18.098 <sup>a</sup>	16	.318
Likelihood Ratio	21.466	16	.161
Linear-by-Linear Association	.035	1	.851
N of Valid Cases	43		

a. 24 cells (96.0%) have expected count less than 5. The minimum expected count is .09.



Statistical Inference:

P Value=0.318 is GREATER than 0.05, therefore we do not reject  $H_0$ .

Conclusion;

Therefore, the high cost of TQM has affected its implementation. This is in consistent with Literature review because cost was one of the hurdles affecting TQM implementation.

Hypothesis to be tested

$H_0$ : Management support has not affected TQM implementation positively

$H_1$ : Management support has affected TQM implementation POSITIVELY there is support from top management

\* How would you rate the extent to which TQM has been implemented in your organization

Cross tabulation

**Table 4.11 Extent of TQM implementation**

			How would you rate the extent to which TQM has been implemented in your organization					Total
			very Low	Low	Moderate	High	Very High	
There is support from top management	strongly disagree		0	0	1	2	0	3
	moderately disagree		0	4	6	2	1	13
	neutral		0	1	10	2	1	14
	moderately agree		0	0	2	1	2	5
	strongly agree		1	0	0	5	2	8
<b>Total</b>			<b>1</b>	<b>5</b>	<b>19</b>	<b>12</b>	<b>6</b>	<b>43</b>

Source: Research data (2015)

### Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	27.770 <sup>a</sup>	16	.034
Likelihood Ratio	29.175	16	.023
Linear-by-Linear Association	3.578	1	.059
N of Valid Cases	43		

a. 23 cells (92.0%) have expected count less than 5. The minimum expected count is .07.

### Statistical Inference

The P Value is 0.034, which is less than 0.05, therefore, we reject H<sub>0</sub>.

### Conclusion:

Support by management has a positive effect on TQM Implementation. This is in consistency with literature review because Support from top management was one of the factors affecting TQM implementation.

### HYPOTHESIS TO BE TESTED

H<sub>0</sub>: staff education has affected TQM implementation positively

H<sub>1</sub>: staff education has not affected TQM implementation positively

**Table 4.12 Effect of staff education on TQM**

		how would you rate the extent to which TQM has been implemented in your organization					Total
		very low	LOW	MODERATE	HIGH	VERY HIGH	
employees are highly trained effectively implementing TQM	strongly disagree	0	0	3	2	0	5
	moderately disagree	0	2	5	0	1	8
	neutral	1	3	8	3	1	16
	moderately agree	0	0	3	5	4	12
	strongly agree	0	0	0	2	0	2
<b>Total</b>		<b>1</b>	<b>5</b>	<b>19</b>	<b>12</b>	<b>6</b>	<b>43</b>

Source Research data (2015)

**Chi-Square Tests**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	21.135 <sup>a</sup>	16	.173
Likelihood Ratio	25.077	16	.068
Linear-by-Linear Association	4.356	1	.037
N of Valid Cases	43		

a. 23 cells (92.0%) have expected count less than 5. The minimum expected count is .05.

## Statistical Inference

P Value = 0.173 is GREATER than 0.05, therefore, we do not reject  $H_0$ .

### **Conclusion:**

Staff education has positively affected TQM implementation

In conclusion the test above shows that identified factors have a significant relationship with TQM implementation. This is in line with the research objective which from the conclusion indicates that a financial resource which was the first research objective has a significant relationship with TQM implementation. Staffing, leadership commitment and staff empowerment all have a significant relationship with TQM implementation.

This is in line with the literature review in chapter two which highlighted staff education, leadership commitment and staff empowerment to be some of the major factors affecting TQM implementation.

## **CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS**

### **5.1 Introduction**

This chapter presents summary of findings, conclusions and recommendations. It is organized as follows; presentation of summary of findings organized as per research objectives, conclusions drawn from the findings and finally recommendations and suggestion for further research.

### **5.2 Summary**

The study sought to examine the extent of Total Quality Management implementation and establish the factors influencing implementation of TQM in healthcare industry. The study found out that TQM had been implemented to a moderate extent in the healthcare industry. Five factors that influence total quality management were identified through factor analysis. They include; risk perception, staff training, top management support, implementation strategy and customer satisfaction. Four out of the five variables were found to have statistically significant relationships with total quality management implementation. they include risk perception, staff training, top management support and customer satisfaction. They have a positive relationship with TQM implementation. Strategy implementation had a negative relationship with TQM implementation.

### **5.3 Conclusion**

From the above findings the following conclusions were made. Total Quality Management has been implemented to varying extent in the healthcare industry in Kenya. It was concluded that the greatest drivers of Total Quality Management implementation are;

strategy implementation which has a negative relationship with TQM implementation as well as risk perception, staff training, top management support and customer satisfaction which all have a positive relationship with TQM implementation.. This is an indication that for TQM to be fully implemented in the healthcare industry in Kenya, organizations must be keen on ensuring TQM implementation is in line with organizational strategy implementation.. Organizations must also ensure that they have support from top management on TQM implementation, train their staff on TQM and ensure that TQM is in line with what customers consider to be quality services.

#### **5.4 Recommendations**

Based on the findings, the following recommendations were arrived at: the hospitals should seek ways to enhance TQM implementation and adoption within the industry and ensure that it is fully implemented. Trainers should ensure that employees and managers are fully trained on TQM knowledge and its implementation. Regulators should ensure that all these factors are put in place to ensure that TQM is fully implemented. Further since implementation strategy is a key driver; management should facilitate empirical studies to be conducted to help health care industry understand the importance of implementing strategy with TQM adoption.

#### **5.5 Limitations**

Since the study focused on only two major hospitals, future studies should consider expanding the scope by including middle sized and small hospitals. The approval of Kenyan

hospitals to allow a student to carry out a study should not take a lengthy period as was for my study. It took a while for the hospitals to allow access for data collection.

### **5.6 Suggestions for Further Research**

Future studies should consider expanding the topic to include moderating variables like firm size and firm age. Future studies should develop an adequate TQM program to define how TQM should be implemented. A study should be carried out on how to develop a training program on staff and managers on TQM implementation and how funds allocation and funding plan affect TQM implementation.

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## APPENDICES

### Appendix I: Questionnaire

This questionnaire is meant to collect information on factors influencing implementation of TQM in KNH and Nairobi hospital. Kindly answer the questions by writing a brief statement or tick the boxes will be applicable. This information will be treated with confidence and is being conducted for academic purposes.

#### Section 1: Background information

1. Which department/section do you work?.....
2. What is your gender?

Male [ ] female [ ]

3. What is your highest level of education?
  - secondary [ ]
  - college diploma [ ]
  - Undergraduate degree [ ]
  - Postgraduate degree [ ]

Other (specify).....

4. What is your position at the hospital?.....
5. Are you ISO certified yes-----no---
6. Any other quality certification?\_\_\_\_\_
7. Who do you benchmark with?\_\_\_\_\_

#### Section 2: Implementation of total quality management

8. In your opinion do you think the hospital has adopted TQM?

Yes [ ] No [ ]

If yes, what are the benefits to the hospital?

.....  
 .....  
 .....  
 .....

If no, state the reasons as to why the hospital has not adopted TQM.

.....  
 .....  
 .....  
 .....

6. Please give the strength of your agreement with the following statements about TQM implementation in your hospital

	Strongly agree	2	3	4	Strong disagree
The hospital has the support of management in implementation of TQM					
The hospital has enough resources for implementation of TQM					
Employees are well trained in matters concerning					

TQM					
There is consistency by all employees in implementation of TQM					
The culture in the hospital does not affect TQM implementation					
There are proper tools in the organization to evaluate TQM					

7. How would you rate the extent to which TQM has been implemented in your organization?

very low [ 1 ] low [ 2 ] moderate [ 3 ] high [ 4 ] very high [ 5 ]

**Section 3: Factors affecting TQM implementation**

8. To what extent do you agree with the following statements regarding TQM implementation? use a scale of 1-5 where 1 is strongly disagree and 5 is strongly agree.

Factors	1	2	3	4	5
Adopting TQM does not negatively impact on existing corporate culture					
TQM is easy to implement					

and is not disruptive					
TQM is prone to risk and can significantly disrupt operations					
TQM implementation limits the organization operations					
Implementation of TQM is costly and requires an enormous amount of money					
Employees in my organization are highly trained in effectively implementing TQM					
There is a continuous training and awareness on new ways of successful implementing TQM					
Staff in my organization are receptive to TQM					
There is support from top management in matters concerning TQM					
The hospital has adequate resources for all staff involved in TQM					
Full implementation of TQM is in line with the organization's mission and vision					
There is sufficient information to the staff in regard to TQM implementation					

There is an avenue for feedback from both external and internal clients to find out whether they are satisfied with the services					
The hospital has set aside sufficient funds towards successful implementation of TQM					
The hospital maintains a very close long term relationships with its customers					
TQM adoption and implementation has been part of our long term organizational goals and strategy					
There is a team tasked with matters of TQM					
The organization is headed towards greater achievement in implementation of TQM in all its operations					

9. Please highlight key factors that you believe influence the level of implementation of TQM in the health sector.

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.....  
.....

10. What are the greatest challenges faced by your organization when implementing TQM?

.....  
.....  
.....

Which hospital in Kenya do you think offers quality service in Kenya?

Why is the service high quality.....

.....