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Total Quality Management Practices in Selected Private Hospitals in Nairobi, Kenya.

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ABSTARCT
The study assesses the existence of total quality management systems in selected private hospitals in Nairobi, Kenya. The critical factors for TQM implementation were also examined including the performance measurement for the effectiveness of these quality systems. This was a case study research design and convenience sampling was done for the top level managers, whereas stratified random sampling was done for the middle level functional managers. Data for identifying the critical factors influencing total quality management in the hospitals and its implementation was collected using semi-structured and structured questionnaires. Quantitative data analysis was done using principle component analysis. Factor analysis was done using analysis of moment structures. The results and findings of the study will be vital for the improvement of service provision in hospitals in developing countries.
Key words: Total quality management, Quality management systems, Performance management.

1.0 INTRODUCTION

Quality is an important consideration for executive thinking. There is an increasing awareness by senior executives, of the fact that quality is an important strategic issue, which should be implemented at all levels of the organisation (Crosby, 1979; Oakland, 2000). Quality management system is defined as a "set of co-ordinated activities to direct and control an organisation in order to continually improve the effectiveness and efficiency of its performance". According to Oakland(2003) and organisation should make strategic decision to adopt a quality management system based on the organisation's strategy, objectives, structure, size, products and services offered. This is also true in the health sector.

In general, Total Quality Management (TQM) is a management philosophy which is used by organisations who strive to improve their efficiency and competitiveness in the business marketplace. TQM quality factors include top management commitment and involvement, employee empowerment and culture. These factors are known by some writers as the soft aspects of management, while the hard aspects include factors such as improvement tools, techniques and systems (Wilkinson, 1992; Oakland, 1993, 2000). Various quality factors are identified by various scholars based on their experiences in working as consultants, managers or researchers (Thiagarajan *et al.,* 2001).

In the present world, TQM has turned out to be a globally strategic force, which may result in numerous benefits including: improved customer satisfaction, superior employee focus and enthusiasm, decreased waste and enhanced overall performance (Yang, 2003). TQM has thus materialised as a possible solution to improve the competence and effectiveness of health care provision and is also becoming more and more important for the thriving of public hospitals. Many hospitals are directing their efforts toward TQM implementation for reducing costs and overall enhancement in the quality of the service rendered. However it is argued that the dimensions of quality are not so well recognised in the health care sector, though there are a number of measurement methods in place (Huq, 2005). Further, there is also the mounting accord that customer satisfaction is a vital indicator of health care quality and most hospitals are providing for avenues to change the delivery of patient care through

TQM (Schalk and Dijk, 2005).

The health-care sector is one of the fastest growing industries in the service sector (Andaleeb, 1998). The competitive economic forces which are present in the business today are forcing the health care sector to utilise new management methods which are geared towards continued cost effectiveness and competence. The health sector has had to reorganise its service delivery system so as to enable it to survive in the current turbulent business environment, which has ensured from maturation of the industry, decrease in funding and stiff competition (Cho *et al*., 2004). Therefore, a majority of the hospitals are in the course of redefining their competitive stronghold and also their competences mainly by adoption of business re-engineering and total quality management techniques.

The health sector has since the 1980's been learning from and emulating the manufacturing industries in designing and measuring the quality of its services. The Institute of Medicine (IOM) defines quality as "the degree to which health care services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge". Indeed the practice of quality improvement in health care has grown tremendously over the past decade. In the US and Europe there have over the last decade been many studies on quality improvement in hospitals. This has been driven by increased customer awareness and expectations for safety and quality; advance in technology and communication; advances in medical knowledge and the complexity of healthcare and its delivery; the need for health institutions to be more efficient and cost effective. Many studies on TQM in hospitals have been done in developed countries, however very few have been done in developing countries. According to Thiagarajan *et al*. (2001), while total quality management (TQM) in the West lacks theoretical basis, knowledge and essentials of TQM in developing economies is quite sparse.

2.0 POFILE OF SELECTED PRIVATE HOSPITALS IN NAIROBI

2.1 The Aga Khan Hospital

Established in 1958, Aga Khan University Hospital, Nairobi (AKUHN) is a private not-for-profit institution that provides tertiary and secondary level health care services. The decision to upgrade the Hospital to a tertiary level teaching hospital was taken in order to respond to the health care needs of the people of East Africa. AKUHN is a premier provider of ambulatory care and quality in patient services, including critical care.

The Hospital has been strengthening its existing partnerships with the Ministry of Health and other Universities which offer health education, with an aim to share experiences, strengthen public sector delivery systems and collaborate on teaching and research.

The Aga Khan Hospitals are a network of international hospitals based in Dar-es-Salaam, Mumbai, Kisumu, Mombasa, Nairobi and Pakistan. Founded by His Highness the Aga Khan, the hospitals provides a broad range of secondary and tertiary care, including diagnosis of disease and team management of patient care. The hospitals are managed by the Aga Khan Health Services, one of the most comprehensive non-profit health-care in the developing world. In recent years, the Hospitals have grown, expanding services and upgrading their facilities. The expansion programme has emphasised the introduction of new diagnostic services and the raising of quality of care to international standards.

The Aga Khan Hospital, Karachi (AKHK) was established in 1985 and more recently an Aga Khan University Hospital, also has been established. Both of these institutions are teaching sites of the Aga Khan University's faculty of Health Sciences. The hospital promotes the Aga Khan University's objective of promoting human welfare in general and the welfare of the people of Pakistan in particular, by disseminating knowledge and providing instruction, training, research, and service in the health sciences. Aga Khan University is Pakistan's largest private medical institute and hospital.

2.2 Gertrude Garden Children's Hospital

Gertrude's Garden Children's Hospital was founded in 1947, with the donation of some land by Colonel Ewart Grogan, pioneer extraordinary, in memory of his beloved wife, Gertrude Edith. Gertrude Garden Children's Hospital offers excellent services to children in Nairobi and East and Central Africa. These quality medical and surgical services cover a wide spectrum of diseases in children. This private hospital has a very strong brand name which attracts patients wherever it takes its services. This has been made possible by actualisation and by the hospital's vision and main mission which is "providing quality healthcare for children", and implementation of its objectives geared towards this goal. The current and further anticipated increase in the outpatients will markedly increase over the next two years. So there is a need to improve the quality and efficiency of the healthcare service delivered in these clinics.

The hospital has embraced many techniques and concepts for the improvement of quality over the years. As

noted by the hospital's chief executive officer, in a service industry, variability is a great challenge and therefore the decision to adopt ISO9001:2000 was an important step. The quality challenge at Gertrude's is unique in that not only does the hospital take care of sick children, but it also has their parents peace of mind that their children will receive healing and that, next to God, they are in the best hands.

3.0 LITERATURE REVIEW

Quality improvement in health care organisations is considered as a means to better meet the needs and expectations of patients. Yang (2003) posits that adopting TQM in the health care industry is not smooth and easily successful as in the case of manufacturing or services industries. Huq (1996) points out that, today hospitals face challenges of looking at their operations and find more efficient ways to do business. Many hospitals are turning toward TQM for cutting costs and generally improvement in the quality of services provided. The concept of TQM started becoming popular in the health care industry during the late 1980's (Garvin, 1988; Westphal, Gulati and Shortell, 1997)

Patient fulfilment is becoming increasingly important for the successful operation of private and public hospitals (Yang, 2003; Cho *et al,*. 2004). Yang (2003) further argues that the use of TQM has provided a partial cure to service quality problems in healthcare organizations. Healthcare TQM is linked with the Baldrige model and has been viewed recently by some as too ambitious for healthcare, while in some countries, healthcare services have not introduced TQM, but some hospitals have set up quality control circles which have been running successfully for some time (Øvretveit, 2001). Past studies found that there was a growing consensus that patient fulfilment is an important gauge of health care quality.

According to Huq **(**1996, 2005**)** determining the factors associated with patient satisfaction is a significant issue for health care providers. TQM also aims to provide organizations with a model for success through customer satisfaction (Vouzas, and Psychogios, 2007). However, that there are some challenges encountered during the realization of TQM in public and non-profit organizations due to the bureaucratic culture and the passive behaviours. Consequently TQM initiatives must include an in-built culture of continuous progress, which can help an organization satisfy the needs of its customers on an ongoing basis (Walsh, Hughes and Maddox, 2002). Even the health care industry is bonded with the cultural background and the traditional proficient style of leadership among physicians and other top management. It is important to note that government health sector has less flexibility in its resource allocation and human resources management.

A close inquiry of the TQM basics reveals that it is unconstrained by industry unique considerations. Customer focus, error prevention, management by fact, people system, and continuous quality improvement are TQM-fostered universal management concepts and transferable to any business setting. Employee empowerment is a critical foundation for creating a total quality organization. Worker motivation, responsibility and accountability are generic concepts that can benefit any business organization. TQM uses quality as the fundamental measurement metric, continuous improvement as the philosophy and employee involvement as the approach (Huq, 2005). Therefore, the basic health of TQM programmes can be measured, and useful prescriptive advice offered, without consideration or knowledge of industry-unique circumstances. As opposed to manufacturing organizations, where TQM is applied widely, service in health care organizations is intangible and delicate. Health care organizations cannot produce their service prior to its need; in most cases the service must be provided within minutes of request; and most importantly, health care organizations deal with the intangible of individual preferences, so finding objective assessments of quality is more difficult.

To be successful in any business the company must build distinctive competences; for the health care provider this distinctive competence may mean quality care at reasonable cost, service features that are not easy to duplicate, or focusing on the provider-customer connections. The forces that caused manufacturing industries to adopt TQM are the same forces that currently push the health care system towards quality management. These forces include competition, customer satisfaction, perceived value, market share and, above all to remain profitable under the impending health care reform plans. It is probably logical and practical to anticipate that hospitals will be expected to provide high quality care for less reimbursement. Hospitals are truly being challenged to look at their operations and unearth more efficient ways to do business. Many hospitals are turning towards TQM for cutting costs and overall improvement in the quality of the services provided.

For a long time, the health care industry has been operating in its own domain of economic rules, ignoring external factors such as competition. As competition within this industry intensifies, hospitals have become increasingly aware of the acute need to check rising operating costs and meet a higher level of expected patient care quality (Panko, 1996). The imperative to compete on the sometimes diametrically opposed dimensions of quality and cost is real and consuming. Many hospital administrators have to learn how to lower operating costs without compromising on providing regular quality care to patients, a difficult balancing act most times. Senior

managers in most hospitals are beginning to feel concerned that improving services to patients actually requires improving the highly multifaceted internal hospital services and operations. A hospital would be perceived as a quality service deliverer only when patients receive the best quality services in a cost effective and time efficient manner. In this regard, the key professionals at the core of service delivery depend on other health professionals to help them perform in a quality way. This effectively means that the internal process of the patient care delivery chain is just as important as the external process.

3.1 Critical Factors Influencing TQM

TQM adoption and implementation requires changes in structure, system, and process as a necessary prerequisite to achieve improved business performance and changes in employee behaviour (Yang, 2003). It is thus important to identify the critical factors that influence the success of TQM adoption and implementation in service organizations (Taylor and Wright, 2003). Some of these critical factors are briefly discussed.

3.1.1 Top Management Commitment

Management leadership and assurance of quality is traditionally considered one of the powerful forces behind quality management (Schalk and Dijk, 2005). This has also been shown to be true in health care (Williams, 1994), both at the top organizational and departmental level. Through obligation to quality, management implements the community needs for quality of care and make and tackle the organizational culture. Management leadership and assurance of quality is likely to build, uphold and support an organizational context that leads to high organizational performance, individual development, and organizational learning.

Management acts as the driver for TQM implementation, creating values, goals and systems to satisfy customer expectations and to improve an organization's performance (Juran, 1988; Dale and Plunkett, 1990; Ahire, Golhar and Waller, 1996; Huq, 2005; Rad, 2006) and responsible for providing direction and encouragement to the organization (Walsh et al, 2002). Management commitment is crucial for a company's quality development since, with their support and contributions, sufficient resources will be allocated to enhance the training activities resulting in better quality measurement, improved customer satisfaction and benchmarking. Hospital directors are exposed to normative pressures to adopt innovative management practices such as TQM (Taylor and Wright, 2003; Huq, 2005).

3.1.2 Employee Involvement

Employee involvement is a critical component during the implementation of total quality management. TQM requires total management commitment to ensure employees engage in quality work culture which results in creation of healthy corporate image by rendering quality services to the customers (Huq, 2005; Schalk and Dijk, 2005). Increased employee's participation in the overall quality strategy brings an increased flow of information and knowledge and contributes to the wellness of the organization for resolving problems [8]. For employees, a significant aim of TQM is the broadening of work responsibilities.

3.1.3 Customer satisfaction

TQM makes customer satisfaction the number one organization priority, where an emphasis is placed on meeting or exceeding external customer expectations in every transaction (Kangi, 1998). A close relationship with the customers is necessary to fully determine their requirements, thus customer involvement is necessary in the product design and development process (Das, Paul, and Swierczek, 2008). TQM is one such philosophy which aims to provide organizations with a template for success through customer satisfaction (Arasli and Ahmadeva, 2004). Customer focus is the emphasis placed by hospitals in meeting the unlimited expectations of its customers (Das, Paul, and Swierczek, 2008).

3.1.4 Teamwork

Teamwork is a critical factor in TQM as teamwork is essential in having a fully functioning process management and improvement, especially in medical treatment; it requires cooperation among all related departments (Huq, 2005; Vouzas, and Psychogios, 2007). According to Yang (2003), teamwork is important to overcome sectionalism and to strengthen cooperation for improving quality (Huq, 2005). The most difficult aspect of TQM is to create an environment of "all one team" (Rad, 2005). Rad further adds that everyone throughout the organization must work together to improve processes and to execute them with energy and efficiency.

3.1.5 Processes

TQM is centered on an effective management of processes and continuous customer satisfaction (Kanji, 1998). This process is improved by reducing the source of variation that exists within it and everyone, in the TQM environment, is required to gain additional capabilities to improve the process (Eng Eng and Yusof, 2003; Huq, 2005). Schalk and Dijk are of the opinion that hospitals will have to focus on integrating their various processes in different levels that include quality management, human resource management etc. to meet and exceed customers' expectations and to achieve organizational excellence (Schalk and Dijk, 2005).

3.1.6 Continuous Improvement

Continuous improvement is a powerful concept related to the pursuit of never-ending improvement in meeting external and internal customer needs (Taylor and Wright, 2003; Schalk and Dijk, 2005). Kanji points out that continuous improvement require management by facts and commitment of all employees with an emphasis on teamwork to promote a bottom-up thrust for quality improvement (Kanji, 1998). Continuous improvement is the philosophy of improvement initiatives that increases success and reduces failure and must be integrated into the management of all systems and processes (Walsh, Hughes and Maddox, 2002; Vouzas and Psychogios, 2007).

3.1.7 Training

Training is a very important tool for promoting and developing skills related to an organization's beliefs and values to change to a culture that places high value on quality. Once management has the skills to lead the TQM process, the rest of the organization should be trained to ensure a systematic, integrated, consistent organization-wide effort (Rad, 2005). The author further asserts that an emphasis on continuous learning and improvement, induces a positive culture where there is sufficient behavioral modification to warrant a sustainable TQM climate. Providing teaching to employees in problem solving skills is one of the most important activities for organizational climate change (Taylor and Wright, 2003).

3.1.8 Culture change

Instilling quality-oriented culture requires change of attitudes, value systems, and beliefs. TQM is an educational process aiming at changing the behavior and attitudes of organizational members and then developing quality sensitive organizational culture (Huq, 2005; Rad, 2006). Organizational culture has a significant effect on the successful TQM implementation (Rad, 2005). Culture is something collective in an organization and therefore not a characteristic of individuals within it. It is necessary for the management to develop concern for employee participation and uninterrupted improvement, and persuade organizational changes.

4.0 RESEARCH METHODOLOGY

This study will use the case study approach. According to Yin (2003) and Hartley (2004) a case study can be used in exploratory studies, to investigate a contemporary phenomenon within its real life context in which questions of why, what and how and something is happening can be answered A case study is an in-depth investigation of an individual, institution or phenomenon (Mugenda and Mugenda, 2003). The importance of a case study is emphasized by Kothari (2000) who both acknowledge that a case study is a powerful form of qualitative analysis that involves a careful and complete observation of a social unit, irrespective of what type of unit is under study. This justifies why a case study is chosen as it enables the researcher to have an in-depth understanding of the facts of the TQM practices in private hospitals.

The target population of this study will comprise of 160 staff in different managerial levels currently employed at the two hospitals. This population was chosen since the people in the management are the ones involved in the day to day running of the hospitals and thus are well conversant with the information required in the study. The researchers grouped the population into three strata i.e. administrative level managers, executor managers and operative managers. From each stratum the study will use simple random sampling to select 48 respondents

The researchers administered a survey questionnaire to each member of the sample population. The questionnaire will have both open and close-ended questions. The close-ended questions will provide more structured responses to facilitate tangible recommendations. The closed ended questions was used to test the rating of various attributes and this will help in reducing the number of related responses in order to obtain more varied responses. Kombo and Tromp (2006) indicate that semi structured interview refers to the use of already prepared questions during the study. The open-ended questions will provide additional information that may not have been captured in the close-ended questions. The questionnaire was carefully designed and tested with a few members of the population for further improvements. This will be done in order to enhance its validity and accuracy of data to be collected for the study. The researcher will exercise care and control to ensure all questionnaires issued to the respondents are received and achieve this, the researcher will maintain a register of questionnaires, which will be sent, and which will be received.

Secondary data was also be collected for this study for example data from the hospitals such as publications, official data on quality, audits and annual reports will be used .Also existing secondary data on customer satisfaction in the hospitals will also be assessed. This data was useful for generating additional information for the study from already documented data or available reports. Cooper and Schindler (2003) further explain that secondary data is a useful quantitative technique for evaluating historical or contemporary confidential or public records, reports, government documents and opinions. Relevant literature such as books, journals, internet articles on TQM and quality management in the health sector.

Before processing the responses, the completed questionnaires will be edited for completeness and consistency.

Quantitative data collected will be analyzed by the use of descriptive statistics and factor analysis. The qualitative data will be coded thematically and then analyzed statistically. Content analysis will be used to data that is qualitative nature or aspect of the data collected from the open ended questions.

5.0 DISCUSSION OF FINDINGS AND RESULTS

Factor analysis was conducted on each of the questionnaires A and B. The Kaiser-Meyer Olkin (KMO), which is a measure of sampling adequacy, showed KMO= 0.69 for questionnaire A and KMO= 0.91 for questionnaire B. Both tends to 1 which indicates the samples were adequate and according to Kaiser's criteria were meritorious (Kaiser 1974).

5.1 Correlation Matrix For Each Of The Questionnaires

Next step consisted of using the Statistical Package for the Social Sciences (SPSS) to performing a correlation matrix for each of the questionnaires. A correlation matrix is an array of numbers which give the correlation coefficients between a single variable and every other variable under investigation. In a correlation matrix the variables should be inter-related but not highly correlated (extreme multi-collinearity), as this can cause difficulties in determining the unique contribution of the variables to a factor (Field 2000: 427). Multi-collinearity can be detected through determinant of the correlation matrix, which is calculated using SPSS. If the determinant is greater than 0.00001, there is no multi-collinearirty. For questionnaire A the correlation matrix has a determinant =0.175 which is greater than 0.00001 and therefore this assures that there is no multi-collinearirty in the variables in this study. This enabled this researcher to proceed on to do the factor analysis.

Table 1.0: Correlation Matrix For Questionnaire A

		TQM	TopMnt	Implement	Empowerm	Training	Teamwork
Correlation	TQM	1.000	.474	.275	.200	.121	.069
	TopMnt	.474	1.000	.599	.444	.176	.112
	Implement	.275	.599	1.000	.639	.166	.340
	Empowerm	.200	.444	.639	1.000	.439	.441
	Training	.121	.176	.166	.439	1.000	.253
	Teamwork	.069	.112	.340	.441	.253	1.000

a Determinant = .175

For questionnaire B the correlation matrix has a determinant =9.174 which is greater than 0.00001 and therefore this assures that there is no multi-collinearirty in the variables in this study. This enabled the researcher to proceed on to do the factor analysis.

Table 2.0: Correlation Matrix For Questionnaire B

		Reosources	Admin	Culture	Cooperation	GoalAchi	Competence	HealthCare	Training	Info	Quality	Management	Supplier	Perform
Correlation	Reosources	1.000	.618	.476	.383	.500	.494	.544	.376	.505	.505	.282	.548	.376
	Admin	.618	1.000	.433	.453	.697	.544	.617	.593	.607	.684	.551	.671	.568
	Culture	.476	.433	1.000	.566	.434	.708	.561	.421	.459	.440	.187	.435	.216
	Cooperation	.383	.453	.566	1.000	.324	.641	.679	.585	.583	.521	.424	.545	.464
	GoalAchi	.500	.697	.434	.324	1.000	.654	.616	.577	.677	.709	.676	.636	.546
	Competence	.494	.544	.708	.641	.654	1.000	.696	.648	.623	.594	.421	.546	.390
	HealthCare	.544	.617	.561	.679	.616	.696	1.000	.623	.735	.677	.554	.738	.527
	Training	.376	.593	.421	.585	.577	.648	.623	1.000	.734	.647	.563	.581	.577
	Info	.505	.607	.459	.583	.677	.623	.735	.734	1.000	.834	.717	.763	.664
	Quality	.505	.684	.440	.521	.709	.594	.677	.647	.834	1.000	.748	.771	.757
	Management	.282	.551	.187	.424	.676	.421	.554	.563	.717	.748	1.000	.695	.769
	Supplier	.548	.671	.435	.545	.636	.546	.738	.581	.763	.771	.695	1.000	.655
	Perform	.376	.568	.216	.464	.546	.390	.527	.577	.664	.757	.769	.655	1.000
Sig. (1-tailed)	Reosources		.000	.000	.000	.000	.000	.000	.000	.000	.000	.004	.000	.000
	Admin	.000		.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
	Culture	.000	.000		.000	.000	.000	.000	.000	.000	.000	.043	.000	.023
	Cooperation	.000	.000	.000		.001	.000	.000	.000	.000	.000	.000	.000	.000
	GoalAchi	.000	.000	.000	.001		.000	.000	.000	.000	.000	.000	.000	.000
	Competence	.000	.000	.000	.000	.000		.000	.000	.000	.000	.000	.000	.000
	HealthCare	.000	.000	.000	.000	.000	.000		.000	.000	.000	.000	.000	.000
	Training	.000	.000	.000	.000	.000	.000	.000		.000	.000	.000	.000	.000
	Info	.000	.000	.000	.000	.000	.000	.000	.000		.000	.000	.000	.000
	Quality	.000	.000	.000	.000	.000	.000	.000	.000	.000		.000	.000	.000
	Management	.004	.000	.043	.000	.000	.000	.000	.000	.000	.000		.000	.000
	Supplier	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000		.000
	Perform	.000	.000	.023	.000	.000	.000	.000	.000	.000	.000	.000	.000	

a Determinant = 9.174E-06

5.2 Factor Extraction

Factor analysis seeks to discover common factors. The technique for extracting factors attempts to take out as much common variance as possible in the first factor. Subsequent factors are, in turn, intended to account for the maximum amount of the remaining common variance until no common variance remains. In this study's data analysis Principle Component Analysis (PCA) was used knowing of other methods of extraction. Table 1A and 1B show that five composite variables were computed for questionnaire A and 13 composite variables for questionnaire B. In questionnaire A, 2 factors were extracted these explained 64% of the variance. Then in questionnaire B, 2 factors were extracted these explained 71% of the variance.

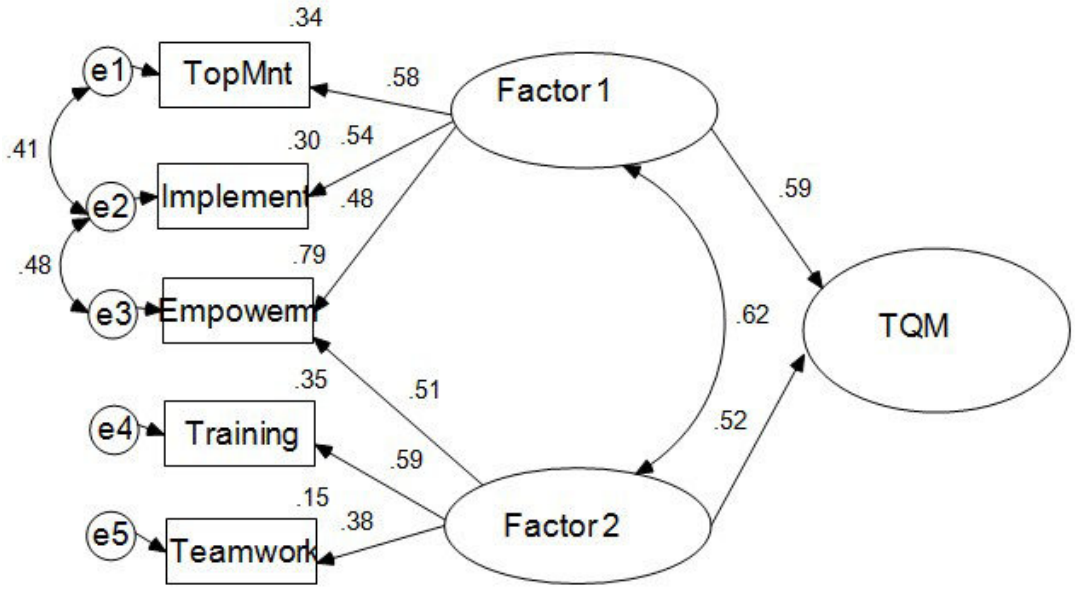
5.3 Communalities Extraction

Communalities were extracted through the using of Principle Component Analysis and Varimax with Kaiser

Normalisation. Communalities are the proportion of variance of the original variable which can be explained by the extraction variables. Table 3.0 and 4.0 show that in this study the factor loadings are quite high, 0.45 to 0.78 for questionnaire A and 0.41 to 0.91 for questionnaire B.
The reliability test that is the Cronbach coefficient alpha =0.73 for questionnaire A and 0.875 for questionnaire B, which both tends to 1. This indicates that there is a high internal consistence of the composite variable; therefore my composite variables are reliable in measuring the dependant variables.

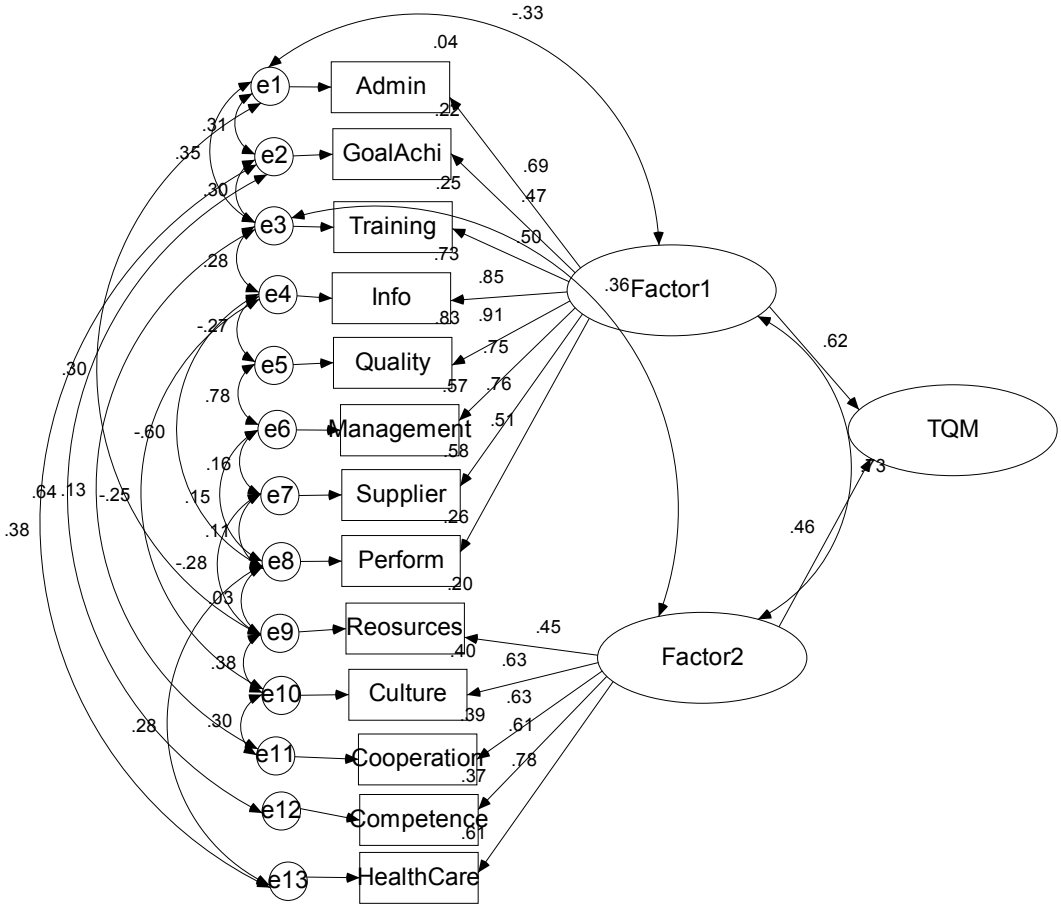
5.4 Confirmatory Factor Analysis Measure Whether The Data Fitted A Model
Using Analysis of Moment Structures, (AMOS) a product of SPSS, the confirmatory factor analysis was done to measure whether the data fitted the model. So a confirmatory factor analysis was carried out to show the relationship between the observed (independent) variables and the latent (dependent) variables. This is illustrated in Figure 1A and Figure 1 B.

Figure 1.0. Model For Questionnaire A



Factor 1= Organizational factors; Factor 2=Quality improvement designs**.**

Figure 2.0 : Model For Questionnaire A



Factor 1= Organizational factors Factor 2=Quality improvement designs.

5.5 Model Fit Indices For The Measurement Level

The goodness of fit statistics for questionnaire A is shown in Table 4A. The chi-statistic=1.067 and a p value = 0.37 which is > than p=0.05. This indicates that it is insignificant to reject the null hypothesis, which states that the model fits the data. Also for this questionnaire A the goodness of fit index =0.96; adjusted goodness of fit =0.995. All these model fit indices tend to 1 depicting a model fit. Finally the root mean square error of approximate =0.04, which lies in the excellent range for this model.

Table 3.0 : Model Fit Indices For The Measurement Level

Model fit indices	Results	Recommended value
Chi-statistic p-value cmin/df	 CMIN=4.268; df 4; p-value=0.371 CMIN/DF=1.067	 P-value >0.05 CMIN/DF<3.0
Goodness of fit index GFI	GFI=0.961	GFI>=0.8
Adjusted goodness-of-fit index AGFI	AGFI=0.855	AGFI>=0.8
Comparative Fit Index CFI	CFI=0.995	CFI>=0.8
Root Mean Square Error of Approximation, RMSEA	RMSEA=0.040	RMSEA 0.05 Excellent 0.05 to 0.08 Good 0.08 to 0.10 Acceptable

Similarly the goodness of fit statistics for questionnaire B is shown in Table 4A. The chi-statistic (CMIN/DF) =1.456 and the p value was 0.026. Also for this questionnaire B the goodness of fit index (GFI) =0.899; adjusted goodness of (AGFI) =0.791. All these model fit indices tend to 1 depicting a model fit. Finally the root mean square error of approximate (RMSEA) =0.074, lies in the acceptable range for this model.

Table 4.0 : Model Fit Indices For The Measurement Level

Model fit indices	Results	Recommended value
Chi-statistic p-value cmin/df	 CMIN=64.080; df 44; p-value=0.026 CMIN/DF=1.456	 P-value >0.05 CMIN/DF<3.0
Goodness of fit index GFI	GFI=0.899	GFI>=0.8
Adjusted goodness-of-fit index AGFI	AGFI=0.791	AGFI>=0.8
Comparative Fit Index CFI	CFI=0.968	CFI>=0.8
Root Mean Square Error of Approximation, RMSEA	RMSEA=0.074	RMSEA 0.05 Excellent 0.05 to 0.08 Good 0.08 to 0.10 Acceptable

Looking at Figure 1.0 model for questionnaire A, one sees that top management has a leading effect on factor 1 (organisational culture) =58%. Empowerment has the least effect at 48%.For Factor 2 which is competence development mainly; training has a 59% effect on the practice of TQM whereas teamwork lags behind at 38%. Factor 1 has a 62 % effect on TQM and resources have 52%.

Also looking at Figure 2.0 model for questionnaire B, one sees that top management has a leading effect on factor 1 (organisational culture) =58%. Empowerment has the least effect at 48%.For Factor 2 which is competence development mainly; health care has a 78% effect on the practice of TQM whereas hospital resources lag behind at 45%. Finally factor 1 has a bigger effect 62% than factor 2 –which has a 46% effect on TQM practices in these hospitals.

CONCLUSION AND RECOMMENDATIONS

TQM has gained increasing poularity as a method to introduce transformational change in an organisation's managerial philosophy and operational effectiveness. The principles for implementating TQM well match principles long stated in philosophies long staed in philosophies of organisational development and change. Whereas most investigations have identified benefits of TQM in manufacturing-type settings, this study sought to extend this knowledge to health-care organisations in Kenya.

Provision of quality healthcare is one of the most complex and difficult undertakings for organisations and governments. TQM among healthcare providers is a way of managing to improve the effectiveness, flexibility and competitiveness of the health care facilities and services provided. It is also a method of removing waste, by involving everyone in improving the way things are done.

TQM systems were assessed, its implementation and effectiveness in two private hospitals in Nairobi, Kenya. It was noted that both hospitals had some form of quality management systems in situ. The quality improvement processes involved accreditation with ISO, and JICA, Performance measurements consisted mainly of patient satisfaction survey, bed occupancy, quality register, clinical audits on mortality and morbidity.

The study concludes that TQM is part of what is needed to run a good organisation; it is not the whole. Running a business well requires a decent strategy and some good decision making. Certainly, TQM can focus the organisation on strategy and mobilise resources to ensure that the strategy succeeds. However, even the bets TQM programme around cannot make much difference in an organisation whose structure are failing, nonetheless, determined TQM brings results.

At a time when manufacturing and service organisations are attempting to chart a customer-oriented strategic posture with emphasis on TQM, healthcare organisations are being asked by their customers to do the same. While some healthcare organisations have answered or at least attempted to answer customer's demands, the majority have not done so effectively. Although many reasons and factors are behind this apparent strategic reluctance to commit to quality service, one reason stands out. It has to do with the fact that most healthcare administrators mistakenly believe mistakenly believe that a quality strategic orientation will most certainly increase cost which is already out of control to begin with. The failue of most healthcare administrators to see

the true nature of the relationship between quality, efficiency and the competitive advantage is partially responsible for the lack of strong TQM philosophy in healthcare.

The study recommends that further training to be conducted amongst the employees as there were noted cases where some employees were not aware of some aspects of TQM practices in the surveyed hospitals. Such training would go a long way in eliminating the existing information asymmetry. TQM success is highly dependent on information dissemination and feedback at and across all levels of the hospital, and analytical techniques are required to evaluate systematically quality management alternatives. Existing hospital information systems are ill-equipped to provide the necessary support gaps. Such technology will facilitate the hospital's ability to respond quickly to rapid, often unexpected, changes in patient needs.

REFERENCES

Ahire, S.L., Golhar, D.Y., & Waller, M.A., (2006), "Development and validation of TQM implementation constructs*", Decision Sciences*, Vol. 27(1), p. 23–55.

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

Arasli, H., & Ahmadeva, L., (2004), ""No more tears!" A local TQM formula for health promotion", *International Journal of Health Care Quality Assurance*, Vol. 17(3), p. 135-145.

Bryman, A and Bell, E (2003) *Synthesizing Research; A guide for Literature Reviews* (3rd edn) Sage: Thousand Oaks

Cho, W.H., Lee, H., Kim, C., Lee, S. and Choi, K-S., (2004), "The impact of visit frequency on the relationship between service quality and outpatient satisfaction: A South Korean study", *Health Services Research,* Vol. 39(1).

Cooper, D.R and Schindler, P.S. (2003). *Business Research Methods* (8th edn) McGraw-Hill: New York

Dale, B.G. & Plunkett, J.J., (2000), Managing Quality, Hertfordshire: Philip Allan.

Das, A., Paul, H., & Swierczek, F.W., (2008), "Developing and validating total quality management (TQM) constructs in the context of Thailand's manufacturing industry", Benchmarking: *An International Journal*, Vol. 15(1), p. 52-72.

Donald C. (2006*) Synthesizing Research; A guide for Literature Reviews* (3rd edn) Sage: Thousand Oaks

Dooley, D. (2007*), Social Research Methods*. New Delhi: Prentice Hall.

Ehigie, B.O. & McAndrew, E.B., (2005), "Innovation, diffusion and adoption of total quality management*", Management Decision*, Vol. 43(6), p. 925-940.

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

Hartley, J. (2004): Case *study research. Essential guide to qualitative methods in organizational research.* London: Sage Publications.

Huq, Ziaul (2005), "Managing change: a barrier to TQM implementation in service industries", *Managing Service Quality*, Vol. 15(5), p. 452-469.

Huq, Ziaul, (1996), "A TQM evaluation framework for hospitals: observations from a study", *International Journal of Quality and Reliability Management*, Vol. 13(6), P. 59-76.

Juran, J.M., (1988*), Juran on Planning for Quality*, New York: The Free Press.

Kanji, G.K., (1998), "Measurement of Business Excellence", *Total Quality Management*, Vol. 9(7), p. 633–643.

Kombo, D. K. & Tromp, D. L. A (2006*). Proposal and Thesis Writing*. Nairobi. Paulines Publications.

Kothari, C. R. (2000*), Research Methodology: Methods and Techniques*. New Delhi: Wiley,.

Leape, L., L.(2005*). Five Years After To Err IS Human* .JAMA.293:2384-2390

Mohanty, R.P., & Behera, A.K., (1996), "TQM in the service sector", *Work Study,* Vol. 45(3), p. 13-17.

Moore, B., & Brown, A., (2006), "The application of TQM: organic or mechanistic", International *Journal of Quality and Reliability Management*, Vol. 23(7), p. 721-742.

Mugenda M. O. and Mugenda A. (1999), *Research Methods: Qualitative and Quantitative Approaches,* African Centre for Technology Studies, Nairobi, Kenya.

Mugenda, A. G. (2008). *Social Science Research: Theory and Principles*. Nairobi, Arts Press.

Mugenda, O.M and Mugenda, A.G (2003). *Research Methods, Quantitative & Qualitative Approaches*, Acts Press, Nairobi

Ngechu. M. (2004), Understanding the research process and methods. An introduction to research methods. Acts Press, Nairobi.

Ovretveit, J., (2001), "Japanese healthcare quality improvement", *International Journal of Health Care Quality Assurance,* Vol. 14(4), p. 164-167.

Rad, A.M.M., (2005), "A survey of total quality management in Iran Barriers to successful implementation in

health care organizations", *Leadership in Health Services*, Vol. 18(3), p. 12-34.
Rad, A.M.M., (2006), "The impact of organizational culture on the successful implementation of total quality management", *The TQM Magazine*, Vol. 18(6), p. 606-625
Schalk, R. & Dijk, W.V., (2005), "Quality management and employee commitment illustrated with examples from Dutch health care", *International Journal of Health Care Quality Assurance*, Vol. 18(3), p. 170-178.
Shores, R.A., (2002), "Improving the quality of management systems", *Quality Progress*, p. 53–57.
Somekh, Bridget and Cathy Lewin. (2005), *Research Methods in the Social Sciences*. London: Sage publications Inc.
Taylor, W.A. & Wright, G.H., (2003), "The impact of senior managers' commitment on the success of TQM programs: an empirical study*", International Journal of Manpower*, Vol. 24(5), p. 535-50.
Vouzas, F., & Psychogios, A.G., (2007), "Assessing managers' awareness of TQM*", The TQM Magazine,* Vol. 19(1), p. 62-75.
Walsh, A., Hughes, H., & Maddox, D.P., (2002), "Total quality management continuous improvement: is the philosophy a reality*?", Journal of European Industrial Training*, Vol. 26(6), p. 299-307.
Westphal, J.D., Gulati, R., & Shortell, S.M., (1997), "Customization or conformity? An institutional and network perspective on the content and consequences of TQM adoption", *Administrative Science Quarterly,* Vol. 42, p. 366–394.
Williams, S.J., (1994), "Patient satisfaction: A valid Concept?", *Social Science and Medicine*, Vol. 38(4), p. 509-16.
Williams.S. W.StephenStephen P. SchmaltD Morton Richard Koss , M, S Jerod.M L.(2005) Quality of Care in U.S. Hospitals as reflected *by Standardised Measures*,Vol 353 21 st july
Yang, C-C., (2003), "The establishment of a TQM system for the health care industry", *The TQM Magazine,* Vol. 15(2), p. 93-98.
Yin, R, K. (2003*) Case Study Research: Design and Methods* (3rd edn). London: Sage Publications.
Zairi, M. (2000), "Managing customer satisfaction: a best practice perspective", *The TQM Magazine*, Vol. 12(6), p. 389-94