



TOTAL QUALITY MANAGEMENT AND QUALITY HEALTH CARE SERVICES: A CASE OF ST. JOSEPH HOSPITAL IN EASTLEIGH, NAIROBI CITY COUNTY, KENYA

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ABSTRACT

Rise in demand for quality healthcare services around the world has necessitated the need to develop a healthcare sector which addresses the fundamental needs and aspiration of patients. This study investigated the effect of Total Quality Management on Quality Healthcare services using the case of St. Joseph Hospital Eastleigh, Nairobi City County, Kenya. More precisely, this study sought to examine the effect of customer focus, process approach, and leadership and supplier relations on quality healthcare services at St. Joseph hospital. The study adopted descriptive design while questionnaires and interview guide were used to collect data from staffs and patients at St. Joseph hospital. Census sampling technique was used to select 80 staff while purposeful sampling was used to select 25 patients. Data was analyzed through descriptive and inferential statistics and the findings revealed that services offered at St. Joseph hospital were reliable, responsive, competent, accessible, tangible and met quality assurance dimensions. The study revealed a significant correlation between supplier relations and quality healthcare services and an overall insignificant relationship between TQM factors and quality healthcare services ($p=0.796$, CI , 0.005). Further, Likelihood Ratio tests revealed that increasing supplier relations would yield greatest quality healthcare care service at St. Joseph hospital. The study recommended that healthcare facilities should invest in TQM in order promote quality healthcare services and patient satisfaction.

Key Words: Effect, Total Quality Management (TQM), Quality, Healthcare, Services

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INTRODUCTION

Total Quality Management (TQM) is one of the strategies aimed at promoting efficiency and quality services. Al Manhaway (2013) describes TQM as a culture utilized by an organization to improve quality of services in effort to fulfill the desires and expectations of customers thereby promoting customer satisfaction. Thus an effective TQM should ensure provision of quality goods and services in a cost-effective manner (Ngambi & Nkemkiafu, 2015). On the other hand, quality health services involves provision of services to a population in a timely, equitable, efficient and effective manner as well meet the criteria of safety and appropriateness (WHO, 2018; WHO, 2006).

Total Quality Management does not only promote performance of an organization but also improve quality of services. Al-Shdaifat (2015) claims that TQM practices of customer focus and continuous improvement were responsible for improvement of service delivery among 70% of hospitals in Jordan. Alaraki (2014) revealed that TQM practices of staff involvement, leadership styles, staff training, customer focus, process approach and supplier relations promoted performance of the hospitals and improved quality of services. Besides, Idris (2011) found an association between TQM dimensions of; leadership, customer orientation, community focus and staff participation and organizational performance in India. Despite the existence of TQM practices, many countries in Sub-Saharan Africa continue to experience deteriorating healthcare services. In Ghana, poor healthcare services has been linked to low employee motivation and involvement in decision making (Amporfu, Nonvignon & Ampadu, 2013) while in Uganda, deteriorating state of healthcare services is caused by poor infrastructure, lack of medical equipments, inadequate resources, low budget and poor conditions of service (Angee, 2013). In Kenya, while studies by Mohamed (2015) and Otieno (2017) show that TQM critical in promoting quality of healthcare services, many healthcare facilities

lack basic infrastructure such as personnel, space and essential healthcare commodities. This is likely to compromise quality of care rendered to patients and if issue of quality healthcare is not treated with seriousness it deserves, the wellbeing of residents of Eastleigh is likely to be compromised. This in the long-run will result in health complication and mortalities thereby making it difficult for Kenya to achieve Vision 2030 in health. Hence, this study examined the effect of Total Quality Management (TQM) on quality services at St. Joseph hospital, Eastleigh, Nairobi County-Kenya.

Problem Statement

Recently, there is an outcry among the residents of Nairobi City County over the deteriorating state of healthcare services. Many healthcare facilities lack basic infrastructure such as personnel, space and essential healthcare commodities. This is likely to compromise quality of care rendered to patients and if issue of quality healthcare is not treated with seriousness it deserves, the wellbeing of residents of Eastleigh is likely to be compromised. The problem of deteriorating healthcare services has increased in many countries over the past few years. In a country like India, quality healthcare services are affected by lack of employee involvement, poor healthcare infrastructure, cultural competence and employee burnouts (Dangmei, & Singh, 2019). In Ghana, poor healthcare services has been linked to low employee motivation and involvement in decision making (Amporfu, Nonvignon & Ampadu, 2013) while in Uganda, deteriorating state of healthcare services is caused by poor infrastructure, lack of medical equipments, inadequate resources, low budget and poor conditions of service (Angee, 2013). This study sought to examine the effect of Total Quality Management (TQM) on quality healthcare delivery using the case of St. Joseph hospital in Eastleigh, Nairobi City County, Kenya.

Objectives of the Study

- To examine the effect of customer focus on quality healthcare services at St. Joseph hospital Eastleigh, Nairobi City County, Kenya.

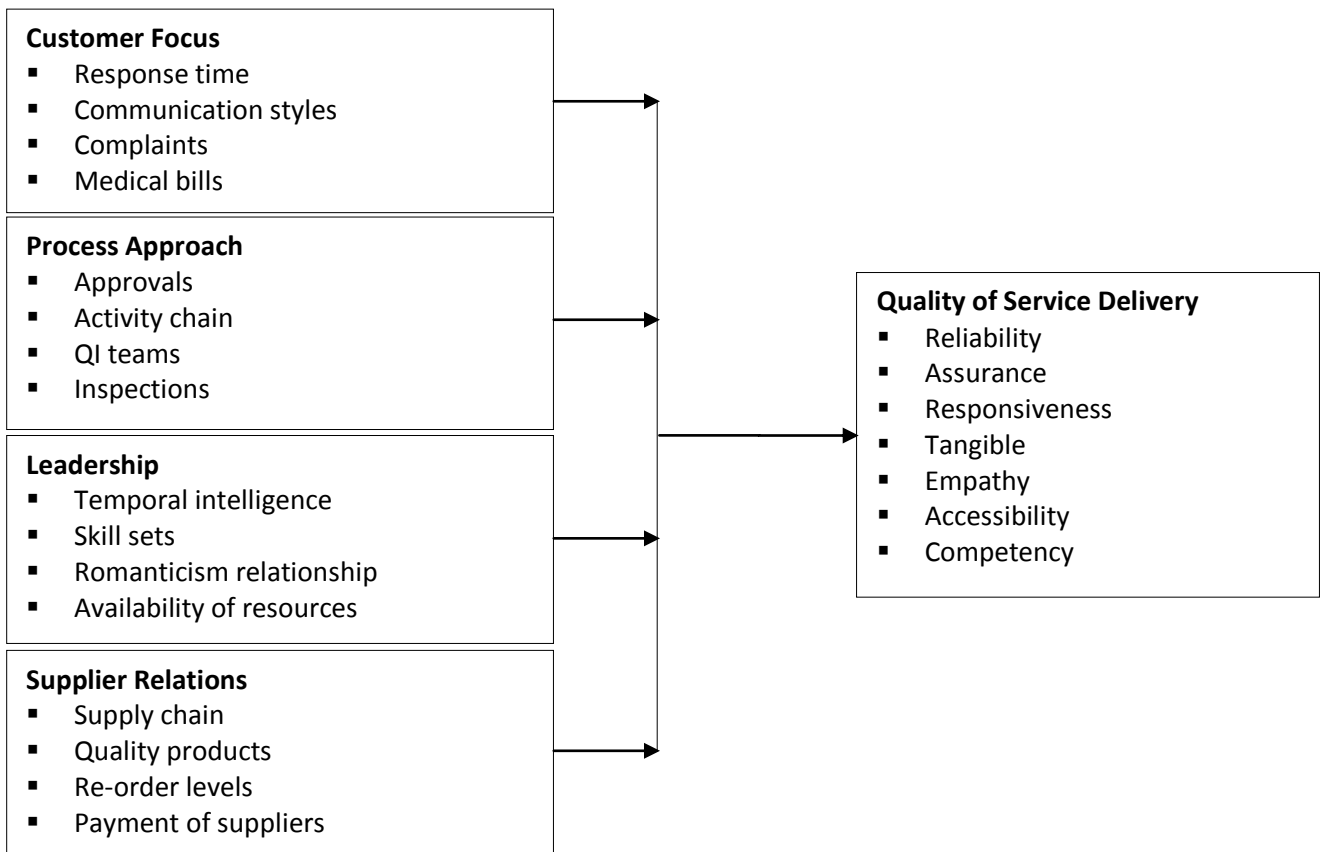
- To examine the effect of process approach on quality healthcare services at St. Joseph hospital Eastleigh, Nairobi City County, Kenya.
- To investigate the effect of leadership on quality healthcare services at St. Joseph hospital Eastleigh, Nairobi City County, Kenya.
- To examine the effect of supplier relations on quality healthcare services at St. Joseph hospital Eastleigh, Nairobi City County, Kenya.

quality in service sectors. SERVIQUAL measures quality of services using 10 dimensions which include: reliability of the services, timely services, competent service providers, accessibility of the service, effective community, courteous personnel, credibility of service, safety of service, understanding the customer and tangible service (Parasuraman *et al*, 1985). This model was appropriate because it demonstrates how adoption of dimensions of quality can help healthcare providers, patients and other stakeholders to improve quality of healthcare services. Mirinda *et al*. (2010) in their study found that SERVQUAL model was effective in measuring quality of healthcare services.

LITERATURE REVIEW

Theoretical Framework

This study was anchored on SERVQUAL model of service delivery framework Parasuraman *et al*, (1985). The model measures the scale of



Independent Variable

Dependent Variable

Figure 1: Conceptual Framework

Customer focus involves efforts directed towards ensuring customer needs and expectations are met. Al-Shdaifat (2015) argues that healthcare providers should offer services in a way that the

interests and expectations of patients are achieved. Through patient-centered services, health outcomes of patients are likely to improve. Oh and Wee (2016) argues that through customer

orientation, patients are likely to achieve self-efficacy which in turn can contribute to profitability and good quality services in public hospitals. They further observe that the vitality of providing patient oriented services bring the required synergy to produce positive change and improve wellbeing of patients. Process approach involves interventions directed towards integrating the process of service delivery to ensure that patients are services in an efficient and timely manner. Shahbod et al., (2017) argues that integrating healthcare systems is exceeding important in promoting quality of services.. Nyatanyi *et al.*, (2017) argues that integrated healthcare system creates a platform for collaboration and sharing of knowledge, experiences and shared goals which are vital for success of any institution. In healthcare sector, integrated healthcare system promotes effective communication, evidence-based interventions, improved surveillance and decreased patience waiting time and costs

Leadership involves guiding the operation of hospitals to ensure that patients receive required services guided by institutional and regulatory policies. Alloubani, et al.,(2014) argue that for hospitals to promote quality services, leadership must respond to patient challenges, new technology and must be dynamic. Basera, Mwenje and Ruturi (2019) argue that effective leaders have the ability to harness available resources, skills and expertise for the betterment of an organization. Lack of effective leadership derails the progress and may result in loss of revenue, poor implementation of activities and ultimately poor services. Mathole, *et al.*, (2018) argued that hospital leaders, who conduct regular and supportive supervisory meetings, acknowledge good performers in group meetings make staff to feel happy and motivated thereby bolster quality of service. Supplier relations are beneficial and enhance mutual relationships between hospital management and suppliers for purposes of ensuring the hospitals have essential raw materials such as equipment's and pharmaceutical products. Supplier relations

promote efficient operations thereby improving quality of services (Yazdani, et al, 2020). Supplier trust is essential in healthcare sector. Abdallah, *et al.*, (2017) argues that trust with suppliers has a positive impact on healthcare performance. High levels of supplier integration not only improve hospital performance but also enhance the transformation of trust benefits into performance.

Review of Empirical Literature

Yang and Zhang (2018) investigated the impact of customer orientation on organizational performance in China. Customer-focused service, customer involvement, and effective information distribution all boosted customer happiness and improved the organization's financial and non-financial performance, according to the findings. Luu, et al., (2016) investigated the impact of process approach on organizational performance in the United Kingdom. The findings demonstrated that the process value approach was superior to the outcome value approach in terms of cognitive strength on employee attitudinal and behavioral loyalty. Jimoh, et al., (2019) investigated the impact of TQM techniques on organizational performance in Nigeria. The findings demonstrated a strong association between TQM procedures and construction company performance. In Ethiopia, a study by Mekonnin (2015) examined the role of customer orientation on business performance of financial institution and found that customer orientation assisted the bank to improve its customers need, even though competing with private commercial banks with different banking strategies was a major challenge to commercial bank of Ethiopia. Govender (2017) investigate the influence of empowering leadership on service delivery. The findings demonstrated that empowering leadership was substantially linked to employee work effort, performance, and enhanced service delivery, as well as serving as a mediating factor between employee work effort and employee performance. In Kenya, Atieno (2018) studied the influence of customer orientation on the performance of suppliers of steel roofing

sheets. The study found that the organization develops new products/services to cope with dynamic changing tastes and preferences of the customers on continuous basis. It was also found that customers care is exercised during service delivery and the staff understands the target market needs and wants. There was a positive relationship in customer orientation on the performance.

METHODOLOGY

This study used descriptive research design. The study targeted health care providers and beneficiaries of St. Joseph Hospital in Eastleigh, Nairobi City County Kenya. Census sampling method was used to select all the 80 healthcare workers at St. Joseph Hospital while convenience sampling was used to select 25 walk-in patients. Questionnaires were used to collect quantitative data from healthcare workers while interviews

were conducted with walk-in patients. The validity and reliability research instruments were done through expert review pre-test and transferability. Data was evaluated with descriptive and inferential statistics and presented as statistical tables with frequency distributions, measures of central tendency, and measures of dispersion, or as a graphical presentation with bars, pie charts, or histograms. This study adhered to ethical guidelines of scientific research. The researcher also adhered to the principles of; respect of persons, confidentiality and do no harm throughout the study.

FINDINGS

The goal of this study was to examine the effects of TQM on quality healthcare services using the case of St. Joseph, Nairobi City Kenya. Findings are presented as follows;

Table 1: Customer Focus at St Joseph Hospital

Statements	Agree	Disagree
Patients who seek services in this facility do not wait for long before being attended to	73 (97.3%)	2 (2.7%)
Healthcare professionals always respond to patient needs within a short-time	75 (100.0%)	0 (0.0%)
Healthcare professionals employ effective communication styles while attending to patients	75 (100.0%)	0 (0.0%)
The St. Joseph hospital has an effective complaint system e.g suggestion box, hotline	75 (100.0%)	0 (0.0%)
This hospital makes quick inquiry upon receiving any complaints	73 (97.3%)	2 (2.7%)
The services offered in this facility are informed by patient needs and expectations	74 (98.7%)	1 (1.3%)
Healthcare professionals ensure service provided satisfy patients	75 (100.0%)	0 (0.0%)

Findings in Table 1 revealed that the respondents were in consensus that St. Joseph hospital was providing patient oriented services. The respondents indicated that patients who sought services at the facility did not wait for long before being attended to (97.3%), healthcare professionals always responded to the needs of patient within a short-time (100.0%), Healthcare professionals employed effective communication styles while attending to patients (100.0%), the facility has an effective complaint system e.g suggestion box, hotline (100.0%) and that the hospital made quick

inquiry upon receiving any complaints (97.3%) and that services offered at the facility were informed by patient needs and expectations (98.7%) and healthcare professionals ensured provision of satisfactory services to patients. This finding is consistent with a study by Atieno (2018) who studied the influence of customer orientation on performance of steel company and found that customer focus helped the company to develop new products/services to cope with dynamic changing tastes and preferences of the customers on continuous basis.

Table 2: Process Approach at St Joseph Hospital

Statements	Agree	Disagree
This hospital has an effective approval system which guides delivery of services	74 (98.7%)	1 (1.3%)
Activity chain in this hospital is guided by elaborate standard procedures	72 (96.0%)	3 (4.0%)
This hospital has an active Quality Improvement team (QI) for quality monitoring and improvement	74 (98.7%)	1 (1.3%)
Healthcare professionals in this facility regularly undergo through supportive supervision	74 (98.7%)	1 (1.3%)
This facility has provisions for supporting patients to access or settle medical bills	74 (98.7%)	1 (1.3%)
This facility is certified by regulatory bodies to operate by bodies such ISO, government	75 (100.0%)	0 (0.0%)

The findings in Table 2 showed that process approach at St. Joseph hospital was superior. The hospital had an effective approval system which guided delivery of services (98.7%), activity chain at the hospital was guided by elaborate standard procedures (96.0%), there were active Quality Improvement teams (QI) for quality monitoring and improvement and healthcare professionals at the facility regularly underwent through supportive supervision (98.7%) while 98.7% of the respondents indicated St. Joseph hospital had provisions for supporting patients to access or settle medical bills and 100.0% of the respondents agreed that the

hospital was certified by regulatory bodies to operate by bodies such ISO, government.

This finding is consistent with a study by Wanjala, Njunguna, Neyole (2018) who claim that process approach ensures generation and information flow which is essential in promoting evidence-based decision in healthcare sector and recommends that healthcare workers should communicate and share information regarding their day to day activities in accordance with safety and confidentiality requirements.

Table 3: Leadership at St. Joseph hospital

Statements	Agree	Disagree
Leaders in this hospital are able to continue doing an activity until its completion	71 (94.7%)	4 (5.3%)
Leaders in this facility are obedient to time and follows what has been scheduled	66 (88.0%)	9 (12.0%)
Leaders in this facility learn from the past, live in the present, and plan for the future	63 (84.0%)	12 (16.0%)
Leaders in this facility have a boundary between work and non-work affairs	67 (89.3%)	8 (10.7%)
Leaders in this facility are able to do many things at the same time-multitasking	67 (89.3%)	8 (10.7%)
Leaders in this facility use time in the best possible way	69 (92.0%)	6 (8.0%)
Leaders in this facility have effective communication skills	73 (97.3%)	2 (2.7%)
Leaders in this facility have free-will to work	71 (94.7%)	4 (5.3%)
Leaders in this facility ensure availability of resources for effective service delivery	74 (98.7%)	1 (1.3%)

As shown in Table 3, the findings showed that St. Joseph has an effective leadership structure. According to the findings, leaders at the facility were consistent in doing planned activities till completion (94.7%); leaders at the facility were obedient to time and followed what had been scheduled (88.0%), leaders at the hospital learn from the past, live in the present, and plan for the

future (84.0%) and leaders in this facility have a boundary between work and non-work affairs (89.3%). In addition, the respondent's indicate leaders in this facility are able to do many things at the same time-multitasking (89.3%), leaders at the facility used time in the best possible way (92.0%), leaders at the facility had effective communication skills (97.3%) and leaders at the facility had

free-will to work (94.7%) and leaders in this facility ensure availability of resources for effective service delivery (98.7%). These findings are in line with those of Govender (2017), who investigated the impact of empowering leadership on service delivery in South Africa and discovered that

empowering leadership was strongly linked to employee work effort, performance, and improved service delivery, as well as acting as a mediating factor between employee work effort and employee performance.

Table 4: Supplier Relations at St. Joseph Hospital

Statements	Agree	Disagree
St. Joseph hospital makes perfect order for healthcare commodities	75 (100.0%)	0 (0.0%)
The healthcare products procured by this facility are of good quality	73 (97.3%)	2 (2.7%)
This hospital has no excess inventory	69 (92.0%)	6 (8.0%)
This hospital has enough capacity for healthcare commodities	68 (90.7%)	7 (9.3%)
Time taken to order and receive healthcare products is short	70 (93.3%)	5 (6.7%)
This hospital rarely makes forecast error when procuring for health commodities	69 (92.0%)	6 (8.0%)
This facility rarely re-orders for commodities due to lack of order fulfillment	71 (94.7%)	4 (5.3%)
This facility pays suppliers on time	73 (97.3%)	2 (2.7%)

Table 4 showed that St. Joseph hospital had an effective supplier relations system. According to the respondents, St. Joseph hospital always made perfect order for healthcare commodities (100.0%), the hospital procured quality products (97.3%), the hospital had no excess inventory (92.0%), the hospital had enough capacity for healthcare commodities (90.7%) and that short time was taken to make an order of healthcare product (93.3%). Further findings revealed that the hospital rarely made forecast error when procuring for health commodities (92.0%) , hospital rarely made re-orders for commodities due to lack of order

fulfillment (94.7%) and that the hospital paid suppliers on time (97.3%). According to a study by Moons, Waeyenbergh and Pintelon (2019) hospital supply chain logistics entails procedures for handling physical goods (e.g. pharmaceuticals, surgical medical products, medical equipment, sterile items, linen, food, and so on) and the associated information flows, from the receipt of goods within a hospital to their delivery at patient care locations. After personnel expenditures, medical supply charges are the most expensive in hospitals (Moons, Waeyenbergh & Pintelon, 2019).

Table 5: Quality of Services at St. Joseph Hospital

Statements	Agree	Disagree
Reliability- Healthcare professionals in this facility perform promised service dependably and accurately	74 (98.7%)	1 (1.3%)
Assurance- Healthcare professionals in this facility convey trust and confidence to patients	74 (98.7%)	1 (1.3%)
Responsiveness- Healthcare professionals in this facility are always willing to help patients promptly	74 (98.7%)	1 (1.3%)
Empathy- Healthcare professionals in this facility are always approachable	74 (98.7%)	1 (1.3%)
Tangible- The physical outlook of this hospital is clean	72 (96.0%)	3 (4.0%)
Accessibility- This facility is accessible to the population	75 (100.0%)	0 (0.0%)
Competency- Healthcare services are provided by qualified and competent professionals	75 (100.0%)	0 (0.0%)

The findings in Table 5 indicated respondent's perceptions about quality of services offered at St. Joseph hospital. According to majority of the respondents, services offered at the facility were of good quality. The respondents indicated that services offered were reliable in the sense that they were dependable and accurate (98.7%), services were of good quality assurance since healthcare professionals at the facility conveyed trust and confidence to patients (98.7%) and service provided were competent since they were provided by qualified and competent professionals (100.0%). Findings also revealed that healthcare services met empathy criteria since healthcare professionals

providing the services were approachable (98.7%), healthcare services at the facility were tangible since the physical outlook of the facility was clean (96.0%) and the services were accessible to the targeted population (100.0%) and responsive since healthcare professionals at the facility were always willing to help patients promptly (98.7%).

Correlation Analysis

To determine the relationship between TQM and the economic quality of services at St. Joseph Hospital, the researcher used correlation analysis. Table 6 summarizes the findings:

Table 6: Bivariate Correlation

		Correlations				
TQM		Customer Focus	Process Approach	Leadership	Supplier Relation	Quality Services
Customer Focus	Pearson	1	.064	.172	-.074	-.035
	Sig. (2-tailed)		.584	.140	.531	.764
Process Approach	Pearson	.064	1	-.022	.028	.021
	Sig. (2-tailed)	.584		.848	.811	.858
Leadership	Pearson	.172	-.022	1	.055	-.041
	Sig. (2-tailed)	.140	.848		.637	.726
Supplier Relation	Pearson	-.074	.028	.055	1	.520**
	Sig. (2-tailed)	.531	.811	.637		.000
Quality Services	Pearson	-.035	.021	-.041	.520**	1
	Sig. (2-tailed)	.764	.858	.726	.000	

** . Correlation is significant at the 0.01 level (2-tailed).

The presence of a linear relationship between the independent and dependent variables was determined using correlation analysis. The findings revealed of the four TQM dimensions, only supplier relations (Sig., 0.00) had a relationship with quality healthcare services. Customer focus (Sig., 0.764), Process Approach (Sig., 0.858) and Leadership (Sig., 0.726) had no relationship with quality of healthcare services at St. Joseph hospital. These findings imply that there was a linear relationship

between supplier relations and quality of services but does not tell the strength of the relationship.

Multinomial Logistic Regression

In order to establish the cause-effect relationship between TQM and quality of services at St. Joseph hospital, the study adopted multinomial logistic regression. Multinomial Logistic regression was considered for this study because dependent variable comprised ordered variable as well as ordered independent variables. The findings were summarized in Table 7:

Table 7: Model Fitting Information

Model	Model Fitting Criteria		Likelihood Ratio Tests	
	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	26.238			
Final	2.773	23.466	30	.796

Because the probability ratio (0.796) was more than the crucial value of 0.05, the results in Table 9 reveal that there was no meaningful association

between TQM and service quality at St. Joseph Hospital.

Table 8: Pseudo R-Square

Cox and Snell	.269
Nagelkerke	.838
McFadden	.809

As shown in Table 8, the *Pseudo R-Square* explains the variation of dependent variable due to the changes of independent variables. The *Nagelkerke* value of 0.838 implies that 83.8% variations of

quality of healthcare services at St. Joseph hospital was due to changes in process approach, customer focus, leadership and supplier relations at 95% confidence interval.

Table 9: Likelihood Ratio Tests

Effect	Model Fitting Criteria		Likelihood Ratio Tests	
	-2 Log Likelihood of Reduced Model	Chi-Square	Df	Sig.
Intercept	2.773 ^a	.000	0	.
Customer focus	2.773 ^b	.000	4	1.000
Process approach	2.773 ^b	.	2	.
Leadership	6.592	3.819	12	.986
Supplier relations	10.071 ^b	7.298	8	.505

The Likelihood Ratio Tests, as shown in Table 9, indicate the impact of each independent variable on the dependent variable. The quality of service coefficient was 2.773 when all independent variables were set to zero. When all other independent variables are zero, a unit increase in customer focus leads to a 2.773 increase in service quality, a unit increase in process approach leads to a 2.773 increase in service quality, a unit increase in leadership leads to a 6.592 increase in service quality, and a unit increase in supplier relations leads to a 6.592 increase in service quality. This finding means that increasing supplier relations will result in a substantial improvement of quality services at St. Joseph hospital.

CONCLUSIONS AND RECOMMENDATIONS

According to the findings, the services provided by St. Joseph Hospital were dependable, responsive, competent, accessible, palpable, and satisfied quality assurance standards. The study discovered a substantial link between supplier relationships and quality healthcare services, as well as a generally minor link between TQM parameters and quality healthcare services ($p=0.796$, CI, 0.005). Furthermore, Likelihood Ratio testing demonstrated that improving supplier relations at St. Joseph hospital would result in the highest quality healthcare care service.

The study suggested that healthcare facilities invest in TQM in order to improve patient

happiness and quality of care. This is because TQM produced dependable, accessible, responsive, tangible, competent, and ensured healthcare services, according to our research.

The study recommended that, the Ministry of Health should collaborate with public and private

sector actors to expand and improve the infrastructure of healthcare institutions in Nairobi City County. In order to improve the quality of healthcare services in the County, additional healthcare personnel must be trained and recruited.

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