





## What enhances service delivery in public hospitals in Kenya? The role of total quality management practices

 Rebecca Wangare Wandie <sup>(a)\*</sup>  Stephen Makau Muathe <sup>(b)</sup>



<sup>(a)</sup>School of business, Kenyatta University, Nairobi, Kenya.

<sup>(b)</sup>PhD., Department of Business Administration, School of Business, Kenyatta University Nairobi, Kenya.

### ARTICLE INFO

#### Article history:

Received 15 August 2022

Received in rev. form 12 Oct. 2022

Accepted 19 October 2022

#### Keywords:

Total Quality Management, Employees' participation, Adoption of Technology, Continuous Improvement, Client Focus, Service delivery, dynamic capability, Kenya

#### JEL Classification:

L21

### ABSTRACT

The public health sector is affected by various challenges, such as operational inefficiencies and poor service delivery. These challenges affect public hospitals' delivery of quality services that meet client expectations. As a result of these issues, public hospitals have adopted the total quality management approach to deal with these challenges. The general objective of this research was to determine the effect of total quality management application on the quality-of-service delivery across public hospitals in Kenya. The study was anchored on a resource-based view, dynamic capabilities, and system approach theories. The research applied a descriptive approach to the target population of 1718 respondents. The sampling approach for the study was a stratified random technique that selected a sample of 250 participants. The findings indicated that employee involvement, technology adoption, continual advancement, and client focus affect service delivery across various public hospitals in Kenya. The research concluded that applying total quality management practices is essential and influences service delivery across various public hospitals. Therefore, the national and county governments are supposed to ensure management's commitment to the implementation of TQM practices across the county's healthcare facilities.

© 2022 by the authors. Licensee SSBFNET, Istanbul, Turkey. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<http://creativecommons.org/licenses/by/4.0/>).

## Introduction

To deliver quality services is considered an essential contributor to success and good operational performance of an organisation in the current global competitive environment (Barros, 2015). Organizations strive to achieve outstanding organizational performance so that they meet the needs of the community in which they operate, by constant development of their products and services (Johnston & Clark, 2008). The constant increase in integration of world markets has put more pressure to the service delivery sector to ensure quality and up-to-date delivery of services. These challenges could attribute to the rapid shift in market causing constant changes in trends, taste and prices.

Organizational efficiency within the healthcare sector is a necessity to ensure patient satisfaction because the provision of quality service has a direct effect on consumer satisfaction. According to Hayes, Batalden and Goldmann (2015), profitability and service loyalty are key facets of any for-profit organization. As part of the service industry, the healthcare industry is a fast-growing and dynamic system. The sector has changed its service delivery system as a strategy to survive the uncertain and everchanging business environment (Holloway & Galvin, 2016).

Service delivery in health facilities ensures that patients receive the treatment and service they seek. According to Subashini and Kavitha (2011), health care services that are centred on the customers are important for health facilities that want to achieve universal health care goals. People-centred care is treatment that is focused and structured around people and communities' health needs and expectations, rather than diseases. In most cases, Pant and Pandey (2018) identify that patient-centric care seeks to focus on the

\* Corresponding author. ORCID ID: 0000-0001-9479-8356

patient, care that is wholesomely focused on humans incorporates all medical experiences and also involves attention to the welfare of people in their communities and their role in helping health facilities achieve their goals and also helping shape health policies.

Total Quality Management (TQM) entails the efforts by an organisation meant to provide a conducive environment fit enough for employees to continually improve their ability to give out products that are valuable and suitable to their customers' needs (Jaca & Psomas, 2015). TQM emphasizes on improvement of firm operations and the enhancement of the management efforts towards supporting quality operations through provision of sufficient funds, training, setting of goals and having enough members of staff (Muruganatham, Vinodh, Arun & Ramesh, 2018). Quality management system is a group of organized practices aimed at managing and controlling a company in order to continuously enhance its performance. According to Cha (2018) patient compliance is being emphasised as part of successful private and public hospitals operations.

The public health system in Kenya is organized in a step-wise manner to allow referral to a higher-level hospital in the event of complicated cases. The nation's healthcare system is classified in six hierarchical levels, from Level 1 up to Level 6. For instance, Level 1 is made up of community service facilities, Level 2 has dispensaries and clinics, whilst Level 3 entails nursing homes, health centres, and maternities. Level 4 entails medium-sized private healthcare facilities as well as sub-county hospitals. Level 5 is made up of the big private hospitals and county referral hospitals whereas Level 6 entails the national referral hospital facilities and big private teaching hospitals (Ministry of Health, 2018).

Kenya is the first nation to necessitate referral healthcare services in East Africa, but the public healthcare sector has been affected by a high migration of Health Care Workers (HCW) from public to private practice and other private healthcare sectors due to different reasons such as empowerment in decision-making, better compensation, better working conditions, clearer communication channels, and effective conflict resolution approaches. HCW's are mainly dispensed by human resource department who are core in maintaining a cordial relationship between employees and their employers thus making it a crucial department in optimal delivery of healthcare services.

The public healthcare system faces numerous challenges such as operational inefficiencies and poor service delivery (Basu, Andrews, Kishore, Panjabi & Stuckler, 2012). The competition from private hospitals has led to demand for delivery of quality services that meet and supersede client expectations. In order to address these challenges, public hospitals have adopted the total quality management approach (Nderitu, 2016). With the growth in the application of TQM, health facilities now recognise TQM as a beneficial system for quality improvement. Efficient and continually improving service is the goal of any public health facility in service delivery.

Past studies have been done on TQM both in the local and global scene. Most of these studies indicate that TQM significantly affects the performance of firms. Unfortunately, in the developing nations and especially in the healthcare sector TQM has not been embraced. Ali and Alolayyan (2013) found a conclusive connection between TQM application and performance in healthcare facilities. Similarly, Awuor and Kinuthia (2013) studied TQM systems in private health facilities across Kenya and deduced that TQM practices can positively influence employee performance and in turn, translate into quality service delivery.

TQM factors significantly impacted the employees and management perception in Mauritius (Ramseook, Munhurrin & Panchoo, 2011). Additionally, Nyamari (2017) studied TQM and operational performance and looked at the increase in the use and implementation of TQM in many global firms and found significant relationship with operational performance. Although TQM has been researched for a number of years by different scholars, most of these were based in the manufacturing sector, there are a few studies done in global health facilities. Moreover, there is no study that focused on TQM and service delivery specifically.

Thus, there is increased interest in TQM and there is need for more empirical studies to be done on the topic given that many firms are taking up TQM and its diffusion internationally is on the rise. In the global scene public hospitals have often been characterised for providing poor services. To ensure that their services improve, it is essential that they take up a quality improvement program. Unfortunately, many of them may not be aware of the advantages such approaches can bring.

Therefore, this research determined the effect of TQM on delivery of care services in public healthcare facilities across Nairobi City County, Kenya.

## **Review of Literature**

### **Theoretical Review**

Resource-Based View Theory looks at an organization as having resources which are heterogeneous (Yang, Jia, and Xu, 2019). The theory notes that firms can attain sustainable competitive leverage by enhancing superior capacities and resources. Therefore, if the resources are meant to be the sources of sustainable leverage, they have to be valuable, rare, inimitable, and non-substitutable (VRIN) (Adnan, Abdulhamid, & Sohail, 2018). According to Yang, Jia, and Xu (2019), the resource-based view (RBV) focuses on the use of the firm's internal resources to gain significant competitive advantage. Aspects such as strategic stability, efficiency, transferability and replicability capabilities are the foundation of the organization's sustainable competitive advantage (Adnan, Abdulhamid, & Sohail, 2018). Moreover, cost control, differentiation and emphasis are the key universal techniques that can allow companies to achieve their objectives (Adnan, Abdulhamid, & Sohail, 2018).

Dynamic capabilities theory offers perspectives on the contextual attributes of the public healthcare and its effect on TQM practices. Dynamic capability can be effective in changing aspects of an external environment as it has both managerial and organizational aspects (Govindasamy & Wattal, 2018). The organizational aspect entails the capacity of the facility to adapt to the challenges by adjusting their resource base while managerial capabilities involve the ability of the manager to set up resources for their purpose. As a result, dynamic capability has to be implemented for it to influence change (Muithya & Muathe, 2020). The concept of dynamic capabilities can be executed at organizational level because these capabilities are based on routines.

System Approach Theory considers organisations as systems that can gain quality by combining the individual efforts to the achievement of a main goal by maximum utilization of organizational efficiency. The theory provides that the management should make sure that all the subsystems of an organisation are well coordinated in order to accomplish the organisations set goals through service delivery (Williams, 2017). The systems theory approach is used in this study as it supports the importance and roles of TQM as a crucial element in operational performance and service delivery in public hospitals. The systems approach theory notes that the business environment is crucial for the sustainability of an organization.

## **Empirical Review**

### *Employee Participation and Service Delivery*

Odero and Makori (2017) examined the relation between participation of human resources and their performance with evidence from part-time lecturers in the Kenyan public institutions of higher learning. The study evidence showed that employee involvement significantly and favourably impacted employee performance thus implying that the involvement of the employees positively affected the performance of employees.

The research of Butali and Njoroge (2018) investigated the impact of employee engagement on organizational performance, as well as the moderating effect of organizational commitment on the link between employee participation and performance. The survey included 5866 employees from three state-owned enterprises: Mumias Sugar Company, Kenya Power, and KenGen. The research was conducted using a descriptive survey research approach. Employee participation has a considerable impact on organizational success, according to the study's findings. Affective commitment, continuation commitment, and normative commitment all influenced the link between employee engagement and organizational performance, according to the study. The study looked at enterprises in Kenya, this study focused on public hospitals in Kenya.

In another study were the impacts of worker involvement on the National Treasury's non-financial effectiveness in Nairobi, Kenya was studied. The mentioned set targets led the research: to analyse the impact of work structure, management, interaction, as well as incentives on company effectiveness in Kenya's government sector. A descriptive survey methodology was used in the research. The targeted demographic for the research was 876 federal treasury employees, and a selection of 269 was selected using a stratified sampling technique.

A survey was used to obtain primary data. The data was analyzed utilizing descriptive and inferential statistics. Work structure, management, communications, and incentives all had a favourable and substantial impact on the efficiency. Employee participation is essential for performance, according to Kibara and Kiuri (2021), report. The study looked at worker's involvement on non-financial performance of national Treasury, this study focused on total quality management on service delivery in public hospitals in Nairobi where employee participation is one of its variables.

The description of the effects of employee engagement in the management plan on operational efficiency by demonstrating quite an occurrence with surveys undertaken in small and medium businesses (SMEs) in Kosovo, demonstrated that indeed employee engagement in business structure is critical to managerial progress. The quantitative technique was used to conduct scholarly research in this study. For gathering of primary data, a questionnaire method was sent to the top management of 50 SMEs in Kosovo who were chosen as a planned selection for the aim of undertaking this research utilizing the SPSS program 23. The study established a substantial net positive effect between employee engagement and Operational efficiency (Rrustemi, Bytyqi, Tahiri, Idriz, & Kovaçi, 2021). The study was carried out in Kosovo SMEs, this study was carried out on Nairobi city county public hospitals.

### *Adoption of Technology and Service Delivery*

In Uganda, Jakisa (2018) examined record management and service delivery at the Ministry of Health Headquarters. The study's findings would establish that the types of records kept by the ministry promote the constant use of existing information hence aiding delivery of services.

On the investigation of Orina (2018), the impact of technology adoption on Kenyan power efficiency; a case study of Kenya power's Embu office. The research employed a cross-sectional descriptive survey investigation methodology, which is a method of gathering data depending on data collected at a certain period in history. The research focused on 86 personnel at the Kenya Power Company's Embu office and 600 consumers in the community who use a lot of electricity. A number of 253 people took part in the survey.

Questionnaires and face to face interviews were used to gather information. Descriptive statistics were used to examine quantifiable information. Regarding the study goals, the data was entered, summarized, and evaluated utilizing the Statistical Package for Social Sciences. The findings revealed that technology adoption and Kenyan power performance were both strongly and substantially

boosted. The study looked at the impact of adoption of technology on performance in Kenya power in Embu office, while this study looked at the effect of adoption of technology on service delivery in public hospitals in Nairobi city county, Kenya.

The research of Malongo (2019) examined the impact of information technology integration on the efficiency of a number of Kenyan public hospitals. The Technology-Organization Environment Model, Technology Acceptance Model, Diffusion of Innovations Theory, and Dynamic Capabilities Theory were all used in this study. The research was based on the positivist concept. The researchers used an explanatory as well as cross-sectional surveying study methodology. The research's targeted group consisted of 98 government hospitals in Kenya that offer comprehensive controlled technology operations, encompassing 94 from the 47 counties, including 4 nationwide referral hospitals. Utilizing proportionally stratified randomized selection, a total of 294 participants were collected. According to the findings, integrating information technology into government hospitals can help improve healthcare effectiveness, usefulness, efficacy, and commercial feasibility. The study focused more on information technology and was based on positivist concept, this study focused mainly on total management quality and used adopting technology as a variable.

The project of Lee (2021) sought to study the effects of various technological use behaviours in a hospital context on healthcare quality. This study covers two elements (diverse and speed) of technological acquisition conduct to characterize distinct methods of technological adoption, based on the diversification idea in environment. The term "diversity" refers to how diverse systems are embraced in a hospital, and "speed" refers to how HIT diversity changes over time (i.e., the pace of technology addition). This study used five years of longitudinal data on over 3300 US hospitals to investigate technology adoption habits using an empirical taxonomy method to see if the hospitals in the data could be separated by the two technology adoption dimensions.

Based on the stated parameters, the cluster findings shows that three similar types of technology adopting patterns emerge. The research also looks into the correlation between the two characteristics on hospital efficiency. To account for direction of causality, it utilized a dynamic panel model with GMM (Generalized method of moments) estimation. The findings demonstrated a good connection amongst HIT diversity and hospital effectiveness, but a weak relation among HIT diversity change velocity and hospital effectiveness. The study was carried out on United States hospitals and it utilized GMM estimation method, while this study focused on hospitals in Nairobi City County in Kenya and utilized descriptive and inferential statistics.

#### *Continuous Improvement and Service Delivery*

Khan, Ali, and Hongqi (2018) conducted an experimental investigation in Pakistan on the effect of continuous improvement on organizational effectiveness. The study used a descriptive research design. An in-depth survey with management was conducted with a sampling of 40 enterprises from three industries (textile, sports, and surgical instruments). Data was collected via questionnaires. The effect of continuous improvement on organizational effectiveness in different Pakistani sectors was investigated in this research. Revenue, pricing, process capability, reliability, engagement of employees, and market dominance were recognized as diverse elements (independent variables) that had an effect on the company's productivity. Companies that incorporate continuous improvement into their research and development, production, and efficiency of the operations can obtain a comparative boon, according to the findings. The study was carried out in Pakistan, this study was conducted in Nairobi city county, Kenya.

The goal of Kandie, Kemboi, and Oloko's (2018) study was to see how continuous improvement affected the efficiency of Kenyan public universities. Researchers used a cross-sectional descriptive survey study methodology to investigate the mediating impact of continuous improvement on institutional output in Kenya's public universities. A census poll was used since all 22 Kenyan public universities were investigated. In general, the findings demonstrated a significant linear relationship between continuous developments in Kenya's Public University Institutional Effectiveness. The study's conclusions should help regulators design frameworks to improve overall organizational effectiveness. This study will focus on service delivery for public hospitals, whereas the previous study focused on university performance.

One of Waduu's (2020) project objectives in Kilifi, Kenya, assessed the influence of continuous improvements on commercial financial institution profitability. The investigators employed a descriptive investigation methodology and a demographics of 195 participants from 12 banking establishments in Kilifi to achieve the study's goals. The study used a mix of organized and unstructured surveys with open and closed ended items to collect data from participants. SPSS (Version 22) is a powerful statistical program for evaluating and visualizing facts and figures using averages, frequency, percentage distribution, measure of dispersion, and means. In Kilifi Town, continuous improvement has been shown to have a large and favourable influence on the banking sector's efficiency. The study was carried out on commercial banks in Kilifi County, which is a different context from the current study which was carried out in public hospitals in Nairobi City County.

#### *Customer Focus and Service Delivery*

When determining the effect of operational performance and practices that focus on clients in improving services within government owned entities (GOEs) across Kenya. The research targeted (34) commercial government owned entities in Kenya in its descriptive research. The study found that customer focused practices and operational performance significantly and favourably impacted performance (Kang'ethe, 2015).

In the investigation the impact of customer focus on manufacturing firm performance in Kenya, with a specific attention on Mabati Rolling Mills was studied. Management theories, systems approach theory, and scientific management theory were used to base the

research. The study used a descriptive study approach in which 121 personnel were randomly selected from a targeted demographic of 400. Questionnaires were used to obtain information, which were self-administered by the respondents. Combining descriptive and inferential techniques were used to examine the data. Correlation and regression evaluation were also employed to portray the link amongst the dependent and independent parameters in the study (Otieno, 2017). Customer focus improved consumer happiness, which led to improved general business outcomes, according to the study. The study focused on a particular firm, this study focused on public hospitals in Nairobi city county, Kenya.

In acknowledging the connections between service excellence and client focus. A literature review led to the discovery of verified measures. In this study, a total of 309 participants were utilized. Reflecting on the 309 replies, the statistical method and the proposed framework showing postulated links were validated utilizing confirmatory factor assessment and structured mathematical model, respectively. Furthermore, using the data obtained, this research codified the notions, described and evaluated the element scale items of the interaction framework among service quality and customer focus, allowing for a more accurate identification of the correlation in the method and also the effect. The data show that customer focus is influenced by service quality (Trans, 2020). However, Trans (2020) methodology used in the study will be different from this study, as this study used descriptive research methods.

One of the objectives of Menza and Rugami (2021) was to investigate how consumer focus affects deposit-taking Saccos in Mombasa County. From the standpoint of improved industry position as well as profitability, performances was examined. The study adopted a descriptive survey methodology. The 13 deposit-taking Savings and Credit Cooperatives in Mombasa County were selected, as with their governing management and central management. All of the County’s functioning and licensed Saccos were identified and subjected to a census. CEOs, supervisors, business management staff, loan management staff, and four executive top management were chosen as desired research participants. Customer focus and deposit-taking SACCO performances are strongly associated, according to Pearson Correlation Analysis. Because the research only looked at deposit-taking SACCOs in Mombasa County, the findings might not even extend to all sectors in Kenya, hence this study concentrated on public hospitals in Nairobi City County.

## Research and Methodology

The research focus was public hospitals in Nairobi City County and used a descriptive design. Muathe (2010), Robson, (2014), Sekaran and Bougie (2016) asserted that this design systematically and emphatically enquired into the study subject without directly controlling the independent variable under study as it cannot be manipulated or its events have already happened. The study target population 1718 respondents comprising of doctors, administrative staff and nurses. However, a sample of 250 respondents was selected using proportionate stratified sampling as recommended by Kothari (2004). Data was collected using a questionnaire and analysed using descriptive statistics and regression analysis. In determining the model significance, the recommendation of Blumberg, Cooper and Schindler (2014) was taken into consideration by use of adjusted coefficient of determination (R-squared (R<sup>2</sup>) in showing the extent in which the shift in service delivery is explained by shift in total quality management across public hospitals. F-statistic was applied to establish the fitness of the model at the 95% confidence level. The significance of the variable coefficients was tested using P-values at 0.05 significant level to evaluate the existence of a significant association between TQM funds and service delivery in public healthcare facilities across Nairobi County, Kenya.

Moreover, ethical concerns relate to confidentiality, no-harm, anonymity, reporting, purpose of the research and analysis issues was observed as recommended by Munhall, (1988), Houghton, Casey, Shaw and Murphy (2010).

## Analysis and Findings

A multiple linear regression model was used to establish the effect of total quality management practices on service delivery among public health facilities in Nairobi City County, Kenya. The findings of Model Summary, ANOVA and Coefficient of Regression were as indicated in the following sections.

### Model Summary

The findings of coefficient of correlation and coefficient of determination are as shown in table below:

**Table 1: Model Summary**

Model	R	R square	Adjusted r square	Std. Error of the estimate
1	.717 <sup>a</sup>	.713	.745	1.10021

<sup>a</sup> Predictors: (constant), employee involvement, technology adoption, continuous improvement and client focus

**Sources:** Survey Data (2021)

The study shows that coefficient of correlation R of 0.717 an indication of strong of correlation between the variables. Coefficient of adjusted R<sup>2</sup> was 0.745 which translates to 74.5%. This shows that changes in dependent variable can be explained by independent variables (employee involvement, technology adoption, continuous improvement and client focus). The residual of 25.5% can be explained by other variables not incorporated in the current study.

## Anova

An ANOVA was conducted as 95% level of significance. The findings of  $F_{\text{Calculated}}$  and  $F_{\text{Critical}}$  are as shown in Table 2.

**Table 2:** ANOVA Findings

Model	Sum of squares	Df	Mean square	F	Sig.
Regression	811.104	55	14.7473	28.4422	.000 <sup>b</sup>
Residual	101.113	195	0.5185		
Total	912.217	250			

a. Dependent Variable: Service Delivery

b. Predictors: (constant), (employee involvement, technology adoption, continuous improvement and client focus)

**Sources:** Survey Data (2021)

The study established that the study had  $F_{\text{Calculated}}$  of 28.4422 and  $F_{\text{Critical}}$  was 6.0113, this show that of  $F_{\text{Calculated}} > F_{\text{Critical}}$  an indication that the overall regression model was significant for the study. The p value was  $0.00 < 0.05$  an indication that at least one independent variable significantly influenced service delivery among public health facilities in Nairobi City County, Kenya.

## Regression Coefficient

In order to establish the individual influence of each of the variables of total quality management practices on the service delivery among public health facilities in Nairobi City County, Kenya, regression coefficient was used. The findings are indicated in the table below:

**Table 3:** Regression Coefficient

Model	Unstandardized coefficients		Standardized coefficients	T	Sig.
	B	Std. Error	Beta		
(constant)	5.101	1.107		2.145	.000
Employee Involvement	.719	.061	.301	3.044	.000
Technology Adoption	.781	.014	.311	3.015	.000
Continuous Improvement	.616	.081	.504	2.715	.000
Client Focus	.609	.054	.402	3.001	.00

a. Dependent Variable: Service Delivery

**Sources:** Survey Data (2021)

$$Y = 5.101 + 0.719X_1 + 0.781X_2 + 0.616X_3 + 0.609X_4$$

Whereby: Y = Service Delivery among Public Health Facilities in Nairobi City County, Kenya

$X_1$  = Employee involvement

$X_2$  = Technology adoption

$X_3$  = Continuous improvement

$X_4$  = Client focus

Table 3 indicates that all variables held constant, service delivery among public health facilities in Nairobi City County, Kenya would be at 5.101. A unit increase in employee involvement while holding other variables constant translates to an increase in service delivery by 0.719. These findings are in line with Butali and Njoroge (2018), that established that employee improvement through affective commitment, continuation commitment, and normative commitment all influenced organizational performance. Rustemi *et al.* (2021) findings also showed a good and substantial relationship between employee involvement and operational efficiency.

Having heightened adoption of technology as a TQM practice while keeping other variables constant, service delivery would attain 0.781. Jakisa (2018) study findings are in line with this study as results showed that adoption of technology has a notable effect on organizational performance. Also, Malongo (2019) findings were in line with this study and noted that integrating information technology into government hospitals can help improve healthcare effectiveness, usefulness, efficacy, and commercial feasibility.

Increased continuous improvement while keeping other variables constant would give service delivery 0.616 increase. This study is in line with Waduu (2020) as results showed that continuous improvement has been shown to have a large and favourable influence on the banking sector's efficiency. Comparably, that of Wanjogu and Waithaka (2021), also gave a similar outcome.

Lastly a unit increment in client focus translates to an increase in service delivery by 0.609. This finding is consistent with Menza and Rugami (2021) as an increase in client focus improves performance. Also, Trans (2020) as the findings codified the notions and described that the element scale items of the interaction framework among service quality and customer focus, allowing for a more accurate identification of the correlation in the method and also the effect.

The study established that all the indicators of total quality management practices used had a p value of  $0.001 < 0.05$  an indication that the variables significantly influenced delivery of services among public healthcare facilities in Nairobi City County, Kenya. This is supported by Awuor and Kinuthia (2013) who studied TQM systems in Kenya's private hospitals and deduced that TQM has a significant effect on performance. Ramseook, Munhurrun and Panchoo (2011) noted that TQM factors significantly impacted the employees and management perception in Mauritius. Nyamari (2017) also studied TQM and operational performance and looked at the increase in the use and implementation of TQM in many global firms and found a notable relationship with operational performance.

## Conclusion

The main goal of this research was to determine the effect of TQM practices on the quality of service in public healthcare facilities in Nairobi City County, Kenya. As noted, employee's involvement, adopting technology, continuous improvement and clients' focus were found to be statistically significant and influenced service delivery in public hospitals in Kenya. Hence, Public hospital administrators who seek out opinions of their staff and include them proactively in decision-making are likely to have enhanced service delivery. Moreover, the hospitals operate better by adopting technology which enable them to network their services and better use of electronic health records management. Through this the hospitals operate faster and provide quality services to clients. Furthermore, the study's concluded that continuous improvement improves service delivery. As a result of continuous improvement, there is more attention to patients and services that satisfy consumers' inherent needs. Customer-centric care enables hospitals to detect and build on development possibilities, such as meeting customer preferences at the first go.

Considering the main TQM predictors in this research, it is worth noting that the management in medical facilities need to strengthen employees' engagement, adopting and keeping abreast with latest technology, continuous improvement, and patient focused service delivery. Stakeholders in various businesses should start identifying the most crucial TQM practices that relate to their business objectives, strategies, anticipated performance, and current situation. For example, the management can implement employees' engagement by developing a framework that would foster employee involvement in TQM practices within their respective facilities. The national and county governments are supposed to ensure management's commitment on the implementation of TQM practices across the county's healthcare facilities to enhance service delivery. Moreover, the national government should develop policies that guide systematic and regular training to every health practitioner as part of improving the quality of healthcare.

This was a cross-sectional study focusing on effect of TQM practices on service delivery in public hospitals in Nairobi city county, Kenya, and as such the results cannot be generalised to the rest of the counties. Given the data was collected in one point in time future research should consider a longitudinal research design. Moreover, for generalization future research should focus on both public and private hospitals in more counties.

## Acknowledgement

All authors have read and agreed to the published version of the manuscript.

**Author Contributions:** Conceptualization, methodology, validation, formal analysis, investigation, resources, writing—original draft preparation, writing—review and editing were completed by both authors in equal measure

**Funding:** This research was funded by the authors.

**Informed Consent Statement:** Informed consent was obtained from all subjects involved in the study.

**Data Availability Statement:** The data presented in this study are available on request from the corresponding author. The data are not publicly available due to restrictions.

**Conflicts of Interest:** The authors declare no conflict of interest.

## References

- Adnan, M., Abdulhamid, T., & Sohail, B. (2018). Predicting Firm Performance through Resource-Based Framework. *European Journal of Business & Management*, 10(1), 31-36.
- Ali, K. A. M., & Alolayyan, M. N. (2013). The impact of total quality management (TQM) on the hospital's performance: an empirical research. *International Journal of Services and Operations Management*, 15(4), 482-506. <https://doi.org/10.1504/ijssom.2013.054904>
- Awuor, E. O., & Kinuthia, D. M. (2013). Total Quality Management Practices in Selected Private Hospitals in Nairobi, Kenya.
- Barros, A. (2015). U.S. Patent No. 8,965,957. Washington, DC: U.S. *Patent and Trademark Office*.
- Basu, S., Andrews, J., Kishore, S., Panjabi, R., & Stuckler, D. (2012). Comparative performance of private and public healthcare systems in low-and middle-income countries: a systematic review. *PLoS medicine*, 9(6). <http://dx.doi.org/10.1371/journal.pmed.1001244>.
- Blumberg, B., Cooper, D. R., & Schindler, P. S. (2014). The Research process and proposal. *Business Research Methods*, 55-105.
- Bryman, A., & Bell, E. (2015). Business Research Methods (Vol. fourth). *Glasgow: Bell & Bain Ltd*.
- Govindasamy, S., & Wattal, S. (2018, August). Linking dynamic capabilities and healthcare innovations: A case study approach. In *2018 Engaged Management Scholarship Conference: Philadelphia, PA, Fox School of Business Research Paper* (No. 18-031). <https://doi.org/10.2139/ssrn.3242224>

- Hayes, C. W., Batalden, P. B., & Goldmann, D. (2015). A 'work smarter, not harder' approach to improving healthcare quality. *BMJ Qual Saf*, 24(2), 100-102. <https://doi.org/10.1136/bmjqs-2014-003673>
- Holloway, L., & Galvin, K. (2016). Qualitative research in nursing and healthcare. *John Wiley & Sons*.
- Jaca, C., & Psomas, E. (2015). Total quality management practices and performance outcomes in Spanish service companies. *Total Quality Management & Business Excellence*, 26(9-10), 958-970. <https://doi.org/10.1080/14783363.2015.1068588>.
- Jakisa, B. K. (2018). Records management and service delivery at Ministry of Health Headquarters Kampala.
- Johnston, R., & Clark, G. (2008). Service operations management: improving service delivery. *Pearson Education*.
- Kang'ethe, M. (2015). Customer Quality Focus and Operational Performance of Kenya Government Owned Entities. *University of Nairobi Repository*.
- Kothari, C. R. (2004). *Research methodology: Methods and techniques*. New Age International.
- Kibara, R., & Kiiru, D. (2021). Employee Engagement and Non-financial Performance of National Treasury, Nairobi City County, Kenya. *International Journal of Business Management, Entrepreneurship and Innovation*, 3(2), 31-48. <https://doi.org/10.35942/jbmed.v3i2.188>
- Muathe, SM.A., (2010). The Determinants of Adoption of Information and Communication Technology by Small and Medium Enterprises within the Health Sector in Nairobi, Kenya. Unpublished PhD Thesis, Kenyatta University
- Muithya, V., Muathe, S., (2020). Dynamic Capabilities and Performance in the Context of Microfinance Institutions in Kenya: An Exploratory Study. *International Journal of Business, Economics and Management Works*. Vol. 7(8).pp. 15-29
- Mugenda, O. M., & Mugenda, A. G. (2003). *Research methods: Quantitative and qualitative approaches*. ACT, Nairobi.
- Muruganatham, G., Vinodh, S., Arun, C. S., & Ramesh, K. (2018). Application of interpretive structural modelling for analysing barriers to total quality management practices implementation in the automotive sector. *Total Quality Management & Business Excellence*, 29(5-6), 524-545. <https://doi.org/10.1080/14783363.2016.1213627>
- Nderitu, C. W. (2016). Service Quality and Performance of Private Hospitals in Nairobi County. (Un-published Thesis), University of Nairobi, Kenya
- Nyamari, P. M. (2017). Effect of total quality management practices on operational performance of commercial banks in Mombasa County, Kenya. *Unpublished Master of Business Administration research project, University of Nairobi*.
- Odero, J. A., & Makori, M. E. (2017). Employee Involvement and Employee Performance: The Case of Part Time Lecturers in Public Universities in Kenya. *International Journal of Management and Commerce Innovations*, 5(2), 1169-1178.
- Pant, P. D., & Pandey, J. P. (2018). Quality of family planning services delivery and family planning client satisfaction at health facilities in Nepal. In *Further analysis of the 2015 Nepal Health Facility Survey*.
- Ramseook-Munhurrun, P., Munhurrun, V., & Panchoo, A. (2011). Total quality management adoption in a public hospital: evidence from Mauritius. *Global Journal of Business Research*, 5(3), 67-77.
- Robson, C. (2014). How to do a research project: a guide for undergraduate students. *Wiley Global Education*.
- Sekaran, U., & Bougie, R. (2016). Research methods for business: A skill building approach. *John Wiley & Sons*.
- Subashini, S., & Kavitha, V. (2011). A survey on security issues in service delivery models of cloud computing. *Journal of network and computer applications*, 34(1), 1-11.
- Williams, S. J. (2017). Improving healthcare systems. *Improving Healthcare Operations*, 15-27. [https://doi.org/10.1007/978-3-319-46913-3\\_2](https://doi.org/10.1007/978-3-319-46913-3_2).
- Yang, Y., Jia, F., & Xu, Z. (2019). Towards an integrated conceptual model of supply chain learning: an extended resource-based view. *Supply Chain Management: An International Journal*, 24(2), 189-214. <https://doi.org/10.1108/SCM-11-2017-0359>.

**Publisher's Note:** SSBFNET stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.



© 2022 by the authors. Licensee SSBFNET, Istanbul, Turkey. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<http://creativecommons.org/licenses/by/4.0/>).

International Journal of Research in Business and Social Science (2147-4478) by SSBFNET is licensed under a Creative Commons Attribution 4.0 International License.