Contribution of Continuous Quality Improvements on Performance of Healthcare Organizations at Kibosho Hospital in Kilimanjaro, Tanzania

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Abstract

Despite national reforms and increased investment in health infrastructure low performance of healthcare service delivery remains a persistent challenge in Sub-Saharan Africa, including Tanzania. This study therefore assessed the extent to which continuous quality improvement on performance of healthcare at Kibosho hospital in Moshi district, Tanzania**.** This study was guided by Total Quality Management theory. The study employed a convergent research design under mixed methods research approach. The target population consisted of 1 deputy and 8 heads of hospital departments at Kibosho Hospital and 200 employees, totaling to 209 individuals. A census sampling technique used to include a sample size of 1 deputy and 8 heads of hospital departments at Kibosho Hospital and 200 employees, totaling to 209 individuals. Data was collected using structured questionnaires for quantitative data and interview guides for qualitative data. Quantitative data were analyzed using descriptive statistics with aid of SPSS version 22, while qualitative data underwent direct quotation to extract meaningful triangulation. Validity of instruments was ensured through both content and faces validity. Ethical considerations were strictly observed, including informed consent, confidentiality, voluntary participation, data security, and proper citation of all referenced materials. The study found that structured continuous improvement initiatives have, to a high extent, enhanced healthcare delivery at Kibosho Hospital. The study concludes that a culture of continuous improvement has strengthened care delivery, teamwork, and efficiency at Kibosho Hospital. Staff engagement in inclusive quality initiatives fostered a shared vision for better outcomes. To sustain and deepen the gains in care delivery, teamwork, and efficiency at Kibosho Hospital, it is recommended that hospital management institutionalize a Community-Integrated Quality Improvement (QI) Program.

Keywords: Continuous Improvement, Healthcare Performance, Service Delivery, Employee Involvement, Quality Management, Organizational Efficiency

1. Introduction

Healthcare systems are globally recognized as fundamental to societal well-being, tasked with providing high-quality, accessible, and cost-effective services to all individuals. Achieving optimal healthcare performance requires a holistic approach that prioritizes strong infrastructure, client-centered care, empowered health workers, and committed leadership (Arifin et al., 2022). Despite major advancements in medical technologies, diagnostics, and treatment modalities, the healthcare sector in many countries still struggles with inefficiencies, inequities in service delivery, and inconsistent care quality (Ampaw et al., 2020; Ebro, 2021; Simorangkir et al., 2021). Total Quality Management (TQM) has therefore emerged as a strategic management framework that focuses on continuous improvement, participatory decision-making and systemic quality control in healthcare organizations. TQM emphasizes four key drivers of performance: robust infrastructure, patient-focused service delivery, staff empowerment, and unwavering top management support (Arifin et al., 2022). Yet, in the absence of coordinated TQM efforts, many healthcare institutions worldwide remain unable to meet the expectations of quality care delivery. In Asia, empirical evidence shows that TQM practices significantly contribute to improved healthcare outcomes through enhanced care delivery, and increased efficiency. In India, Al-Rjoub et al. (2023) and Puthanveettil et al. (2020) reported that hospitals implementing continuous quality improvement and staff empowerment experienced a 35% increase in patient satisfaction. Similarly, in Jordan, Akhorshaideh et al. (2023) and Al-Oweidat et al. (2023) observed that organizational commitment played a pivotal role in healthcare quality delivery by fostering an environment where staff felt ownership and responsibility over patient outcomes. Collectively, this body of evidence reflects a growing global recognition that TQM is not just a managerial framework, but a powerful strategy for transforming care delivery, improving teamwork dynamics, and optimizing operational efficiency within healthcare systems.

In Africa, where many health systems face resource constraints, the adoption of TQM practices is gradually enhancing healthcare delivery. In Nigeria, Mutsoli (2019) observed a 22% rise in employee performance following staff training, pointing to stronger teamwork and accountability. Kavulya et al. (2018) also linked client orientation to better patient responsiveness and satisfaction. Addressing these challenges through policy reform, leadership

training, and strategic investment in TQM systems is essential for enhancing healthcare quality and achieving sustainable health outcomes across the continent.

In Tanzania, access to quality healthcare remains a significant concern, particularly in public hospitals where service delivery is often affected by limited resources, staff shortages, and underfunding (Matiku, 2023). World Bank (2021) reported that Tanzania has only 1.6 physicians and 15 nurses per 10,000 people, far below the WHO recommendation of 44.5 health workers per 10,000 (WHO 2021). In Kilimanjaro Region, particularly in Moshi District, strikes by medical personnel have become increasingly common, largely due to unfavorable working conditions and delays in responding to staff grievances by the government (Assenga et al., 2019). These workforce issues have not only weakened the morale of healthcare workers but have also contributed to declining trust in health institutions. A notable case is Kibosho Hospital, one of the key health service providers in the district, which has experienced a steady decline in patient visits over the past five years.

The declining trend in patient visits at Kibosho Hospital over the past five years has become an alarming issue within the hospital. In 2019, the hospital received 15,839 patients, in 2020 was 14,997, in 2021 were 13,879 while in 2022 were 13,634 patients the highest recorded in the five-year period. However, this number steadily decreased each subsequent year, with only 13,551 patients served in 2023. This represents a cumulative drop of nearly 2,300 patients, signaling that more individuals are turning to alternative facilities, postponing healthcare, or losing confidence in the hospital's ability to meet their needs. The figures reflect deeper underlying issues such as patient dissatisfaction, poor management practices, and potential quality gaps in the hospital's service offerings. Behind these numbers are real stories of patients who might have faced long wait times, lack of essential medications, or inadequate communication with healthcare providers' factors that could discourage future visits. Among the most promising approaches is the adoption of Total Quality Management (TQM), which emphasizes continuous improvement, patient satisfaction, and strong leadership as core elements of organizational performance. This study, therefore, sought to assess the extensiveness contribution of continuous quality improvements on healthcare performance at Kibosho Hospital in Kilimanjaro Region. The hope was to uncover practical, sustainable solutions that not only reverse the decline in patient visits but also serve as a model for other healthcare facilities facing similar challenges across Tanzania.

1.2 Statement of the Problem

Low performance of healthcare service delivery remains a persistent challenge in Sub-Saharan Africa, including Tanzania. Despite national reforms and increased investment in health infrastructure, many healthcare institutions continue to deliver substandard services that fail to meet patient expectations (Kapologwe et al., 2020). In response, the Government of Tanzania has implemented several initiatives, such as the Health Sector Strategic Plan (HSSP V), Results-Based Financing (RBF), and the Direct Health Facility Financing (DHFF) system, aimed at improving accountability, resource allocation, and service delivery at the facility level. However, Kinyenje et al. (2022) report that 64% of public and faith-based hospitals in Tanzania still face chronic staff shortages, lack of medical equipment, and poor working conditions, all of which contribute to low patient satisfaction. Additionally, long travel distances, high medical costs, and delayed treatment continue to hinder access to essential healthcare, particularly in rural and semi-rural settings.

If these challenges are not effectively addressed, the consequences could raise to preventable morbidity and mortality rates, reduced trust in the healthcare system, increased health disparities, and continued strain on national development efforts. Various studies have been conducted, including those by Mlay et al. (2021) on the Impact of Health Worker Motivation on Patient Care in Rural Tanzania; Nyagawa and Sabasaba (2022) on Service Delivery Challenges in Faith-Based Hospitals in Kilimanjaro; and Shaaban et al. (2023) on the Relationship between Health Facility Infrastructure and Utilization Rates in Northern Tanzania. While these studies offer valuable insights into broader healthcare system challenges, none have specifically investigated the role of continuous improvement strategies in enhancing healthcare performance at district-level faith-based institutions. Therefore, the current study investigated the extensiveness of the contributions of continuous quality improvement on the performance of healthcare at Kibosho Hospital in Moshi District, Tanzania.

1.3 Research Objective

To assess the extent to which continuous quality improvement contributes to improvements on performance of healthcare organization at Kibosho Hospital in Kilimanjaro, Tanzania

1.4 Research Question

To what extent does continuous quality improvements contributes to improvement on performance of healthcare organization at Kibosho Hospital in Kilimanjaro, Tanzania?

1.5 The Total Quality Management Theory

This study was guided by Total Quality Management theory. The proponent of Total Quality Management (TQM) theory is W. Edwards Deming, who introduced its key concepts in the mid-20th century, particularly in his 1986 work "*Out of the Crisis*". TQM theory emphasizes continuous improvement, customer focus, and the involvement of all employees in the quality management process. It states that long-term success stems from satisfying customer needs through continuous improvement in all aspects of an organization. The key assumptions of the theory include the belief that quality improvement is a constant, organization-wide process, that defects are often due to system flaws rather than employee errors, and that leadership plays a crucial role in fostering a culture of quality.

The TQM theory offers strengths in improving healthcare performance by focusing on three key areas: continuous improvement, process efficiency, and employee empowerment. Continuous improvement fosters a culture of ongoing evaluation and refinement of practices, which enhances patient care quality and operational outcomes in healthcare settings. In assessing contributions in this area, healthcare facilities can identify areas for advancement and ensure that services evolve to meet patient needs. Despite its much strength, TQM theory has some weaknesses, particularly when applied to complex environments like healthcare. One key challenge is that implementing TQM can be time-consuming and resource-intensive, requiring an investment in training, infrastructure, and cultural shifts across the organization. This makes it difficult for some institutions, particularly those with limited resources, to fully adopt and sustain TQM practices.

The TQM theory is highly relevant to the study on the extensiveness of continuous improvement on performance of healthcare at Kibosho hospital in Kilimanjaro, Tanzania. TQM's core principles continuous improvement, process efficiency, and employee empowerment directly align with key performance indicators in healthcare. For Kibosho Hospital, applying TQM offers a framework for addressing its challenges, such as declining patient visits, by improving service quality and operational efficiency. The focus on continuous improvement allows the hospital to

regularly evaluate and enhance patient care standards, ensuring that services meet evolving healthcare demands. TQM's emphasis on process efficiency can help streamline administrative and clinical workflows, reducing delays and resource wastage, thus improving patient outcomes and hospital performance. Moreover, employee empowerment within TQM encourages staff participation in decision-making and problem-solving, fostering innovation and accountability.

2. Literature Review

This section presents the empirical review organized according to the research objective.

AlFlayyeh & Alghamdi (2023), examined the continuous improvement and its contribution on employee performance: an empirical investigation of Riyadh Private Hospitals in Saudi Arabia. The research design for this study was a cross-sectional survey. A total of 327 respondents participated from different private hospitals. The study revealed that transformational, transactional, and authoritative continuous improvement had a positive impact on employee performance, whereas laissez-faire leadership did not. However, the study concentrated more on leadership influence than on how continuous improvement affects healthcare service delivery. The current study added a knowledge by assessing the extent to which continuous improvement enhances overall healthcare performance in a public hospital setting.

Sehanovic *et al.,* (2022), examined the contribution of continuous improvement on employee behavior in healthcare institutions during the COVID-19 in Bosnia. The study employed cross-section survey design. Questionnaire was used to collect data from the respondents. The study sample size was 178 employees from private healthcare institutions in B&H. The results indicate that effective commitment mediates the connection between transformational and transactional leadership and turnover intention. The study focused on leadership styles and their influence on turnover intention through affective commitment. However, the emphasis was more on employee behavior than on service performance outcomes. The current study added knowledge by exploring the extent to which continuous quality improvement enhances healthcare performance within a public hospital context.

Pahi *et al.* (2020), examined the continuous improvement and commitment to service quality in Pakistani Hospitals. A quantitative survey method was adopted to collect data from 315 medical officers working in 43 public-sector hospitals in Sindh, Pakistan. The findings lend support to the direct hypothesized relationships of continuous improvement with commitment to service

quality. The study found support for the entire continuous improvement direct link with commitment to service quality. Pahi et al. (2020) investigated continuous improvement and service quality commitment within public hospitals in Sindh, Pakistan, a context with different healthcare infrastructure, cultural dynamics, and resource constraints compared to Tanzania. The current study's focused on Kibosho Hospital in Kilimanjaro offers localized insights into how continuous improvement operates in Tanzanian healthcare settings, which face unique challenges such as rural accessibility, disease burden, and health system decentralization

Tito (2022), examined the contribution of continuous improvement on organizational performance in the health sector in Kenya. Descriptive survey design was adopted in conducting the study and Stratified sampling techniques was employed to select 384 employees from the selected Kiambu and Machakos Level 5 hospitals as well as Kenyatta National Hospital as the respondents to the study. Questionnaires and interview guides were used as data collection instruments. Findings of the study showed that leadership influences the relationship between employee participation and organizational performance. The study focused on leadership as a moderating factor between employee participation and performance, with data collected through questionnaires and interviews from selected hospitals. While valuable, the study concentrated more on relational dynamics than on how continuous improvement practices are embedded in daily hospital operations. The current study added value by shifting the focus to how continuous improvement practices are systematically embedded into the everyday operational processes of healthcare delivery at Kibosho Hospital.

Eliakim *et al.* (2023), examined the contribution of improvement of health facilities on employees' performance: A Case of Silverland Tanzania Limited in Iringa Region. The study employed the case study research design since the study targeted a specific organization, Silverland Tanzania Limited. The target population of this study was 420 employees working at Silverland Tanzania Limited. Simple random sampling and purposive sampling techniques were used to select the respondents, data collection was done by questionnaire, in-depth interview and secondary data obtained through annual reports, and newsletters. Findings revealed that inspirational motivation and individualized consideration had a positive role on employees' performance at Silveland Tanzania Limited. The study used a case study design focused on a private company, which limits relevance to public healthcare settings. Methodologically, the

study emphasized leadership traits such as inspirational motivation, with less attention to how continuous improvement practices shape healthcare service delivery. The findings focused more on employee performance than on broader healthcare outcomes. The current study added knowledge by exploring the extent to which continuous improvement influences healthcare performance within a public hospital environment.

2.1 Summary Literature Review and Research Gap

The reviewed empirical studies on continuous improvement in healthcare settings have been conducted across various global contexts including Saudi Arabia (AlFlayyeh & Alghamdi, 2023), Bosnia (Sehanovic et al., 2022), Kenya (Tito, 2022), and Tanzania (Eliakim et al., 2023) have provided valuable insights into how leadership styles, employee behavior, and organizational dynamics influence performance outcomes. However, many focused more on leadership influence (AlFlayyeh & Alghamdi, 2023), employee behavior during crises (Sehanovic et al., 2022), or employee commitment to service quality (Pahi et al., 2020), rather than evaluating how continuous improvement practices directly affect healthcare service delivery. Additionally, methodologically, most studies relied on single-method designs primarily quantitative surveys offering a little depth in understanding how continuous improvement is operationalized in daily hospital activities. Eliakim et al. (2023), though based in Tanzania, centered on urban company, with a little relevance to rural hospital contexts. Therefore, the current study bridges this gap by using a mixed-methods approach to assess the contribution to which continuous improvement enhances overall healthcare performance at Kibosho Hospital, a public hospital in Moshi District, thereby contributing locally grounded knowledge applicable to Tanzania's healthcare system.

3. Methodology

A convergent research design was employed under mixed research approach. The target population consisted of 1 deputy officer and 8 heads of hospital departments at Kibosho Hospital, totaling 209 individuals. A census sampling technique used to include a sample size of 1 deputy and 8 heads of hospital departments at Kibosho Hospital and 200 employees, totaling to 209 individuals. Data were collected using structured questionnaires for quantitative data and interview guides for qualitative insight. The validity of the instruments was assured through expert reviews from Mwenge Catholic University. Data collection procedures involved obtaining

permissions, distributing questionnaires, and conducting an interview. Quantitative data were analyzed using descriptive statistics with aid of SPSS version 22, while qualitative data were analyzed using direct quotation transcribed from the respondents using Transcriptor software. Ethical considerations were strictly observed, including informed consent, confidentiality, voluntary participation, data security, and proper citation of all referenced materials.

4. Findings and Discussions

This section presents the response rate, provides demographic details, and discusses the responses as presented below.

4.1 Response Returned Rate of Instruments

This section presents the return rate of data collection instruments administered during the study. It includes the number of questionnaires successfully completed by professional healthcare staff and the number of interviews conducted with key informants. The return rate is essential in evaluating the adequacy and reliability of the collected data, as it reflects the level of participant engagement and the representativeness of the sample. Table 1 presents a returned rate of instruments.

Table 1: Returned Rate of Instruments

Instrument Type	Targeted (n)	Retrieved (n)	Return Rate (%)
Questionnaires	200	181	90.5%

Source: Field Source, (2025)

Table 1 illustrates that out of the 200 questionnaires distributed to professional healthcare staff, the researcher successfully retrieved 181, yielding a usable response rate of approximately 90.5%. This high return rate surpasses the minimum threshold of 52.7% recommended by Baruch and Holtom (2008) as acceptable for social science research, indicating a strong level of participant engagement and reliability of the data collected.

4.2 Demographic Information

This section presents the demographic profile of the professional health staff who participated in the study. The characteristics examined include gender, education qualification, and work experience. Understanding these personal attributes provides context for interpreting the study findings and assessing the representativeness and diversity of the respondents. Table 2 presents the personal characteristics of professional health staffs

Table 2: Personal Characteristics of Professional Health Staffs (No. of Employees 181)

Respondents		**f**	**%**
Gender	Male	84	46.4
	Female	97	53.6
Education qualification	Diploma	134	74.0
	Bachelor's degree	42	23.2
	Master degree	5	2.8
Work experience	Below 5 years	111	61.3
	5-10 years	58	32.0
	Above 10 years	12	6.6

Source: Field Data, (2025)

Results from Table 2 shows that 46.4% of the professional health staff was male, while 53.6% were female. This indicates a slight gender imbalance, with female staff representing the majority of respondents in the study. The findings imply that there is relatively equitable gender representation within the healthcare workforce at Kibosho Hospital, though females slightly outnumber males. This could reflect broader shifts in the healthcare sector, where more women are entering and sustaining careers in health professions, particularly in nursing and midwifery roles. These results are consistent with the study by World Health Organization (2019), which reported that women make up more than 70% of the global health and social care workforce, highlighting the feminization of the health sector in many parts of the world. Such a trend is seen as progress toward gender equality, though challenges in leadership representation and wage equity still persist.

According to the data in Table 2, a majority of the professional health staff held diploma-level qualifications, totaling 74.0% respondents. This was followed by 23.2% respondents with a bachelor's degree, and only 2.8% with a master's degree. The findings suggest that diploma training remains the dominant qualification among healthcare workers at Kibosho Hospital. This pattern may be due to the demand for mid-level health professionals who can be deployed quickly and effectively, especially in resource-limited settings. However, the relatively low

proportion of staff with higher academic qualifications may imply limited opportunities for advanced training and professional development. These findings align with the observations made by Munga and Mbilinyi (2025), who found that Tanzania's healthcare system is heavily reliant on diploma-level cadres due to financial and institutional limitations in scaling up advanced training programs. This may raise concerns about the need to strengthen capacity-building initiatives to ensure quality service delivery and promote upward career mobility.

As shown in Table 2, majority (61.3%) of the respondents had less than 5 years of work experience, 32.0% had 5–10 years, and only 6.6% had more than 10 years of experience. This suggests that the majority of the health staff at Kibosho Hospital are relatively early in their professional careers. A workforce dominated by less experienced staff may reflect recent recruitment efforts or staff turnover due to transfers, retirement, or resignations. While younger professionals may bring innovation and adaptability, a low number of highly experienced staff could impact institutional memory and mentorship capacity. This pattern is supported by findings from Sirili et al. (2023), who noted a skewed distribution of healthcare workforce experience in Tanzanian hospitals, with a heavy concentration of early-career health workers and a shortage of seasoned professionals. The implications highlight the need for structured in-service training and retention strategies to balance workforce experience and enhance quality care delivery.

4.3 Cross Tabulation

The Cross Tabulation between Working Experience of the Employees and the Contribution of Continuous Quality Improvement on Healthcare Performance

This section presents a cross-tabulation analysis exploring the relationship between the working experience of employees and their perceptions of the contribution of Continuous Quality Improvement (CQI) on healthcare performance. The aim is to determine whether employees' years of experience influence how they perceive the impact of CQI practices on various aspects of service delivery in healthcare. The responses were categorized according to three work experience brackets: below 5 years, 5–10 years, and above 10 years. The data are analyzed based on the following scale: Very Low Extent (VLE) = 1, Low Extent (LE) = 2, Moderate Extent (ME) = 3, High Extent (HE) = 4, Very High Extent (VHE) = 5, as demonstrated in the table 3 below;

Table 3: Cross Tabulation between Working Experience of the Employees and the Contribution of Continuous Quality Improvement on Healthcare Performance (No. of Employees 181).

		Work experience			Total
		Below 5 years	5-10 years	Above 10 years	
To what extent has continuous improvement enhanced the quality of patient care services?	ME	5	1	0	6
	HE	8	8	2	18
	VHE	98	49	10	157
Total		111	58	12	181
To what extent has healthcare staff felt that continuous improvement efforts disrupt their daily routines?	LE	46	22	5	73
	ME	40	22	1	63
	HE	16	10	2	28
	VHE	7	4	4	15
Total		109	58	12	179
To what extent has regular assessment and feedback improved the efficiency of healthcare services?	ME	6	2	1	9
	HE	8	6	3	17
	VHE	97	50	8	155
Total		111	58	12	181
To what extent have continuous improvement initiatives impacted the reduction of patient wait times?	LE	3	0	1	4
	ME	4	3	1	8
	HE	18	8	3	29
	VHE	86	47	7	140
Total		111	58	12	181
To what extent has employee involvement in improvement processes increased their commitment to service quality?	ME	2	3	1	6
	HE	12	5	1	18
	VHE	97	50	10	157
Total		111	58	12	181
To what extent have continuous training and development programs helped staff adapt to new healthcare practices effectively?	LE	1	1	0	2
	ME	2	5	1	8
	HE	21	13	3	37
	VHE	87	39	8	134
Total		111	58	12	181
To what extent have frequent changes from improvement initiatives led to inconsistencies in healthcare service delivery?	LE	52	18	4	74
	ME	22	15	1	38
	HE	24	14	4	42
	VHE	12	11	3	26
Total		110	58	12	180

To what extent have continuous	LE	3	1	1	5
improvement initiatives addressed	ME	13	17	1	31
key challenges faced by	HE	22	7	4	33
healthcare providers?	VHE	73	33	6	112
Total		111	58	12	181

Source: Field Data, (2025)

Results from Table 3 shows that employees across all levels of work experience perceive Continuous Quality Improvement (CQI) as having a strong positive influence on healthcare performance at Kibosho Hospital. Notably, those with less than 5 years of experience reported the highest levels of agreement, with 88.3% indicating that CQI has enhanced patient care to a very high extent. Similarly, the majority acknowledged that regular assessments and feedback have significantly improved service efficiency, with over 87% of respondents across all experience categories affirming this impact. Staff involvement in CQI initiatives was also seen to boost commitment to quality, as shown by 157 employees (86.7%) rating this impact as very high. Additionally, 140 employees reported a very high reduction in patient wait times, suggesting that CQI is not only improving care delivery but also streamlining operational processes.

On the other hand, while concerns about disruptions and inconsistencies were present, they were generally rated as low to moderate in extent. Most of 73 employees (40.8%) indicated that CQI efforts disrupted their routines to a low extent, and 74 (41.1%) said frequent changes led to minimal inconsistencies. This reflects a relatively high level of adaptability among staff, particularly among newer employees who appear more receptive to change. Moreover, continuous training and development were seen as effective in helping staff adopt new practices, with 134 respondents acknowledging a very high extent of adaptation. The table suggests that CQI initiatives are widely accepted and have brought substantial improvements in care delivery, teamwork, and efficiency, making them a key component of performance enhancement at Kibosho Hospital. These improvements are not limited to technical efficiency alone; they also reflect enhanced coordination among healthcare teams, quicker patient service, reduced operational bottlenecks, and stronger employee commitment to organizational goals. Therefore, CQI has not only fostered a culture of accountability and collaboration but has also positioned Kibosho Hospital on a progressive path toward sustainable quality healthcare delivery.

This study aimed on investigating the contribution to which continuous improvement contributes to the performance of healthcare services at Kibosho Hospital. The interpretation of the results is guided by the mean score criteria established by Chyung and Hutchinson (2023), where mean values ranging from 1.00–1.99 denote Very Low Extent (VLE), 2.00–2.99 indicate Low Extent (LE), 3.00–3.99 reflect a Moderate Extent (ME), 4.00–4.49 represent a High Extent (HE), and 4.50–5.00 correspond to a Very High Extent (VHE). Key: Very Low Extent (VLE) = 1, Low Extent (LE) = 2, Moderate Extent (ME) = 3, High Extent (HE) = 4, Very High Extent (VHE) = 5. Furthermore, Kothari (2004) rate standard deviation (SD) values ranging from 0.00–0.49 indicate Very Low Variation (VLV), suggesting strong consensus; 0.50–0.99 denote Low Variation (LV), reflecting minor differences in perception; 1.00–1.49 represent Moderate Variation (MV), pointing to a mix of opinions; 1.50–1.99 indicate High Variation (HV), showing substantial disagreement; and 2.00 and above reflect Very High Variation (VHV), signaling wide dispersion in responses. The detailed descriptive statistics are presented in Table 4.

Table 4: *Professional Health Staffs Responses on the Contribution of Continuous Quality Improvement on Healthcare Performance (No. of Employees 181)*

		VLE		LE		ME		HE		VHE		Mean	SD
S/N	**Continuous improvement statements**	**f**	**%**	**f**	**%**	**f**	**%**	**f**	**%**	**f**	**%**		
i	To what extent has continuous improvement enhanced the quality of patient care services?	0	0.0	0	0.0	6	3.3	18	9.9	157	86.7	4.8	0.45
ii	To what extent have healthcare staffs felt that continuous improvement efforts disrupt their daily routines?	0	0.0	73	40.8	63	35.2	28	15.6	15	8.4	2.9	0.94
iii	To what extent has regular assessment and feedback improved the efficiency of healthcare services?	0	0.0	0	0.0	9	5.0	17	9.4	155	85.6	4.8	0.51
iv	To what extent have continuous improvement initiatives impacted the reduction of patient wait times?	0	0.0	4	2.2	8	4.4	29	16.0	140	77.3	4.6	0.66
v	To what extent has employee involvement in improvement processes increased their commitment to service quality?	0	0.0	0	0.0	6	3.3	18	9.9	157	86.7	4.8	0.45

vi	To what extent have the costs associated with continuous improvement outweighed the benefits in healthcare services?	0	0.0	13	7.6	28	16.4	87	50.9	43	25.1	3.9	0.84
vii	To what extent have continuous training and development programs helped staff adapt to new healthcare practices effectively?	0	0.0	2	1.1	8	4.4	37	20.4	134	74.0	4.6	0.66
viii	To what extent have frequent changes from improvement initiatives led to inconsistencies in healthcare service delivery?	0	0.0	74	41.1	38	21.1	42	23.3	26	14.4	3.1	1.10
ix	To what extent has clear communication about improvement goals enhanced team collaboration and service delivery?	0	0.0	0	0.0	13	7.2	14	7.7	154	85.1	4.7	0.56
x	To what extent have continuous improvement initiatives addressed key challenges faced by healthcare providers?	0	0.0	5	2.8	31	17.1	33	18.2	112	61.9	4.3	0.86
	Grand mean											4.2	**0.70**

Source: Field Source, (2025)

The results in Table 4 show that employee responses on the extent to which continuous improvement enhance performance of healthcare services by a mean score of 4.2 and a standard deviation of 0.45. This infers that continuous improvement is perceived to have a very high extent of positive impact on healthcare service delivery, indicating that most respondents believe ongoing improvement initiatives substantially elevate performance levels. The majority of respondents (86.7%) indicated to a very high extent that continuous improvement has enhanced the quality of patient care services, while 9.9% indicated to a high extent, and only 3.3% indicated to a moderate extent. A mean score of 4.8 reflects that to a great extent continuous improvement has enhanced the quality of patient care services to a very high extent, demonstrating strong agreement among respondents regarding its positive and impactful role in improving healthcare outcomes.

This infers that health professionals at Kibosho Hospital overwhelmingly perceive continuous improvement as a strong contributor to enhancing the quality of care. Continuous improvement strategies such as quality audits, patient feedback, and performance reviews likely enable better service delivery. These findings support the work of AlFlayyeh & Alghamdi (2023), who emphasized that quality improvement frameworks in hospitals are associated with enhanced

patient safety and care outcomes. During interviews, one key informant noted: *"Routine evaluations and improvements help us identify what works and what needs to change our patients benefit directly from that"* (Key Informant A, March 2025).

Another key informant had this to share; "*Continuous improvement has created a culture of accountability and learning among staff. We no longer wait for problems to escalate once an issue is identified, we work as a team to find a solution immediately. This proactive approach has improved patient satisfaction and overall service quality*" (Key Informant C, March 2025).

The interview responses generally imply that continuous improvement practices at Kibosho Hospital have fostered a proactive, collaborative, and learning-oriented work culture among healthcare staff. The comments suggest that regular evaluations and feedback mechanisms are not only used to identify areas that need change but also to drive immediate, team-based solutions. This has enhanced service quality and patient satisfaction, indicating that continuous improvement is deeply embedded in the hospital's operational practices and positively influences both staff performance and patient outcomes. The results resonate with the study conducted by AlFlayyeh & Alghamdi (2023) which found that continuous improvement is a powerful driver of better hospital service quality, patient satisfaction, staff performance, and patient outcomes. Hospitals that embed CQI into their culture and operations see broad, sustained benefits for both patients and staff. The finding is in line with Total Quality Management's theory on its core principles of ongoing improvement, employee involvement, and customer (patient) focus to enhance service quality and outcomes.

According to results in Table 4, 40.8% of healthcare professionals indicated to a low extent, and 35.2% to a moderate extent, that continuous improvement efforts disrupt their daily routines. Only 8.4% believed it to be to a very high extent, and 15.6% to a high extent. The mean score of 2.9 and a standard deviation of 0.94, means that, to a low extent continuous improvement effort as having a relatively low extent of disruption to their daily routines. This suggests that while some staff may experience occasional interruptions, the overall impact on routine workflow is minimal. This implies that while some staff finds continuous improvement initiatives slightly disruptive, most perceive them as manageable or non-disruptive. It is normal for change initiatives to initially interfere with routine operations; however, when well-coordinated, they are integrated smoothly. This is in line with findings by Berwick et al. (2023), who argued that

successful healthcare improvement depends on aligning new systems with existing workflows to minimize disruptions. A key informant echoed this by stating: *"It's true that change can be inconvenient at first, but most of us adapt quickly when we understand the long-term benefit"* (Key Informant B, March 2025).

The other key informant commented; "*At first, it felt like the new processes were interrupting our usual routines, but with time and proper coordination, we've adapted. Now, these changes are part of our normal workflow, and we see the benefits in how smoothly things run today compared to before*" (Key Informant C, March 2025).

The interview comments imply that continuous-improvement initiatives at Kibosho Hospital initially cause some discomfort, yet staff rapidly accommodate the new routines once they see clear, long-term advantages and receive adequate coordination and support. In other words, disruption is perceived as temporary and manageable; with good communication and teamwork the changes become embedded in daily practice and ultimately streamline workflow. This underscores a change-ready culture in which health professionals are willing to tolerate short-term inconvenience in exchange for lasting gains in efficiency and care quality. The results are in line with the study conducted by Sehanovic et al., (2022) which found that successful organizational change depends on strong leadership, effective communication, and active employee involvement. These elements are widely recognized as foundational for embedding quality improvement and achieving lasting performance gains. The finding resonate with Total Quality Management theory (1986), which emphasizes that successful organizational change requires strong leadership, effective communication, and employee involvement.

Results in Table 4 show that 85.6% of respondents indicated to a very high extent and 9.4% to a high extent that regular assessment and feedback have improved the efficiency of healthcare services. Only 5% selected moderate extent. A mean score of 4.8 and a standard deviation of 0.51, indicates to a great extent healthcare professionals that regular assessment and feedback enhance the efficiency of healthcare services. This data implies that the majority of healthcare staff at Kibosho Hospital recognizes the importance of ongoing evaluation and timely feedback in improving workflows, minimizing service delays, and optimizing patient care delivery. The regularity and structure of assessment appear to create a culture of continuous monitoring, allowing staff to quickly identify inefficiencies and take corrective action. These findings are

consistent with the conclusions of Batalden and Davidoff (2024), who emphasize that feedback loops are essential for continuous quality improvement in healthcare systems. Through constructive feedback and transparent evaluation, institutions can foster accountability, motivate staff, and improve coordination ultimately leading to faster service delivery and better patient outcomes.

The results in Table 4 shows that a large majority (77.3%) of professional health staff reported to a very high extent that continuous improvement initiatives have helped reduce patient wait times, while 16.0% selected high extent and only 4.4% and 2.2% selected moderate and low extent, respectively. A mean score of 4.6 and a standard deviation of 0.66 indicate to a great extent healthcare staff that continuous improvement practices have effectively contributed to minimizing patient wait times. This implies that staff recognizes a strong link between improvement efforts and reduced congestion in service delivery. Streamlined procedures, better scheduling, and resource allocation likely contribute to quicker patient handling. These results align with the findings of Pahi et al. (2020), who emphasized that lean process improvement in hospitals reduces patient waiting times without compromising quality. During the interview, one respondent shared: *"Our triage process has become more efficient, which has really reduced delays in outpatient care"* (Key Informant A, March 2025).

The other key informant commented; "*Before, patients would sometimes wait hours just to be seen. But with the new changes like assigning staff based on peak hours and revising our appointment system we've seen a noticeable drop in waiting times. It's made our workflow smoother and patients much more satisfied*" (Key Informant C, March 2025).

The information from the interviews generally implies that continuous improvement initiatives at Kibosho Hospital have led to practical and measurable enhancements in service delivery, particularly in reducing patient wait times. The respondents highlight that process adjustments such as optimizing triage procedures, aligning staff schedules with peak hours, and improving appointment systems have resulted in smoother workflows and increased patient satisfaction. These insights suggest that frontline staff not only acknowledge the effectiveness of these changes but also experience their positive impact in daily operations. This reflects a hospital environment that is responsive to system inefficiencies and committed to patient-centered care through ongoing improvement efforts. This aligns with Total Quality Management (TQM) theory

(1986), which emphasizes employee involvement as a core principle. TQM holds that engaging frontline staff in decision-making and valuing their input fosters ownership, motivation, and commitment to continuous improvement ultimately enhancing both service quality and staff satisfaction.

According to the results in Table 4, 86.7% of respondents indicated to a very high extent and 9.9% to a high extent that employee involvement in improvement processes increases their commitment to service quality. Only 3.3% chose moderate extent. A mean score of 4.8 and a standard deviation of 0.45 suggest that to a great extent unified belief among healthcare professionals that actively engaging staff in continuous improvement processes boosts their dedication to maintaining and enhancing service quality. This implies that when employees are involved in decision-making, problem-solving, and innovation, they feel a greater sense of ownership and accountability for outcomes. The implication is that participatory approaches foster intrinsic motivation and teamwork, which are essential for sustaining high standards of care. These findings align with Jimmieson et al. (2024), who emphasized that employee involvement in organizational change leads to higher morale, stronger work commitment, and improved service delivery. As one staff member noted during interviews: *"When we're included in shaping the changes, we don't just follow instructions we own the results, and that makes us strive for better"* (Key Informant A, March 2025).

Another key informant also said;

> "…Being part of the improvement process makes us feel valued. It's not just about implementing policies from above we contribute ideas, suggest better ways of doing things, and see those ideas put into action, which builds trust and motivates us to go the extra mile in our work" (Key Informant B, March 2025).

The information from the interviews implies that employee involvement in continuous improvement processes fosters a sense of ownership, value, and motivation among healthcare staff. When staffs are actively engaged in shaping change rather than passively implementing top-down directives, they feel more trusted and respected. This sense of inclusion not only boosts morale but also encourages employees to take initiative, contribute ideas, and commit more fully to delivering quality care. The interviews suggest that participatory approaches enhance

teamwork, build trust, and cultivate a culture where staffs are intrinsically motivated to improve performance and service delivery.

The results in Table 4 show a mixed perception regarding the costs versus benefits of continuous improvement: 50.9% indicated high extent, 25.1% very high extent, while 16.4% and 7.6% chose moderate and low extent, respectively. A mean score of 3.9 and a standard deviation of 0.84 indicate that to a moderate extent costs associated with continuous improvement outweighed the benefits in healthcare services. While a majority believes these initiatives are worthwhile, the presence of moderate and low ratings suggests some concerns about resource demands, such as time, finances, or staff workload. This implies that although continuous improvement is largely appreciated for enhancing healthcare outcomes, its implementation must be carefully managed to balance its demands with available capacity. These results echo those of Kaplan et al. (2022), who noted that although quality improvement requires financial input, the long-term gains in efficiency and patient outcomes often justify the costs.

These findings are in line with Total Quality Management (TQM) Theory, which emphasizes the importance of continuous improvement as a means of enhancing organizational performance while acknowledging that successful implementation requires the alignment of resources, staff commitment, and strategic planning. TQM advocates for a systematic, organization-wide approach to quality enhancement that involves all employees, but it also recognizes the need for cost-effectiveness and efficient resource utilization. The cautious optimism reflected in the data supports the idea that while staffs see value in continuous improvement, its sustainability depends on ensuring that the cost-benefit ratio remains favorable and that staffs are adequately supported throughout the process.

The results in Table 4 reveals that 41.1% of the respondents indicated low extent, and 21.1% moderate extent, that frequent changes from improvement initiatives lead to inconsistencies in service delivery. However, 23.3% selected high extent and 14.4% very high extent. A mean score of 3.1 and a standard deviation of 1.10 reflects to a moderate extent that healthcare professionals regarding the impact of frequent changes on service consistency. While a considerable portion of staff do not view frequent changes as highly disruptive, a notable minority express concern that too many adjustments, especially when poorly coordinated, may introduce confusion or variability in service delivery. These results suggest a division in opinion, though many staff do

not see frequent changes as a major source of inconsistency. Change fatigue and unclear implementation guidelines may be factors where concerns arise. This view aligns with findings by Weiner (2024), who observed that rapid or poorly managed organizational changes create confusion and reduce performance if not well communicated. As one staff member noted: *"Sometimes, too many changes at once can lead to confusion and overlap in roles it needs coordination"* (Key Informant B, March 2025).

Another key informant had this to share; "*We understand the importance of improvement, but when changes come one after another without enough time to adjust or proper training, it creates uncertainty. Some staff become unsure about procedures, and this affects the consistency and confidence in service delivery*" (Key Informant A, March 2025).

The information from the interviews generally implies that frequent and poorly coordinated changes in healthcare settings can lead to confusion, role ambiguity, and reduced confidence in service delivery among staff. While employees recognize the value of continuous improvement, they emphasize the need for proper pacing, adequate training, and clear communication to ensure that changes are effectively integrated into daily operations. The responses suggest that without these supporting structures, even well-meaning initiatives may disrupt workflows, undermine staff confidence, and compromise the consistency of care. This highlights the importance of structured change management strategies that consider staff readiness and organizational capacity to absorb change. This resonates with Total Quality Management (TQM) theory (1986), which emphasizes that successful quality improvement depends on strong organizational support systems, including structured change management, clear communication, and staff readiness.

The results in Table 4 shows that an overwhelming majority (85.1%) of health staff indicated to a very high extent, and 7.7% to a high extent, that clear communication about improvement goals has enhanced team collaboration and service delivery. Only 7.2% reported a moderate extent, with no respondents selecting low or very low. A mean score of 4.7 and a standard deviation of 0.56 reflect to a great extent that transparent, goal-oriented communication is critical for aligning staff efforts and optimizing patient care. This implies that when improvement objectives are clearly articulated and regularly reinforced, teams coordinate more effectively sharing information, anticipating needs, and resolving issues collaboratively. Clear communication reduces misunderstandings, builds trust, and ensures that every team member understands their

role in achieving quality targets. These findings mirror those of Pahi et al. (2020), who found that effective communication is foundational to inter professional collaboration and positive patient outcomes in healthcare settings. Prioritizing regular briefings, visible dashboards of improvement metrics, and open feedback channels can therefore sustain high levels of teamwork and service delivery at Kibosho Hospital.

The study found that to a great extent structured continuous improvement initiatives have enhanced healthcare delivery at Kibosho Hospital. This was most evident in areas such as timely service provision, adherence to treatment protocols, and staff collaboration items that scored highest in the data. Interviews with key informant confirmed observable improvements in service quality, particularly in departments applying regular feedback mechanisms and team-based problem-solving. The finding goes beyond procedural upgrades, revealing a clear link between continuous learning cultures and sustained performance outcomes. The finding was reinforced by a grand mean score of 4.2, reflecting strong consensus on the value of continuous improvement. This supports Deming's (1986) Total Quality Management theory and aligns with Donabedian's model, which emphasizes systematic quality evaluation in improving patient care.

5. Conclusion and Suggestions

Based on the finding the study concluded that a system of continuous improvement has, to a high extent, enhanced care delivery, teamwork, and efficiency at Kibosho Hospital, leading to improved patient satisfaction and operational performance.

To sustain and deepen the gains in care delivery, teamwork, and efficiency at Kibosho Hospital, it is recommended that hospital management institutionalize a Community-Integrated Quality Improvement (QI) Program. This program should actively involve not only healthcare staff but also representatives from the local community and patient groups to ensure culturally relevant and patient-centered solutions. Evidence from the study indicates that inclusive engagement fosters a shared vision and more meaningful improvements, making this collaborative model essential for sustained progress.

Additionally, the hospital should adopt a digital suggestion and recognition platform tailored for low-resource settings, enabling staff to submit ideas for quality improvements anonymously and recognize peers' efforts in real time. This innovative approach encourages continuous staff

engagement and nurtures a culture of innovation, as reflected by enhanced operational flow and morale observed in the findings.

It is further recommended that micro-learning pods be introduced during shift transitions to provide bite-sized, peer-led training on quality improvement and teamwork skills. This method fits well within existing workflow constraints while promoting ongoing professional development, which has been shown to boost staff commitment and performance in the study.

The Government of Tanzania, through the Ministry of Health, should support and scale up the integration of community-driven quality improvement models in other public hospitals. This includes allocating dedicated funding, formulating national QI guidelines, and building local capacity to replicate effective practices like those observed at Kibosho Hospital. Government involvement is essential in institutionalizing these models at a systemic level, ensuring consistent improvements in healthcare delivery across the country.

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