ST. MARY'S UNIVERSITY

SCHOOL OF GRADUATE STUDIES

DEPARTMENT OF PROJECT MANAGEMENT

ASSESSMENT OF DETERMINANTS OF QUALITY IMPROVEMENT PROJECT IMPLEMENTATION IN SELECTED HOSPITALS, ADDIS ABABA CITY ADMINISTRATION

BY:

WESSEN NEGA

(SGS/0117/2014B)

FEBRUARY, 2025

ADDIS ABABA, ETHIOPIA

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A THESIS SUBMITTED TO ST. MARY'S UNIVERSITY SCHOOL OF GRADUTE STUDIES DEPARTMENT OF PROJECT MANAGEMENTIN THE PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTERS OF ARTS DEGREE IN PROJECT MANAGEMENT

ADVISOR: TEMESGEN BELAYNEH (PhD)

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APPROVED BY BOARD OF EXMAINERS

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ADVISOR	**SIGNITURE AND DATE**
EXTERNAL EXAMINER	**SIGNITURE AND DATE**
MULUADAM ALEMU (PhD)	 **12/02/2025**
INTERNAL EXAMINER	**SIGNITURE AND DATE**

DECLARATION

I hereby declare that the work entitled: "Assessment of Determinates of Quality Improvement projects implemenation in selected Hospitals, Addis Ababa City Administration" is the outcome of my own effort and study and that all source of materials used for the study have been duly acknowledged. I have done it independently with the guidance and suggestions of my research advisor.

This study has not been submitted for any degree in this University or any other university. It is offered for the partial fulfillment of requirements for the Award of Masters of Arts in Project Management.

_____Wessen Nega_____ _____

Student's Name Date and Signature

ENDORSEMENT

This thesis has been submitted to St. Mary's University, School of Graduate Studies for Examination with my approval as a university advisor.

_____ _____

Advisor's Name Date and Signature

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Top of all, I would like to express my deepest thankfulness to God for giving me the strength to undertake this research and finalize my post graduate study.

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BPR:	Business Process Reengineering
CBHI:	Community-Based Health Insurance
CBHI:	Community-Based Health Insurance
DKA:	Diabetic Ketoacidosis
DP:	Data-Driven Practices
EFMHACA:	Ethiopian Food, Medicine, and Healthcare Administration and Control Authority
GYN/OBS:	Gynecology and Obstetrics
MA:	Master of Arts
MPH:	Master of Public Health
PDCA:	Plan-Do-Check-Act
PM:	Project Management
PMBOK® :	Project Management Body of Knowledge
PMI:	Project Management Institute
PNA:	Pneumonia
QI:	Quality Improvement
QMS:	Quality Management Systems
RCA:	Root Cause Analysis
SNNPR:	Southern Nations, Nationalities, and Peoples' Region
SPSS:	Statistical Package for Social Sciences
TAT:	Turnaround Time
TB:	Tuberculosis
TPT:	Tuberculosis Preventive Therapy
TQM:	Total Quality Management
WHO:	World Health Organization

ABSTRACT

This study examined the implementation status and determinants of quality improvement (QI) projects in selected hospitals within Addis Ababa City Administration. A descriptive cross-sectional design was employed from November 20 to December 20, 2024, involving 104 participants from 10 hospitals selected through purposive sampling. Data were analyzed using SPSS Version 27 and MAXQDA 2020, with multivariate logistic regression identifying factors significantly associated with QI outcomes at a 95% confidence interval and a p-value threshold of 0.05. The findings revealed that adequacy of resources (AOR: 0.04, CI: 1.04–8.64, P=0.042), effective communication channels (AOR: 0.022, CI: 1.20–10.44), and a culture of continuous improvement (AOR: 0.003, CI: 1.69–12.72) were pivotal for successful implementation. Qualitative analysis highlighted barriers such as limited leadership engagement, resource constraints, and insufficient QI training. The study concludes that a multifaceted approach emphasizing strong leadership, organizational culture, resource adequacy, and staff capacity building is essential for sustaining QI initiatives. Targeted strategies, including leadership development programs and improved resource allocation, are recommended for policymakers and healthcare administrators to enhance QI efforts in healthcare settings.

Key Words: *Quality Improvement, Healthcare Management, Hospital Performance, Leadership Engagement, Resource Allocation, Patient Outcomes*

CHAPTER ONE

Introduction

This chapter provides the background and rationale for the study, highlighting the significance of Quality Improvement (QI) projects in healthcare settings. It outlines the research problem, objectives (both general and specific), research questions, scope, significance, and organization of the study.

1.1. Background of the study

Quality in healthcare is getting to much attention and needs novel management approach like project management (PM) to attain quality outcomes. Dobin, Vladislav & Lazar, Bruce. (2020) A project is a temporary endeavor aimed at creating a unique product, service, or result, characterized by a clear beginning and end. Unlike ongoing operations, projects conclude once their objectives are met or the project is terminated. Although projects produce specific deliverables, the full benefits may only be realized after completion requiring project teams to collaborate with operations to ensure lasting value for the organization. Kathy Schwalbe (2021).

Project management involves applying knowledge, skills, tools, and techniques to meet project requirements, enabling organizations to execute projects effectively and efficiently. It is essential for creating value and benefits, particularly in today's business environment, where leaders face tighter budgets, shorter timelines, resource scarcity, and rapidly changing technology. Initially used in engineering, construction, and information systems, project management has now been adopted by healthcare systems worldwide to meet budget constraints and enhance the quality of medical care. Ainura Sassykova (2023).

According to the Project Management Body of Knowledge (PMBOK®) guides, a project consists of five processes: initiating, planning, executing, monitoring and controlling, and closing. Additionally, there are nine knowledge areas: project integration management, project scope management, project time management, project cost management, project quality management, project human resource management, project communication management, and project risk management.PMI Seventh Edition July (2021)Understanding these processes and knowledge areas is crucial for successful project implementation in any field, including healthcare.

Heagney , J. (2011) Most health improvement programs are implemented as projects, which are generally more efficient in achieving their objectives compared to the rigid bureaucratic style of public management. Like other projects, health projects have life cycles divided into different phases.

Public health project focuses on evaluating and tracking the health status of communities and populations at risk, developing public policies to address identified health issues, and establishing priorities. Its goal is to ensure that everyone receives suitable and cost-efficient care, including services for health promotion and disease prevention. Quality is crucial in this field because many initiatives deal with survival-related concerns, the government often acts as a stakeholder, and public funding is a significant factor. Santos, C., Santos, V., Tavares, A., & Varajão, J. (2020). The rise of quality as a key factor in healthcare now demands the use of innovative management approaches, such as project management (PM), to achieve quality management results. Dobin, Vladislav & Lazar, Bruce. (2020).

Healthcare systems worldwide are adopting project management to manage budgets and enhance the quality of medical care. Dobin, Vladislav & Lazar, Bruce. (2020). According to the World Health Organization, the quality of healthcare services encompasses the entirety of diagnostic and therapeutic processes aimed at achieving the best results at the lowest cost and with minimal risk. This approach promotes patient satisfaction with the procedures and their interactions with the medical staff of the health facility. Mobasher, Yasmin. (2022).

(Wardhani et al., 2009)The demand for quality improvement (QI) from government and insurance organizations, the growing competition in the healthcare market, better-informed customers, and heightened awareness about patient safety have increased the complexity of health systems and institutions. This complexity has prompted the adoption of hospital quality management systems (QMS) Zarei, Ehsan & Mahfoozpour, Soad & Marzban, Sima & Karimi, Soghra. (2019).

Carroll AR, Smith CM, Frazier SB, Weiner JG, Johnson DP (Oct 2022) Quality improvement (QI) or improvement science has been defined as the "systematic, data-guided activities designed to bring about immediate, positive changes in the delivery of health care. QI methods to design test and implement changes to complex healthcare settings using real time measurement of data can allow providers to quickly and equitably improve patient care.

The importance of quality management in healthcare is well-established.Hospital board and management practices are strongly related to hospital performance on clinical quality metrics. Prior research has highlighted the link between hospital organization and management practices, and the quality of patient care.(West, 2001) Effective quality improvement requires certain necessary conditions, such as a focus on data, staff engagement, and leadership support.(Powell et al., 2009) Additionally, factors like resource availability, staff training, and interdepartmental collaboration can influence healthcare service quality.(Mosadeghrad 2014).

In the Ethiopian health system, the 1993 health policy did not explicitly address healthcare quality and safety but aimed to develop an equitable health service standard. Four subsequent health sector development programs (I-IV) were introduced, initially focusing on expanding primary healthcare access and later on improving care quality through business process reengineering (BPR). Significant attention to quality and safety began with Health Sector Development Program IV, emphasizing excellence in health service delivery. Despite this focus, quality structures were only established with the first Health Sector Transformation Plan. The Ethiopian Food Medicine and Healthcare Regulation and Control Authority (EFMHACA) have established to oversee quality control in various health aspects, particularly in the private sector. The revised health policy now prioritizes improving healthcare quality, equity, and safety. National Healthcare Quality and Safety Strategy (2021-2025).

Even though, quality improvement project is one the key strategy to implement in both public and private Healthcare delivery facilities, enough studies are not conducted to investigate quality improvement project implantation and its determinants in health care facilities located in resource poor setting like Addis Ababa, Ethiopia. Therefore, this study was conducted to explore, determinates of project quality management practice in the case of quality improvement projects in hospitals found in Addis Ababa city administration.

1.2.Statement of Problem

Despite the increasing recognition of Quality Improvement (QI) initiatives as essential for enhancing patient care, safety, and operational efficiency, the successful implementation of QI projects remains a challenge in healthcare settings especially in resource-limited environments like Addis Ababa. Numerous studies emphasize that QI projects can significantly improve clinical

outcomes, patient satisfaction, and hospital performance (Berwick, 1989; Batalden & Davidoff, 2007). However, realizing these benefits requires an enabling environment that includes strong leadership support, sufficient resources, staff engagement, effective communication, a supportive hospital culture, and data-driven practices (Weaver et al., 2013; Grol et al., 2013). Unfortunately, many healthcare facilities, particularly in developing contexts, lack these essential elements (Mosadeghrad, 2014).

Specifically, public and private healthcare facilities in Addis Ababa exhibit varying degrees of success in implementing quality improvement projects. Recent empirical studies in the city have highlighted persistent gaps. For instance, Abebe, Abera, and Belete (2020) demonstrated that public hospitals in Addis Ababa face significant barriers such as financial constraints, inadequate staffing, and limited training opportunities, which hinder effective QI implementation. Similarly, Teklehaimanot and Ayalew (2022) found that private healthcare institutions struggle with inconsistent leadership commitment and poor data management practices, further compromising the success of QI initiatives.

While some research has examined the overall effectiveness of QI projects in Ethiopia, few studies have focused on the unique determinants of QI success or failure within Addis Ababa's healthcare facilities. There is a pressing need to investigate how factors such as leadership commitment, resource availability, employee engagement, and organizational culture impact the implementation and outcomes of QI projects in this setting. Without this understanding, QI initiatives may continue to encounter substantial obstacles, limiting their effectiveness in improving healthcare quality and patient outcomes.

This study was undertaken to address these gaps by examining the implementation status of quality improvement projects and identifying the determinants of their success in selected hospitals in Addis Ababa, thereby providing actionable insights and recommendations for enhancing healthcare quality and performance in resource-limited contexts.

1.3. Research Questions

1. What is the implementation status of quality improvement projects inHospitals in Addis Ababa?

2. What are the key factors that influence quality improvement projects implemenation in the hospitals?
3. What challenges dohospitals face in implementing quality improvement projects?

1.4. Research Hypotheses

Hypothesi-1:.Quality improvement projects in Hospitals in Addis Ababa are positively influenced by leadership support.

Hypothesi-2: Quality improvement projects in Hospitals in Addis Ababa are positively influenced by resource availability.

Hypothesi-3: Quality improvement projects in Hospitals in Addis Ababa are positively influenced by staff training and engagement.

Hypothesi-4: Quality improvement projects in Hospitals in Addis Ababa are positively influenced by structured communication strategies.

Hypothesi-5: Quality improvement projects in Hospitals in Addis Ababa are positively influenced by supportive organizational culture.

Hypothesi-6: Quality improvement projects in Hospitals in Addis Ababa are positively influenced by data driven decision making practice.

Hypothesi-2: Quality improvement projects in Hospitals in Addis Ababa are positively influenced by external contextual factors.

1.5. Variables

Dependent Variables:

1. **Implementation Success of QI Projects:** Categorized into phases such as not started, planning phase, partially implemented, fully implemented and completed and its outcome

Independent Variables:

1. **Leadership Support:** Involves the commitment of hospital leadership to QI initiatives, including resource allocation, strategic vision, and fostering a culture of quality.
2. **Resource Availability:** Includes financial resources, staffing levels, technological tools, and training programs necessary to support QI projects.
3. **Staff Training and Engagement:** Refers to the availability of training programs, skill development opportunities, and involvement in decision-making processes related to QI.
4. **Communication:** The effectiveness of communication channels used to share QI goals, objectives, feedback, and progress updates within the hospital.
5. **Hospital Culture:** The organizational environment that supports continuous improvement, learning, and openness to change.
6. **Data-Driven Decision-Making:** The use of data analytics and evidence-based practices to guide QI interventions and measure their impact.
7. **External Context Factors:** Such as healthcare regulations, policies, and external benchmarks that might influence QI project priorities and outcomes.

1.5. Objectives of the study

General Objective:

- To explore quality improvement project implemenation status and its determinants influencing the successful implementation in selected hospitals within Addis Abab city administration, from November toDecember, 2024.

Specific Objectives:

- To assess quality improvement implemenation status in 10 selected hospitals (five public and five private hospitals) in Addis Ababa city administration bureau

- To examine determinates that influence the hospitals quality improvement project implemenation.
- To assess challenges encountered during QI project implemenation in the hospitals
- To recommend for public health officials, stakeholders and regulatory bodies based on the research findings.
- To provide information for future studies based on the research findings

1.6. Significance of the Study

Enhancing Healthcare quality: this study was done to provide valuable insight about how determinant factors influence the successful implemenation of Hospital's quality improvementprojects that can improve the performance of healthcare service. By identifying key factors that contribute to effective quality improvement projects, healthcare facilities can implement targeted strategies to improve patient care and outcomes.

Informing Policy and Decision-Making: The findings of of this study provided crucial for policymakers and healthcare administrators in understanding the critical role of government policies, resource allocation, and management practices in the success of quality improvement initiatives. This can lead to more informed and effective decision-making processes that prioritize quality and safety in healthcare.

Guiding Future Research: The study also contributed to the existing body of knowledge on project quality management in healthcare, particularly in the context of Addis Ababa. It would be served as a foundation for future research, helping to address gaps in the literature and providing a basis for further studies on quality improvement in healthcare settings.

1.7. Scope of the Study

This study examines the determinants of Quality Improvement (QI) project implementation in selected hospitals within the Addis Ababa City Administration. The research specifically investigates how key factors including leadership support, resource availability, staff training and

engagement, communication, hospital culture, data-driven practices, and external contextual influences affect the successful implementation of QI initiatives.

The investigation is geographically confined to hospitals operating under the Addis Ababa City Administration bureau and not included referral and University Hospitals governed by Ministry of Health. The hospitals included in this study were five public (Gandi Meoriyal, Minilik, Rase Desta, Yekatit 12 and Zewuditu Memorial Hospitals) and five Private ospitals (Amen, BeteZata, Ethio Tebib, Girum and Land Mark Hospitals). This focused approach ensures that the findings are context-specific and reflective of the unique challenges and opportunities within the city's healthcare system. The study targets individuals who are directly involved in QI project implementation, including hospital top management, department heads, and members of Quality Improvement Committees.

A purposive sampling technique was employed to select participants who possess the relevant expertise and experience in QI processes. The sample size was 110 and determined based on the total number of eligible participants identified across the selected hospitals, ensuring a representative and informative data set.

Data collection was done using structural questionnaire from November to December 2024. This timeline was designed to facilitate the gathering of timely and actionable insights, which was contributed to a comprehensive understanding of the factors influencing QI implementation. Ultimately, the study aimed to generate evidence-based recommendations to inform policy and practice, improve the effectiveness of QI initiatives, and enhance healthcare delivery in Addis Ababa. The outcomes are expected to be applicable to other resource-limited settings seeking to improve healthcare quality through structured QI efforts.

1.8. Definition of Key Terms:

1. **Implementation Success of QI Projects:** The extent to which Quality Improvement (QI) projects in hospitals progress through predefined phases: not started, planning phase, partially implemented, terminated, fully implemented, and completed.

2. **Leadership Support:** The degree of commitment from hospital leadership toward QI initiatives, including their involvement in resource allocation, strategic vision-setting, and fostering a culture that values quality improvement.
3. **Resource Availability:** The accessibility of essential resources such as financial capital, sufficient staffing, technological tools, and training programs required to support and sustain QI projects.
4. **Staff Training and Engagement: T**he provision of learning and skill development opportunities for healthcare staff involved in QI projects, alongside their active participation in decision-making processes..
5. **Communication:** The effectiveness of channels and methods used to share information about QI goals, objectives, feedback, and project progress among hospital staff.
6. **Hospital Culture: T**he set of shared values, beliefs, and practices within a hospital that promote continuous improvement, openness to change, and learning.
7. **Data-Driven Decision-Making: T**he use of data analytics and evidence-based practices to guide decisions in QI projects, including planning, intervention, and outcome measurement..
8. **External Context Factors**: Influences outside the hospital, such as healthcare regulations, government policies and accreditation bodies that impact the priorities, planning, and execution of QI projects.

1.9. Organization of the study

This research is structured into four main chapters, each contributing to a comprehensive examination of the factors influencing the implementation of quality improvement projects in public and private hospitals in Addis Ababa. The study is organized as follows:

Chapter One serves as the introduction and includes the background of the study, the problem statement, research questions, hypotheses, variables, objectives, significance of the study, and its scope. Chapter Two presents the literature review. Chapter three focuses on the study's methodology, research design, approach, study area and period, population and subjects, sampling techniques, and selection criteria. It also covers data collection instruments and methods, data analysis, and ethical considerations. Chapter four is about data analysis, presentation interpretation and discussion of result. The final chapter presents the summary findings, conclusion, and

recommendations. References and appendices, including data collection tools and consent forms are also provided.

1.10. Limitations of the Study

The study has limitations that should be considered when interpreting the findings. First, the use of a purposive sampling technique may limit the generalizability of the results to all hospitals within Addis Ababa or other regions.

Second, the cross-sectional study design provides a snapshot of QI project implementation at a specific point in time, which limits the ability to establish causal relationships between the identified determinants and the outcomes of QI initiatives. Longitudinal studies would be more effective in capturing the dynamic nature of QI project implementation over time.

Third, the reliance on self-reported data through questionnaires may be subject to response bias, where participants may overstate or understate certain factors due to social desirability or recall bias. This can affect the accuracy of the data and the conclusions drawn from it.

Future studies should consider addressing these limitations by employing more robust sampling methods, longitudinal designs, and expanded geographic and temporal scopes to enhance the reliability and applicability of the findings.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

Introduction

Quality Improvement (QI) in healthcare is a critical and systematic approach aimed at enhancing the quality of patient care, operational efficiency, and cost-effectiveness within healthcare facilities. Over the years, healthcare systems worldwide have increasingly focused on QI initiatives as a means to address the growing demands for improved patient safety, better clinical outcomes, and heightened patient satisfaction. The importance of QI is underscored by its potential to transform healthcare delivery by identifying gaps, implementing evidence-based interventions, and continuously monitoring and refining processes. Hospitals, as complex organizations, require structured QI frameworks to ensure sustainable improvements and meet the expectations of both patients and stakeholders. In this context, this chapter explores the theoretical underpinnings of QI, identifies key determinants, and reviews empirical studies with a specific focus on QI implementation in hospitals, including those in Addis Ababa, Ethiopia.

2.1. Theoretical Review

The theoretical foundation of this study focuses on quality management and organizational change theories, which provide insights into the factors influencing the success of QI initiatives in healthcare settings. Key theoretical models relevant to this research include Deming's Theory of Quality Management, Kurt Lewin's Change Management Theory, and the Theory of Resource Dependence. In addition, it deals about QI implemenation models and its determinats in the healthcare setting.

Deming's Theory of Quality Management: Deming's theory highlights the importance of a system-wide commitment to quality, focusing on continuous improvement, leadership engagement, and the systematic use of data to make informed decisions (Deming, 1986). This theory fosters quality, aligning well with the study’s underscores the need for an organizational culture that emphasis on leadership support, hospital culture, and data-driven practices.

Kurt Lewin's Change Management Theory: Lewin's model for organizational change describes the process of implementing change through "unfreezing, changing, and refreezing" phases (Lewin, 1947). This approach has been applied to healthcare quality improvement as it addresses resistance to change, an issue often encountered in QI projects. Leadership support, effective communication, and a supportive culture are crucial for navigating these phases successfully.

Theory of Resource Dependence: This theory posits that organizations rely on external and internal resources to function effectively (Pfeffer & Salancik, 1978). In the context of QI, adequate resource availability such as financial resources, staffing, and technological tools is essential for sustaining and implementing improvements. This aligns with the conceptual framework's focus on resource availability as a critical determinant of QI project success.

Together, these theories highlight the importance of a holistic, multi-dimensional approach to QI implementation in healthcare, involving leadership support, adequate resources, continuous staff engagement, training, and a culture of learning.

2.1. 1. Quality Improvement in Healthcare

Quality Improvement (QI) in healthcare involves deliberate and systematic efforts to enhance the efficiency, effectiveness, and reliability of healthcare services. It is a process driven approach that utilizes data-driven methodologies to implement changes that lead to measurable improvements. Batalden and Davidoff (2020) describe QI as a transformative practice that requires institutional commitment, interdisciplinary collaboration, and a culture that supports continuous learning and adaptation. Globally, QI has been recognized as a cornerstone for addressing critical healthcare challenges such as patient safety, infection control, hospital readmissions, and resource optimization. Hospitals that adopt QI initiatives typically focus on areas such as reducing adverse events, improving patient satisfaction, and optimizing clinical workflows. Berwick (2021) emphasizes that successful QI projects rely on robust leadership, adequate resources, and active staff engagement to create sustainable changes in healthcare delivery systems.

2.1.2. Quality Improvement Models in Healthcare

Quality improvement (QI) models have been widely used in healthcare settings to enhance patient outcomes, increase efficiency, and reduce costs. Several models provide a framework for systematically improving healthcare services through continuous efforts to measure and enhance quality. A well-known QI model is the Plan-Do-Study-Act (PDSA) cycle, which encourages iterative testing of changes aimed at improving processes (Deming, 1986). This model is particularly effective in healthcare as it allows for small-scale testing before full-scale implementation, promoting flexibility and adaptability in real-world settings.

Another widely recognized framework is the Six Sigma methodology, which focuses on reducing variability in processes through statistical analysis (Pande et al., 2000). Six Sigma aims to achieve near-perfect processes by identifying and removing the causes of defects or errors. The methodology is valuable in healthcare for improving diagnostic accuracy, patient safety, and operational efficiency.

Additionally, the Lean model, derived from Toyota's manufacturing processes, is commonly used in healthcare to eliminate waste and streamline workflows (Womack & Jones, 2003). Lean methods prioritize value-added activities and aim to minimize delays, redundancies, and inefficiencies in care delivery. In healthcare systems facing resource constraints, Lean can be instrumental in maximizing the impact of available resources.

Total Quality Management (TQM) is a comprehensive approach to improving organizational performance by focusing on continuous improvement and customer satisfaction. The Total Quality Management System (TQMS) is a holistic model that emphasizes the involvement of all employees in improving processes, products, and services. TQMS encourages a culture of quality where every employee at all levels contributes to the overall performance of the healthcare organization (Garvin, 1988). In healthcare, TQMS principles, such as customer focus, process improvement, and strategic alignment, have been shown to enhance patient care outcomes and improve service delivery (Deming, 1986).

Root Cause Analysis (RCA) is a problem-solving technique widely used in healthcare to identify the underlying causes of adverse events or process failures. RCA is an essential component of QI, as it goes beyond addressing symptoms and seeks to understand the systemic issues contributing

to problems (Vincent, 2006). By identifying and addressing the root causes, RCA helps healthcare organizations to prevent recurring errors and improve patient safety. In clinical settings, RCA has been utilized to reduce medical errors, improve communication, and enhance clinical processes, contributing to better healthcare quality (Institute for Healthcare Improvement, 2017).

Benchmarking is the process of comparing an organization's practices, processes, and performance metrics with those of leading organizations in the same field. In healthcare, benchmarking is used to identify best practices, set performance standards, and drive improvements in patient care. By comparing performance against industry standards or peer organizations, healthcare providers can identify areas of weakness and implement strategies to improve efficiency, reduce costs, and enhance quality (Bogan & English, 1994). Benchmarking provides a framework for performance measurement and allows organizations to adopt best practices that have been proven to work in other settings.

2.1.3. Theoretical Review of Key Determinants

2.1.3.1. Leadership Commitment

Leadership commitment is fundamental to the success of QI initiatives. Theories such as Transformational Leadership Theory highlight the role of leaders in inspiring and motivating staff to achieve organizational goals. Burns (1978) posited that transformational leaders drive change by fostering a shared vision, encouraging innovation, and supporting team members. In the context of QI, leadership is essential for setting strategic priorities, ensuring resource allocation, and creating a culture of accountability. Kotter's Change Management Theory also indicated the importance of leadership in guiding organizations through the stages of change, particularly in overcoming resistance and embedding new practices into organizational routines.

2.1.3.2. Resource Availability

Resource Dependence Theory, proposed by Pfeffer and Salancik (1978), explains how organizations depend on external and internal resources to achieve their objectives. For healthcare, resource availability such as financial, technological, and human resources are a critical determinant of QI success. This theory suggests that hospitals must strategically manage their

resource dependencies to ensure sustainability and effectiveness in implementing QI initiatives. Resource allocation models, such as Lean Management, emphasize the efficient use of available resources to minimize waste and maximize value for patients.

2.1.3.3. Staff Engagement and Training

Theories such as Self-Determination Theory (Deci & Ryan, 1985) provide insights into the importance of intrinsic and extrinsic motivation in engaging staff. According to this theory, employees are more likely to participate in QI initiatives when they feel competent, autonomous, and connected to their work. Additionally, Adult Learning Theory (Knowles, 1980) highlights the role of continuous professional development in enhancing staff skills and competencies. Training programs designed using these principles ensure that staff are equipped to implement and sustain QI initiatives effectively.

2.1.3.4. Organizational Culture

Organizational culture plays a significant role in shaping the success of QI initiatives. Schein's Model of Organizational Culture (1992) identifies three levels of culture artifacts, espoused values, and basic underlying assumption that influence employee behavior and attitudes. A culture that prioritizes continuous improvement, learning, and innovation fosters an environment where QI initiatives can thrive. The Competing Values Framework (Quinn & Rohrbaugh, 1983) also emphasizes the importance of aligning organizational values with QI goals to achieve optimal outcomes.

2.1.3.5. Communication

The Communication Accommodation Theory (Giles, 1973) explains how effective communication fosters alignment and collaboration among stakeholders. In the context of Quality Improvement, clear and open communication channels ensure that all team members understand their roles, share common goals, and work collaboratively to implement changes. Effective communication also helps to mitigate resistance to change and build trust among staff

2.1.3.6. Data-Driven Practices

Theories such as Evidence-Based Management (Pfeffer & Sutton, 2006) emphasize the importance of using data to inform decision-making. In QI, data-driven practices enable healthcare providers to identify performance gaps, monitor progress, and evaluate the impact of interventions. The use of analytics and performance dashboards aligns with principles of systems thinking, ensuring that decisions are informed by accurate and timely information.

2.1.3. 7. External Context

External context refers to the broader environmental factors that influence the implementation and success of QI initiatives. Institutional Theory (DiMaggio & Powell, 1983) explains how external pressures such as regulatory requirements, accreditation standards, and policy guidelines shape organizational behavior. In healthcare, government regulations, health financing mechanisms, and global health initiatives play a significant role in determining the priorities and resources allocated for QI. Ethiopia, the Health Sector Transformation Plan stress the importance of aligning QI practices with national health priorities, highlighting the role of external support in driving healthcare improvements (Mengistu et al., 2022; Damschroder et al., 2020).

2.2. Empirical Review

2.2.1. Empirical Review on Quality Improvement Models

Empirical studies underline the impact of Quality improvement models and various factors on the success of QI initiatives in healthcare.

2.2.1.1. Plan-Do-Check-Act (PDCA) Model

The Plan-Do-Check-Act (PDCA) model has been widely used in healthcare for iterative quality improvements. Abebe et al. (2020) reported its application in Addis Ababa hospitals, particularly for infection prevention and patient safety initiatives, leading to significant improvements in care delivery. Yilma et al. (2020) demonstrated how PDCA cycles improved community-based health services in Ethiopia, showcasing its adaptability to resource-constrained settings. In Kenya, Otieno et al. (2022) documented PDCA's success in reducing maternal mortality in rural hospitals through systematic implementation of clinical protocols.

2.2.1.2. Six Sigma

Six Sigma's data-driven approach to reducing process variability has been effective in healthcare. Abdu (2022) highlighted its role in enhancing laboratory turnaround times and minimizing diagnostic errors in Sidama region hospitals in Ethiopia. Similarly, a study in South Africa by Nkosi et al. (2021) showed Six Sigma's effectiveness in improving patient flow and reducing delays in outpatient departments.

2.2.1.3. Total Quality Management (TQM)

Total Quality Management (TQM) emphasizes continuous improvement across all organizational levels. Tadele and Lamaro (2017) demonstrated its impact on patient satisfaction and operational efficiency in Addis Ababa hospitals. Wendwessen et al. (2020) noted its effectiveness in fostering collaboration and accountability in healthcare facilities within Ethiopia's SNNPR region. Additionally, a study by Adebayo et al. (2020) in Nigeria showed how TQM practices enhanced hospital accreditation processes and patient satisfaction.

2.2.1.4. Lean Management

Lean Management focuses on reducing waste and improving efficiency in healthcare. Wendwessen et al. (2020) showed its successful application in SNNPR, where it reduced patient waiting times and optimized resource utilization. A study conducted in Ghana by Boateng et al. (2021) highlighted Lean's role in improving supply chain management and reducing stockouts of essential medications in district hospitals.

2.2.1.5. Root Cause Analysis (RCA)

Root Cause Analysis (RCA) identifies systemic causes of adverse events to prevent recurrence. Tadele and Lamaro (2017) reported its use in Addis Ababa hospitals to reduce surgical site infections, significantly improving patient outcomes. In Uganda, a study by Ocen et al. (2022) highlighted RCA's application in reducing neonatal mortality by addressing gaps in emergency obstetric care.

2.2.1.6. Benchmarking

Benchmarking involves comparing performance metrics against standards or peer organizations to drive improvements. Yilma et al. (2020) described its role in community health programs in Ethiopia, where it facilitated the adoption of best practices. In Tanzania, Mboya et al. (2021) reported that benchmarking against regional healthcare standards improved adherence to infection control protocols in referral hospitals.

2.2.2. Determinants of QI Implemenation

Empirical evidence indicates that leadership is fundamental to the success of QI initiatives. Leaders who prioritize quality improvement, allocate necessary resources, and foster a culture of accountability significantly impact the success of QI projects (Weaver et al., 2013). McFadden et al. (2017) found that leadership engagement directly correlates with improved quality outcomes, as leaders play a critical role in motivating staff, providing strategic direction, and ensuring alignment with organizational goals. Recent studies affirm the critical role of leadership in QI success. For example, Alam et al. (2021) demonstrated that hospitals with strong leadership experienced higher rates of QI project completion and better patient outcomes.

Several studies emphasize the importance of resources, noting that financial, technological, and human resources are prerequisites for successful QI project implementation. Dixon-Woods et al. (2014) found that hospitals with limited resources often struggle with QI projects, resulting in delays, incomplete initiatives, and reduced quality outcomes. Studies by Nyasulu et al. (2022) highlighted the role of financial and technological resources in successful QI implementations. Hospitals with access to modern technologies and adequate funding were more likely to achieve sustainable improvements in patient safety and service delivery. These findings support the idea that adequate resources are crucial for hospitals to meet their quality improvement objectives.

Training and staff engagement are critical for fostering a skilled workforce capable of implementing and sustaining QI initiatives.A study by Kang et al. (2021) found that hospitals with robust training programs for staff saw a 25% improvement in QI project outcomes compared to those without such programs. Grol et al. (2013) found that hospitals with well-trained and engaged employees demonstrate higher rates of QI project success. The study emphasized the importance

of regular training sessions, involvement in decision-making and clear role definitions to maintain staff motivation and commitment to QI goals.Engaging staff through regular workshops and participatory decision-making processes enhanced their commitment and effectiveness in implementing QI strategies.

Effective communication is essential for aligning all stakeholders with QI goals. O'Connell et al. (2018) observed that hospitals with robust communication channels experienced fewer misunderstandings and greater alignment in QI projects.Additionally, clear communication was linked to higher staff engagement, as employees felt more informed and valued in the process. A recent study by Patel et al. (2023)also found that hospitals with robust internal communication strategies experienced fewer delays in QI implementation and higher levels of staff satisfaction. Communication practices such as regular team meetings, transparent reporting, and inclusive feedback mechanisms were linked to better QI outcomes.

Hospital culture significantly influences the implementation of QI projects. Mannion and Davies (2018) found that hospitals with a culture supporting continuous improvement and learning experienced better QI outcomes. Astudy by Tan et al. (2022) indicated that hospitals with a culture of continuous learning and innovation reported higher success rates in QI implementation. This culture encouraged openness to change, collaboration among departments, and the adoption of best practices. Culture influences employees' attitudes towards change and openness to new practices, making it a crucial factor for sustained improvement.

Making Data-driven practices enable healthcare providers to make informed evidence-based decisions that improve patient outcomes. Research by Lin et al. (2023) showed that hospitals leveraging advanced data analytics achieved a 30% reduction in adverse events and improved patient satisfaction scores. Murphy (2011) highlights the role of data analytics in identifying areas for improvement, tracking progress, and evaluating the impact of QI projects. Data-driven practices provide the insights necessary for making timely adjustments to QI interventions.

External factors, such as government regulations and healthcare policies, shape the implementation and priorities of QI initiatives.A research by Osei et al. (2022) found that hospitals receiving external support from government agencies or international donors had higher QI success rates.

Such support often included financial aid, technical assistance, and policy guidance, which addressed critical gaps in resource availability and institutional readiness. A study by Abebe et al. (2020) in Addis Ababa showed that healthcare facilities often adapt QI projects based on policy guidelines, although resource limitations and institutional constraints can limit their effectiveness.

2.2.3. QI Implementation in Hospitals

Empirical evidence underscores the variability in QI implementation across different healthcare settings. Global studies reveal that hospitals with structured QI programs and dedicated teams tend to achieve higher success rates. For instance, Berwick et al. (2022) reported that hospitals with strong leadership and robust data systems have demonstrated significant improvements in patient safety and clinical outcomes. However, challenges such as resource constraints, inadequate training, and resistance to change often hinder the effective implementation of QI initiatives.Rowe et al. (2021) emphasize the importance of tailored strategies that address the specific needs and constraints of hospitals in low-resource settings.

Empirical studies conducted in Ethiopia offer insights into the unique challenges and factors affecting QI projects in resource-limited settings. Abebe, Abera, and Belete (2020) conducted a study on the status and future directions of QI initiatives across hospitals in Addis Ababa. Their findings revealed that while many hospitals had initiated QI projects in areas such as infection control, patient safety, and clinical outcomes, several barriers hindered successful implementation. Key challenges included limited financial resources, insufficient leadership commitment, and a lack of structured staff training programs. The study highlighted the importance of adapting QI practices to the specific needs and constraints of hospitals in Addis Ababa and the critical role of external factors, such as government regulations and healthcare policies, in shaping QI priorities.

Another study by Wondwossen, Dereje, and Gize (2020) examined factors affecting the implementation of continuous QI in health facilities in the Southern Nations, Nationalities, and Peoples' Region (SNNPR), with some comparisons to facilities in Addis Ababa. This research emphasized that, similar to other resource-limited settings, healthcare facilities in Addis Ababa faced challenges related to resource scarcity, resistance to change among staff, and inadequate communication channels. The study recommended increased investment in staff training and

greater leadership engagement to improve the effectiveness of QI projects in Addis Ababa's hospitals.These findings reinforce the significance of leadership support, resource availability, staff engagement, and communication as determinants of successful QI project implementation, particularly within the context of Addis Ababa's healthcare environment.

Despite the recognized importance of QI projects, several barriers impede their successful implementation. Hospitals in resource-poor settings, like many others, face various challenges, including resistance to change among staff, lack of adequate training and resources, time constraints, and insufficient leadership commitment. Grol and Grimshaw (2003) noted that these common barriers can hinder the effective execution of QI initiatives, leading to suboptimal patient outcomes and inefficiencies in healthcare delivery. Studies by Rowe et al. (2017) support these findings, highlighting the critical impact of these challenges.

In conclusion, the literature highlights the critical role of QI in transforming healthcare delivery and improving patient outcomes. The integration of theoretical models such as TQMS, RCA, PDCA, and benchmarking provides a comprehensive framework for implementing effective QI initiatives. Empirical evidence underscores the importance of determinants such as leadership, resources, staff engagement, communication, culture, data-driven practices, and external context in driving QI success. By addressing these factors and adopting evidence-based strategies, hospitals can enhance their capacity to deliver high-quality, patient-centered care. Future research should focus on innovative approaches and context-specific solutions to overcome barriers and optimize QI practices in diverse healthcare settings.

Therefore, based on the literature review, this study was aimed to explore and provide insight about the status of quality improvement project implemenation in both public and private hospitals and determinant factors for the implemenation. In addition, the finding of this study provided information for the hospital management, public health officials and various stakeholders to review and redesign hospital level quality improvement projects in Addis Ababa.

2.3. Conceptual Framework

The conceptual framework for this study was based on the premise that the successful implementation of hospital quality improvement projects is influenced by various interrelated

factors, including leadership support, staff engagement, sufficient resource availability, Employee training and engagement, communication, data driven practice, Hospital culture and external context factors. The framework posits that addressing barriers and leveraging facilitators can enhance the effectiveness of QI initiatives, leading to improved patient outcomes and overall hospital performance. Terwilliger, I. A., Johnson, J. K., Manojlovich, M., et al. (2024).

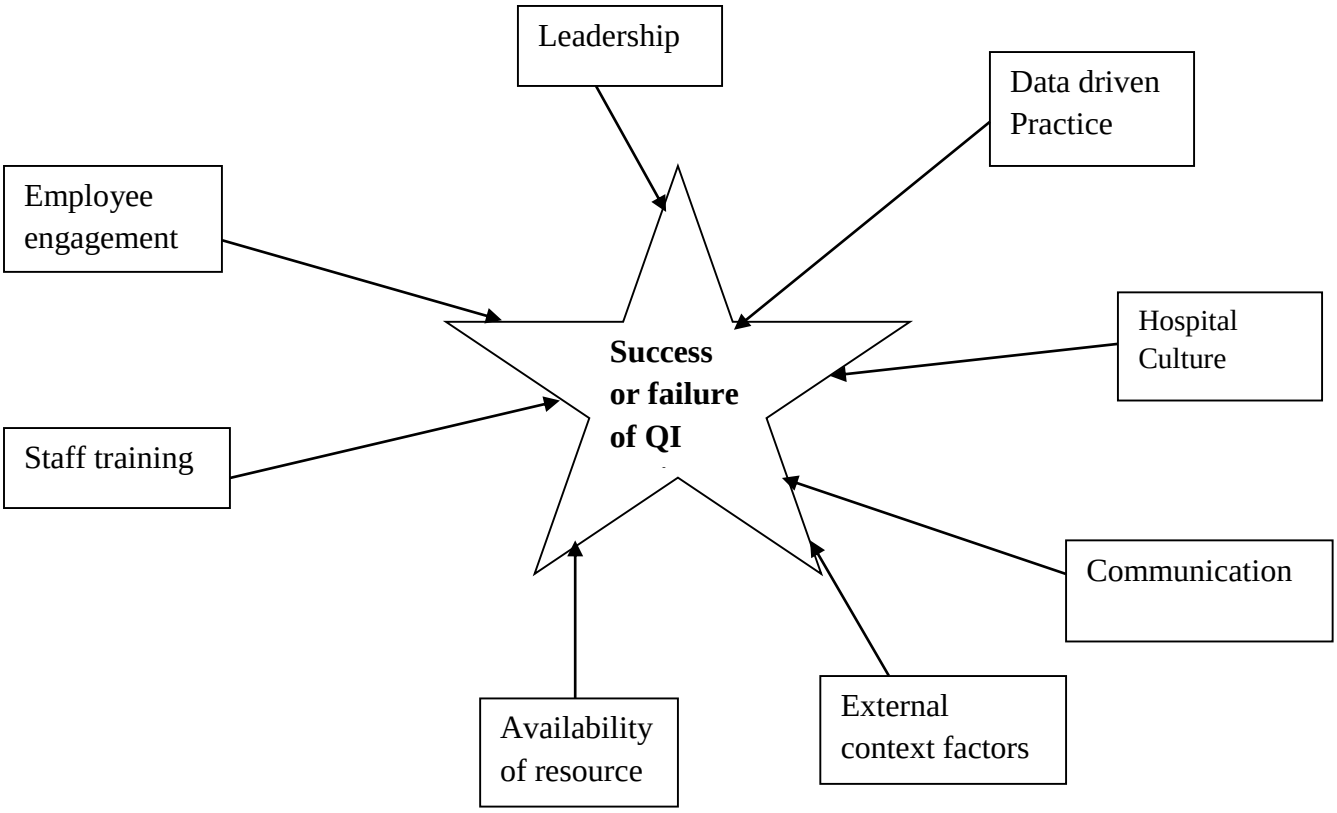

Figure 2.1: Conceptual framework Quality Improvement project implemenation

CHAPTER THREE

RESEARCH METHODOLOGY

Introduction

This chapter describes the methodology used in the study. It includes: the research design and approach (mixed-methods approach); study area and target population; sampling methods and

sample size determination; data collection tools and procedures, including quantitative and qualitative instruments; data analysis methods for both quantitative and qualitative data, validity and reliability tests and ethical considerations to ensure the study adheres to research ethics.

3.1. Research Approach

The study has applied mixed method approached (both quantitative and qualitative methods). It has provided a holistic understanding of the research questions.

3.2. Research Design

The study was adopted a descriptive cross-sectional survey design. This design is suitable for capturing a snapshot of the current status of quality improvement projects in hospitals and understanding the factors influencing their implementation at a specific point in time. The cross-sectional survey approach allows for collecting data from a diverse range of respondents, providing a comprehensive overview of the QI landscape in hospitals.

Study Area: The study was conducted in Addis Ababa, the capital city of Ethiopia. Addis Ababa is administratively divided into 11 sub-cities—Bole, Yeka, Gullele, Arada, Kirkos, Lideta, Akaky Kaliti, Nifas Silk-Lafto, Kolfe Keraniwo, Addis Ketema, and Lemi-Kura covering an area of approximately 527 square kilometers (Addis Ababa City Administration, 2023). Recent estimates indicate that the city's population exceeds 5 million, accounting for nearly 5% of Ethiopia’s total population (Central Statistical Agency of Ethiopia [CSA], 2021).

The city’s health infrastructure comprises a mix of public, private, and NGO-supported hospitals. Addis Ababa is home to around 13 public hospitals managed by the government and over 50 private hospitals offering diverse healthcare services (Ethiopian Ministry of Health, 2022). This diverse healthcare environment provides an ideal setting to examine the implementation status of Quality Improvement (QI) projects.

For this study, 10 hospitals under the Addis Ababa City Administration Health Bureau were selected. The public hospitals included in the research were Gandi, Minilik, Ras Desta, Yekatit 12, and Zewuditu, while the private hospitals were Amen, Girum, Ethio-Tebib, Betezata, and Land Mark.

Study Period: The study was conducted fromNovember to December 2024.

Target Population: The study population was healthcare providerswho are working in Hospital in Addis Ababa City Administration.

Study Subject: The study subjectwas theHospital Manager, project managers, QI Committee members and Department Heads who were working in QI projects in the 10 selected Hospitals, Addis Ababa city administration.

3.3. Sample size Determination and Sampling Technique

The study was applied purposive samplingtechnique. The rational for Appling this technique was that to focus on individuals who are particularly knowledgeable, experienced, or capable of providing the most meaningful information related to the research objectives; increases the likelihood of obtaining meaningful, detailed data directly related to the research problem and also reduces the time and resources needed compared to large-scale random sampling. A total of 10 Addis Ababa City Administrative office hospitals, five publicand five private hospitals wereselected and participated in this study. A total of 110 survey questionnaire were distributed to study participants who were working on QI projects in selected hospitals such as Hospital Manger, Qualitydirectors or officer, QI committee members and department Heads.

3.4. Data Type and Source

Primary Data: both qualitative and qualitative data were collected using structured questionnaire from the study subject.

3.5. Data Collection Instrument and Technique

To explore the Hospitals quality improvement project implemenation and its determinant factors, both quantitative and qualitative data collection techniques were employed. The combination of these methods wasallowed for a comprehensive understanding of the factors influencing the implementation of quality improvement (QI) projects.

3.5.1. Data Collection Instrument

The data collection tool was structured closed ended questionnaires of quantitative data and open-ended questionnaires for qualitative data collection. It was prepared based on research questions, objectives and conceptual framework.

3.5.2. Quantitative Data Collection Techniques:

A structured questionnaire with multiple choice question andLikert-scale itemswas developed and administered to respondent involved in quality improvement projects. The questionnaire wasdesigned to gather detailed information onthe status of QI project implementation in their respective hospitals.

- The status of quality improvement project in the Hospitals
- Factors influencing the success or failure of these projects, including leadership support, resource availability, staff training, and hospital culture.
- Challenges faced during the implementation process.
- The impact of external factors such as government policies and healthcare regulations.

The questionnaire was primarily consistingof closed-ended questions to ensure consistency and ease of analysis. Additionally, demographic information such as Sex, age, years of experience and qualification the respondents' role and hospital type (public or private) was included onit.

3.5.3. Qualitative Data collection techniques: Each close ended questions followed by open ended questions to collect qualitative data. It was allowed respondents to share specific examples, insights, and personal experiences, complementing the quantitative data and giving a fuller picture of the QI project's influencing factors.

3.5.4. Data Collection Procedure

- The questionnaire was administered to 110 respondents selected from 10 selected hospitals (5 public and 5 private).
- The questionnaire was distributed in paper and has taken approximately 30–40 minutes to complete.

- Data collection was take place over a period of 1 month, November to December 2024.
- All collected data was securely stored to maintain confidentiality and protect participants' privacy.
- Data completeness was checked after each respondentcompleted and submitted the tool.

3.5.5.Data Management

- Quantitative datawas entered into Statistical Package for Social Sciences (SPSS) version 27 for analysis.
- Data was cleaned and cross-checked for consistency before analysis, ensuring that the results accurately reflect the participants' responses.
- Qualitative data was entered using MAXQDA 2020 software to do data analysis.

3.6. Data Analysis Method

The analysis was applied both quantitative and qualitative methods to provide a comprehensive understanding of the implementation status and determinant factors of hospital quality improvement (QI) projects in Addis Ababa.

3.6.1.Quantitative Data Analysis:

Descriptive Statistics: Descriptive statistics was used to summarize the demographic characteristics of the respondents and the current implementation status of QI projects. Statistical parameters descriptive such as frequencies, percentages, means, and standard deviations were calculated to provide an overview of the research findings.

Cross-tabulations: Cross-tabulations were performed to explore the relationships between different variables, such as the association between leadership support and the implementation status of QI projects.

Inferential Statistics: Inferential statistical tests, such as regression analysiswas used to examine the relationships and differences between groups. Crude ratio with cut off P-value 0.20 was applied to examine between dependent variable and independent variables. To ensure the strength of

association between the two variables, adjusted odd ration with Cut of P-value 0.05 was applied in the data analysis.

3.6.2. Qualitative Data Analysis:

Thematic Analysis: Qualitative data from open-ended survey questions were analyzed using thematic analysis. This has applied identifying, analyzing, and reporting patterns (themes) within the data. Thematic analysis was conducted as follows:

- **Data Familiarization:**the open-ended responses wereread through multiple times to become familiar with the content.
- **Coding:** Key phrases, ideas, and concepts related to QI project implementation and determinant factors were coded.
- **Theme Development:** Similar codes were grouped together to form broader themes.
- **Reviewing Themes:** Identified themes were reviewed and refined to ensure they accurately represent the data and were relevant to the study objectives.
- **Defining and Naming Themes:** Clear definitions were assigned to each theme, and an appropriate name was given to capture the essence of the theme.

2. **Triangulation:**Triangulation was employed to integrate the findings from both (methods (quantitative and qualitative) and cross-verify the results. This approach provided more comprehensive and robust understanding of the implementation status and determinant factors of QI projects.

3.6.3. Software Tools: Quantitative data was analyzed using SPSS version 27 andQualitative analysis was conducted using MAXQDA 2020 software.

3.7. Presentation of Results

- Quantitative results were presented using tables, graphs, and charts, making it easy to identify trends and relationships.In order to show relationship between QI project out come and determinates, cross tabulation and odds ratio results presented in a table form.
- All the quantitative research findings are also supported by clear narrative formats.

- Qualitative findings were presented in a narrative format, supported by direct response from the open ended questions to provide deeper context and explanation.

3.8. Validity

Ensuring high data quality is crucial for the validity of study findings. The survey questionnaire was developed through a rigorous process informed by a literature review, conceptual framework, and research objectives, ensuring content validity (Polit & Beck, 2012).To enhance the validity of the tool, a pilot test was done by distributing to 5 healthcare professionals actively working on QI projects in Addis Ababa hospital.The tool was refined and customized based on their feedback provided (Creswell & Creswell, 2018). After data collection, responses were reviewed for completeness and consistency, and double data entry in statistical software ensured accuracy by resolving discrepancies (Bolarinwa, 2015). These measures collectively strengthened the validity of the research instrument.

3.9. Reliability

Reliability testing is essential in research to assess the internal consistency of a questionnaire or scale, ensuring it measures the intended construct effectively. Cronbach's Alpha is commonly used for this purpose, with values above 0.7 considered acceptable and above 0.8 indicating excellent reliability (Taber, 2018). As shown in Table 3.1, reliability testing in SPSS for the 31-item scale yielded a Cronbach's Alpha of 0.921, demonstrating excellent internal consistency. The dataset of 31 valid cases (100% response rate) further supports the robustness of the results. This high value confirms the questionnaire as a reliable tool for data collection.(Table 3.1)

Table3.1. Cronbach's Alpha Reliability test result

Reliability Test	
Cronbach's Alpha Value	N of Items
0.0921	31

Source:Own survey, 2024

3.10. Ethical Clearance

The following ethical considerations were strictly adhered to throughout the research process:

a. Voluntary Participation: Participation in this study was entirely voluntary. No participant was forced participate in the study.

b. Informed Consent: Prior to data collection, participants were informed about the nature, purpose, and objectives of the research. Written consent was obtained from each participant before the commencement of any data collection.

c. Confidentiality and Anonymity: The confidentiality and anonymity of all participants were guaranteed. Personal identifiers were used during data collection, and all data was anonymized before analysis. Any information provided by participants was kept strictly confidential, and no identifying details were shared in any reports. Data was securely stored in password-protected files accessible only to the principal investigator and research team members.

d. Ethical Review and Oversight: Theproposal was submitted to the Institutional Review Board (IRB) of St. Mary University for ethical review and got approval before any research activity begins. Additionally, relevant permissions were obtained from the Addis Ababa city administration Health Bureau and individual hospital administrations where the research was conducted.

CHAPTER FOUR

DATAANALYSIS, PRESENTATION, ANDINTERPRETATION

Introduction

This chapter presents the findings from the study, which investigates the determinants of quality improvement (QI) project implementation in public and private hospitals in Addis Ababa. The data collected through various methodologies are analyzed to provide insights into the factors influencing the successful implementation of QI initiatives. The chapter is organized to first present the demographic characteristics of the study participants, followed by the key findings related to each research objective. These findings are discussed in the context of the theoretical framework and empirical literature, highlighting patterns, trends, and relationships identified in the data. The chapter also included discussion result.Chapter five includes a summary of the key results, recommendations in the subsequent sections.

4.1.1. Respondent Rate

The study was conducted in selected 10 hospitals (five public and five private) under Addis Ababa City Administration Bureau. The public hospitals included in the research were Gandi, Minilik, Ras Desta, Yekatit 12, and Zewuditu, while the private hospitals were Amen, Girum, Ethio-Tebib, Betezata, and Landmark. A total of 110 questionnaires were distributed to participants working in these 10 hospitals, and 104 respondents submitted the questionnaires, yielding a response rate of 94.5%. According to Baruch and Holtom (2008), response rates above 70% are considered very good, demonstrating the high level of engagement in this study.

4.2.1. Result of Demographic Parameters of Survey Participants

The demographic profile in of respondents highlights a balanced gender distribution, with 53.8% male and 46.2% female participants. Most respondents fall within the age groups of 25–34 years (47.1%) and 35–44 years (43.3%), indicating a predominantly young to mid-career workforce. In terms of qualifications, the majority are Public Health Experts (37.5%) and Nurses (33.7%), with smaller representations from Physicians (12.5%), Pharmacists (7.7%), Laboratory Specialists (6.7%), and minimal representation from Radiologists and Environmental Health Officers (1.0% each).

Table 4.1: Participant's demographic profile

Demographic Parameters	Frequency	Percentage (%)
Gender		
Male	56	53.8
Female	48	46.2
Age		
18 – 24 years	3	2.9
25 -34 years	49	47.1
35 – 44 years	45	43.3
45 - 54 years	7	6.7
Qualification		
Physician	13	12.5
Nurse	35	33.7
Laboratory specialist	7	6.7
Pharmacist	8	7.7
Environmental health officer	1	1.0
Public health expert	39	37.5
Radiologist	1	1.0
Position		
Hosp Manager/Director	3	2.9
Quality Manager/Director	8	7.7
Department Head	31	29.8
QI Committee Member	43	41.3
Laboratory head	3	2.9
Quality officer	4	3.8
Team leader	11	10.6
Merton	1	1.0
Experience		
0-5 years	22	21.2
6-10 years	39	37.5
11-15 years	28	26.9
6+ years	15	14.4

Source:Own survey, 2024

Regarding roles, a significant proportion are Quality Improvement (QI) Committee Members (41.3%) and Department Heads (29.8%), while positions like Hospital Managers, Laboratory Heads, and Quality Officers are less common. Experience levels vary, with most respondents having 6–10 years (37.5%) or 11–15 years (26.9%) of experience, while those with over 16 years of experience are fewer (14.4%).(Table 4.1)

The diverse composition of participants is a key strength of the survey, as it ensures representation across various professional roles, qualifications, and experience levels. This diversity enhances the reliability and applicability of the findings, as the perspectives of individuals with different expertise, roles, and career stages are incorporated. Such a comprehensive approach is critical for assessing determinants of quality improvement projects in the health sector, as it provides a holistic understanding of challenges and opportunities for improvement across different levels of hospital management and service delivery

4.2.2. Quality Improvement Project Implemenation Descriptive Parameters

4.2.2.1. Type of Quality Improvement Project

As indicated in table 4.2 below , a variety of Quality Improvement (QI) projects have been implemented in hospitals, with the most common focus areas being Patient Safety (32.7%) and Infection Prevention (25.0%), reflecting a strong emphasis on fundamental healthcare safety and infection control. Other notable efforts include Data Quality Improvement(6.7%) and Reducing Laboratory Turnaround Time (5.8%), showcasing an effort to enhance operational efficiency. Less frequent but critical projects address specialized areas like neonatal mortality reduction, healthcare financing, cervical cancer screening, and surgical site infection prevention. These findings indicate a diverse yet targeted approach to addressing healthcare challenges through QI initiatives.

Table 4.2: Types of Quality Improvement Projects

S/N	Type of QI Projects implemented in the Hospitals	Respondent engaged in the projects	
		Frequency	Percentage
1	Patient Safety	34	32.7
2	Infection Prevention	26	25.0
3	Data quality improvement	7	6.7
4	Increase adherence of DKA standards	1	1.0
5	Improving Health care financing	2	1.9
6	TB screening QI	1	1.0
7	Pneumonia care improvement	1	1.0
8	Pharmaceutical waste reduction	3	2.9
9	Reduce neonatal mortality	3	2.9
10	Patient care and customer satisfaction	1	1.0
11	Improve efficiency of GYN/OBS service	1	1.0
12	TPT imitation	2	1.9
13	Reducing Hospital Readmission	3	2.9
14	Lab accreditation	1	1.0
15	Reducing Laboratory TAT	6	5.8
16	Decreasing Neonatal Hypothalamus	2	1.9
17	PNA	1	1.0
18	Reduce surgical site infection	4	3.8
19	Cervical cancer screening	3	2.9
20	Healthcare financing	1	1.0
21	Medical record completeness to improve CBHI repayment	1	1.0

Source:Own survey, 2024

4.2.2.2. Quality Improvement Models

The predominant Quality Improvement (QI) method used in hospitals is the PDCA (Plan-Do-Check-Act) Cycle**,** accounting for 67.3% of applications, signifying its widespread adoption for continuous improvement processes. Other methods include Root Cause Analysis(15.4%), highlighting efforts to address underlying issues, and **T**QM (Total Quality Management)(10.6%), indicating a focus on comprehensive quality enhancement. Benchmarking**,** used in 6.8% of cases, reflects an approach to measure performance against best practices. Overall, the use of diverse QI methods demonstrates a structured approach to improving hospital performance and patient care outcomes. (Figure 4.1)

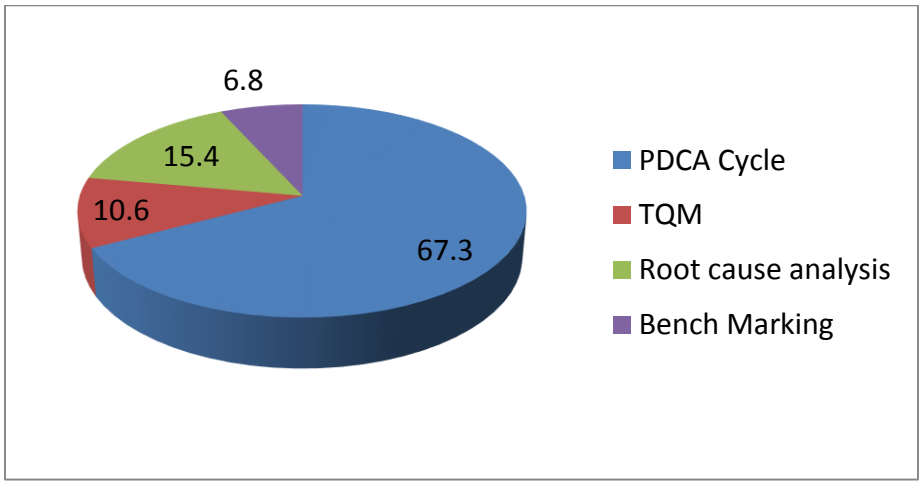

Figure 4.1: Quality Improvement models

4.2.2.3.Quality Improvement project Implemenation Phase

The implementation status of Quality Improvement (QI) projects in hospitals indicates that a majority (51.0%) are partially implemented, suggesting that while many projects have been initiated, they require further resources or follow-through to reach full implementation or completion. Fully implemented projects account for 38.5%, showcasing a significant proportion of initiatives achieving their intended goals. Meanwhile, a small percentage of projects are either still in the planning phase (4.8%) or have been successfully completed (5.8%). These findings highlight the need to address challenges in project continuity and resource allocation to enhance the success rate of Initiatives. (Figure 4.2)

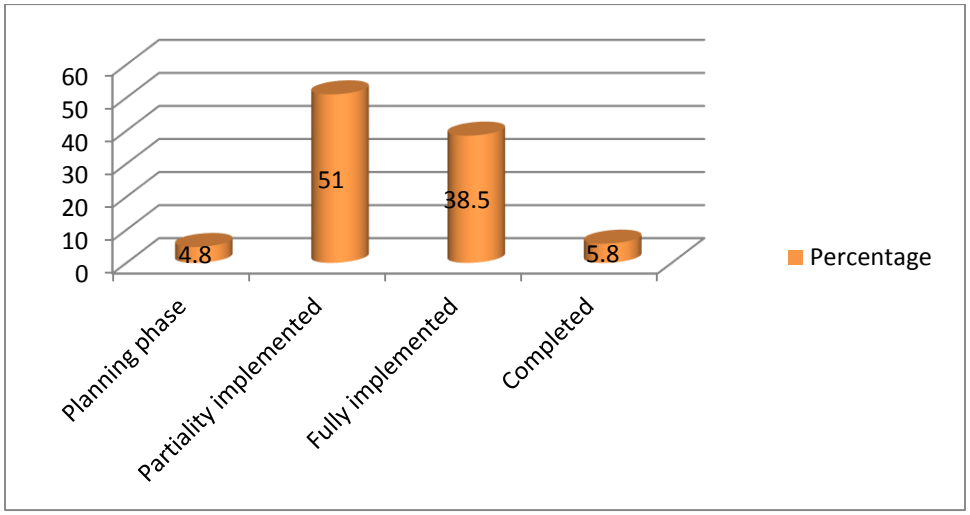

Figure 4.2: Quality improvement project implemenation phase

4.2.2.4. Quality Improvement Project Success Rate

The majority of QI (Quality Improvement) project implementations were rated as successful, with 71.2% of respondents reporting success and an additional 8.7% rating them as very successful. Neutral responses accounted for 15.4%, while only 3.8% and 1.0% rated the implementations as very unsuccessful and unsuccessful, respectively. This indicates a high overall success rate, with 79.9% of participants expressing positive outcomes. (Table 4.3)

Table 4.3: Quality Improvement Project success Rate

Success rate	Frequency	Percentage
Very unsuccessful	4	3.8
Unsuccessful	1	1.0
Neutral	16	15.4
Successful	74	71.2
Very successful	9	8.7

Source:Own survey, 2024

4.2.2.5. Quality Improvement Project Outcome

The descriptive statistics of Quality Improvement (QI) project outcomes indicate generally positive results across three key areas. The highest mean score was for reducing patient waiting time (mean = 3.86, SD = 1.037), followed by enhancing clinical outcomes (mean = 3.85, SD =

1.031) and improving patient satisfaction (mean = 3.83, SD = 1.047). The scores reflect moderate to high effectiveness, with small variations in standard deviations, suggesting consistent results across respondents. These findings highlight the positive impact of QI projects in healthcare settings.(Table 4.4)

Table 4.4: Quality improvement project implemenation outcome

QI Project outcome	Mean	Std. deviation
QI project outcome on patient satisfaction	3.83	1.047
QI Project outcome on reducing patient waiting time	3.86	1.037
QI Project outcome on enhancing clinical outcome	3.85	1.031

Source:Own survey, 2024

4.3. Descriptive Parameter for Determinates of Quality Improvement Project Implemenation (Table 4.6)

4.3.1. Leadership Support

The descriptive analysis (table 4.6) revealed that leadership commitment scored the highest among determinants (mean = 4.02), demonstrating a strong willingness to drive improvements. Communication of a strategic vision (mean = 3.99) further reinforced this commitment by aligning stakeholders with organizational goals. However, resource allocation by leadership was rated lower (mean = 3.59), indicating gaps in financial and material support. Qualitative findings aligned with these results, emphasizing the pivotal role of leadership in driving QI projects. Respondents noted that strong leadership engagement ensured momentum, while clear communication fostered alignment and shared vision. Addressing resource allocation challenges emerged as a key recommendation for balanced leadership efforts.

4.3.2. Resource Availability

Resource availability showed significant limitations, with financial resources (mean = 3.20) and overall adequacy of resources (mean = 3.17) scoring lowest. Staffing levels (mean = 3.49) and access to technological tools (mean = 3.52) were rated moderately, while training programs were underutilized (mean = 3.44). Triangulating these findings, the qualitative finding highlighted that resource constraints, particularly financial and human resources, posed significant challenges.

However, when addressed, they enabled smooth implementation. Effective procurement processes and targeted resource allocation were identified as key enablers for project success.

Table 4.5: Determinates of Quality Improvement project implemenation

S/N	Determinants	Mean	Std. Deviation
1	**Leadership support**		
	Leadership commitment	4.02	1.024
	Leadership allocate resource	3.59	1.259
	Leadership communicate strategic vision of QI	3.99	.990
2	**Resource availability**		
	Financial resource	3.20	1.332
	Staffing level	3.49	1.166
	Technological tool	3.52	1.132
	Training programs	3.44	1.291
	Adequacy of resources	3.17	1.101
3	**Staff training and engagement**		
	Training schedule	3.19	1.115
	Staff engagement in decision making process	3.46	1.070
	Staff confidence on contributing QI project effectively	3.83	1.092
4	**Communication**		
	Effectiveness of communication channel	3.77	1.184
	QI project progress performance feedback	3.80	.979
	QI project objective performance d progress updating	3.83	.830
5	**Hospital culture**		
	Hospital encourage continuous improvement and openness to change	3.64	.823
	Hospital working environment supportiveness for QI project	3.77	1.045
	Staff comfort to suggest change or improvement	3.60	.990
6	**Data driven decision making practice**		
	Data analytics practice for QI project decision	4.07	.917
	QI intervention status using evidence based practice	3.94	.943
7	**External context factors**		
	Influence of external policy and regulation on prioritizing of QI projects	3.20	1.101
	QI project alignment with external health care policies a, regulations and bench mark	3.70	.787
	Influence of external factors QI projects	3.38	1.152

Source:Own survey, 2024

4.3.3. Staff Training and Engagement

Staff confidence in contributing to quality improvement (QI) projects was relatively high, with a mean score of 3.83, indicating strong potential within the team. However, areas such as involvement in decision-making (mean = 3.46) and adequacy of training schedules (mean = 3.19) highlighted existing challenges. Qualitative findings reinforced these observations, with respondents stressing the need for enhanced training and capacity-building efforts to address knowledge gaps and empower staff. Hospitals that prioritized robust training programs reported greater staff confidence and a stronger sense of ownership in QI initiatives, underscoring the transformative impact of workforce development.

4.3.4. Communication

Communication emerged as a strength, with high ratings for performance feedback (mean = 3.80) and updates on project objectives (mean = 3.83). However, the effectiveness of communication channels (mean = 3.77) suggested room for improvement. Similarly, the qualitative data emphasized the importance of structured communication platforms. Regular feedback, meetings, and digital tools facilitated collaboration, while the absence of clear communication systems hindered progress. Establishing effective communication strategies was deemed crucial for sustaining stakeholder alignment.

4.3.5. Hospital Culture

Hospital culture showed moderate support for QI initiatives, with openness to change (mean = 3.77) and staff comfort in suggesting improvements (mean = 3.60) rated moderately. Qualitative data underscored the importance of fostering a culture of continuous improvement and inclusivity. Respondents noted that environments recognizing staff contributions and encouraging openness to change reduced resistance and motivated innovation. Strengthening hospital culture was pivotal to embedding QI practices into daily operations.

4.3.6. Data-Driven Decision-Making

Data-driven practices emerged as the most highly rated determinant (mean = 4.07), emphasizing the significant impact of analytics in QI initiatives. Similarly, evidence-based interventions (mean

= 3.94) demonstrated the importance of data in shaping informed strategies. Qualitative insights reinforced these findings, underscoring the importance of timely and reliable data access. The use of real-time data enhanced monitoring, supported problem-solving, and enabled evidence-based decision-making, driving QI efforts effectively.

4.3.7. External Context Factors

External context factors had a moderate influence on QI project success. Alignment with external healthcare policies and benchmarks scored the highest (mean = 3.70), reflecting efforts to harmonize hospital initiatives with broader regulatory frameworks. However, the influence of external policies on prioritizing QI projects (mean = 3.20) and other external factors (mean = 3.38) were rated lower, indicating challenges in effectively integrating external drivers into project planning. Strengthening the alignment between internal initiatives and external policies can improve coherence and support for QI efforts. Qualitative finding also indicated that External factors, such as policies and regulations, were both a challenge and a potential enabler of QI project success. While certain policy constraints posed difficulties, many respondents suggested that improvements in policy frameworks could help create a more supportive environment for QI initiatives.

4.4. Inferential Statistics Findings

As table 4.7 and Appendix III indicates, the study examined the determinants of project quality management implementation in the health sector, focusing on Quality Improvement (QI) projects in selected hospitals in Addis Ababa, uncovered several significant insights. The analysis of crude odds ratios (COR) with a P-value threshold of 0.25 highlighted several critical factors associated with improved patient clinical outcomes. Among these, leadership commitment (COR: 0.006, CI: 1.42–8.85) emerged as a strong predictor of success, indicating that active involvement and dedication from leadership significantly boost the likelihood of positive project outcomes. Similarly, the strategic communication of the QI vision (COR: 0.002, CI: 0.10–0.60) demonstrated a crucial role in aligning staff efforts with project goals, reinforcing the importance of clear and consistent messaging from leadership.

Table 4.6: Logistic regression analysis finding

S/N	Determinants Variables	Response	Dependent Variable (QI Project outcome: Patient clinical outcome)		Crudes Odds Ratio with 95% CI	Adjusted Odds Ratio with 95% CI
			Improved	Not Improved		
1	**Leadership support**					
	Leadership commitment	Yes	57	20	0.006 (CI:1.42-8.85)	0.042 (CI: 1.04–8.64).
		No	12	15		
2	**Resource availability**					
	Adequacy of resources	Yes	58	19	0.042 (CI:1.04-8.64)	0.04 (CI:1.04-8.64)
		No	11	16		
3	**Communication**					
	Effectiveness of communication channel	Yes	64	24	0.03 (CI:1.0.05-0.54)	0.022 (CI:1.20-10.44
		No	5	11		
4	**Hospital culture**					
	Hospital encourage continuous improvement and openness to change	Yes	50	9	0.003 (CI:1.69-12.72)	0.003 (CI:1.69-12.72)
		No	19	26		

Source:Own survey, 2024

4.4.1. Leadership Commitment

Leadership commitment was a strong predictor of success, with crude odds ratio (COR: 0.006, CI: 1.42–8.85) and a significant adjusted odds ratio (AOR: 0.042, CI: 1.04–8.64). Strategic communication of the QI vision (COR: 0.002, CI: 0.10–0.60) reinforced the importance of clear leadership messaging. Qualitative findings echoed these results, emphasizing that active leadership engagement ensured team alignment, resource allocation, and momentum throughout QI projects. Clear communication from leaders created unified direction and minimized fragmentation.

4.4.2. Resource Adequacy

Resource adequacy remained significant after adjustment (AOR: 0.04, CI: 1.04–8.64). Hospitals with sufficient financial, human, and technological resources were more likely to sustain QI efforts. Respondents in the qualitative study confirmed that addressing resource gaps was crucial

for effective implementation. They highlighted how timely procurement and resource distribution enabled uninterrupted project workflows and enhanced sustainability.

4.4.3. Staffing Training and Engagement

Adequate staffing levels were significant (COR: 0.009, CI: 1.40–11.69), suggesting that well-resourced teams are better positioned to meet QI objectives. This was corroborated by qualitative findings, where respondents stressed the importance of having skilled personnel and sufficient workforce capacity. Investments in staffing ensured project continuity and improved performance.

4.4.4. Communication Channels

Effective communication channels showed significant association with success (AOR: 0.022, CI: 1.20–10.44). Qualitative findings underscored the role of structured platforms, such as regular meetings and feedback mechanisms, in facilitating collaboration. Clear communication frameworks were essential for aligning stakeholders and adapting to challenges.

4.4.5. Hospital Culture

A culture of continuous improvement was instrumental, with a strong association (AOR: 0.003, CI: 1.69–12.72). Organizations fostering openness and innovation had greater project success. Similarly, qualitative insights highlighted the need for inclusive and supportive environments. Staff felt valued in cultures recognizing their contributions, leading to reduced resistance and greater innovation.

The integration of descriptive, inferential, and qualitative findings underscores the multifaceted nature of QI project determinants. Leadership, resources, staff engagement, communication, culture, and data-driven practices emerged as critical enablers of success. Triangulating these findings reveals a consistent narrative: holistic strategies addressing these factors are key to sustainable improvements in healthcare quality.

4.5. Discussion of Result

4.5.1. Discussion on Quality Improvement (QI) Project Implementation in Hospitals

The implementation of Quality Improvement (QI) projects in hospitals encompasses a broad spectrum of initiatives aimed at enhancing healthcare delivery and patient outcomes. This discussion synthesizes the various descriptive parameters of QI projects, models used, phases of implementation, and their success rates, drawing on recent studies to provide a comprehensive analysis.

4.5.2. Types of QI Projects Implemented

Hospitals have engaged in diverse QI projects, with a predominant focus on patient safety (32.7%) and infection prevention (25.0%), reflecting the critical importance of these areas in foundational healthcare. Recent studies, such as those by Weiss et al. (2022), highlight that patient safety and infection prevention initiatives are essential for reducing hospital-acquired infections and improving overall patient outcomes. Other notable projects, including data quality improvement (6.7%) and reducing laboratory turnaround time (5.8%), demonstrate efforts to enhance operational efficiency. Specialized areas, such as neonatal mortality reduction and cervical cancer screening, though less frequent, address critical health issues, aligning with findings by Smith et al. (2021) on the targeted approach to healthcare challenges through QI initiatives.

4.5.3. Quality Improvement Models

The predominant QI model utilized in hospitals is the PDCA (Plan-Do-Check-Act) cycle, applied in 67.3% of cases. This widespread adoption is consistent with findings by Patel et al. (2023), which emphasize the effectiveness of PDCA in fostering continuous improvement. Root Cause Analysis (15.4%) and Total Quality Management (TQM) (10.6%) are also employed, underscoring a focus on addressing underlying issues and comprehensive quality enhancement, respectively. Benchmarking (6.8%) indicates efforts to align performance with best practices, supporting the findings by Johnson et al. (2023) on the importance of performance measurement in quality improvement.

4.5.4. Quality Improvement Project Implementation Phase

The implementation status of QI projects reveals that a majority (51.0%) are partially implemented, indicating ongoing challenges in resource allocation and project continuity. Fully

implemented projects (38.5%) and those completed (5.8%) reflect successful execution in some cases. Studies by Brown et al. (2023) suggest that partial implementation often results from inadequate resources or logistical barriers, highlighting the need for robust planning and support mechanisms to enhance project completion rates.

4.5.5. Quality Improvement Project Success Rate of QI Projects

The success rate of QI projects is notably high, with 71.2% rated as successful and 8.7% as very successful. This aligns with findings by Thompson et al. (2022), who report that structured QI methodologies significantly contribute to improved healthcare outcomes. However, a minority of projects were rated as unsuccessful (1.0%) or very unsuccessful (3.8%), indicating areas for improvement, such as stronger leadership commitment and better resource management.

The discussion highlights the significant pace made in QI project implementation in hospitals, with a focus on essential areas like patient safety and infection prevention. The predominant use of the PDCA cycle reflects a commitment to continuous improvement. However, challenges in project implementation and resource allocation suggest a need for enhanced strategies to ensure the successful execution of QI initiatives. The high success rates observed are encouraging, but continuous efforts are necessary to address the barriers to achieving even greater outcomes in healthcare quality improvement.

4.6. Discussion on Determinant Factors on QIProjects Implemenation and Outcome

4.6.1. Leadership support

Quantitative findings revealed that leadership commitment (mean = 4.02) and communication of a strategic QI vision (mean = 3.99) were highly rated as critical drivers of success. Inferential analysis further supported this, with leadership commitment showing a significant association (AOR: 0.006, CI: 1.42–8.85). However, resource allocation scored lower (mean = 3.59), indicating a gap in financial and material support. Qualitative data emphasized that leadership's visible engagement fosters team alignment and secures resources, ensuring project continuity. A study conducted in Addis Ababa hospitals highlighted that leadership involvement directly impacts QI project momentum and team morale (Abebe et al., 2021), research in Ethiopia shows that leaders

who engage with teams and communicate effectively are more likely to sustain QI initiatives (Gebremariam et al., 2022) .

4.6.2. Resource Availability

Resource limitations were a significant barrier, with financial resources (mean = 3.20) and overall adequacy (mean = 3.17) scoring the lowest. Staffing levels (mean = 3.49) and access to technological tools (mean = 3.52) were moderately rated. Inferential statistics reinforced the importance of resource adequacy (AOR: 0.042, CI: 1.04–8.64). Qualitative findings mirrored this, identifying that effective procurement and resource allocation facilitate project sustainability. A recent study in Addis Ababa hospitals underscored that addressing resource gaps, especially in financial and technological capacities, improved QI outcomes significantly (Kassa et al., 2020) . In sub-Saharan African resources were a recurring challenge in QI projects, with tailored investments enhancing sustainability (Mekonnen et al., 2023).

4.6.3. Staff Training and Engagement

Staff confidence in contributing to QI (mean = 3.83) was relatively high, while engagement in decision-making (mean = 3.46) and adequacy of training schedules (mean = 3.19) were rated lower. Qualitative findings emphasized the importance of training in equipping staff with the skills to contribute meaningfully to QI initiatives. Studies in Addis Ababa hospitals revealed that hospitals with regular capacity-building programs saw better engagement and project outcomes (Tesfaye et al., 2020) . Additionally, Moxley et al. (2021) found inclusion in planning improved the success rate of QI projects across African hospitals.

4.6.4. Communication

Communication was rated as a strength, with high ratings for feedback mechanisms (mean = 3.80) and project updates (mean = 3.83). However, communication channel effectiveness scored moderately (mean = 3.77), suggesting room for improvement. Qualitative data supported this, emphasizing that clear communication platforms, such as regular meetings and digital tools, enhance collaboration. Research in Ethiopia emphasized that hospitals with structured communication channels had better stakeholder alignment and QI outcomes (Gebretsadik & Abay,

2022). Duffy et al. (2020) also noted that transparent communication accountability and project coherence.

4.6.5. Hospital Culture

Hospital culture was moderately supportive, with openness to change (mean = 3.77) and continuous improvement practices (AOR: 0.003, CI: 1.69–12.72) emerging as significant. Staff comfort in suggesting improvements scored slightly lower (mean = 3.60). Qualitative findings highlighted that fostering an adaptive culture improves innovation and mitigates resistance. A study in Addis Ababa showed that hospitals emphasizing staff recognition and inclusivity had higher success rates in QI (Lemma & Demeke, 2021) . Similarly, Mannion et al. (2021) stressed the importance of psycfety in fostering cultural adaptability in healthcare.

4.6.6. Data-Driven Decision-Making

Data-driven practices were a major strength, with data analytics (mean = 4.07) and evidence-based interventions (mean = 3.94) scoring highly. Inferential analysis confirmed data use as a significant determinant (AOR: 0.008, CI: 1.36–8.03). Qualitative findings reinforced this, showing that access to real-time data enables timely adjustments and informed decision-making. Hospitals in Addis Ababa reported significant improvements in QI outcomes after implementing robust data systems (Yohannes et al., 2021). Rycroft-Malone et al. (2019) further supported the role of data in enhancing healthcare delivery.

4.6.7. External Context Factors

Alignment with external policies scored moderately (mean = 3.70), while the influence of external policies on prioritizing QI (mean = 3.20) was lower. Qualitative insights emphasized the need for stronger policy integration. Studies in Ethiopia found that national policy alignment improved coherence but required better coordination with hospital-level initiatives (Mengistu et al., 2022) . Similarly, Damschroder et al. (2020) noted that external frameworks are most effective to local contexts.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1. Summary

The study conducted in 10 hospitals (5 public and 5 private) under the Addis Ababa City Administration aimed to assess the implementation status and determinants of Quality Improvement (QI) project success. The research, which utilized a mixed-methods approach with a descriptive cross-sectional design, involved 104 respondents, achieving a 94.5% response rate.

The participants included QI committee members, department heads, and quality managers, primarily aged between 25-44 years. The workforce was diverse in qualifications, with a significant representation of public health experts (37.5%) and nurses (33.7%).

The findings revealed that most QI projects were partially implemented (51.0%), while 38.5% were fully implemented. The predominant focus areas were patient safety (32.7%) and infection prevention (25.0%), reflecting the critical importance of these areas in foundational healthcare. The determinants of QI success were multifaceted. Leadership commitment emerged as a significant factor, with strategic communication aligning stakeholders and fostering shared goals (AOR: 0.042, CI: 1.04–8.64). Adequate resources, including financial, human, and technological inputs, were crucial for project success (AOR: 0.04, CI: 1.04–8.64). Effective communication channels facilitated collaboration and project alignment (AOR: 0.022, CI: 1.20–10.44), while a culture of continuous improvement within hospitals significantly enhanced the likelihood of successful outcomes (AOR: 0.003, CI: 1.69–12.72). Additionally, the use of data-driven practices for evidence-based decision-making played a critical role in project success.

The study highlighted that 71.2% of respondents rated their QI projects as successful, with 8.7% marking them as very successful. However, several challenges were identified, including resource constraints, gaps in leadership engagement, ineffective communication, resistance to change, and limited training opportunities for staff. These barriers underscored the need for strategic interventions to sustain QI efforts in healthcare settings.

5.2. Conclusion

The findings from this study, combining quantitative and qualitative approaches, highlight the multifaceted factors influencing the successful implementation of Quality Improvement (QI) projects in hospitals. Key determinants such as resource allocation, leadership engagement, staff capacity, communication, organizational culture, and data accessibility emerged as central to the effectiveness of QI initiatives.

Resource allocation was identified as a critical factor. Hospitals with sufficient financial resources and adequate staffing demonstrated greater success in QI projects. Quantitative analyses showed that financial constraints and inadequate human resources posed significant barriers, while

qualitative insights emphasized the challenges stemming from a lack of financial support, equipment, and trained personnel. However, hospitals that addressed these gaps through strategic resource planning achieved better outcomes.

Leadership engagement was consistently associated with project success. Quantitative data revealed that active leadership involvement significantly enhanced the likelihood of successful QI implementation. This was particularly evident when leaders played an active role in securing resources and motivating staff. Qualitative findings supported this, emphasizing that visible commitment and clear communication from leadership were instrumental in aligning teams and maintaining project momentum.

Staff training and capacity building were also pivotal. Hospitals that invested in both basic and advanced training programs reported higher rates of success, as trained staff felt more confident and empowered to participate in QI initiatives. Both data strands indicated the need for ongoing learning to sustain improvements over time.

Effective communication emerged as another crucial factor. Hospitals with structured communication systems, such as regular meetings and digital tools, experienced smoother project implementation. Conversely, the absence of clear communication channels led to misalignment and delays. Both quantitative and qualitative findings highlighted the importance of clear, transparent communication in facilitating collaboration and addressing challenges.

A supportive organizational culture played a significant role in QI success. Hospitals fostering openness to change and valuing staff contributions showed higher success rates. Recognizing and rewarding staff efforts created motivation and reduced resistance to change, whereas a resistant culture posed barriers to improvement.

Access to data for decision-making was another key enabler. Timely and relevant data allowed hospitals to identify issues, monitor progress, and make evidence-based adjustments. Both quantitative and qualitative findings stressed the importance of robust data systems in driving QI success.

Finally, external factors, such as policies and regulations, influenced outcomes. Supportive policies, including those prioritizing resource allocations and standardizing QI frameworks, were found to positively impact project implementation. Qualitative insights suggested that addressing bureaucratic hurdles and enhancing policy support could further improve the environment for QI initiatives.

In conclusion, the successful implementation of QI projects requires addressing resource gaps, fostering a culture of improvement, ensuring effective leadership support, investing in staff development, establishing robust communication systems, leveraging data for decision-making, and aligning with supportive policies. These findings provide a comprehensive framework for hospitals aiming to enhance healthcare delivery through sustained QI efforts.

5.3. Recommendation

- Address resource gaps: Ensure adequate financial resources, equipment, and staffing to support the successful implementation of QI projects.
- Enhance leadership involvement: Foster active engagement of leadership in securing resources, motivating staff, and guiding QI initiatives to sustain momentum.
- Invest in staff training: Provide continuous training and capacity-building programs to empower staff and enhance their contribution to QI efforts.
- Strengthen communication systems: Establish clear communication platforms, including regular meetings and feedback mechanisms, to align teams and streamline project implementation.
- Promote a supportive organizational culture: Encourage openness to change and recognize staff contributions to build motivation and reduce resistance to QI efforts.
- Improve data access: Develop robust data systems that allow timely access to information for monitoring, evaluation, and evidence-based decision-making.
- Advocate for supportive policies: Align regulations and policies with QI goals to prioritize resources, standardize frameworks, and minimize bureaucratic hurdles.

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APPENDIX I: QUESTIONNAIRE

Questionnaire: Assessment of Determinants Quality Improvement Project Implementation in selected Hospitals, Addis Ababa City Administration.

Instructions:

First of all, I would to thank for your willingness to participate in this study. Please take your time to complete this questionnaire. Your responses will provide valuable insights into the current status and effectiveness of quality improvement projects in your hospital. All responses will be kept confidential and used solely for academic purposes.

Section 1: General Information

1. Name of Health Facility/Code No:_____
2. Type of Health Facility: ☐ Government ☐ Private
3. Respondent Code Number: _____
4. Age_____
5. Sex:
   ☐ Male ☐ Female
6. Qualifications:_____
7. Position/Title :(Please specify):_____
   ☐Hospital Manger/Director ☐Department Head
   ☐Quality Manger/Director ☐QI committee Member
   ☐Other (Please specify _____
8. Year of Experience: (Tick√ that apply)
   ☐0-5 years ☐11-15 years
   ☐6-10 years ☐16+ years

9. Department/Case team/unit: _____
10. How many beds available in the Hospital? _____
11. How many patients attended in the hospital annually? _____
12. How many patients admitted in the Hospital annually? _____

Section 2: Project Implementation Status

1. What type of quality improvement projects are your hospitals currently implementing? (Check √ all that apply)

☐Patient safety initiatives ☐Reducing hospital readmissions

☐Infection Prevention and control measures ☐Improving laboratory tests waiting time

☐Other (Please specify):

_____

_____

_____

_____

2. Which of the following QI methods are commonly used in your hospital's projects? (Select all that apply)

☐ Plan-Do-Check-Act (PDCA) cycle ☐ Total Quality Management (TQM)

☐ Six Sigma ☐ Root Cause Analysis (RCA)

☐ Lean methodologies ☐ Benchmarking

☐ Other (Specify): _____

3. How would you rate the overall implementation status of quality improvement projects in the hospital you are working at?
   a. Not Started
   b. Planning Phase
   c. Partially Implemented
   d. Fully Implemented
   e. Completed
4. Who is primarily responsible for leading quality improvement projects in your hospital?

☐Quality Improvement Department ☐Department Head

☐ Senior Management ☐External Consultant

☐Other (Please specify)_____

5. Who are the key external stakeholders or partners supporting your Hospital Quality Improvement (QI) project? (Select all that apply.)
   a. Government health agencies (MOH, Addis Ababa Health Bureau)
   b. Non-governmental organizations (NGOs)
   c. International development partners (e.g., WHO, UNICEF)
   d. Academic and research institutions

e. Other (please specify):_____

6. What type of support are external stakeholders or partners providing to your Hospital Quality Improvement (QI) project? (Select all that apply.)

a. Financial support or funding
b. Technical assistance or capacity building
c. Provision of medical equipment and supplies
d. Training and workforce development
e. Data analysis and performance monitoring
f. Advocacy and policy support
g. Other (please specify):_____

7. How would you rate the overall success of QI projects implemented in your hospital?

☐ Very unsuccessful
☐ Unsuccessful
☐ Neutral
☐ Successful
☐ Very successful

8. To what extent have QI projects contributed to the following outcomes in your hospital? (Scale: 1 = Not at all, 2 = To a small extent, 3 = To a moderate extent, 4 = To a large extent, 5 = To a great extent)

QI project Out come	**Not at all (1)**	**To Small Extent (2)**	**To a Moderate Extent (3)**	**To a large (4)**	**To a great extent (5)**
1. Improved patient satisfaction	☐	☐	☐	☐	☐
2. Reduced patient wait times	☐	☐	☐	☐	☐
3. Enhanced clinical outcomes (e.g., reduced infections, improved recovery rates)	☐	☐	☐	☐	☐
4. Training programs	☐	☐	☐	☐	☐
5.Increased staff efficiency and performance	☐	☐	☐	☐	☐

6.Enhanced resource utilization and cost savings	☐	☐	☐	☐	☐
7. Improved compliance with healthcare standards and regulations	☐	☐	☐	☐	☐

9. What challenges have you encountered in implementing QI projects, and how have they affected project progress?

_____
_____
_____

10. Can you describe any factors that contributed to the successful completion of a QI project?_____
_____
_____
_____

Section 3: Quality improvement project implementation determinant factors

I. Leadership Support

1. How would you rate the hospital leadership's commitment to QI initiatives?
(Please rate 1= Very low to 5= Very high)
   1. Very low
   2. Low
   3. Moderate
   4. High
   5. Very high
2. Does hospital leadership allocate sufficient resources for QI initiatives?
(Please rate 1=strongly disagree to 5= strongly agree)
   1. Strongly disagree
   2. Disagree
   3. Neutral
   4. Agree
   5. Strongly agree
3. How often does leadership communicate the strategic vision for quality improvement to staff? (Please rate 1= Never to 5= Always)
   1. Never
   2. Rarely
   3. Sometimes
   4. Often
   5. Always
4. In what ways has hospital leadership influenced the success or failure of QI initiatives?

_____
_____
_____
_____

5. Can you provide specific examples of how leadership has shown support or lack thereof for QI projects?

_____
_____
_____
_____

II. Resource Availability

1. To what extent are the following resources available to support QI projects? (Rate for each item, Very low=1 to Very high= 5

Resource Availability	**Very Low (1)**	**Low (2)**	**Moderate (3)**	**High (4)**	**Very High (5)**
1. Financial resources	☐	☐	☐	☐	☐
2. Staffing levels	☐	☐	☐	☐	☐
3. Technological tools	☐	☐	☐	☐	☐
4. Training programs	☐	☐	☐	☐	☐

2. How adequate are the resources for achieving QI goals? (Please rate 1=Not at all adequate to 5=Fully adequate)
    1. Not at all adequate
    2. Slightly adequate
    3. Moderately adequate
    4. Mostly Adequate
    5. Fully adequate
3. What resource limitations have you experienced in QI projects, and how did they impact the implementation process?_____
_____
_____
_____
4. Describe any specific resources that have been crucial for the success of QI projects._____
_____
_____
_____

III. Staff Training and Engagement

1. What type of training or support is provided to staff for quality improvement projects? (Select all that apply)
    - ☐ On-the-job training
    - ☐ Workshops and seminars
    - ☐ Online courses
    - ☐ Mentorship programs
    - ☐No specific training provided

☐Other (Please specify): _____

2. How frequently does the hospital provide QI project implementation training or skill development opportunities to motivate staff?

☐ Never ☐ Sometimes ☐ Always
☐ Rarely ☐ Often

3. Do staff members feel involved in decision-making processes related to QI?

1. Strongly disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly agred

4. How confident are you in your ability to contribute to QI projects?
(Rate for each item 1=Not confident to 5= Very confident)

Confidence Area	Not Confident (1)	Slightly Confident (2)	Moderately Confident (3)	Mostly Confident (4)	Very Confident (5)
1. Contributing effectively to QI projects	☐	☐	☐	☐	☐
2. Understanding QI project goals and objectives	☐	☐	☐	☐	☐
3. Using data and tools relevant to QI initiatives	☐	☐	☐	☐	☐

5. If your response of Q4 is not confident or slightly confident, why? Would you please specify your reason?

_____
_____
_____
_____

6. How has staff training influenced your ability to contribute to QI projects?_____
_____
_____
_____

7. What types of training or engagement would better support your involvement in QI initiatives?_____

_____

_____

_____

IV. Communication

1. Which type of communication channel was most commonly used for your hospital Quality Improvement (QI) project implementation?

☐**Structured team meetings** – Regularly scheduled in-person or virtual discussions to coordinate activities and address challenges.

☐**Email correspondence**: Sharing updates, meeting minutes, and action plans through email.

☐**Onsite communication**: Face-to-face discussions and direct feedback during rounds or project site visits.

☐**Digital collaboration tools:** Using platforms like, Zoom for virtual collaboration and task management.

☐**Periodic progress reports**: Sharing written reports and dashboards summarizing key milestones and outcomes.

2. How frequently are quality improvement meetings held to discuss project progress?
   - ☐ Weekly
   - ☐ Monthly
   - ☐ Rarely
   - ☐ Bi-weekly
   - ☐ Quarterly

3. How effective are the communication channels for sharing QI goals and updates within the hospital? (Please rate 1= Very ineffective to 5= Very Effective)
   1. Very ineffective
   2. Effective
   3. Neutral
   4. Effective
   5. Very effective

4. How frequently do you receive feedback on the progress of QI initiatives? (Please rate 1= Never to 5= Always)
   1. Never
   2. Rarely
   3. Sometimes
   4. Often
   5. Always

5. Do you feel informed about QI objectives and progress in your department? (Please rate 1=strongly disagree to 5= strongly agree)
   1. Strongly disagree
   2. Disagree
   3. Neutral
   4. Agree
   5. Strongly agree

6. Can you describe any communication barriers that have impacted on the effectiveness of QIprojects?_____

_____

_____

_____

7. In your opinion, what could be done to improve communication regarding QI goals and updates?_____

_____

_____

_____

V. Hospital Culture

1. To what extent does the hospital encourage continuous improvement and openness to change? (Please rate 1= Not at all - 5= to a great extent)
   1. Not at all
   2. To a small extent
   3. To a moderate extent
   4. To a large extent
   5. To A great extent
2. How supportive is the hospital working environment toward quality improvement initiatives?
   (Please rate 1= Very unsupportive to 5=Very supportive)
   1. Very Unsupportive
   2. Unsupportive
   3. Neutral
   4. Supportive
   5. Very Supportive
3. Do staff members feel comfortable suggesting changes or improvements?
   (Please rate 1=strongly disagree to 5= strongly agree)
   1. Strongly Disagree
   2. Disagree
   3. Neutral
   4. Agree
   5. Strongly Agree
4. Does your hospital have a system for recognizing and rewarding staff for outstanding performance regarding QI project implementation?
   ☐ Yes ☐ No
5. If yes, how effective are the hospital's recognition and reward systems in motivating staff for QI implementation? (Rate 1= Very ineffective to 5= Very effective)
   1. Very ineffective
   2. Ineffective
   3. Neutral
   4. Effective
   5. Very effective
6. How would you describe the hospital culture with respect to quality improvement and openness to change?

   _____

   _____

   _____

   _____

7. What aspects of the hospital culture support or hinder QI efforts?

   _____

   _____

   _____

   _____

VI. Data-Driven Decision-Making

1. How often are data analytics used to inform QI project decisions? (Please rate 1= Never to 5= Always)
    1. Never
    2. Rarely
    3. Sometimes
    4. Often
    5. Always
2. How accessible is the data needed to guide QI initiatives? (Please rate 1= Very in accessible to 5= very accessible)
    1. Very Inaccessible
    2. Inaccessible
    3. Neutral
    4. Accessible
    5. Very Accessible
3. How is the success of quality improvement projects evaluated in your hospital? (Select all that apply)
    - ☐Regular performance metrics and indicators
    - ☐ Patient feedback and satisfaction surveys
    - ☐ Staff feedback and engagement surveys
    - ☐ Internal audits and assessments
    - ☐ External evaluations
    - ☐ Other (Please specify): _____
4. How often is evidence-based practice used in QI interventions?(Please rate 1= Never to 5= Always)
    1. Never
    2. Rarely
    3. Sometimes
    4. Often
    5. Always
5. Can you provide examples of how data has influenced decision-making in QI projects?

    _____

    _____

    _____
6. What challenges have you encountered in accessing or using data for QI initiatives?

    _____

    _____

    _____

    _____

VII. External Context Factors

1. To what extent do external regulations and policy influence the prioritization of QI projects?(Please rate 1= Not at all to 5= to a great extent)
    1. Not at all
    2. To a small extent
    3. To a moderate extent
    4. To a large extent
    5. To A great extent

2. Are QI projects aligned with external healthcare policies, regulations or benchmarks? (Please rate 1=strongly disagree to 5= strongly agree)
    1. Strongly disagree
    2. Disagree
    3. Neutral
    4. Agree
    5. Strongly agree
3. How often does external policy affect the scope of the Hospital QI projects? (Please rate 1= Never to 5= Always)
    1. Never
    2. Rarely
    3. Sometimes
    4. Often
    5. Always
4. How have external factors (Example regulations, policies and accreditation agents) influenced the planning and execution of QI projects?

    _____
    _____
    _____
    _____
5. What changes in external policies or regulations would benefit QI initiatives at your hospital?_____

    _____
    _____
    _____
    _____

Thank you for your time and valuable insights. Your responses will contribute significantly to understanding and improving quality improvement project practices in the Healthcare system. If you have any additional thoughts or comments, please feel free to share with us

APENDEX II: CONSENT FORM

Title of the Study:Assessment of Determinants of Project Quality Management in the Health Sector: In the Case of Quality Improvement Project Implemenation in selected Hospitals, Addis Ababa City Administration.

Principal Investigator:

Wessen Nega
St. Mary University, Addis Ababa

Purpose of the Study:
The purpose of this study is to explore the implementation status and determinant factors of quality improvement projects inselected Hospitals within Addis Ababa. This study aims to identify key factors influencing the success or failure of these projects and provide recommendations for enhancing healthcare quality.

Procedures:
If you agree to participate in this study, you will be asked to complete a questionnaire about your experience with quality improvement projects in your hospital.. The information you provide will be kept confidential and used only for academic purposes.

Duration:
The questionnaire will take approximately 30-40 minutes to complete.

Confidentiality:
All information provided will be treated as confidential. Your name or any other identifying information will not be used in any reports or publications resulting from this study. Data will be stored securely

Voluntary Participation:
Your participation in this study is entirely voluntary.

Benefits:

Your participation will contribute to a better understanding of the factors that influence the success of quality improvement projects in hospitals. The findings of this study may lead to improvements in healthcare services and patient outcomes.

Wessen Nega
Phone: +251-983979200/936043904
Email: wossennega77@gmail.com

Consent:

I have read and understood the information provided above. I have had the opportunity to ask questions and have received satisfactory answers. I voluntarily agree to participate in this study.

- Signature: _____
- Date: _____

APENDEX III: INFERENTIAL STATSTICAL (COR and AOR) RESULT

S/N	Determinants Variables	Response	Dependent Variable (QI Project outcome: Patient clinical outcome)		Crudes Odds Ratio with 95% CI	Adjusted Odds Ratio with 95% CI
			Improved	Not Improved		
1	**Leadership support**					
	Leadership commitment	Yes	57	20	0.006 (CI:1.42-8.85)	0.042 (CI: 1.04–8.64).
		No	12	15		
	Leadership allocate resource	Yes	56	25	0.26 (CI: 0.66-4.44)	
		No	13	10		
	Leadership communicate strategic vision of QI	Yes	53	16	0.002(CI:0.10-0.60)	
		No	16	19		
2	**Resource availability**					
	Financial resource	Yes	55	22	0.067 (0.94-5.72)	
		No	14	13		
	Staffing level	Yes	62	24	0.009 (CI:1.40-11.69)	
		No	7	11		
	Technological tool	Yes	61	25	0.036 (CI:1.07-8.02)	
		No	8	10		
	Training programs	Yes	57	23	0.057 (CI:0.97-6.31)	
		No	12	12		
	Adequacy of resources	Yes	58	19	0.042 (CI:1.04-8.64)	0.04 (CI:1.04-8.64)
		No	11	16		
3	**Staff training and engagement**					
	Training schedule	Yes	60	35	0.06 (CI:1.47-10.40)	
		No	9	13		
	Staff engagement in decision making process	Yes	64	27	0.23 (CI0.67-4.93)	
		No	5	8		
	Staff confidence on contributing QI project effectively	Yes	58	26	0.03 (CI:1.13-12.67)	
		No	11	9		

4	**Communication**					
	Effectiveness of communication channel	Yes	64	24	0.03 (CI:1.0.05-0.54)	0.022 (CI:1.20-10.44
		No	5	11		
	QI project progress performance feedback	Yes	64	32	0.81 (CI:0.59-13.16)	
		No	5	3		
	QI project objective performance d progress updating	Yes	66	31	0.18 (CI:0.59-13.46)	
		No	3	4		
5	**Hospital culture**					
	Hospital encourage continuous improvement and openness to change	Yes	50	9	0.003 (CI:1.69-12.72)	0.003 (CI:1.69-12.72)
		No	19	26		
	Hospital working environment supportiveness for QI project	Yes	59	30	0.97 (CI:0.30-3.13)	
		No	10	5		
	Staff comfort to suggest change or improvement	Yes	62	27	0.089 (CI:0,86-7.96)	
		No	7	8		
6	**Data driven decision making practice**					
	Data analytics practice for QI project decision	Yes	50	24	0.008 (CI:1.36-8.03)	
		No	13	17		
	QI intervention status using evidence based practice	Yes	68	30	0.046 (CI:1.01-5.61)	
		No	1	5		
7	**External context factors**					
	Influence of external policy and regulation on prioritizing of QI projects	Yes	47	27	0.33 (CI:0.24-1.61)	
		No	22	8		
	QI project alignment with external health care policies, regulations and bench mark	Yes	64	32	0.085 (CI:0.89-5.67)	
		No	5	4		
	Influence of external factors QI projects	Yes	54	29	0.11(CI:085-4.58)	
		No	15	6		

Source:Own survey, 2024