Addis Ababa University

College of Business and Economics

School of Commerce

Title: Assessment of factors affecting the success of Quality Improvement projects of selected public hospitals in Addis Ababa, Ethiopia

By Begashaw Belay

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Addis Ababa, Ethiopia

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Title: Assessment of factors affecting the success of a Quality Improvement projects of selected public hospitals in Addis Ababa, Ethiopia

By Begashaw Belay

Advisor: Dr. Abraraw Chane (PhD)

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Addis Ababa, Ethiopia

DECLARATION

I, the undersigned, declare that this study entitled "Assessment of Factors Affecting the Success of Quality Improvement Projects of Selected Public Hospitals in Addis Ababa, Ethiopia" is my own work. I have undertaken the research work independently with the guidance and support of my research advisor Dr. Abraraw Chane. I also declare that it is not submitted before to any institution for any purpose & all the resources used in the thesis are duly acknowledged & referenced.

Name: Begashaw Belay

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Date: _____

Advisor: **Dr Abraraw Chane (PhD)**

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Date: _____

STATEMENT OF CERTIFICATE

This is to certify that the project work prepared by Begashaw Belay Abichu, titled: "Assessment of Factors Affecting the Success of Quality Improvement Projects of Selected Public Hospitals in Addis Ababa, Ethiopia"; submitted in partial fulfillment of the requirements for the Degree of Master of Arts in Project Management complies with the regulations of the University and meets the accepted standards with respect to originality and quality.

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Abstract

This thesis aimed to assess contextual factors influencing success in quality improvement projects of selected public hospitals in Addis Ababa, Ethiopia. The study used a Descriptive cross-sectional research design to explain the contextual factors using the Model for Understanding Success in Quality. The researcher adopted quantitative research methods. The study was conducted across seven public hospitals that are currently undertaking quality improvement projects. Out of 88 participants 84 which is 95.45% employees returned properly answered self-administered questionnaires distributed using a non-probabilistic purposive sampling method by using an electronic data collection tool. The IBM SPSS version 25 is used in the study to analyze & present the descriptive statistics. Total MUSIQ scores ranged from 79 to 143 with a mean score of 121.48 ± 13.27 and median of 123 and an IQR of 116-130.75. Out of the total 168 expected performance scores using the MUSIQ tool 72.3% score was addressed and this implies the QI project has a reasonable chance of success as a whole. The study found that the performance of the QI team and the organizational success factors had a low MUSIQ score. Strengthen QI team leadership and engagement, addressing microsystem challenges and capacity gaps, and enhancing organizational engagement and support, are recommended.

Keywords: QI collaborative, MUSIQ, QI project, Addis Ababa, Ethiopia, Contextual success factors.

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List of Acronyms

BMJ: British Medical Journal

CEO: Chief executive Director

CQI: Continuous Quality Improvement

FDRE: Federal Democratic Republic of Ethiopia FMOH: Federal Ministry of Health

HSTP: Health Sector Transformation Plan

IQR: Inter quartile range

MFI: Model for Improvement

MUSIQ: Model for Understanding Success in Quality

NHQS: National Health Quality Strategy

NHS: National Health Service

QI: Quality Improvement

QIP: Quality Improvement Projects

SD: Standard deviation

SNNP: South Nations Nationality People

Chapter One

1. Introduction

1.1. Background of the study

Quality improvement projects (QIPs) in healthcare have grown to be an essential component of the global healthcare sector (Spieker, 2020). Enhancing patient satisfaction, lowering healthcare costs, and delivering improved health outcomes all depend on improving the quality of healthcare services (Teisberg, Wallace, & O'hara, 2020). But even though quality improvement programs are widely used, it's still difficult to make them successful, particularly in poor nations (Maphumulo & R. Bhengu, 2019).

Quality improvement is an ongoing activity that aims to improve the delivery of healthcare services by methodically assessing and refining healthcare procedures (Hill, Stephani, Sapple, & J. Clegg, 2020). Numerous elements that affect the performance of quality improvement initiatives in healthcare organizations have been discovered by studies. These elements include of organizational support, teamwork, leadership, culture, and resources (Kaplan, Provost, Froehle, & Margolis, 2012) (Stelson, Hille, Eseonu, & Doolen, 2017). To guarantee that a project has sufficient resources and support, leadership is essential when spearheading quality improvement initiatives (Wendwessen, Dereje, & Gize, 2020).

Furthermore, substantial resources including staff, money, and technology are needed for quality improvement projects to be successful. An organization's culture is extremely important because it affects how its members view their jobs, their coworkers, and the organization as a whole. For healthcare professionals to effectively collaborate and make sure that quality improvement programs are in line with departmental objectives, teamwork is essential. Organizational support is essential for creating a pleasant work environment that promotes innovation, cooperation, and quality improvement (Aburayya, et al., 2020) (Gage, Gotsadze, Seid, Mutasa, & Friedman, 2022).

The goal of quality improvement initiatives is to pinpoint areas where healthcare delivery is deficient and then put solutions in place to enhance outcomes, safety, and quality. QIPs are implemented at public hospitals in Ethiopia, with an emphasis on infectious and non-communicable diseases (Patterson, Worku, Jones, Clary , Ramaswamy, & Bose, 2021), HIV/AIDS (Shiferaw & Misganaw, 2020), and maternal and child health (Hagaman, et al., 2020) (Sori, Debelew, Degefa, & Asefa, 2023). Nonetheless, there is still a lack of QIP success at Addis Ababa's public hospitals, and many initiatives fall short of their goals.

Lack of funding, a shortage of medical professionals, and poor infrastructure are major problems facing Ethiopia's healthcare system. In response, the government has launched a variety of

projects, including Health Sector Transformation Plan II 2020/21-2024/25 (2013 EFY - 2017 EFY) (Health-Ethiopia, 2021)which focuses on quality improvement in public institutions. On the other hand, little is known about the variables that affect these hospitals' quality improvement initiatives' effectiveness.

The National Healthcare Quality and Safety Strategy (NQSS), (Efy), 2022), is a list of policies and initiatives that Ethiopia's Ministry of Health has put into place to raise the standard of healthcare services offered in public institutions. These policies include increasing the number of people who can access healthcare services, implementing innovative health technologies, developing capacity, and encouraging the use of evidence when making decisions. In Ethiopia, public hospital healthcare services are still not up to par, despite these efforts. This issue has been exacerbated by several variables, including insufficient management support, low staff engagement, and inadequate resources.

The purpose of this study is to determine the variables that affect the effectiveness of quality-improvement initiatives in particular public hospitals in Addis Ababa, Ethiopia. The results of this research will offer valuable perspectives on tactics that may be employed to enhance the efficacy of quality enhancement initiatives at these medical facilities, hence augmenting the general quality of healthcare provisions in Ethiopia.

1.2. Background of the organization

Addis Ababa, Ethiopia's capital city contains various public hospitals that provide general healthcare services. Because of their limited resources, capacity, and infrastructure, these hospitals struggle to provide high-quality healthcare services. Thus, raising the standard of healthcare services and eventually improving population health outcomes requires an understanding of the variables influencing the effectiveness of quality improvement initiatives at these facilities.

Health and health-related data indicate that Addis Ababa city has twelve public hospitals catering to the general public. The hospitals in Addis Ababa are part of Ethiopia's secondary or tertiary healthcare system. According to the 2014 EFY annual performance report, Ethiopian hospitals are at different stages of development when it comes to the execution of QI initiatives. Many programs ranging in length from six to eighteen months are being implemented in hospital settings. Project management is done by hospital units in charge of quality improvement. Nonetheless, it is also envisaged that hospital employees who are not on the QI unit team would take part in carrying out the QI projects.
The study focuses on public hospitals in Addis Ababa, which are part of the national healthcare system and serve the general public.

1.3. Statement of the problem

One of the most important factors influencing patient outcomes and satisfaction is the quality of healthcare services. The backdrop of Addis Ababa, Ethiopia's public hospitals calls for an evaluation of the variables influencing the outcomes of quality-improvement initiatives.

Hospital quality programs are the subset of quality programs that have drawn the most attention worldwide, especially US hospital overall quality management programs. However, there isn't much evidence of QI in developing countries (Hill, Stephani, Sapple, & J. Clegg, 2020). In a hospital-based descriptive study carried out in Sri Lanka, top management commitment, training, teamwork, physical structure, and monitoring system were found to be independent variables that influence the CQI project success (Ranagala & S. Shridharan, 2022). A study conducted in Ethiopia looked at the variables affecting the Southern Nation Nationality and People Regional State's basic hospitals and health centers' continuous quality improvement (Wendwessen, Dereje, & Gize, 2020).

Ethiopia is among the emerging nations where the healthcare system faces challenges in meeting the increasing demand for healthcare services while maintaining a high standard of care. The majority of healthcare services are provided by public hospitals; however, these facilities have many shortcomings, such as inadequate funding, outdated equipment, and a lack of qualified medical staff. Numerous national and international programs have been put in place to improve healthcare quality because it is a crucial part of providing healthcare. The success rate of QIPs is still low despite these efforts, and it's unclear what factors contribute to this.

The provision of high-quality care in healthcare institutions depends on the success of quality improvement initiatives. However, many healthcare organizations—including those in Ethiopia—continue to face difficulties in making such ventures successful. Thus, this study's goal is to identify the variables that affect the effectiveness of quality-improvement initiatives in public hospitals in Addis Ababa, Ethiopia.

1.4. Research questions

- *Research Question 1:* To what extent does the success of quality improvement projects depend on the QI team's level of collaboration, composition, and performance?
- *Research Question 2:* How much of an impact does organizational leadership have on promoting quality-improvement programs in Ethiopia's public hospitals in Addis Ababa?
- *Research Question 3:* To what extent does the success of quality improvement projects depend on the performance level of microsystems?
- *Research Question 4:* To what extent does the success of quality improvement projects depend on the performance of the external environment?
- *Research Question 5:* How much support does QIC provide for quality improvement programs to be successful?

- *Research Question 6:* What tactics can be used to increase the effectiveness of quality improvement initiatives in particular public hospitals in Addis Ababa, Ethiopia?

1.5. Research objectives

General objective

The objective of this study is to assess factors affecting the success of QI projects of selected public hospitals in Addis Ababa, Ethiopia

Specific objectives

- To determine the effect of QI team, team composition, and collaboration on the success of quality improvement projects in selected public hospitals in Addis Ababa, Ethiopia.
- To examine the role of organization leadership in driving quality improvement initiatives in public hospitals in Addis Ababa, Ethiopia
- To assess the impact of microsystem contexts on the success of quality improvement projects in public hospitals in Addis Ababa, Ethiopia.
- To investigate the effect of external environmental factors on the success of quality improvement projects in public hospitals in Addis Ababa, Ethiopia.
- To explore the role of data infrastructure, resource availability, and other QI support and capability in influencing the success of quality improvement projects in public hospitals in Addis Ababa, Ethiopia.
- To provide recommendations and strategies for improving the success of quality improvement projects in public hospitals in Addis Ababa, Ethiopia, based on the study findings

1.6. Rational of the study

This study aims to uncover significant factors that contribute to the success of quality improvement projects in selected public hospitals in Addis Ababa, Ethiopia. The purpose of this research is to better grasp the variables that are essential to the effective execution of quality-improvement initiatives in public hospitals and the subsequent enhancements in the standard of healthcare services offered to the general public.

Ethiopia's healthcare system faces many obstacles, and improving the system as a whole will depend on figuring out the crucial success criteria that allow public hospitals to raise the caliber of the services they provide. Policymakers, medical professionals, and researchers will have a better understanding of the intricate elements influencing the success or failure of quality improvement initiatives in Ethiopia's public hospitals thanks to this study.

Furthermore, the results of this study can be used to improve the quality of healthcare in other developing nations in the region that are dealing with comparable issues and problems in their healthcare systems.

1.7. Significance of the study

The purpose of this study is to evaluate the variables affecting the effectiveness of quality improvement initiatives in public hospitals in Addis Ababa. First off, the study clarifies the difficulties Ethiopian public hospitals face in implementing quality improvement initiatives. Policymakers and hospital administrators can utilize this data to pinpoint problem areas and put into practice practical quality improvement plans. The study aims to determine the variables that impact the accomplishment of quality enhancement initiatives in public hospitals. The results can be utilized to create policies and programs that target the factors found and encourage the accomplishment of quality improvement initiatives. Thirdly, the study adds to the body of knowledge regarding initiatives for quality enhancement in hospital environments. The study's conclusions can be applied to future investigations into the variables influencing quality-improvement initiatives in various healthcare contexts.

1.8. Delimitation/Scope of the study

The study will concentrate on elements such as employee engagement, resource allocation, leadership support, and microsystems, and it will only look at public hospitals in Addis Ababa. Private hospitals, medical facilities located outside of Addis Ababa, and unrelated variables to quality improvement initiatives will not be covered by the study. The study will consider a limited number of public hospitals in Addis Ababa as the sample size, and not all public hospitals in the region or in the country. The study will make use of primary data that will be gathered from project teams, quality managers, and hospital administrators through questionnaires and interviews. The study's primary focus will be on quality-improving initiatives that have been carried out in the past year. The study will make use of data that will be gathered from hospital employees participating in quality improvement projects.

1.9. Operational definition of key terms

Environment: The community and society in which your organization is located. The geographical, political, and economic context in which your company (or office) operates is covered, as are any related rules, procedures, payment methods, etc.

Microsystem: A small group of people working together regularly to provide care to discrete populations of patients. Microsystems may include doctor’s offices or clinics, hospital units, hospital wards, or departments within a business/billing office.

Microsystem Leaders: Top managers with responsibility for the operation and administration of the microsystem affected by this QI project. Microsystem leaders may include department or division chairs, department managers, ward/unit medical or nursing directors, business unit managers, a senior physician in a large physician group, etc.

Organization: The largest collective unit that provides service to a population of patients. For inpatient services, we are typically referring to a hospital, nursing home, or long-term care facility. For services in the outpatient setting, the organization may be a health care plan,

hospital, or health care system (e.g., HMO-affiliated clinic, hospital-affiliated clinic, integrated services organization, etc.) However, some outpatient settings (clinics or offices) are not part of a larger organization, and in this case, the organization may refer to your clinic/office/physician group.

QI Team: A group comprised of individuals who collaborate on the QI project. The team is defined by its members' common objectives and shared responsibility for the QI project's outcome. Members of the QI team are often in charge of organizing and carrying out tests of change, as well as gathering and managing data. Physicians, nurses, pharmacists, data managers, administrative personnel, and others may be on the QI team.

QI Team Leader: The member of the QI team that is responsible for directing the work of the team.

Senior Executives: People with the overall responsibility for the operation and administration of the organization. Senior executives may hold various titles. At a hospital or HMO/Hospital affiliated clinic, these may include president, CEO, COO, members of the board of directors or cabinet, senior or vice president, or chairs or vice chairs of nursing or medicine. In a smaller office or clinic, these may include senior partner or members of the partnership group.

The Success of QI project: as reaching the predefined target percentage, or “aim” of the QI project determined by the QI leadership team.

Chapter Two

2. Literature Review

2.1. Introduction

This chapter reviews the literature on quality improvement projects in public hospitals, focusing on their performance and obstacles. The idea of success factors and their impact on quality improvement project activities are the main areas of focus. The first part of this chapter looks at quality improvement concepts and their relevance to the objectives of this study. This is followed by a discussion on the factors of success that were picked for study. A summary of the literature reviewed is then presented. From the discussion of the factors influencing the success of QI projects, a conceptual framework is then presented.

2.2. Theoretical Review

A theoretical framework serves as the foundation for every study (P.Meyer & R.Maltin, 2010). Because the interlocking relationships must be examined, a theory generates research (Wehbe-Alamah, 2015). According to (McDonald, et al., 2007), the "what" question is expanded by addressing "how" and "why" these quality improvement (QI) strategies or their components may or may not be effective, and under what conditions ("when" and "where").

This study is anchored by four theories that can help in understanding quality improvement namely: Theory of change (ToC), Resource based view/Theory (RBV), Innovation Diffusion theory (IDT) and Organizational theory (OT). Additionally, quality definition, quality improvement concept and project implementation are also included.

2.2.1. Theory of change

The theory of change (ToC) is a valuable framework and planning tool used to evaluate the effectiveness of interventions and desired outcomes by identifying intended changes and developing a well-structured approach to achieve them (Vogel, 2012). It starts with the identification of a desired outcome and works backward to evaluate the inputs, activities, and outputs required to reach that outcome. The model assumes that change is achieved through a series of interconnected and interdependent steps and that a change in one aspect of an organization affects all other aspects.

The Theory of Change model suggests that successful implementation of these projects requires identification of resources, building capacity, training, and motivation of staff, and integration of quality improvement activities into a hospital's existing processes. Evaluation of the effectiveness of quality improvement projects is crucial to understand whether measurable improvements are achieved in terms of health outcomes, patient satisfaction, and efficiency.

Understanding the ToC helps in determining how quality improvement projects in public hospitals can trigger positive change within the healthcare system, including aspects such as patient satisfaction, reduced errors, and efficient healthcare delivery. The ToC will guide the evaluation of existing quality improvement initiatives, identifying gaps, and formulating evidence-based strategies for enhanced implementation (Weiss C. , 1995).

2.2.2. Resource based view/Theory

The resource-based view (RBV) is a strategic management theory that explains how organizational performance and competitive advantage can be achieved through the effective use of resources (Barney, 1991). The resource-based view (RBV) theory asserts that a firm's resources, capabilities, and competencies are the key drivers of its performance and competitive advantage. In the context of healthcare, RBV suggests that hospitals with the right resources are likely to be more successful in implementing quality improvement projects. Resources can be in the form of human capital, physical assets, financial capacity, and relationships with stakeholders. The RBV approach can be applied to the proposed research in several ways. Firstly, it can be used to identify the essential resources hospitals need to implement quality improvement projects successfully. For example, to initiate quality improvement projects, hospitals may need financial resources to purchase equipment, staff training to build capacity, and technology to monitor and evaluate the interventions' effectiveness. Secondly, the RBV argues that hospitals should focus on building core capabilities that lead to sustainable competitive advantages. This approach requires hospitals to understand their unique strengths, develop strategic capabilities and expertise in their priority areas, and continually invest in these areas.

2.2.3. Innovation Diffusion theory

Innovation diffusion theory (IDT), a theory proposed by Rogers (Rogers, 2010), investigates the process through which innovations spread across different stakeholders in a social system over time. Innovation Diffusion Theory explains how new ideas and practices are adopted and spread within an organization. The innovation adoption process has five stages, according to IDT: knowledge, persuasion, decision, implementation, and confirmation. The theory suggests that the acceptance of innovation is influenced by the perceived value of the innovation, the characteristics of the innovation and the adopter, and the communication channels through which information is spread.

IDT is essential in the context of quality improvement projects because successful implementation of quality improvement projects requires healthcare professionals' willingness to adopt new practices. The knowledge stage involves an understanding of the benefits of quality improvement and how they can be achieved. The persuasion stage involves adopting quality improvement projects as an organizational priority. The decision stage is where healthcare professionals decide to allocate resources towards quality improvement projects. The rate at which knowledge about specific innovations is exchanged and realized by the various stakeholders affects the overall success of quality improvement projects.

2.2.4. Organization theory

Organizational theory (OT) provides frameworks for understanding the internal and external factors influencing the way organizations function and adapt to change (Scott & Davis, 2007). These factors range from organizational structure, culture, and leadership to environmental factors such as political, economic, and social issues. Organizational theorists argue that the structure of an organization should be designed to meet its goals and objectives effectively. In the case of healthcare, this means ensuring that the organization's structure facilitates quality (Nembhard & Amy C. , 2006). The proposed research applies organizational theory by examining the organizational structure of selected public hospitals in Addis Ababa, Ethiopia, and how this structure influences the implementation of quality improvement projects. Hospitals with a decentralized organizational structure, for example, are often more effective in implementing quality improvement projects as it allows for better coordination of resources and decision-making. Additionally, organizational culture, values, and goals can also facilitate or hinder the implementation of quality improvement projects.

2.2.5. Quality Improvement Concepts

Definition of Quality

Quality in healthcare includes technological, interpersonal, and clinical elements of care. "The degree to which health services increase the likelihood of the desired health outcomes and are consistent with current professional knowledge" is how the Institute of Medicine (IOM) defines quality. Clinical outcomes metrics, patient satisfaction surveys, and procedural measures can all be used to evaluate quality (Baker, 2001).

When it comes to healthcare, quality is defined as the extent to which patients' demands are met and their health outcomes are improved by the effective and efficient delivery of medical services (McDonald, et al., 2007). The following areas should be prioritized in healthcare quality improvement initiatives: fairness, timeliness, effectiveness, safety, and patient-centeredness (Baker, 2001). The operational definition of quality will also be useful in determining the variables affecting initiatives for quality improvement and gauging their efficacy.

Quality Improvement

The process of continuously addressing performance gaps and putting evidence-based strategies into practice to improve the quality of healthcare services is known as quality improvement, or QI (Batalden & Davidoff, 2007). Ensuring ongoing enhancements to processes, services, and products is the aim of quality management. It is a quality improvement leadership paradigm (Hackman & Wageman, 1995).

Establishing performance indicators, carrying out audits, determining what needs to be improved, implementing corrective measures, and tracking results are all part of quality improvement projects. In order to evaluate the effectiveness of quality improvement projects, it

is essential to comprehend principles related to quality improvement, such as the Plan-Do-Study-Act (PDSA) framework.

Making measurable improvements in a specific area of healthcare delivery is the primary objective of quality improvement, which typically involves utilizing theories or evidence of what might work but necessitates local testing to determine the most effective strategy (Goodman, et al., 2016). Using an iterative methodology, QI tests change ideas by embracing an iterative theory of change that stresses an ongoing process of planning and testing changes, analyzing and learning from comparing the results to an expected outcome and modifying the hypothesis in response to test results (Reed & Card, 2016).

There are several acknowledged QI techniques available. Often referenced techniques include experience-based co-design, Lean, Six Sigma, and the Model for Improvement (Ham, Berwick, & Dixon, 2016). As per the national healthcare quality plan, Ethiopia has approved MFI and Kaizen as the official quality improvement models for project implementation. A dictionary of frequently used QI tools is available at the Quality Improvement Hub of the National Health Service (NHS) Scotland (Backhouse & Ogunlayi , 2020).

In quality improvement programs, data are used to support decisions that are grounded in reliable evidence. It has long been practiced to document early efforts, collect data continually to evaluate the impact of change concept implementation throughout time, and understand variations in efforts and outcomes. When measuring improvement, this narrative method is frequently prioritized over problems with data quality and completeness. Before advocating for the growth and context-specific adaptation of change ideas, QI encourages small-scale experimenting with them. Interventions assessed utilizing a QI approaches are more likely to spread and be adopted by others, leading to increasing scale and conviction in their efficacy. Relying once more on an iterative testing process, the effective dissemination of improvement hinges on the adaptation of interventions to new settings, patient and staff groups, resource availability, and even individual preferences of healthcare practitioners in the neighborhood (Backhouse & Ogunlayi , 2020) (Jones, Kwong, & Warburton , 2021).

2.2.6. Project implementation and project performance

"A temporary endeavor undertaken to create a unique product, service, or result" is what is meant to be called a project. An operation, on the other hand, refers to "work done in organizations to sustain the business". Projects differ from operations in that they end when their objectives are fulfilled or the project is terminated (Turner, 2009).

Projects aimed at enhancing the quality of a product or services are known as quality improvement, on the other hand. These projects are meant to pinpoint the challenges or problems that are compromising the caliber of the good or service and devise solutions. The main distinction between quality improvement projects and projects is that the former are concentrated on a particular facet of the product or service, whilst the latter may try to accomplish a variety of

goals such as boosting sales or raising customer happiness. While projects may not always entail such ongoing monitoring and analysis, quality improvement programs usually require constant monitoring and analysis of data to find areas where improvements can be made.

The process of carrying out scheduled tasks to accomplish project goals and objectives is known as project implementation (Kerzner, 2022). It entails organizing, carrying out, and overseeing the project's operations. Within the framework of this study, "project implementation" refers to how public hospitals use quality improvement programs to achieve their goals.

In summary, project implementation acts as a roadmap for carrying out the investigation, while quality definition and QI concepts offer the fundamental knowledge for the suggested research.

2.3. Empirical Review

This section dwells on literature reviewed in relation to the objectives of the study as set out below. The discussion encompasses four key areas: project management in healthcare, quality improvement in healthcare settings, quality improvement in the Ethiopian health sector, and factors affecting quality improvement implementation.

2.3.1. Project Management in Health Care

A project is a short-term undertaking with a defined beginning and termination point (with constraints of time, funds, or scope) usually taken up in a bid to bring about a positive impact.

Project management is an organized approach to planning, controlling, and executing projects within a healthcare setting. Project management is a critical aspect of healthcare systems, especially in facilitating the efficient implementation of quality improvement programs (Dixon-Woods, Leslie, Tarrant, & Bion , 2013).

Given the complexity of the healthcare industry, project management is crucial. Effective project management plays a crucial role in the accomplishment of quality improvement initiatives by guaranteeing that the projects remain on schedule, stay under budget, and are finished on schedule. The value of project management in healthcare quality improvement initiatives has been shown by numerous studies. For instance, a study conducted by (Lee, Choi, Kang, Cho, & Chae, 2002) discovered that effective project management was necessary to make healthcare quality improvement initiatives successful.

2.3.2. Quality Improvement in Ethiopian Healthcare services

The goals of quality improvement are to lower expenses, enhance clinical outcomes, and improve patient care (Bodenheimer, Wagner, & Grumbach, 2002). Quality improvement interventions should focus on six essential areas, according to the Institute of Medicine (IOM): patient-centered care, efficiency, timeliness, effectiveness, equity, and safety (Baker, 2001). These frameworks include performance monitoring on an ongoing basis, the discovery of best practices, and the adoption of appropriate care procedures. Numerous methodologies are employed, including the Plan-Do-Study-Act (PDSA) cycle, Continuous Quality Improvement,

and Total Quality Management, among others (Nicolay, et al., 2012). The methodical process of assessing patient care and healthcare systems to find areas for improvement is known as quality improvement in healthcare.

Due to evidence that quality improvement can enhance patient outcomes, lower healthcare costs, and increase patient safety, there has been a surge in interest in this area in recent years. Lean management, Six Sigma, and overall quality management are a few of the methods for improving quality in the healthcare industries that have been developed. According to a study by (Rosa, Marolla, Lega, & Manfredi, 2021), lean management can effectively raise the standard of healthcare services.

"Comprehensive care that is measurably safe, effective, patient-centered, and uniformly delivered in a timely way that is affordable to the Ethiopian population and appropriately utilizes resources and services efficiently" is the definition of quality given by the Ethiopian National Health Quality Strategy (Efy), 2022).

The healthcare system in Ethiopia is confronted with several obstacles, including insufficient funding, a high rate of illness, and insufficient accessibility to medical care. As a result, the government has implemented several QI programs, including the Ethiopian Hospital Services Transformation Roadmap (Health-Ethiopia, 2021). Additionally, the Ethiopian National Patient Safety and Quality Healthcare Strategies and the Ethiopian Health Extension Program support the delivery of healthcare (Assefa, Woldie, Sinkie, & Woldemichael, 2012).

The Ethiopian government has made quality improvement in the country's healthcare system a top goal in recent years. The government has put in place several initiatives and plans to raise the standard of healthcare delivery. For instance, the Health Sector Transformation Plan, which aims to enhance the quality of healthcare services through the execution of quality improvement activities, has been implemented by the Ministry of Health in Ethiopia. Several studies have been conducted on quality improvement in the Ethiopian health sector, including a study by (Bayile, Kassa, Moges, & Mehare, 2020) which found that improvement initiatives involving healthcare providers were more effective than those implemented by management alone.

2.3.3. Contributing Factors for the success of Quality Improvement Projects

Several variables could affect how well quality improvement projects are carried out. A strong organizational culture that encourages continuous improvement, stakeholder participation, leadership commitment and support, and effective communication are a few of these elements (Kaplan, Provost, Froehle, & Margolis, 2012). Furthermore, outside variables like financing, laws, and policies may also have an impact on the outcome of quality improvement projects (Ferlie & Shortell, 2001). Quality improvement initiatives in Ethiopian public hospitals may be greatly impacted by several factors, including the availability of resources, the skills and expertise of healthcare professionals, planning, monitoring, and evaluation practices, teamwork,

communication, and workload (Bayile, Kassa, Moges, & Mehare, 2020) (Wendwessen, Dereje, & Gize, 2020).

According to a study by (Shea, Turner, Albritton, & L. Reiter, 2018), respondents' opinions of specific contextual elements (such as the significance and value of QI) varied depending on the staff member's function. This study examined contextual factors that impact the implementation of quality improvement in primary care. Similar problems at the organizational and team levels were reported by respondents in all roles. These problems included a lack of clear communication about quality improvement, differences between top-down and bottom-up QI priorities, and disparities between stated leadership priorities and leadership support for QI (e.g. time and resources).

In a study on Factors Influencing Continuous Quality Improvement Programmes in Government Hospitals of Sri Lanka, (Ranagala & S. Shridharan, 2022) identified top management commitment, training, teamwork, physical structure, and a monitoring system as independent variables that influence the CQI implementation program. Teamwork was rated lower by all participants, and they all thought it had minimal effect on the way the CQI program was run. The study also noted some obstacles to the application of CQI, such as insufficient training for staff members, opposition from first-line supervisors, a dearth of managerial backing, and others. The majority of government hospitals lack organizations, employees spend most of their time on low-value jobs, and organizational goals are not disclosed to the public. As a result, they are unable to concentrate on their efforts to increase the quality. Poor planning, inappropriate incentives, and compensation are said to make it more difficult to implement quality improvement.

A second study by (Hart, Dykes, Thienprayoon, & Schmit, 2015) states that successful quality improvement is achieved by combining a thorough understanding of the methodology and science with the "softer skills" of change management of change management. Competent teams and leaders need to customize and modify their approaches in order to create cultures and settings that support change. Without a doubt, the patient or family who is actively involved in their care needs to be at the heart of every experiment with innovation and change, directing it in the most important areas.

A QI program evaluation indicates that in order to motivate and sustain implementation and create conditions likely to yield results, it appears necessary to have senior management commitment, sustained attention, the right kind of management roles at different levels, a focus on customer needs, physician involvement, sufficient resources, careful program management, and relevant and practical training that staff can put to immediate use. Context-specific adaptation is necessary because what works in one area might not work in another, and the same study found that little is known about the long-term impacts of QI accomplishment (Øvretveit, 2009).

A study by (Wendwessen, Dereje, & Gize, 2020) found that CQI project execution is associated with characteristics such as leadership receptivity, learning encouragement, customer satisfaction, and job satisfaction among health personnel. Overall, staff QI training, leadership engagement, and teamwork did not show significant connections, despite being mentioned in several previous studies as important predictors of CQI adoption.

2.4. Conceptual Framework

The conceptual framework for this study on the assessment of factors affecting the success of QI projects of selected public hospitals in Addis Ababa, Ethiopia will be built around the identified factors that influence the success of quality improvement project implementation. A project's ability to improve quality will be influenced by several factors. These elements can be broadly categorized as the project team, the microsystem in which they function, the organizational culture, the external environment, and local QI support and capability.

The conceptual framework will include the following variables:

1. **Leadership commitment and support (Microsystem):** This factor refers to the extent to which ward or unit leadership is committed to quality improvement projects and provides support for their successful implementation.
2. **Organizational factors:** This factor refers to the hospital leadership values, beliefs, and norms that exist within the hospital, which may promote or hinder continuous quality improvement.
3. **External factors:** This factor refers to factors that are external to the hospital, such as government policy, funding, and regulatory requirements, that may impact quality improvement project success.
4. **Resource availability (QI support):** This factor refers to the availability of resources required for quality improvement projects, such as funding, technology, and skilled personnel.
5. **Skills and expertise (QI Team):** This factor refers to the knowledge, skills, and expertise required for the successful implementation of quality improvement projects.
6. **Planning, monitoring, and evaluation:** This factor refers to the process of developing and implementing a plan for quality improvement projects, monitoring progress, and evaluating their effectiveness.

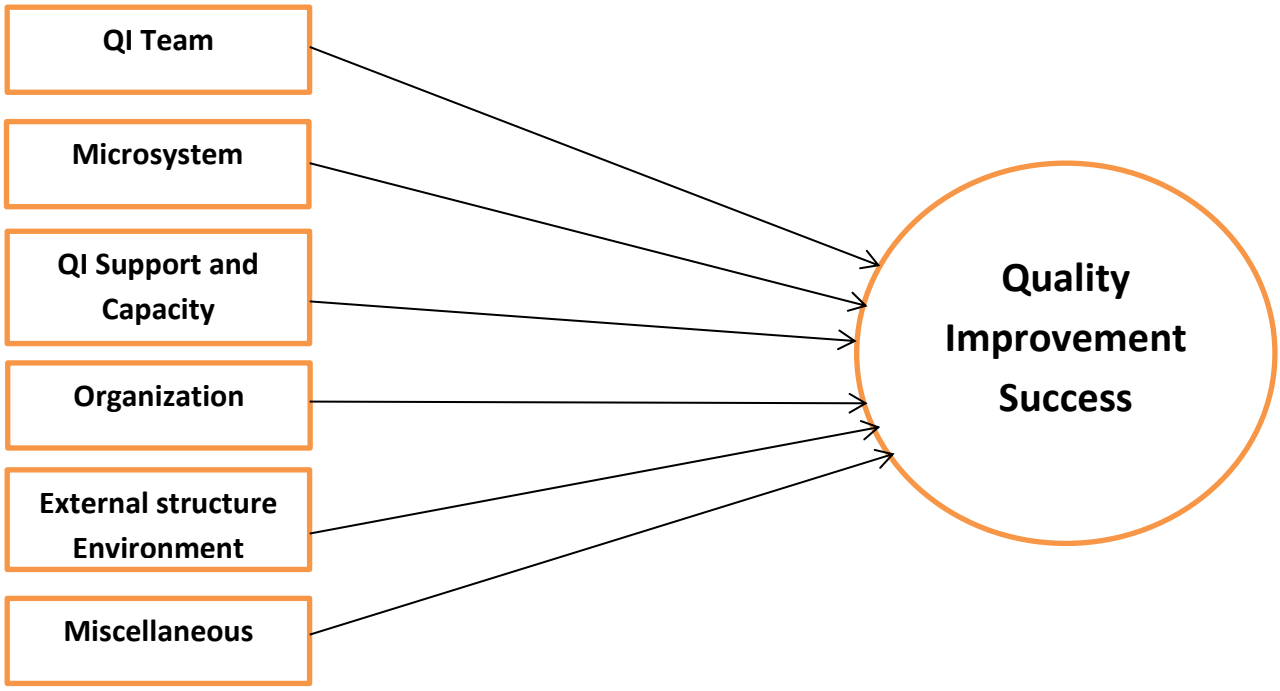

Figure 2.7 1 Conceptual Framework: Adopted from Source: (Kaplan, Provost, Froehle, & Margolis, 2012)

Chapter Three

3. Research Methodology

3.1. Introduction

This chapter will dwell more on the methods that will be employed in identifying the population to be studied as well as the procedures that will be put in place for data collection and analysis. Other areas that will be covered include a study area, research design, and approach, sample population, sampling size as well as ethical considerations for the study. The final stages include how data will be analyzed and presented.

3.2. Description of the Study Area/Organization and projects

This study was conducted at selected public hospitals in Addis Ababa Ethiopia. These are Yekatit 12 Hospital Medical College (Y12HMC), Saint's Paul Hospital Millennium Medical College (SPHMMC), Ras Desta Damtew Hospital, Zewditu Memorial Hospital (ZMH), Saint Peter Hospital, ALERT Hospital and Menelik II Hospital. In these hospitals, there is a clinical governance and quality improvement department which manages all quality improvement projects.

3.3. Research Approach

This study used a quantitative research design, gathering data from respondents via a survey questionnaire. The questionnaire aimed to gather data on aspects affecting quality improvement project success, such as organizational culture, leadership, teamwork, communication, and resource availability. According to (Creswell & Creswell, 2017), for research questions that aim to establish the link between variables and define the features of the population, a quantitative method is appropriate. The quantitative technique emphasizes on precise measurements and makes it possible to analyze survey data using statistics, mathematical concepts, or numerical values.

3.4. Research Design

A study design is a conceptual framework and a roadmap for gathering, measuring, and analyzing data (Kothari, 2004). According to (Neuman, 2013), this is the detailed "architectural" design that outlines the sequence in which the research will be conducted.

This research employed a descriptive study approach to characterize the success characteristics of the quality improvement project and its practice. According to (Creswell & Creswell, 2017), the descriptive method of research is a way to collect data regarding the state of affairs as it is right now.

Therefore, a descriptive cross-sectional study design with a quantitative approach, with data collected at a single point in time was applied. The study used a non-experimental design, as the

aim was to observe and describe the contextual factors that contribute to successful quality improvement projects in public hospitals, rather than to manipulate or control these factors.

3.5. Sampling Design

3.5.1. Population of the study

Kothari (Kothari, 2004) describes target population as all units to be considered, from where the study sample will be picked. The population of the study consisted of public hospitals located in Addis Ababa, Ethiopia. The research focused on hospitals with established quality improvement programs and recent experience of implementing such projects namely Y12HMMC, SPHMMC, Ras Desta Damtew, ZMH, Saint Peter, ALERT, and Menelik II Hospital.

3.5.2. Sampling Techniques

Probability and nonprobability sampling are the two main options for choosing an acceptable sample. Non-probability Purposive sampling, also known as judgmental sampling, is a strategy in which particular circumstances, persons, or events are purposely selected in order to provide important information that cannot be obtained from alternative possibilities (Creswell & Creswell, 2017). The sampling technique for this study was purposive sampling, as the aim was to select all participants from hospitals that have experience in implementing quality improvement projects.

3.5.3. Sample size determination

The hospital's quality improvement directorate is led by full-time health professional whose responsibility is coordinating QI activities in the hospital. All members of the QI projects were considered and a census survey was carried out which makes the total sample size of 88 participants.

3.6. Data Collection Techniques and Procedure

3.6.1. Data Source

In order to gather pertinent data and information, the study used primary data sources. The study used questionnaire surveys to collect primary data.

3.6.2. Research Instrument

The Model for Understanding Success in Quality (MUSIQ), a well-known, standardized quantitative method to assess the local environment, was distributed to each of the study's selected institutions. Kaplan et al. developed MUSIQ after a comprehensive review of the existing literature and structured feedback from a diverse panel of QI experts (Kaplan, Provost, Froehle, & Margolis, 2012). It is hypothesized that there are causal relationships between the 24 contextual aspects found in MUSIQ, which are detected at different levels of the healthcare system, and QI success. The six areas of MUSIQ: external environment, organization, QI support and capacity, QI team, microsystem, and others could have an impact on the success of QI. MUSIQ is intended to apply to a wide range of QI approaches, including "systematic, data-

guided activities designed to bring about immediate, positive changes in the delivery of health care," as well as to individual QI projects taking place within one or across multiple health care microsystems. There are 24 items in the survey, with scores ranging from 24 to 168. A project has a decent likelihood of success if its total score is between 120 and 168. A score between 80 and 119 indicates potential contextual barriers and a score between 50 and 79 indicates substantial contextual problems. The majority of contextual aspects are evaluated with 24 single questions, and each contextual factor is graded on a 7-point Likert scale (from absolutely agree to totally disagree). While elements within the organization and the surrounding environment have an indirect impact on success, contextual factors within microsystems and those related to the QI team directly determine QI success.

3.6.3. Data Collection Procedure

The data collection technique for this study was a questionnaire survey. The questionnaire was designed to elicit information on the various factors that influence success in quality improvement projects. The survey was administered to quality improvement team members or managers at participating hospitals.

Data quality control measures included pre-testing the questionnaire at a non-study facility in this case Tirunesh Bejing Hospital, training data collectors on data collection techniques, supervising data collection, and validating responses through data cleaning.

3.7. Data Analysis and Data Presentation

The collected data was filtered, sorted, and cleaned in line with research objectives. Then, the clean data was entered, coded, and analyzed using SPSS version 25 software. Descriptive statistics was used to summarize the data with counts, proportions (%), mean and SD as appropriate. Likert scale responses to multiple questions were computed and the mean score and their standard deviation were presented.

Table 3.7 1. Scoring of Quality improvement projects using MUSIQ survey responses

Total Score	
168	Highest Possible MUSIQ Score
120-168	The Project has a reasonable chance of success
80-119	The Project could be successful, but possible contextual barriers
50-79	The Project has serious contextual issues and is not set up for success
25-49	The Project should not continue as is; consider deploying resources to other improvement activities
24	Lowest Possible MUSIQ Score

Source: (Kaplan, Provost, Froehle, & Margolis, 2012)

3.8. Data Validity and Reliability

Kothari (Kothari, 2004) states that validity is the most critical criterion and indicates the degree to which an instrument measures what it is supposed to measure. Validity can also be thought of as utility. In other words, validity is the extent to which differences found with a measuring

instrument reflect true differences among those being tested. The questionnaire's validity was checked by pilot test to ensure that it fully addresses the issues indicated in the research question.

As part of the research study, reliability tests were conducted to assess the consistency and reliability of the measurements used in the study. The test results indicated the reliability coefficient, which measures the internal consistency or stability of the measurements. A reliability test known as Cronbach's alpha coefficient was employed to gauge the questioner's internal consistency. For the coefficient to be considered reliable, it must fall between 0 and 1. As the result gets closer to 1, which denotes all the items measure the same variable, the item's internal consistency improves. The overall Cronbach's alpha for the contextual factors taking 24 items was found to be **0.743**. As described by (R.Price, 2021), the values of Cronbach's alpha of more than 0.7 is good. Thus, since alpha value in this study was above 0.7, questionnaire's had very good reliability.

3.9. Ethical Consideration

Ethical approval and a written support letter were obtained from Addis Ababa University, School of Commerce, and the Department of Project Management. Then, permission to carry out the study was sought from the respective Hospitals' administrations. The ethical considerations for this study included obtaining informed consent from participants, ensuring participant confidentiality and anonymity, and ensuring data security.

3.10. Plan for dissemination of findings

The result of the study is going to be presented for research defense and a formal report will be submitted to the school of commerce and the region. Furthermore, the findings of this study will be disseminated for publication in a national or international peer-reviewed reputable journal. The study will also be presented during various research symposiums, conferences or on seminars.

Chapter four

4. RESULT AND DISCUSSION

4.1. Introduction

This chapter discusses the findings by the study's objectives.

4.2. Response rate

The response rate offers data regarding the target population's involvement and desire to take part in the study. The number of completed responses divided by the total number of eligible participants in this study was used to compute the response rate, which was then multiplied by 100 to represent it as a percentage.

Of the 88 questionnaires distributed electronically, 84 were completed. This results in a response rate of 95.45%, which is acceptable. The study's response rate was thus used to draw reliable findings since in statistics, a response rate of equal to or greater than 50% is considered agreeably suitable for data analysis and interpretation, and a rate of above 70% is considered excellent.

4.3. Background Information

4.3.1. Gender of Respondents

The study aimed to determine the gender of the participants. Of the 84 participants in the sample, 53 (63.1%) were men, indicating that men were handling the majority of QI projects. The gender distribution within the sample revealed a somewhat uneven portrayal of women, suggesting an inequitable portrayal of female viewpoints within the research.

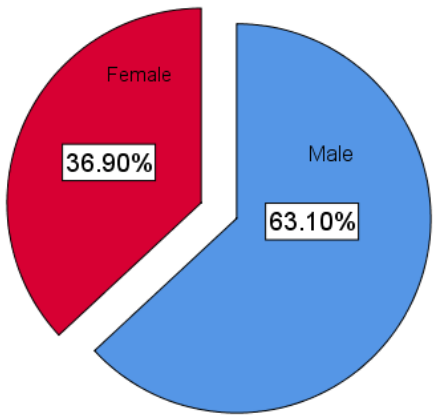

Figure 4.1 Gender of Respondents

4.3.2. Age Distribution

In terms of age, the study participants' mean age was 33.57 years, and the standard deviation of 4.99 showed how dispersed the respondents' age distribution was. The sample's minimum age was 25 years and its highest age was 42 years. The median age of the respondents was 34 years.

About the respondents' age range, 29 (34.5%) said they were between the ages of 25 and 30, 17 (20.2%) said they were between the ages of 31 and 35, and the remaining 38 (45.2%) said they were 36 years of age and older. This suggests that health professionals in their early to mid-mid-life are actively involved in quality improvement initiatives.

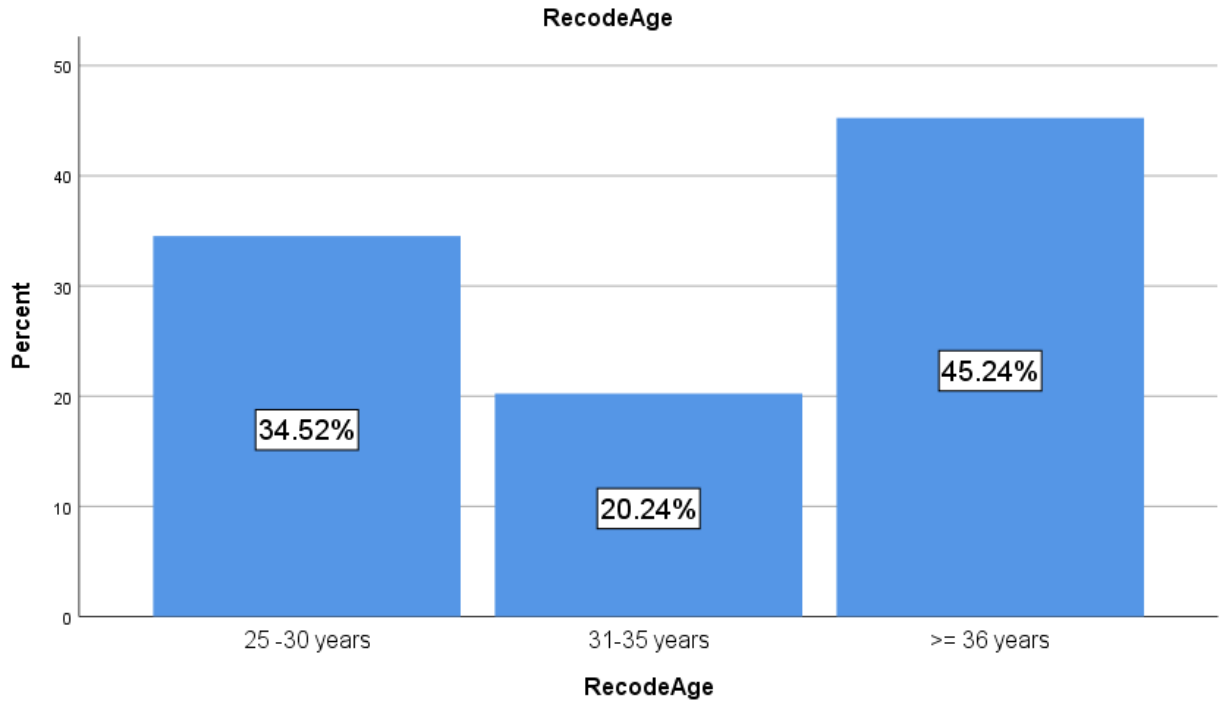

Figure 4.2 Age distribution of respondents

4.3.3. Profession of Respondents

In order to comprehend the makeup of the sample population, the study looked into the professions of the respondents. The participants' varied professional backgrounds were shown by the data, which included 28 (33.3%) physicians, 26 (31.0%) nurses, 14 (16.7%) public health professionals, 4 (4.8%) HOs, 4 94.8%) Laboratory technologist, 5 (6.0%) midwives, and 3 (3.6%) pharmacies.

Profession

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Physician	28	33.3	33.3	33.3
	HO	4	4.8	4.8	38.1
	Nurse	26	31.0	31.0	69.0
	Laboratory Technologist	4	4.8	4.8	73.8
	Midwife	5	6.0	6.0	79.8
	Pharmacy	3	3.6	3.6	83.3
	Public health	14	16.7	16.7	100.0
	Total	84	100.0	100.0	

Table 4.1 Profession of Respondents

4.3.4. Level of Education

To determine the educational background of the sample population, the respondents' educational status was examined. The educational backgrounds of the participants ranged widely, from Bachelor's to Master's to professional degrees (Specialties). The research study's computation of frequency counts and percentages for each category of education level provided insight into the respondents' wide range of educational backgrounds.

Educational Level

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	BSc degree	26	31.0	31.0	31.0
	Postgraduate	30	35.7	35.7	66.7
	MD Degree	21	25.0	25.0	91.7
	MD +	7	8.3	8.3	100.0
	Total	84	100.0	100.0	

Table 4.2 Educational level of respondents

The aforementioned respondents' socio-demographic profile shows that they are highly educated and represent a range of health profession fields. 21 (25.0%) of the respondents have a medical doctor degree, 30 (35.7%) have a postgraduate degree, 26 (31.0%) have a first degree, and the remaining 7 (8.3%) have an MD+ Clinical Specialty Certificate, according to the frequency

distribution of the respondents' educational levels. Consequently, it seems that the study participants' answers are very trustworthy.

4.3.5. Work Experience

In order to determine the respondents' level of professional expertise, the study gathered information about their work experience. According to the study, the majority of respondents—51, or 60.71% had job experience ranging from five to ten years, followed by 16 (19.05%), 10 (11.9%), and 7 (8.33%)—who had fewer than five years. The results indicate that the majority of respondents had been employed for more than five years, indicating that they possessed sufficient expertise to provide accurate information.

Figure 4.3 Work experiences of respondents

4.3.6. Role in the QI Project

The research study gathered information on the roles that people performed in order to comprehend the responsibilities that the respondents played in the QI project. Across all projects, 84 people responded in total. These included 72 members of the QI team (8 leaders and 64 members), 5 organizational leaders, and 7 microsystem leaders.

Role in QI project

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Organization/Hospital Leader	5	6.0	6.0	6.0
	Case Team/Department	7	8.3	8.3	14.3
	QI project team leader	8	9.5	9.5	23.8
	QI team member	64	76.2	76.2	100.0
	Total	84	100.0	100.0	

Table 4.3 Role in the QI Project

4.4. Descriptive Statistics

The study examined its objectives in an attempt to assess the contextual factors influencing the success of quality improvement projects at several public hospitals in Addis Ababa, Ethiopia. The seven hospitals that are actively involved in the QI project were given the Model for Understanding Success in Quality (MUSIQ), an electronic-based, quantitative instrument to assess local context, over the course of a month. We looked at two options: the most popular contextual framework, MUSIQ, and a questionnaire that came from it. MUSIQ identifies 24 contextual variables, which are related to 6 areas that potentially impact QI performance: microsystem, external environment, organization, QI support and capacity, QI team, and miscellaneous.

4.4.1. Quality Improvement Project Team

Table 4.4 Quality improvement team members' factors of success

	TA %	A %	SA %	N %	SD %	D %	TD %	Mean	SD
QI team worked on it before	6.0%	36.9%	32.1%	11.9%	10.7%	0.0%	2.4%	5.06	1.25
Diverse professional backgrounds	29.8%	46.4%	13.1%	4.8%	2.4%	3.6%	0.0%	5.86	1.18
Physician actively participating	15.5%	40.5%	29.8%	10.7%	3.6%	0.0%	0.0%	5.54	1.00
At least one member of the QI team an authority	20.2%	35.7%	21.4%	13.1%	6.0%	3.6%	0.0%	5.40	1.31
QI team leader has an ongoing presence	7.1%	25.0%	28.6%	11.9%	16.7%	10.7 %	0.0%	4.62	1.47
Chance to participate in decision-making	20.2%	53.6%	14.3%	11.9%	0.0%	0.0%	0.0%	5.82	.89
QI team members agreed on the project's overall goals	27.4%	40.5%	9.5%	2.4%	10.7%	9.5%	0.0%	5.43	1.63
Use of improvement methods PDSA cycle, run chart	22.6%	26.2%	19.0%	14.3%	10.7%	6.0%	1.2%	5.13	1.57
Familiar with each other before	21.4%	20.2%	27.4%	22.6%	1.2%	7.1%	0.0%	5.17	1.40

Nine contextual factors were used in conjunction with a Likert scale to assess the impact of the QI team on the success of quality improvement projects. The contexts assessed were about QI team leadership, diversity, presence of subject matter expert, the Decision-making processes, team norms, skill, physician involvement, prior QI experience, and Tenure. (Kaplan, Provost, Froehle, & Margolis, 2012) State that the QI team's ability to function, including its norms, decision-making processes, and QI abilities, is essential to the success of QI because the team is in charge of directing the implementation of QI techniques to bring about change. The functioning of a QI team is influenced by various contextual elements, such as the presence of subject matter expertise, diversity of the team, physician involvement, past QI experience, and team longevity.

The average QI team score across all nine settings is 48.03 ± 11.7, indicating that Addis Ababa hospitals have a very strong QI team. More importantly, the physician involvement and team diversity are quite high. Physicians and public health experts oversaw each project team, with participation from numerous other medical professionals and hospital administrators. This result contradicted a study conducted in Nigeria (Eboreime, N. Nxumalo, R. Ramaswamy, & J. Eyles , 2018) in which doctors were not involved in Quality Improvement Projects, and it is in line with a multi-site ambulatory setting Quality Improvement collaborative conducted in the United States in which doctors played a significant role in the project (Douglas, Moonseong Heo, Namita Azad, Andrew D. Racine, & Michael L. Rinke, 2019).

The majority of the QI project staffs are familiar with each other which give a high QI team tenure results with a mean score of 5.17 ± 1.40. This implies that the projects can undergo well since the team has a strong already ongoing relationship. Also, decision-making mean score was found to be a mean score of 5.82 with a standard deviation of 0.89. Every successful organization is built on a strong foundation of people. Team members are a wealth of information and creative ideas, yet this resource is frequently underutilized. Any effective company is constructed upon a solid human base. Although team members are a great source of knowledge and original ideas, they are sometimes underutilized. By increasing productivity and reducing outsourcing, employee participation in decision-making not only enables them to positively impact project implementation but also saves time and money for the project (Schwarz, J E Rowe, & S E Landis, 1999). From the nine contextual factors ongoing presence of QI team lead scored 4.62 which is the lowest score under this success factors.

4.4.2. Microsystem

Table 4.5 Microsystem factors of success

	TA %	A %	SA %	N %	SA %	D %	TD %	Mean	SD
Microsystem leaders personally facilitate this QI project	2.4%	16.7%	39.3%	14.3%	16.7%	10.7%	0.0%	4.42	1.31
Microsystem values teamwork	3.6%	50.0%	38.1%	4.8%	2.4%	1.2%	0.0%	5.44	.84
Microsystem staff who were not members of QI	7.1%	13.1%	39.3%	21.4%	8.3%	10.7%	0.0%	4.57	1.33
Microsystem staff who were not members of the QI team have a strong desire to improve performance in the area of focus	2.4%	45.2%	21.4%	19.0%	7.1%	4.8%	0.0%	5.02	1.21

From the findings majority of the respondents agreed that the microsystem values teamwork, communication, and a commitment to quality improvement with a mean of 5.44 and a standard deviation of 0.84. In addition, the majority of the respondents agreed that the microsystem staffs, who were not members of the QI team, have a desire to improve performance in the area of focus of this QI project with a mean score of 4.57 and a standard deviation of 1.33. Furthermore, the majority of the respondents were between somewhat agreed and somewhat disagreed that microsystem staffs, who were not members of the QI team, are effective at using QI methods for change. Finally, the lowest score in the microsystem contextual factors was that leaders of the microsystem personally facilitated the QI projects with a mean score of 4.42 and a standard deviation of 1.31.

Contextual factors within the microsystem, specifically, microsystem motivation, microsystem QI culture, and microsystem QI capability were assessed with a total mean score of 19.45 ± 4.69 out of 28 expected scores accounting for 69.5% of the total result. The main factors like the low involvement of Microsystem leaders and the lack of knowledge of microsystem staff who were not members of the QI team were the reasons for the lower score of this domain in assessing contextual factors.

4.4.3. QI Support

Table 4.6 Quality Improvement support factors of success

	TA %	A %	SA %	N %	SA %	D %	TD %	Mean	SD
Existing IS allows us to easily pull data	19.0%	34.5%	22.6%	9.5%	11.9%	2.4%	0.0%	5.32	1.35
Adequate financial support, resources	1.2%	23.8%	40.5%	6.0%	16.7%	8.3%	3.6%	4.48	1.44
Staff are given education and training in how to identify and act on QI opportunity	21.4%	28.6%	20.2%	7.1%	16.7%	6.0%	0.0%	5.13	1.56

Resource availability, data infrastructure, and QI workforce focus were assessed in this domain. Regarding data infrastructure, 34.5% of respondents agreed that existing information systems allow them to easily pull data specifically needed for QI projects. This suggests that there may be challenges in accessing the data needed to identify and measure quality improvement opportunities. Also, only 23.8% of respondents agreed that their QI teams have adequate financial support, resources, and time to meet the aims of their QI projects. This suggests that there may be a need for more funding and resources to support QI work. The majority of the respondents agreed that staffs are given education and training in how to identify and act on quality improvement opportunities and statistical and other quantitative methods that support quality improvement. The overall QI team's mean score computed from the three contexts is 14.93 ± 4.35 which indicates 71.1% of the contextual factors of quality support and capacity were well addressed.

4.4.4. Organization

Table 4.7 Organizational factors of success

	TA %	A %	SA %	N %	SD %	D %	TD %	Mean	SD
Senior executives are directly involved in QI	3.6%	20.2%	34.5%	27.4%	9.5%	4.8%	0.0%	4.67	1.15
At least one specific senior executive specifically supports this QI project	9.5%	15.5%	40.5%	21.4%	9.5%	3.6%	0.0%	4.83	1.20
This organization places no value on QI	4.8%	14.3%	27.4%	2.4%	19.0%	20.2 %	11.9%	3.75	1.82
QI is thoroughly integrated	9.5%	50.0%	29.8%	3.6%	4.8%	1.2%	1.2%	5.48	1.09

From the findings, majority of the respondents agreed that the senior executives in their organization are directly involved in quality improvement activities with a mean score of 4.67±1.15. Also, more than half (65.5%) of the respondents agreed that at least one specific senior executive in my organization specifically supports the QI project (mean=4.83, SD=1.20). Most of the respondents were asked if the organization places value on quality improvement and interestingly enough it was found the majority of them think that their organizations place no value on QI with a mean score of 3.75 ± 1.09.

Organization was seen to be the greatest challenge. Low MUSIQ scores were observed in all four contextual factors in this domain. Organizational leadership support and organizational culture towards the QI initiative were found poor. Only 66.9% performance was reported with a score of 18.73 ± 5.26 on the MUSIQ questionnaire that there is low organizational engagement for the improvement project. This low score of organizational context factors was also observed in a study done in Nigeria (Eboreime, N. Nxumalo, R. Ramaswamy, & J. Eyles , 2018).

4.4.5. Environment

Table 4.8 Environmental factors of success

	TA %	A %	SA %	N %	SD %	D %	TA %	Mean	SD
Pressure or incentives from outside motivated us to undertake	45.2%	22.6%	11.9%	4.8%	4.8%	8.3%	2.4%	5.64	1.74
Groups external to my organization provide important personnel, money, resources, or training	25.0%	28.6%	22.6%	6.0%	8.3%	8.3%	1.2%	5.26	1.61

From the findings, majority of the respondents strongly agreed that pressures or incentives from outside their organization motivated them to undertake this specific QI project with a mean score of 5.64 ± 1.74. The respondents further strongly agreed that groups external to their organization provide important personnel, money, resources, or training in support of this QI project with 5.26 ± 1.61. The quality improvement collaborative was initiated by the health bureau in order to improve perinatal outcomes and had sponsorship and motivation from the regional advisors. This was shown by the highest performance contextual factors seen in the environment domain. Given the shortage of support from the hospital's administration, external support appears to be essential to the initiative's success. However, such reliance on contributors could result in an implementation that is biased in favor of donor interests, possibly leading to changes from the original plan.

4.4.6. Miscellaneous

Table 4.9 Miscellaneous Success Factors

	TA %	A %	SA %	N %	SD %	D %	TD %	Mean	SD
Task strategic importance to the organization	1.2%	44.0%	40.5%	7.1%	4.8%	2.4%	0.0%	5.23	.96

QI project has strategic importance for the organization as it was responded to by the majority of the QI team members with a mean score of 5.23 ± 0.96.

4.5. Total Model for Understanding Success in Quality Assessment Score

Table 4.10 The total Model for Understanding Success in Quality (MUSIQ) assessment score

Contextual factors	Mean	Std. Deviation	Percentiles 25	50	75
QI team subtotal	48.02	6.70	45.00	49.00	53.00
Microsystem subtotal	19.45	3.02	17.25	20.00	22.00
QI support subtotal	14.93	2.87	13.00	15.50	17.00
Organization subtotal	18.73	2.66	17.00	19.00	21.00
Environment subtotal	10.90	2.41	9.00	12.00	13.00
Miscellaneous subtotal	9.44	3.18	6.25	10.00	12.00
Total sum	**121.48**	**13.27**	**116.00**	**123.00**	**130.75**

Total MUSIQ score with a mean score of 121.48 ± 13.27 and an IQR of 116-130.75. Out of the total 168 expected performance scores using the MUSIQ tool, 72.31% score was addressed and this implies the QI project has a reasonable chance of success as a whole.

Chapter Five

5. SUMMARY, CONCLUSION AND RECOMMENDATION

5.1. Introduction

This chapter covers the summary of findings, inferences made from the results, as well as recommendations made for improving the QI project's execution in the Addis Ababa public hospital context.

5.2. Summary of the Findings

The study sought to assess contextual factors influencing success in quality improvement projects of selected public hospitals in Addis Ababa, Ethiopia.

5.2.1. Background information

The sample consisted of 84 participants, with 53 (63.1%) identified as male, indicating a significant majority of males engaging in Quality Improvement (QI) projects. The mean age of the respondents was 33.57 years with a standard deviation of 4.99, indicating a moderate degree of dispersion in the age distribution. The median age was 34.00, with the youngest participant being 25 and the oldest 42. The age analysis revealed that 54.7% of the respondents were aged between 25 and 35 years, indicating active engagement in QI projects by early middle-aged health professionals. The data revealed a diverse range of educational levels, with 33.3% holding medical doctor degrees, 35.7% having postgraduate degrees, 31% having first degrees, and 8.3% possessing MD+ Clinical Specialty Certificates. The findings also indicated that the sample included various healthcare professionals, with 33.3% being physicians, 31% nurses, 16.7% public health professionals, and 19.2% other healthcare professionals. Overall, the research results indicate a predominance of male participation in QI projects, a concentration of early middle-aged professionals, a highly educated sample population, and a diverse range of healthcare professions and roles. These findings provide valuable insights into the characteristics of the respondents, highlighting the need for gender balance, age-targeted interventions, and multidisciplinary collaboration to optimize the impact of QI initiatives in healthcare settings.

5.2.2. Contextual factors influencing QI project’s success

The analysis revealed a remarkably robust QI team, with a high degree of physician involvement and broad representation from other health professionals and hospital administrators. Still, several things may have been done better, especially about QI experience and team leadership. Numerous team members had little to no experience with prior QI projects, and there was a dearth of an active and accessible team leader.

The area of microsystems emphasized the significance of capability, QI culture, and motivation within the microsystem. The poor participation of microsystem leaders and the lack of knowledge of microsystem employees who were not on the QI team were the key reasons for the study's lower scores in this area. The efficiency of QI initiatives may be increased by filling in these capacity shortages and utilizing microsystem employees' strong motivation for performance improvement.

The study found issues with organizational leadership support and the QI initiative's surrounding culture inside the organization domain. The leadership of the hospitals was judged to have provided inadequate participation and support, indicating a need for increased organizational commitment to the reform efforts. These results emphasize how crucial it is to establish a positive corporate culture and gain leadership support in order to successfully implement QI.

The domain of the external environment exhibited the greatest performance scores, signifying the beneficial impact of external assistance, namely from advisers and the regional health bureau. Concerns were raised, though, about a possible reliance on outside funding sources that would cause changes to the project's initial plan and give preference to donor interests above regional needs.

Overall, the total MUSIQ scores indicated a reasonable chance of success for the QI project as a whole.

5.3. Conclusion

In conclusion, this study aimed to assess the contextual factors influencing the success of quality improvement projects in selected public hospitals in Addis Ababa, Ethiopia. The researchers utilized the Model for Understanding Success in Quality (MUSIQ) framework, along with a questionnaire adapted from the framework, to assess the local context of the participating hospitals. The study focused on six domains of contextual factors: external environment, organization, QI support and capacity, QI team, microsystem, and miscellaneous. The findings indicate that the hospitals in Addis Ababa have a considerably strong quality improvement (QI) team, with a high involvement of physicians and a diverse composition of professionals. There were, nevertheless, a few places that needed improvement. The leadership presence and previous QI experience of team members received the lowest marks in the QI team domain. Enhancing these elements can help the QI team function more effectively. Factors including QI culture, QI capacity, and microsystem motivation scored lower in the microsystem domain. The knowledge of employees who are not on the QI team and the participation of microsystem leaders were cited as the causes of the lower results. To increase performance, the microsystem's capacity gaps must be identified and filled.

In terms of resource availability, data infrastructure, and QI workforce focus, challenges were identified. Accessing the necessary data for identifying and measuring quality improvement opportunities was reported as difficult, and there was a lack of adequate financial support, resources, and time for QI projects. The organization domain presented the greatest challenge, with low MUSIQ scores observed in all four contextual factors. Organizational leadership support and culture towards the QI initiative were found to be poor. This highlights the need for improved engagement and commitment from the hospital's leadership to facilitate successful QI projects. External support, particularly from the regional health bureau, played a critical role in the success of the QI collaborative. However, dependence on donors could lead to implementation biases favoring donor interests, potentially deviating from the original project design.

Overall, the MUSIQ score with a mean score of 121.48 ± 13.27. Seventy-two (72.3%) percent of the expected performance scores were addressed, suggesting a reasonable chance of success for the QI collaborative as a whole.

5.4. Recommendation

Based on the findings of the study, several recommendations can be made to improve the success of quality improvement projects in public hospitals in Addis Ababa, Ethiopia.

1. **Strengthen QI team leadership and engagement:** The study identified a need for stronger QI team leadership and ongoing presence within the team. It is recommended to enhance the leadership skills of the QI team leaders and ensure their continuous involvement and availability. This can be achieved through leadership training programs and by establishing clear roles and responsibilities for the QI team leaders. Additionally, fostering a culture of collaboration and teamwork among the QI team members, including diverse healthcare professionals and hospital leaders, can further enhance the success of quality improvement projects.
2. **Address microsystem challenges and capacity gaps:** The study revealed lower scores in the microsystem domain, particularly in microsystem motivation, QI culture, and QI capability. To address these challenges, it is important to involve microsystem leaders and engage them actively in quality improvement initiatives. Providing training and resources to microsystem staff who are not members of the QI team can help improve their knowledge and skills in QI. Furthermore, identifying and addressing capacity gaps within the microsystem, such as knowledge and access to data, can contribute to better project outcomes. This may involve improving data infrastructure, ensuring adequate financial support and resources for QI projects, and offering continuous education and training to staff.
3. **Enhance organizational engagement and support:** The study identified organizational factors as the greatest challenge, with low scores in organizational leadership support and organizational culture towards the QI initiative. To overcome these barriers, it is recommended to promote a culture of quality improvement within the organization. This can be achieved by fostering leadership engagement and commitment to QI projects, establishing clear communication channels, and providing ongoing support and resources for QI efforts. Recognizing and rewarding staff for their contributions to quality improvement can also motivate and encourage a culture of excellence

Overall, it is important to create an enabling environment that supports and sustains quality improvement efforts. This includes strengthening QI team leadership, addressing microsystem challenges and capacity gaps, and enhancing organizational engagement and support. By implementing these recommendations, public hospitals in Addis Ababa can improve the success of their quality improvement projects and ultimately enhance the quality of healthcare services provided to the community.

References

Aburayya, A., Alshurideh, M., Al Marzouqi, A., Al Diabat, O., Alfarsi, A., Suson, R., et al. (2020). Critical Success Factors Affecting the Implementation of. *Sys Rev Pharm 2020;11(10):230-242*, 1-6.

Assefa, T., Woldie, M., Sinkie, S. O., & Woldemichael, K. (2012). Patient safety practices and medical errors: Perception of health care providers at Jimma University Specialized Hospital, Southwest Ethiopia. *Journal of Preventive Medicine*, 162-170.

Backhouse, A., & Ogunlayi , F. (2020). Quality improvement into practice. *BMJ 2020;368:m865*.

Baker, A. (2001). Crossing the Quality Chasm: A New Health System for the 21st Century. *BMJ*, 3-5.

Barney, J. (1991). Firm Resources and Sustained Competitive Advantage. *Journal of Management*, 99-120.

Batalden, P. B., & Davidoff, F. (2007). What is "quality improvement" and how can it transform healthcare? *BMJ Quality & Safety*, 2-3.

Bayile, Y. S., Kassa, G. M., Moges, N. A., & Mehare, T. (2020). Quality of health care service assessment using Donabedian model in East Gojjam Zone, Northwest Ethiopia, 2018. *African Journal of Medical and Health Sciences* , 19(2384-5589):157-165.

Bodenheimer, T., Wagner, E., & Grumbach, K. (2002). Improving primary care for patients with chronic illness: the chronic care model. *Jama*, 288(14), 1775–1779.

Creswell, J. W., & Creswell, J. (2017). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches.* Thousand Oaks, California: SAGE Publications, 5th Edition.

Dixon-Woods, M., Leslie, M., Tarrant, C., & Bion , J. (2013). Explaining Matching Michigan: an ethnographic study of a patient safety program. *Implementation Science*, 8(1), 1–13.

Douglas, L. C., Moonseong Heo, Namita Azad, Andrew D. Racine, & Michael L. Rinke. (2019). Contextual Factors Associated with Quality Improvement Success in a Multisite Ambulatory Setting. *Journal for Healthcare Quality*.

Eboreime, E., N. Nxumalo, R. Ramaswamy, & J. Eyles . (2018). Strengthening decentralized primary healthcare planning in Nigeria using a quality improvement model: how contexts and actors affect implementation. *SEMANTIC SCHOLAR*.

Efy), N. H.-2.-2. (2022). *National Healthcare Quality and Safety Strategy (NQSS) 2021-2025 (2013-2017 Efy).* Addis Ababa: Ministry of Health-Ethiopia.

Ferlie, E. B., & Shortell, S. (2001). Improving the quality of health care in the United Kingdom and the United States: a framework for change. *The Milbank Quarterly*, 79(2), 281–315.

Gage, A. D., Gotsadze, T., Seid, E., Mutasa, R., & Friedman, J. (2022). The influence of Continuous Quality Improvement on healthcare quality: A mixed-methods study from Zimbabwe. *Social Science & Medicine, 298, 114831*, 2-8.

Goodman, D., Ogrinc, G., Davies, L., Baker, G., Barnsteiner, J., Foster, T., et al. (2016). Explanation and elaboration of the SQUIRE (Standards for Quality Improvement Reporting Excellence) Guidelines, V.2.0: examples of SQUIRE elements in the healthcare improvement literature. *BMJ Quality & Safety*, 25(12), e7–e7.

Hackman, J. R., & Wageman, R. (1995). Total Quality Management: Empirical, Conceptual, and Practical Issues. *JSTOR*, pp. 309-342.

Hagaman, A. K., Singh, K., Abate, M., Alemu, H., Kefale, A. B., Bitewulign, B., et al. (2020). The impacts of quality improvement on maternal and newborn health: preliminary findings from a health system integrated intervention in four Ethiopian regions. *BMC Health Services Research volume 20, Article number: 522 (2020)*.

Ham, S. C., Berwick, D., & Dixon, J. (2016). Improving quality in the English NHS. *The Kings Fund*, 8-11.

Hart, C. K., Dykes, C., Thienprayoon, R., & Schmit, J. (2015). Change Management in Quality Improvement: The Softer Skills. *Current Treatment Options in Pediatrics*, 372–379.

Health-Ethiopia, M. o. (2021). *Health Sector Transformation Plan II (HSTP II) 2020/21 - 2024/25 (2013 EFY-2017 EFY).* Addis Ababa: Ministry of Health, Ethiopia:http://repository.iifphc.org/handle/123456789/1414.

Hill, J. E., Stephani, A.-M., Sapple, P., & J. Clegg, A. (2020). The effectiveness of continuous quality improvement for developing professional practice and improving health care outcomes: a systematic review. *Implementation Science*, 1-4.

Jones, B., Kwong, E., & Warburton , W. (2021). *Quality improvement made simple (3rd Edition).* London: The Health Foundation: https://doi.org/10.37829/HF-2021-I05.

Kaplan, H. C., Provost, L., Froehle, C., & Margolis, P. (2012). The Model for Understanding Success in Quality (MUSIQ): building a theory of context in healthcare quality improvement. *BMJ Quality & Safety*, 1-9.

Kerzner, H. (2022). *Project Management: A Systems Approach to Planning, Scheduling, and Controlling, 13th Edition.* New Jersey: John Wiley & Sons.

Kothari, C. (2004). *Research Methodology: Methods and Techniques. 2nd Edition.* New Delhi: New Age International Publishers.

Lee, S., Choi, K.-S., Kang, H.-Y., Cho, W., & Chae, Y. (2002). Assessing the factors influencing continuous quality improvement implementation: experience in Korean hospitals. *International Journal for Quality in Health Care*, 14(5), 383–391.

Maphumulo, W. T., & R. Bhengu, B. (2019). Challenges of quality improvement in the healthcare of South Africa post-apartheid: A critical review. *Pub med central*, 1-9.

McDonald, K. M., Sundaram, V., Bravata, D., Lewis, R., Lewis, R., Lin, N., et al. (2007). Closing the Quality Gap: A Critical Analysis of Quality Improvement Strategies (Vol. 7: Care Coordination). *http://www.ahrq.gov/*.

Nembhard, I. M., & Amy C. , E. (2006). Making it safe: the effects of leader inclusiveness and professional status on psychological safety and improvement efforts in health care teams. *The International Journal of Industrial, Occupational and Organizational Psychology and Behavior*, 941-966.

Neuman, W. L. (2013). *Social Research Methods: Qualitative and Quantitatif Approaches (7th Edition).* London: Pearson New International.

Nicolay, C. R., S Purkayastha, A Greenhalgh, Benn, J., Chaturvedi, S., Phillips, N., et al. (2012). Systematic review of the application of quality improvement methodologies from the manufacturing industry to surgical healthcare. *Journal of British Surgery*, 99(3), 324–335.

Øvretveit, J. (2009). *Does improving quality save money? A review of evidence of which improvements to quality reduce costs to health service providers.* London: The Health Foundation: 95.

P.Meyer, J., & R.Maltin, E. (2010). Employee commitment and well-being: A critical review, theoretical framework and research agenda. *Journal of Vocational Behavior*, 323-337.

Patterson, J., Worku, B., Jones, D., Clary , A., Ramaswamy, R., & Bose, C. (2021). Ethiopian Pediatric Society Quality Improvement Initiative: a pragmatic approach to facility-based quality improvement in low-resource settings. *BMJ Open Qual*, 3-8.

R.Price, L. (2021). *Psychometric Methods: Theory into Practice.* Guilford Publications.

Ranagala, R. M., & S. Shridharan. (2022). Factors Affecting Continuous Quality Improvement in Police Hospital, Sri Lanka. *Sri Lanka Journal of Medical Administration*, Page/Article: 17.

Reed, J. E., & Card, A. (2016). The problem with Plan-Do-Study-Act cycles. *BMJ Quality &*, 25(3), 147–152.

Rogers, E. M. (2010). *Diffusion of Innovations, 4th Edition.* New York: Simon and Schuster.

Rosa, A., Marolla, G., Lega, F., & Manfredi, F. (2021). Lean adoption in hospitals: the role of contextual factors and introduction strategy. *BMC Health Services Research*, 21(1), 889.

Schwarz, M., J E Rowe, & S E Landis. (1999). A team approach to quality improvement. *Family Practice Management*, 25-30.

Scott, W., & Davis, G. (2007). *Organizations and Organizing: Rational, Natural and Open System Perspectives.* Upper Saddle River.

Shea, C. M., Turner, K., Albritton, J., & L. Reiter, K. (2018). Contextual factors that influence quality improvement implementation in primary care: the role of organizations, teams, and individuals. *Health Care Management Review*, 43(3), 261.

Shiferaw, M. B., & Misganaw, A. S. (2020). Evaluation of continuous quality improvement of tuberculosis and HIV diagnostic services in Amhara Public Health Institute, Ethiopia. *PLoS One*, 3-6.

Sori, D. A., Debelew, G. T., Degefa, L. S., & Asefa, Z. (2023). Continuous quality improvement strategy for increasing immediate postpartum long-acting reversible contraceptive use at Jimma University Medical Center, Jimma, Ethiopia. *BMJ Open Qual: 2023 Feb;12(1):e002051. doi: 10.1136/bmjoq-2022-002051.*, 3-4.

Spieker, N. (2020). The Business Case for Quality in Health Care. In *Improving Health Care in Lowand Middle-Income Countries: A Case Book* (pp. 89-104). SpringerOpen.

Stelson, P., Hille, J., Eseonu, C., & Doolen, T. (2017). What drives continuous improvement project success in healthcare? *Pub Med*, 47-53.

Teisberg, Wallace, S., & O'hara, S. (2020). Defining and implementing value-based health. *Academic Medicine*, 95(5).

Turner, J. R. (2009). *Handbook of Project-based Management: Leading Strategic Change in Organizations, Third Edition.* New York City: McGraw-Hill.

Vogel, I. (2012). *Review of the use of 'Theory of Change'in international development.* The UK's Department for International Development (DFID).

Wehbe-Alamah, H. (2015). Madeleine Leininger's Theory of Culture Care Diversity and Universality. In H. Wehbe-Alamah, *Nursing Theories and Nursing Practice* (pp. 303-320). F.A. Davis.

Weiss, C. (1995). New Approaches to Evaluating Community Initiatives: Concepts, Methods, and Contexts. In C. Weiss, *Nothing as Practical as Good Theory : Exploring Theory-Based Evaluation for Comprehensive Community Initiatives for Children and Families* (pp. 65-92). Washington, DC: The Aspen Institute.

Weiss, C., & Connell, J. (1995). Nothing as Practical as Good Theory: Exploring Theory-Based Evaluation for Comprehensive Community Initiatives for Children and Families. In: New Approaches to Evaluating Community Initiatives: Concepts, Methods, and Contexts. *The Aspen Institute*, 65-92.

Wendwessen, N., Dereje, T., & Gize, A. (2020). Factors Affecting the Implementation of Continuous Quality Improvement in Health Facilities in Southern Nation and Nationalities Peoples Region (SNNPR), Ethiopia. *Journal of Multidisciplinary Healthcare*, 13.

Annexes

Annex I: Informed Consent

Dear Respondents,

I am Begashaw Belay, a graduate student at Addis Ababa University. I am conducting a research on ‘’Assessment of Factors influencing success of Quality Improvement Projects at selected public Hospitals in Addis Ababa, Ethiopia” in partial fulfillment of Master of Arts in project management.

On this questionnaire writing your name is not required and your answers will be kept completely confidential. Your honest answers will help me to understand in identifying which contextual factor most important for implementing quality improvement projects and to identify problems related to quality improvement project and finally to recommend the possible intervention to the problem. I would greatly appreciate your voluntary participation in filling the questionnaire by spending some of your time.

The potential respondent for this questionnaire is quality improvement (QI) Project members of public hospitals in Addis Ababa. You are purposively selected since you are QI team members of your hospital.

This is a tool designed to help you assess aspects of your local context that may affect the success of your quality improvement project. We have identified a number of contextual factors at multiple levels of the health care system that we believe influence the successful implementation of quality improvement. We have summarized these factors and how they influence success in a model called MUSIQ. This tool is meant to help you examine context using MUSIQ.

Thank you in advance for your kind cooperation in filling the questionnaire. If you have any questions or inquiry, please communicate the investigator using below address at any time:

Begashaw Belay: Email address-begashaw3sintayehu@gmail.comTelephone: +2519 65 46 81 31

Annex II: Questionnaire

Part I: Socio demographic characteristics of respondents

After reading the question choose your response from the available options. Please also write your specific response for question that asks short answer.

Sr. N.	Question	Response Item	Remarks
101.	Sex	1. Male 2. Female	
102.	Age in years	Years	
103.	Profession	1. Physician 2. HO 3. Nurse 4. Laboratory 5. Mid-wife 6. Pharmacy 7. Public Health 8. Other Specify	
104.	Education level	1. Diploma 2. First Degree 3. Post Graduate 4. MD 5. MD+	
105.	Your professional work experience (please write your experience in years)	_____Years	
106.	Working facility name	_____	
107.	Name of the QI project that you have worked on over the past 12 months?	_____	
108.	Have your improvement project reached its target/AIM?	1. Yes 2. No	
109.	What is your role in the QI project	1. Organization/Hospital Leader 2. Case team/Department where QI project is conducted leader 3. QI project Team leader 4. QI Team member	

Part II: MUSIQ (https://www.google.com/search?q=MUSIQ+calculator)

Instruction: In circling a response, please keep in mind the following general guidelines regarding the choices of response categories. You should choose **Totally Agree** when, for example, the statement represents a completely accurate description of your hospital. You should choose **Totally Disagree** when the description is completely inaccurate. The response **neither Agree nor Disagree** should be chosen when, based upon your experience, you believe the statement is neither a particularly accurate nor a particularly inaccurate description of your hospital. This situation may arise because there is wide variation in the activities the statement describes.

S.N/	Questions	Totally Agree	Agree	Somewhat Agree	Neutral	Somewhat Disagree	Disagree	Totally Disagree
The following questions relate to the QI team that is working on this project								
201.	Most members of our QI team have worked on improvement projects before	7	6	5	4	3	2	1
202.	The QI team members have diverse professional backgrounds and experiences	7	6	5	4	3	2	1
203.	There was a physician actively participating on this QI team	7	6	5	4	3	2	1
204.	At least one member of the QI team is an authority on the outcome, process, or system being changed in this project	7	6	5	4	3	2	1
205.	The QI team leader has an ongoing "presence" in this team-someone who was readily available	7	6	5	4	3	2	1
206.	Most members of my QI team have a chance to participate in decision making	7	6	5	4	3	2	1
207.	QI team members agreed on the projects overall goals	7	6	5	4	3	2	1
208.	Our QI team effectively uses improvement methods (e.g., Plan Do Study Act [PDSA] cycles, run charts, control charts) to make Changes	7	6	5	4	3	2	1
209.	Members of our QI team were familiar with each other before they began working on this QI project	7	6	5	4	3	2	1

The following questions assess factors that exist in the ward, unit, office, or department where changes related to this QI project are taking place.								
210.	Microsystem leaders personally facilitate this QI project	7	6	5	4	3	2	1
211.	The microsystem values teamwork, communication, and a commitment to quality improvement	7	6	5	4	3	2	1

212.	Microsystem staff, who were not members of the QI team, are effective at using QI methods for change	7	6	5	4	3	2	1
213.	Microsystem staff, who were not members of the QI team, have a strong desire to improve performance in the area of focus of this QI project	7	6	5	4	3	2	1
The following questions relate to the support that is available to QI projects. This support may exist in either your overall organization as a whole; more specifically in your unit, office, or department; or, be provided by external sponsors of the project.								
214.	Existing information systems allow us to easily pull data specifically needed for this QI project	7	6	5	4	3	2	1
215.	Our QI teams have adequate financial support, resources, and time to meet the aims of this QI project were devoted to this QI project	7	6	5	4	3	2	1
216.	Staff are given education and training in how to identify and act on quality improvement opportunities	7	6	5	4	3	2	1
The following questions relate to the organization where your QI project takes place. These questions refer to your overall organization, not the individual QI team or the specific unit/department where changes related to the QI project take place.								
217.	The senior executives in my organization are directly involved in quality improvement activities	7	6	5	4	3	2	1
218.	At least one specific senior executive in my organization specifically supports this QI project	7	6	5	4	3	2	1
219.	This organization places no value on quality improvement	7	6	5	4	3	2	1
220.	Quality improvement is thoroughly integrated in this organization	7	6	5	4	3	2	1

The following questions relate to the environment surrounding your organization (office).								
221.	Pressures or incentives from outside my organization motivated us to undertake this specific QI project	7	6	5	4	3	2	1
222.	Groups external to my organization (e.g., associations, institutes, collaboratives) provide important personnel, money, resources, or training in support of this QI Project	7	6	5	4	3	2	1
Miscellaneous								
223.	Task Strategic Importance to the Organization	7	6	5	4	3	2	1

224.	Triggering Event	7- Yes 1- No

Thank you!!!!