



Addis Ababa University, College of Business and Economics

School of Commerce

The role of Team Work on Project performance in Health care projects: The case of “capacity development in the field of training for health care specialist and technicians”

By

Nardos Berhanu GSR/9370/13

A project work Submitted to Addis Ababa University, School of Commerce in Partial Fulfillment of the Requirements for the Degree of Masters of Art in Project Management

Advisor

Abdurazak Mohammed (PhD)

June 2022
Addis Ababa, Ethiopia

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STATEMENT OF DECLARATION

I, Nardos Berhanu, declare that the project work entitled “The role of Team Work on Project performance in Health care projects: The case of “capacity development in the field of training for health care specialist and technicians” is an original work of my own efforts. This research project has not been previously submitted to any other University in Degree or Master’s Program and every source of materials used for the research have been properly acknowledged.

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STATEMENT OF CERTIFICATION

This is to certify the project work entitled “The role of Team Work on Project performance in Health care projects: The case of “capacity development in the field of training for health care specialist and technicians” is prepared by Nardos Berhanu and submitted in the fulfillment of the partial requirement for Master’s degree of Arts in Project Management under the supervision of the advisor.

This project work is original and sufficient for the award of Master of Arts Degree in Project Management.

Dr. Abdurazak Mohmmmed

(Advisor)

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Acronym

COVID:	Corona Virus Infectious Disease
GOE:	Government of Ethiopia
GRPI:	Goals, Roles, Procedure, Interpersonal Relationship
GTP:	Growth and Transformation Plan
KFW:	Kreditanstalt für Wiederaufbau
MAPM:	Masters of Art in Project Management
MoH:	Ministry of Health
MoE:	Ministry of Education
PMBOK:	Project Management Body of Knowledge
PTC:	Polytechnic College
SPSS:	Statistical Program for Social Science
TVET:	Technical and Vocational Education Training

ABSTRACT

The aim of this project work was to determine the impact of teamwork on project performance in the case of a selected health care project under the Ministry of Education "Capacity Building in the Field of Training for Healthcare Specialists and Technicians" project. This study evaluated teamwork practice in the case project and the link it has with meeting project deliverables: staying within project budget, and operating on schedule and beneficiary satisfaction. The study also attempts to assess the influence of team members' contributions and teamwork efforts on project performance in healthcare projects. The study will examine present teamwork levels in order to evaluate project performance, and it will seek to discover a direct relationship between successful teamwork primary determinants and project performance. The study was casual explanatory research in order to produces quantitative data and provides statistically conclusive to test three hypotheses about the relationships between teamwork determinates and project performance. The results have revealed that team work dose play a role in project performance in the case project, and out of the studied threes teamwork determinates two in particular have shown a positive and significant relationship with project performance. The highest impact comes from through "Open communication and positive feedback" showing substantial relationship with project performance followed by "commitment to team success and shared goals". However, the remaining identified effective team work determinants have shown to have less effect on project performance. Therefore, based on the findings of the study, the researcher recommended that MoE, and other healthcare projects should focus on finding ways to boost this effective teamwork determinates for a greater project performance in their respective institutions.

Keywords: *Projects, teamwork, effective teamwork determinants, project performance.*

CHAPTER ONE

INTRODUCTION

1.1. Background

A project is an integrated effort of different disciplines and is achieved by using the available resources within the constraints of cost, time and quality. A project team is a collection of individuals with different needs, backgrounds and expertise; teams are cross-functional, which is a characteristic of matrix and project management organization (Bubshait, Siddiqui and Al-Buali, 2015). Harris & Harris (1996) explain that a team has a common goal or purpose where team members can develop effective, mutual relationships to achieve team goals. Teamwork is defined by Scarnati (2001, p. 5) “as a cooperative process that allows ordinary people to achieve extraordinary results”. Teamwork is the interaction and coordination of team members who are working together to achieve a specific, common objective by applying their professional expertise. The purpose of project teamwork is to achieve high levels of cooperation, productivity, and success. Teams are the fundamental framework of how project activities and tasks are structured and handled inside companies in every project. Byproduct, the productivity of the team members assigned to the project is largely determined by their overall performance, as they are an integral part for gentle project execution, accelerate work processes in achieving common goals, improving productivity, supporting in the settlement of project obstacles, ensuring that resources are well-managed, and taking less time to complete.

Project success according to project team members and project manager is commonly understood in terms of schedule performance, cost performance, quality performance, and stakeholder satisfaction, considering a typical project is composed of a team members and project manager to complete the assignment within the time and budget. The project team is a group of experts that are in charge of completing project duties on a regular basis. As a consequence, teamwork will be the mechanism by which we accomplish the project objective and goal, and therefore we must accept its critical relevance to project success. Within companies and organizations, teams are the core framework for planning and coordinating project activities and tasks. As a result, we can reasonably assume that a project's success or failure is often

determined by the overall performance of the project's teams. By increasing performance outcomes and supporting project managers in overcoming challenges, effective teamwork allows any project to run smoothly. This can result in improved deliverable and, as a result, increased profitability for an organization.

In the case of “capacity development in the field of training for health care specialist and technicians” project, where the project owner is Ministry of Education, and is funded by the German development bank; KFW, the objective of the project is defined as “increase the level of expertise and qualification of graduates in biomedical engineering training through the qualitative improvement and expansions of selected TVET colleges, university Hospitals and Higher Universities. This objective is finally measured against set performance indicators and baseline studies conducted. As a result, project success is measured upon midterm and end term evaluations of each project activity defined. In order to implement this project appropriately, qualified team members of the project are selected furthermore, the project includes a sub-activity related to the COVID-19 pandemic to give emergency support to help mitigate the virus's impacts in terms of providing healthcare. The project primary team consists of TVET technical experts, biomedical engineers, finance experts, procurement and logistics experts, medical equipment procurement experts, higher education research experts, as well as the project team leader and other supporting staff members. Furthermore, the broad implementation area of 6 beneficiaries for the standard project and 18 beneficiaries for the COVID-19 emergency assistance, deliverables assigned unique team members to aid project activity. The project features a vast team of team members that are not only from the project but also from numerous stakeholders.

This study aims to uncover a number of teamwork characteristics that predict high teamwork effectiveness in order to better understand the responsibilities of team members and their productivity in health-care projects. In addition, it sought to determine the degree of cooperation and team members' impressions of teamwork, as well as its potential impact on project success and organizational performance. This research will be carried out on the Ministry of Education's "capacity development in the field of training for health care specialists and technicians" project, which includes 6 beneficiaries; Black Lion Specialized Hospital,

Jimma University Medical Center, Tegbare-id Polytechnic College, Kombolcha Polytechnic College, Addis Ababa University, and Jimma University on a regular project, and an additional 19 Beneficiaries for the COVID-19 Emergency Support, which includes nine teaching hospitals, seven regional TVETs, and three higher education universities. This research will attempt to investigate the types and amounts of interaction between teamwork and project performance by assessing basic teamwork determinates and their impact on project success. Based on the research findings, recommendations will be made on how to address issues related to teamwork and propose appropriate approaches. Moreover, other researchers interested in doing study on teamwork significance for project performance might use this study as a starting point.

1.2. Statement of the problem

Through the history of project management, project managers have managed their projects according to three criteria: cost, time and quality. All other considerations are often regarded as subordinate. This approach however, has not been successful for any of the above three criteria, let alone the entire project. This is due to the fact that project managers traditionally have not given much weight to a very important criterion – people (Bubshait, Siddiqui and Al-Buali, 2015).

In order to respond rapidly to market needs and increase profits, the best companies are constantly searching for proven practices that offer a competitive advantage. These companies generally avoid practices that do not provide some proven added value. Several studies have shown that the role of a project manager is critical to project success. However, the literature on project success factors has largely ignored the impact of a project manager and his or her leadership style on project success (Turner and Muller, 2005).

According to (Vincent September 2011) Team effectiveness is the capacity a team has, to accomplish the goals or objectives administered by authorized personnel or the organization. In Ethiopia, the function and impact of teamwork on project performance has not been sufficiently studied or addressed in project-based organizations.

The study was motivated by the fact that we are not emphasizing on how to make different types of teams much more effective for each project, as well as understanding the fundamental characteristics that drive teamwork and the linkage between teamwork and project performance. Furthermore, the absence of sufficient empirical research on the impact of teamwork on project performance and illustrating the critical role of teamwork and the link between project performances, as well as the necessity to fill a knowledge gap, drove the conception of this study. Therefore, the role of teamwork in project performance, in a specific MoE project will be investigated, along with, which aspects of effective teamwork has the greatest relevance and correlation.

1.3. Research Question

The following research questions were identified for this study based on a review of the literature and different teamwork models of team performance.

- Is there a link between teamwork and project performance in the project of “capacity development in the field of training for health care specialist and technicians”?
- To what degree is teamwork promoted in the project of “capacity development in the field of training for health care specialist and technicians”?
- To what degree has teamwork characteristics influenced project performance

1.4. Objective of the study

1.4.1. General Objective

The general objective of this research, which employs the MoE project as a case study, is to evaluate the impact of team members and their teamwork effort on project performance in healthcare initiatives. The study will assess the current level of teamwork in order to assess performance, and it will make an attempt to identify a direct link between successful teamwork primary determinants and project performance.

1.4.2. Specific Objective

- To determine the link between teamwork and project performance in the project “capacity development in the field of training for health care specialist and technicians”
- Identifying effective teamwork performance indicators and how they relate to project performance.
- To examine the extent to which teamwork characteristics affects organizational performance

1.5. Hypothesis of the study

The study aims to test the following hypothesis

H10. There is no significant relationship between commitment to team success& shared goals and project performance within MoE project.

H20. There is no significant relationship between open communication and positive feedback of team and project performance within MoE project

H30. There is no significant relationship between appropriate team composition and project performance within MoE project

1.6. Definition of terms

Team; A group of people with a full set of complementary skills and competencies required to complete a task, job or project.

Teamwork; work done by several associates with each doing a part but all subordinating personal prominence to the efficiency of the whole, the act of bringing several individuals together in order to efficiently and effectively complete a project.

Project; - According to the PMBOK (Project Management Body of Knowledge) 3rd edition, A project is defined as a “temporary endeavor with a beginning and an end and it must be used to create a unique product, service or result”.

Project success; - a project is said to be successful, when it succeeds in achieving the expected business case which needs to be clearly identified and defined during the project inception and selection before starting the development phase.

Healthcare: -Healthcare is involved, directly or indirectly, with the provision of health services to individuals. These services can occur in a variety of work settings, including hospitals, clinics, dental offices, out-patient surgery centers, birthing centers, emergency medical care, home healthcare, and nursing homes.

1.7. Significance of the Study

The contribution of project teamwork to project performance is reliant on project team members, which has gone unnoticed in previous literature. This study is believed to add to our understanding of teamwork and project performance particularly in healthcare projects. It not only emphasizes effective teamwork and project performance, but it also helps health care project team members and supervisors are aware of the aspects that lead to effective project teamwork and performance. It is fair to say that now more than ever, there is a vast coverage of healthcare activities and healthcare projects across Ethiopia significantly so after the pandemic of COVID 19 and furthermore due to the recently imposed war in northern Ethiopia region. These healthcare projects are ultimately evaluated against their impact or improvement that individual deliverables provide.

The Government of Ethiopia (GOE) is working to strengthen the healthcare system to align it with the Sustainable Development Goals. Under the second Growth and Transformation Plan (GTP II) and Health System Transformation Plan, the Ministry of Health (MOH) is implementing reforms to various aspects of the healthcare system(Ethiopia - Country Commercial Guide, 2022). According to Country commercial Guide statement, more healthcare projects are expected to be launched in the coming years, and research dedicated to investigating project success, healthcare project performance in this case, will greatly benefit future and current project team members and project managers.

The study is critical to the case project, who seeks to improve implementation of project deliverable. It will aid in the project's strategic implementation as well as the formation of beneficiary comfort. It will

help the company identify problem areas in teamwork and performance of project delivery. The findings will help healthcare projects understand and improve project teamwork, as well as how to attain desired results. Members of the project team will learn and accept responsibility for how things are done, and they will be able to modify their attitude and mindset consequently. This study will attempt to fill this void of empirical evidence by identifying the associations between teamwork, and project performance. In the great scale of things, the research is thought to add to the body of knowledge for project management expertise.

1.8. Scope of the Study

Former Ministry of Science and Higher Education (MoSHE) currently reformed under the Ministry of Education has had several healthcare projects, however, this research will be conducted on a specific healthcare project “capacity building for healthcare specialist and technicians” and its sub activity “COVID-19 emergency Support” which is funded by the German state-owned investment and development bank, known as Kreditanstalt für Wiederaufbau (KfW). The project's active teams will be assessed to see what makes them effective and which aspects have a major impact on project performance. To uncover successful team work determinates, this study will leverage existing effective team work theories and models that are focused on the efficacy of team work in project performance.

1.9. Limitation of the study

More time is required for a thorough research, because of the limited time available for this study; it will concentrate on only one selected project under the Ministry of Education. In addition, following that, a lack of willingness on the part of a few employees to submit important data was a minor limitation. Lack of accuracy in current data will also play a significant role in restricting the investigation. Finally, the limitations of accessible literature that is directly related to the study subject will be stressed since they have a major impact on fulfilling the study objective. As a response, the researcher will design techniques for each difficulty until the study is completed.

1.10. Organization of the Study

This study is organized and divided into Five chapters with sub chapters the background of the study, statement of the problem, purpose of the investigation, research questions and hypothesis, definition of terminology, importance of the study, scope and limitation of the study are all included in the first chapter's Introduction section. The second chapter expands on the previous chapter's review of relevant literature, and has sub chapters of, an overview of concepts and work related to this study; it examined literature on topics relevant to the study, conducted an empirical review, and developed a conceptual framework to guide the research. The study's research methodology section explains the research methodologies that will be used in this study, as well as the research design, study population, sample procedures, data source, and data collection tools. Chapter four covers the data analysis and interpretations while the final chapter provides the summary, conclusion and Recommendations based on the findings.

CHAPTER TWO

LITERATURE REVIEW

2.1. Introduction

A team is a small number of people with complementary skills who are committed to a common purpose, a common set of performance goals, and a common approach for which they hold themselves mutually accountable (Katzenbach and Smith, 1993). In this section, literature related to successful teamwork determinants are reviewed in the attempt to show the relation of team work to project performance. The purpose of this review is to evaluate several concepts related to teamwork, team effectiveness models, and project performance. In order to understand teams, teamwork, and team success in a project, many literatures addressing teams in general, their features, varied models, project performance variables, and characteristics of effective teams will be examined.

2.2. Defining Project Team

A project team can be defined as ‘a number of people who work closely together to achieve shared common goals’ (Burke and Barron, 2014:160). Experts working on projects work in groups, even if they have never interacted prior. The PMI (2013) defines the Project Team as members of the project team who are directly involved and assigned with roles and responsibilities to complete the project. In regards to project teams, members should state their duties, responsibilities, and authority levels to the other members early in the teambuilding process. Mohammed and Abi (2015) define project team a group of people with complementary skills and knowledge who work together through continuing communication, making joint decisions, accomplishing a set of tasks, and motivating each other to accomplish a particular goal.

This practice gives other team members direct information of who they need to collaborate with to tackle a specific problem. Members of a team cannot contribute to tasks or social interactions unless they possess the necessary knowledge, skills, and talents. Members' capacity to make valuable contributions can be increased by either appropriate team member selection or training and growth. Teamwork is vital for the successful execution of any project. The team's goal is to provide a project that is completed on time, on or under budget, profitable for all team members, free of claims, and resulting in a happy customer.

Rivalries, documentation battles, doing harmful actions out of spite, and other distracting actions may result in at least an unpleasant work environment and more likely an unsuccessful project (Cheng et al, 2006).

2.3. Defining Teamwork

Kohn and O'Connell (2007) define teams as a group of people who share a common team purpose and a number of challenging goals. Teams are required in organizations because diverse individuals with varied talents, views, knowledge, and interpretations must work together to fulfill responsibilities and reach organizational goals and objectives. And teams are important because they give a wide range of skills and knowledge that a single person cannot provide. Teamwork is defined by (Harris and Harris 1996) as “a work group or unit with a common purpose through which members develop mutual relationships for the achievement of goals/tasks. These indicate that team members collaborate in the pursuit of a common goal by sharing knowledge/skills and being adaptable enough to perform numerous tasks.

2.4. Teamwork Theory within Workplace

Teamwork can be simply defined as a state of unity achieved within a group of people working for a specific goal or benefit (Jaeme). In addition, in business, the term "teamwork" is used to describe the coordination and cooperation among the members of a partnership. One structured pattern of participative management and the mostly implemented recently among huge businesses, high performance, and high-reliability organizations is known by the term “teamwork”.

2.5. Determinants of successful team work

According to Tarricone and Luca (Luca, 2002), successful team environment is built on a cooperation that exist between all team members creating an environment where they are all willing to share and participate for the sake of promoting and nurturing a positive and effective team environment (Luca, 2002). Thus, Tarricone and Luca pointed to several attributes that they considered important for successful teamwork. For the purpose of this study we will discuss only some of this attributes:

- **Commitment to team success and shared goals**, where team members are motivated, involved and intend to accomplish at the highest level (Vries, 1999). participants understand their purpose and share their goals – the combination achieves mission (Francis & Young, 1979) members must share a strong common goal (Kets De Vries, 1999)groups provide each member of the team with prestige and recognition (Scarnati, 2001) successful teams are motivated to succeed (Bradley & Frederic, 1997) there is strong team commitment to succeed (Critchley & Casey, 1986) members have strong shared values and beliefs (Kets De Vries, 1999)engaged in and satisfied with their work (Wageman, 1997)creation of a team atmosphere that is informal, relaxed, comfortable and non-judgmental (Harris & Harris, 1996) promote group cohesion (Bradley & Frederic, 1997) people enjoy regular interaction with individuals who have similar interests and goals (Scarnati, 2001).
- **Open communication and positive feedback**, where managers within organization actively listen to the concerns and needs of team members and also admire and value their contribution and commitment. At the same time, team members must express willingness to provide and accept constructive criticism and to give true and valid feedback (Harris, 1996). give and accept feedback in an non-defensive manner (Harris & Harris, 1996) ideal team should be highly diversified in the talents and knowledge each member contributes, while maintaining open, non-threatening communication (Bradley & Frederic,1997) value effective listening and communications that serves group needs (Harris & Harris,1996) engage in open dialogue and communication (Kets De Vries, 1999)cultivate a team spirit of constructive criticism and authentic non-evaluative feedback(Harris & Harris, 1996)team members must be open and truthful (Critchley & Casey, 1986) enable members to express group feelings (Harris & Harris, 1996)listen to all ideas and feelings; (Critchley & Casey, 1986) face up to conflict and work through it (Critchley & Casey, 1986)
- **Appropriate team composition**, where team members are fully attentive of their specific team role and know what level is expected from them regarding their contribution to the team and the project (Wageman, 1997). successful teams are a product of appropriate team composition

(Bradley & Frederic, 1997) clarify member roles, relationships assignments and responsibilities (Harris & Harris, 1996) discuss differences in what each member has to contribute to the work (Wageman, 1997).

2.6. Characteristics of Effective Teamwork

Teamwork is defined by Scarnati (2001, p. 5) “as a cooperative process that allows ordinary people to achieve extraordinary results” A number of characteristics essential for effective cooperation have been identified via research. Many of these characteristics have been repeatedly recognized in the literature. Carl Larson and Frank LaFasto (2010) pointed out the major characteristics of effective teams in project management. These are:

- A result- driven structure. It is often best to let the team develop a structure that allows them to operate in a manner that produces result.
- A clear, elevating goal. Everyone knows the specific performance objective and when it should be, and has been met.
- A unified commitment. All individuals direct their efforts toward the goal
- Competent team members. Members are able to tackle their responsibilities given their level of knowledge.
- Standard of excellence. Team members know what is expected of them individually and collectively
- Collaborative climate. A climate of trust produced by honest, open, consistent and respectful behavior.
- Principled leadership. Team members appreciate that team leaders have the position because they have good leadership skill and are working for the good of the team.
- External support and Recognition. Encouragement and praise motivate individuals and teams.

2.7. Team Effectiveness Models

A team's performance may be measured by its ability to complete consecutive tasks without losing members while yet addressing the needs of each individual member. The success of the project is

measured by the satisfaction of the client while that of the members by expression of their happiness and want to continue working together. (Stewart et al 1999). For the teams to be effective they must be able to establish their task by setting objectives, deciding plans and defining roles and responsibilities. But to help the team to work together productively there is need to create open and honest communication channels, establish team values and develop ground rules. Failure to address these issues leads to infighting and no task to accomplish (Nash, 2001).

Because all businesses and organizations rely on teams and their performance for project and organizational success, various successful team models have been developed over time. The following four well-known team effectiveness models are defined for the purposes of this research.

2.7.1. The Katzenbach and Smith Model

After researching numerous teams that were encountering issues in their work environments, Jon Katzenbach and Douglas Smith established the team effectiveness model in their book "The Wisdom of Teams" In 1993.

The authors provide a triangle model of effective teamwork, with the corners representing the key outcomes of teamwork: collective work products, performance results, and personal growth. The triangle's sides represent the three primary aspects that contribute to the attainment of these goals: commitment, skills, and accountability.

Focusing on Team Basics Model—Katzenbach and Smith (1993)

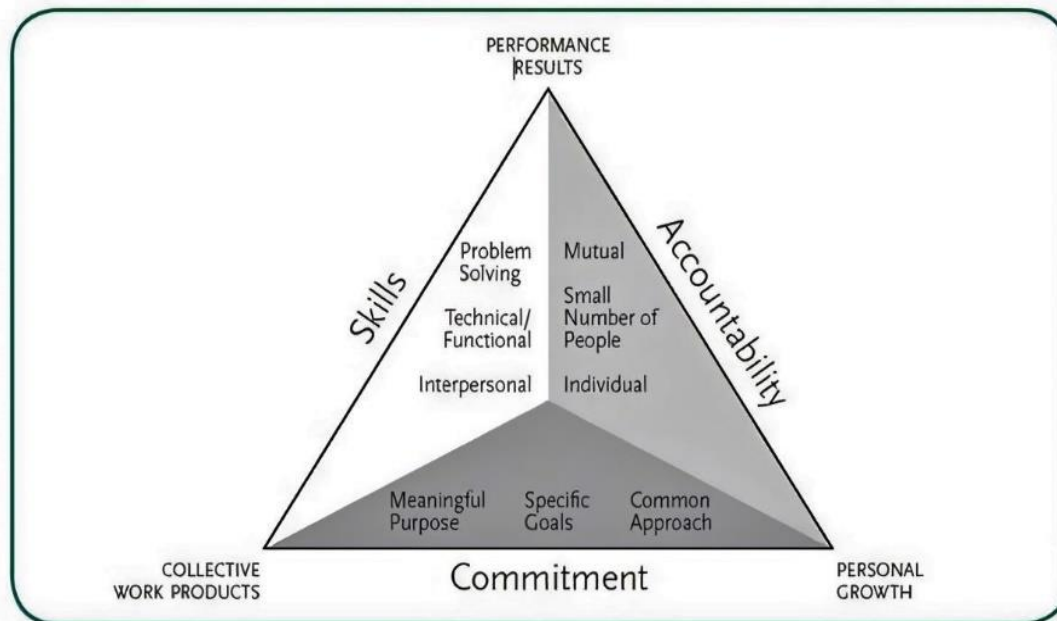


Figure 1. The Katzenbach and Smith model

Commitment: When everyone is engaged and motivated to working toward a same objective, there is team commitment. Team members are more committed to their job when they are involved in and aligned with the organization's objective, have defined goals, and a common team strategy to achieving them. A lack of commitment may have a negative impact on group dynamics because it leads to distrust, unhealthy conflict, and uncertainty about the goal. Team development, according to the Katzenbach and Smith approach, aids in increasing accountability and involvement. To promote commitment to a unified purpose, successful teams adopt performance management systems.

Skills: are technical competency, what team members possess, to do the actual task, problem solving, and interpersonal skill. When these skills are acquired by team members it will allow the efficiency in execution, synergy among members and personal growth which will be inevitable. Every member of a team must be skillful in interpersonal relationship and teamwork, and have the adequate professional skills to accomplish goals.

Accountability: When it comes to teamwork projects and duties, there should be both mutual and individual accountability. Team members must remain committed to their own responsibilities and team

Lencioni's Five Dysfunctions of a Team

Lencioni's Five Dysfunctions of a Team



goals without avoiding accountability, which might jeopardize team success. One person's unwillingness to complete a task on time might have an influence on others who rely on the effort to meet their own objectives.

2.7.2. The Lencioni Model

Patrick Lencioni's book "The Five Dysfunctions of a Team" depicts a team effectiveness model that differs somewhat from the others. He focused on the aspects that a team should not have to look at the core reasons why teams are dysfunctional and claimed that recognizing a team's dysfunctions may assist form an effective team by knowing what to anticipate and how to manage it successfully (Udoagwu, 2020). Lencioni's concept is depicted as a pyramid, with the absence of trust at the bottom, and recommends that you must address one dysfunction before moving on to the next.

Figure 2 Lencioni's Dysfunctions of a team model

The following are the five dysfunctions of a team according to Patrick Lencioni:

Absence of trust: lack of trust fosters an atmosphere in which teams are hesitant to seek guidance, support, or assistance. When there is skepticism that a team member can be vulnerable with one another, trust cannot be created within the team.

Fear of conflict: is pretending to get along for the sake of false harmony, which can prevent potential good conflict that might result in productive ideas since disagreement can generate room for new or better ideas, and fear of conflict can lead to an ineffective team. A good debate between two team members may prompt them to seek a third alternative that is advantageous to everyone.

Lack of Commitment: occurs when people aren't devoted to the task that has been allocated to them. This has an effect on the larger team since when team members aren't dedicated, it hinders their decision making, proper communication, work processes, and meeting deadlines.

Avoidance of accountability; this is when team members must overcome their discomfort and hold each other accountable for their roles and job execution. However, when people are hesitant to hold themselves or others accountable for their actions, it leads to team dysfunction.

Inattention to Result: occurs when a team member prioritizes personal ambitions above shared achievement, which leads to details, and when team members are overly focused on their individual goals, productivity and improvement on reaching the common objectives will be missed.

2.7.3. Rubin, Plovnick, and Fry's (GRPI Model of Team Effectiveness)

Doctors Irwin Rubin, Mark Plovnick, and Ronald Fry popularized the GRPI paradigm in 1977. The model emphasizes the fundamental features required for teams to work successfully; it is made up of four major components: goals, roles, procedures, and interpersonal relationships. The GRPI is simple frameworks that can help organizations improve employee engagement, commitment and foster accountability towards measurable individual and team goals (Dinnie Muslihat, 2019). Through this model, we can see that team performance can be improved by clarifying goals and responsibilities, creating an environment that encourages frequent honest communication, and fostering willingness and flexibility among team members.

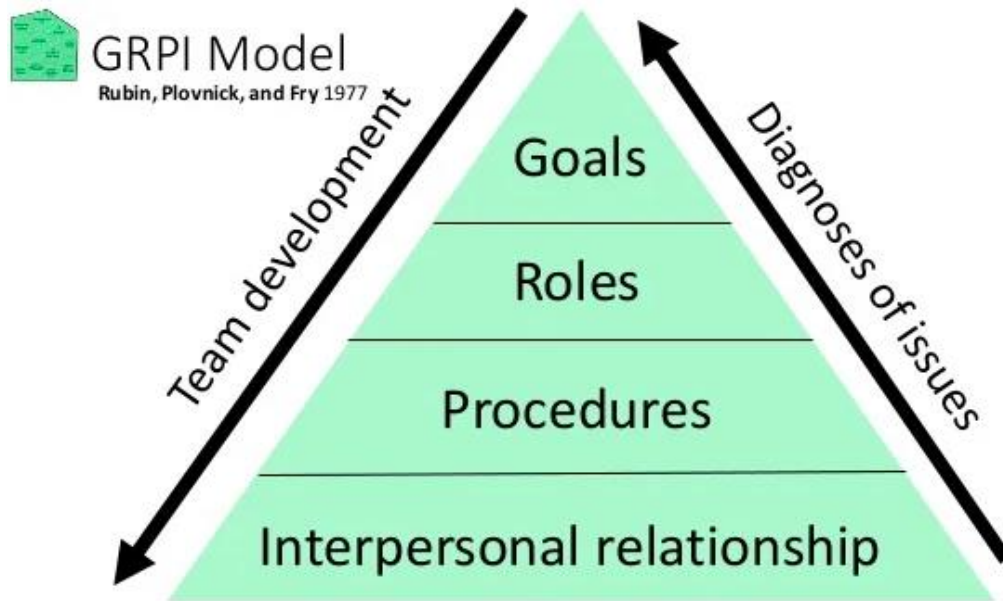


Figure 3 GRPI Model

Goals: (Kelechi Udoagwu, 2020) setting goals is the most fundamental requirement for a functional team because it clarifies the shared understanding of what the team is trying to achieve, where it wants to go and how it knows whether it is still on track. And setting objectives and desired accomplishments is important in order to be effective because without evident direction, it can lead to disputes and disagreements. In all project there must be clear objectives and intentions regarding individual and team goals, combined with strong and open communication about priorities and expectations.

Roles: Because goals are realized through team members, each and every team member must understand their tasks, roles, and what they are accountable for, because not knowing can lead to failure. Furthermore, the entire team must have a designated team leader with strong leadership abilities and unambiguous authority, as well as members assigned to tasks that are appropriate for their ability level. Roles determine who is supposed to do what, who is responsible for what, and who has what authority.

Procedures: is required because a set of processes must be in place for the team to function well in decision making, workflow procedures, problem solving procedures, conflict resolution techniques, and high communication practices. Processes that are well defined allow for successful collaboration in problem solving, coping with obstacles, open and good communication, and effective decision making.

Interpersonal relationships: are critical because team members must create relationships with one another that are built on trust, excellent communication, flexibility, and adaptability in order to be productive. We may argue that teams are communities in the way their members interact with one another, and this has a significant impact on the team's spirit, emotional well-being, and overall performance since it helps us build trust, respect, and accountability among team members.

2.7.4. The LaFasto and Larson Model

In 2001, Frank LaFasto and Carl Larson developed a team effectiveness model through researching 600 teams in various organizations, they made a model of what an effective team looks like, which consisted of five elements for team effectiveness which are team members, team relationships, team problem solving, team leadership and team organizational environment (Muslihat2019).

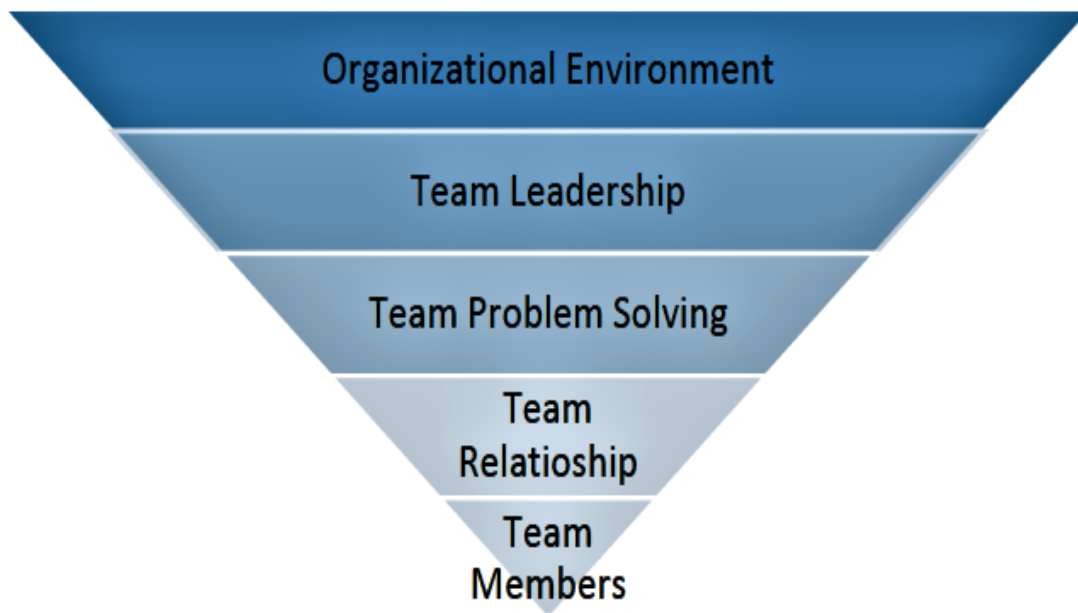


Figure 4 La Fasto and Larson Model

Team members: are important since task performance is dependent on team members' skills and characteristics, as well as whether they are the appropriate fit for the position. Team members should be able to operate in a team setting and with others if they have the necessary skills and competencies.

Team connections: In the same way that interpersonal relationships are important in the GRPI model, the correct team building behaviors are critical to maximizing team capabilities. When you choose someone with a positive attitude, it will be easier to build strong working connections.

Team problem solving: When teams have excellent team connections and interactions, high levels of trust are established, which may lead to increased productivity, conflict resolution, and problem-solving abilities. The reverse impact might occur when there is a lack of trust. When there are solid working connections among members of a team, it can help to make collective choices simpler and minimize friction.

Team leadership: In any team effectiveness model, a successful, proactive team leader who drives team members in a compelling direction is fundamental. It is critical for a team's success to have a leader that inspires and engages their team.

Organizational environment: promotes collaborative work methods and an organizational culture that encourages team commitment and accountability. When the right method and company culture are in place, a team's commitment will increase.

2.8. Project performance and Success

Whenever we launch a project, we should have a definite time set at the start specifying its beginning and ending period, as well as what the goal or target will be and what we are attempting to accomplish through it, as well as detailing the standard specification of the product or service. The PMBOK describes a project as having three specific attributes. First, it is a temporary endeavor with a definite beginning and end. Second, a project aims to accomplish something that has not been done before Third, the requirements and specifications for the product or service created by the project. Therefore, whenever we launch a project, we should have a definite time set at the start specifying its beginning and finishing period along with what the goal or target will be and what we are trying to accomplish through it and also detailing the standard specification of the product or service

Project success is the completion of a task, action and process according to what is planned at the start of the project according to the agreed up on standard (Bannerman, P. L. 2008).The success of the project is measured by the satisfaction of the client while that of the members by expression of their happiness and want to continue working together. (Stewart et al, 1999) According to Sheard and Kakabadse (2002) a project leader should also consider importance of project teamwork for success of any project.

2.9. Teamwork and Project Performance

According to M. Afzalur Rahim (2001), performance of the team is positively related to the outcomes of projects. However, there is no empirical study showing the association between project teamwork and project success in any particular industry (Yang et al., 2013). Similarly, Unger-Aviram, Zwikael, and Restubog (2013) indicated that project efficiency can be measured in terms of project team performance which refers to the extent that project team members have completed the project as predefined cost and schedule. They claimed that higher the team efficiency will result in lower the deviation in estimated time and cost of project.

Cengage implied that some of the organization's major benefits from the implementation of teamwork include improved quality of work life for employees, reduced absenteeism and turnover, increased innovation of team members, and improved organizational adaptability and flexibility to rapid changing markets and technologies (Cengage, 2006). To add up, Knoll Workplace Research suggests that implementing teamwork within organizations or enterprises result in major positive changes on the work and performance level of employees (team members). Such positive impacts include creating a united effort, ensuring fair distribution of work, reducing risks, subordinating personal interests to organizational interests and ensuring timely completion of any work with high quality and efficiency (Dr. Michael O'Neill, 2010).

From a Project Management perspective, critical success factors (CSFs) are characteristics, conditions, or variables that can have a significant impact on the success of the project when properly sustained, maintained, or managed (Milosevic and Patanakul, 2005). The following table summarizes previous critical success factors from previous literature.

Critical Success Factors	Reference
Skilled project managers	Chan et al. (2001) Jha and Iyer
Project team motivation	Chua et al. (1999)
Commitment of all project participants	Chua et al. (1999) Chan et al. (2001)

Table 1 Critical Success Factor, literature

As attempted to elaborate so far in this literature section, the significance and influence of project teams on project success or failure cannot be ignored.

2.10. Review of Empirical Studies

To support the study's conceptual framework, the influence of prior empirical research on teamwork, team effectiveness, and project and organizational success is reviewed.

A study on the Impact of Project Teamwork on Project Success in Pakistan (by Muhammad et al, 2017) the importance of project teamwork for the project success, argues that leader alone cannot successfully complete a project. The study was based upon Higher Education Commission in Pakistan and data has been collected from project leaders regarding performance and contribution of project team work toward project performance. The study hypothesized four elements, communication, cohesion, collaboration and technical skills in the positive and direct relationship between the project teamwork and project performance. The findings demonstrated a positive and strong relationship between team collaboration and team communication and cohesion, while project team technical skills had the least effect. The study was conducted in a developing country and discovered that project teamwork is an effective tool for project success. Furthermore, project team members who work at the same frequency can have a synergistic effect on project success factors. Moreover, project team members must understand the importance of their contribution to the project's success.

An Empirical Study on “Teamwork Quality and the Success of Innovative Projects” (Hoegl and Gemuenden, 2001) aimed to contribute to the clarification of the critical issues, in particular, it addresses

the following questions: (1) what is “teamwork,” and how can it be measured? (2) Why and how is teamwork related to the success of innovative projects? (3) How strong is the relationship between teamwork and different measures of project success? This research was conducted using 575 interviews with members, leaders, and managers of 145 software development teams in Germany. The research provides empirical evidence that team work quality is an important success factor of innovative project success. The empirical results of this research document that team work quality is significantly related to project success (including team performance and team members’ personal success). This research contributes to clarifying how teamwork relates to different measures of project success. Both team performance (effectiveness and efficiency) and the personal success of team members (satisfaction and learning) are significantly connected to team work quality.

Ijeoma Okoronkwo of Harrisburg University of Science and Technology has researched team performance on project success using hypothetical data to identify and establish the primary factors that anchor all other factors that drive team performance and project success. According to the findings of the survey questions, team members' performance is at its peak in a high trust environment. Trust enables teams to engage in consistent and meaningful communication, which leads to commitment and interdependence among team members. Accountability and good team results are fostered, developed, and sustained in a trust-based work environment. And, in a trust-based relationship between teams, collaboration and cohesion are effective, which drives performance and success.

The study of the impact of teamwork on organizational productivity in some Accra Metropolitan Assembly basic schools (Agarwal and Adjirackor, 2016) indicated a strong positive significant relationship between the independent variables of teamwork, team trust, recognition and rewards, and employee performance. However, teamwork was found to be highly related to employee performance. The overall findings revealed that teamwork provides benefits when compared to other elements, such as, enhanced productivity, improved organizational performance, competitive advantage, and increased product quality and quantity which all help to boost organizational productivity. Employers may also be

able to boost their performance by doubling the levels of teamwork and taking steps to increase individual performance, this has a direct impact on employee and project performance.

2.11. Conceptual Framework of the Study

Project teamwork contributes favorably and considerably to the success of any project; as a result, various effective team determinants, such as commitment to team success and shared goal, open communication and positive feedback, and appropriate team composition, have been examined in the literature. Commitment to team success and shared goal is the first and main part in teamwork in regards to forming projects and organizations. However, without open communication and positive feedback, project can easily be led to failure since it is an important thread for an effective project. In addition, appropriate team composition enables team members to be fully attentive of their specific team role and know what level is expected from them regarding their contribution to the team and the project.

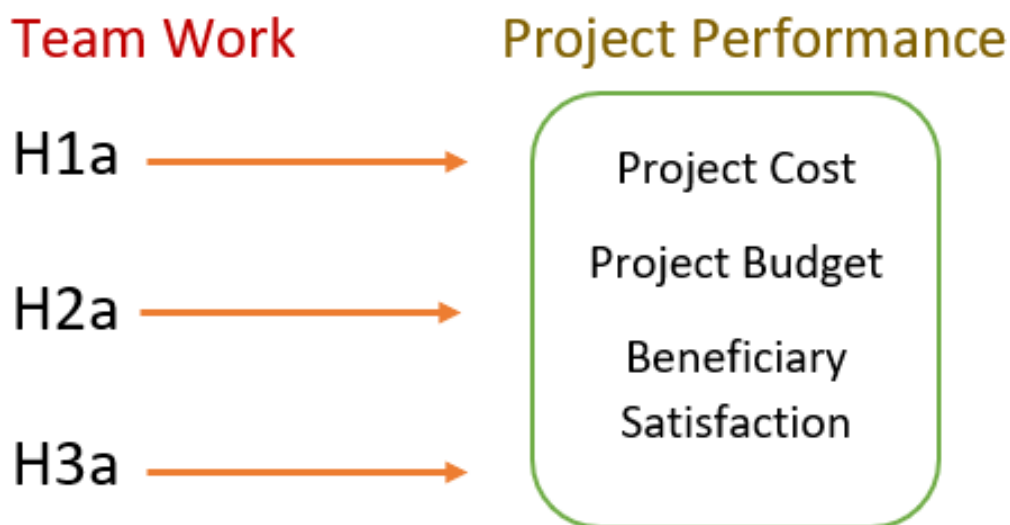


Figure 5 Conceptual Framework

CHAPTER THREE

RESEARCH METHODOLOGY AND DESIGN

3.1. Introduction:

Following a literature review on teamwork and what defines effectiveness in terms of project performance, the most relevant behavioral determinants of team effectiveness and team performance have been chosen using sources such as the internet, library databases, and books by various authors. Based on the determined factors and determinants, an appropriate questionnaire is developed and will be distributed to primary team members of the selected project, which will serve as a primary data source. This chapter will discuss the research design, study variables, study area, target population, sampling size, data analysis methodologies, reliability and validity analyses, as well as ethical considerations, are all addressed.

3.2. Research Design

The primary purpose of this research is to see if there is a direct link between project performance and teamwork. The research methodology is causal, highlighting the importance of teamwork and how it affects project performance. As a result, causal explanatory research is used to collect quantitative data; the study's goal is to explore ideas about cause-and-effect relationships between teamwork and project performance, so the findings are statistically conclusive. This research provides a clear image of the scenario of teamwork determinates, which are the cause, and project performance, which is the impact, and will help us figure out what kind of relationship they have.

The research design is solely case study in order to investigate the effect of teamwork on project performance applied in the ministry of education selected project. Because it will provide us with contextual, in-depth knowledge of teamwork and its role in the organization and will enable the research to compare a variety of variables at the same time, the research time line is cross sectional. The study is also cross-sectional since the data is collected at a specific moment in time. A cross-sectional research will help with the analysis of data gathered at a single moment in time from a population and on pre-defined variables. The reason for adopting this method is because it is reasonably quick to perform,

will allow collecting all variables on my study at once and enabling me to research multiple results at once.

The study takes a quantitative approach, using cross-sectional survey methods such as questionnaires. There are certain important considerations to weigh while choosing a survey method, such as geographic flexibility, cost, and the need for a quick and efficient response. I have chosen quantitative approach because I'll be gathering and analyzing numerical data on teamwork and the chosen determinate traits in order to evaluate relationships, uncover patterns, make predictions, and generalize outcomes across the practice of the selected project. Quantitative research is ideally suited for these studies because there are few variables involved, making it more precise and objective, it's also less expensive and quicker.

3.3. Description of Study Variables

Independent variables are not considered as being dependent on any other variable in the experiment at hand. The independent variables are those that are altered as "input" variables, while the dependent variables are those that demonstrate the impact or "output" of that input variable. Dependent variables, on the other hand, are so named as such because their values are explored in an experiment under the premise or hypothesis that they are dependent on the values of other variables. The determinants of an effective teamwork approach are the independent variable in this study, while the dependent variable is the project's performance. The study hypothesizes that the independent variable causes variation or change in the dependent variable. The independent variables in this case include the commitment to team success and shared goal, open communication and positive feedback, which are all represented by the letter X. The dependent variable, Y, represents the project's performance.

Category	Variables description	Notation	Measurement	Description
Dependent variable	Project performance in terms of (Project Budget, Project timeline, and beneficiary satisfaction)	Y	Likert scale (1-5)	Rank
Independent variable	commitment to team success and shared goal	X ₁	Likert scale (1-5)	Rank
	open communication and positive feedback	X ₂	Likert scale (1-5)	Rank
	appropriate team composition	X ₃	Likert scale (1-5)	Rank

Table 2 Variable description

3.4. Description of Target Population and Study Area

The population of this survey is team members on the project "capacity building for healthcare specialist and technicians" which is owned by the Ministry of Education of Ethiopia. The objective of this project is to “increase the level of expertise and qualification of graduates in biomedical training through qualitative improvement and expansion of selected TVETs universities and Teaching hospitals”. The program comprises of three components aiming at a higher practical share of training and a greater orientation towards the needs of private sector in the field of biomedical engineering in three different types of institutions: 1) TVET colleges; Tegnare-id PTC and Kombolcha PTC, 2) Higher Universities; Addis Ababa University- institute of technology and Jimma University- institute of technology, 3) Teaching hospitals: Black Lion Specialized Hospital and Jimma University Medical College and, an additional 19 Beneficiaries for the COVID-19 Emergency Support, which includes 9 teaching hospitals, 7 regional TVETs, and 3 higher education universities. This project is funded by the German development bank; KfW, which is the entity which overlook any budgetary decision and approvals regarding the project implementation.

The research target population are mainly selected team members directly involved in the implementation of the project who are the assigned project team leader and the technical project team members, in addition the survey will include team member who are indirectly involved from the ministry side who aid and facilitate activities, as well as focal persons assigned from the beneficiary (6 original project partners and 19 COVID-19 support beneficiaries) side, Finally the survey will also include team members from the funding bank to get a more inclusive overview. The reason for this target population selection is to acquire as much perspective and attitude of teamwork understanding as possible. The selected target population both external and internal to the project is approximately 58 respondents.

3.5. Sample size

As the number of respondents is limited, the chosen method is a census survey, as the evaluation will cover all assigned project team members, which is estimated to be 58 respondents.

3.6. Data Collection

All of the relevant data are acquired from team members directly and indirectly involved on the selected project implementation as a primary source. The data is collected using hard copy and soft copy questioners. They'll were used to gather information from the target population, with each item tailored to meet a specific research purpose. The questions are designed to make them more convenient and easier to understand for the respondent.

A questionnaire is a type of data collection instrument that consists of questions that are meant to elicit information from respondents. Questionnaires were chosen over other types of data instruments because they are less expensive and typically contain standardized replies, making data gathering easier.

Three elements are prepared for the data collection questionnaire: section I is designed to collect the respondents generic profile. Section II consists of questions designed to gauge the amount of agreement among respondents on identified effective team determinants. Section III contains questions designed to determine how well the respondent believes the Project is performing. Closed ended questions are used in the measurement scales, with a Likert scale ranging from Strongly Disagree (1) to Strongly Agree (5). The respondents were given a seven day period to fill out the questioners, which will be delivered to them in person.

3.7. Data Analysis

Data analysis entails condensing large amounts of information into manageable components, looking for trends, creating summaries, and employing statistical tools. The collected information will be edited, documented, and also quantitatively analyzed by means of descriptive statistics. Descriptive statistics are crucial because it allow us to present our data in a more meaningful fashion, allowing for easier data interpretation. To assess the link and effect of the two variables, Pearson Correlation and regression analysis will be used to examine and interpret the single point in time responses. Histograms, and charts will be used to present the data descriptive (mean, mode, and standard deviation) will be analyzed and presented in tables, percentages, and charts using the statistical program for social science software

(SPSS). The regression and correlations tests will be used to determine the correlation and impact of the variables.

Correlation and regression was used to help determine the relationship between teamwork and project performance. The regression coefficient β (regression coefficient) denotes how much a change in x must be multiplied to get the equivalent average change in y, or how much y changes for a unit increase in x. The degree to which the line slopes upwards or downwards is represented in this manner. Below is the study's multiple regression equation:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon_0$$

Where,

Y: is project performance

$\beta_0, \beta_1, \beta_2,$ and β_3 : coefficient regression

$X_1, X_2,$ and $X_3,$ are the variables; commitment to team success and shared goal, open communication and positive feedback, and appropriate team composition

ϵ_0 : is the error term.

3.8. Reliability and Validity Analysis

The reliability and validity principles are used to assess the quality of research. They describe the degree to which an approach, strategy, or test evaluates something exactly. Validity is concerned with a measure's precision, whereas reliability is concerned with its consistency. Cronbach's alpha is a scale reliability metric that measures internal consistency, or how closely a collection of items are connected. Cronbach's alpha, α (or coefficient alpha), developed by Lee Cronbach in 1951, measure reliability and tests to see if multiple-question Likert scale surveys are reliable (Stephanie Glen). Although the standards for what makes a "good" α coefficient are entirely arbitrary and depend on your theoretical knowledge of the scale in question, many methodologists recommend a minimum α coefficient between 0.65 and 0.8 (or higher in many cases); α coefficients that are less than 0.5 are usually unacceptable, especially for scales purporting to be one-dimensional (Chelsea Goforth, 2015)

Data	Data	Reliability Statistics	
No.	Team work determinants	N	Cronbach's Alpha
1	Commitment to team success and shared goals	7	0.741
2	Open communication and positive feedback	7	0.684
3	Appropriate team composition	6	0.723
4	Project performance	11	0.697

Table 3 Cronbach's Alpha

3.9. Ethical Consideration

For ethical purpose, Informed consent sheet in English language is prepared and thoroughly explained to the participants. The respondents were informed about the aim, benefit, and duration of the study. Additionally, they were informed that they have a full right to refuse or discontinue participating in the study at any point in time without any negative repercussions.

All participants were treated with utmost respect and dignity. All the information gathered from the participants was handled confidentially and was not disclosed to a third party. The privacy of the participants is maintained.

I will ensure the study is free of plagiarism and research misconduct, and it will accurately represent the results.

CHAPTER FOUR

DATA ANALYSIS AND INTERPRETATION

4.1. INTRODUCTION

The data analysis, interpretation, and presentation are all covered in this chapter. Descriptive approaches such as percentages, mean, standard deviation, and coefficients were used to examine the data, in the instance of a selected project under the MoE “capacity development in the field of training for health care specialist and technicians” project. This chapter discusses the analysis and interpretation of the acquired data on the relationship between teamwork and project performance. Subchapter include: Introduction, response rate, demographic features of respondents, rating of key study variables, connection among variables, hypothesis testing, and discussion of findings. Finally, the chapter uses correlation and regression analysis to demonstrate the link between teamwork and project performance.

4.2. GENERAL PROFILE AND RESPONSE RATE OF THE RESPONDENTS

4.2.1. Response rate

There were 52 surveys collected out of 58 questionnaires distributed to team members of the selected case project, with a response rate of 89.6% and without any questionnaires that were not filled properly.

4.2.2. Demographic Characteristics of Respondents

Gender, age, educational level, role in project team, and years of experience at the project were all included in the demographic information section of the questionnaire. In the table below, the results of the structured questionnaires are presented.

Out of the total 52 respondents, about 35 (75%) of the respondents were male while 13 (25%) were female.

Regarding age, 19 (36.5%) of the respondents are between the ages of 20 and 30, 20 (38.5%) are between the ages of 31 and 40, and 9 (17.3%) are between the ages of 41 and 50. The statistics plainly demonstrates that the great majority of those who responded were between the ages of 20 and 40.

Concerning the respondents' educational status, approximately 2 (3.8 %) have a diploma, 24 (46.2 %) have a BA/BSc, 23 (44.2 %) have an MA/MSc degree in various specialities, and 3 (5.8%) have "other" educational status. The data shows that respondents with a BA/BSc or MA/MSc degree are more frequent, and that the respondents are capable of reading, comprehending, and answering the questions.

Out of the 52 respondent's, majority 50 (96.2%) are team members while the rest 2 (3.8%) are team leaders the case project, indicating a significant involvement of both team leaders and team members in the study. Regarding the years of experience in selected the project, about 24 (46.2%) of respondents had experiences of years ranging from 1 to 2, 13(25%) had experience of 2 to 3 years, and about 10(19.2) % had experience of 3 to 4 years, and 5 (9.6%) have been working for 4 years or more. This indicates that the responders have substantial experience as part of a project and as a team, and that they can clearly respond to the questions posed and are well-versed in providing responses. As a result, the researcher determines that the responses derived from the respondents will be accurate and beneficial in demonstrating the importance of teamwork in project performance.

Profile	Description	Frequency	Valid %
Gender	Male	39	75.0
	Female	13	25.0
Age	20-30 years	19	36.5
	31-40 years	20	38.5
	41-50 years	9	17.3
	51-60 years	4	7.7
Educational Level	Diploma	2	3.8
	BA/BSc	24	46.2
	MA/MSc	23	44.2
	Other	3	5.8
Role on Team	Team leader	2	3.8
	Team member	50	96.2

Years of Experience	1-2 years	24	46.2
	2-3 years	13	25.0
	3-4 years	10	19.2
	>4 years	5	9.6
Total		52	100

Table 4 Demographic of Respondents

4.3. Descriptive Analysis of Variables

4.3.1. Descriptive analysis of selected Teamwork Determinants

The case project's team members and team leaders were asked to rate their level of agreement with the three determinants of team performance based on factors selected from several team work models. Using a Likert scale, the questionnaire was designed to assess teamwork comprehension as well as agreement on the three criteria and their influence on project performance. The different indications were rated on a 5-point Likert scale, with 1 point for 'Strongly disagree,' 2 points for 'Disagree,' 3 points for 'Neutral,' 4 points for 'Agree,' and 5 points for 'Strongly Agree.' The replies were evaluated using descriptive statistics such as mean and standard deviation.

Commitment to team success and shared goals

The first section of the teamwork determinants of the project examines the Commitment to team success and shared objectives element. The six questions in the below-mentioned questionnaire define this aspect of teamwork. Commitment to team success and shared goals as a team work parameter at the case project was assessed on a scale of 1 to 5, with an average mean of $M=3.225$, indicating a moderate degree of commitment. As shown in the table below, the standard deviation of the commitment to team success and shared goals parameter of teamwork measurement is 1.00, which is low, indicating that the majority of individual responses are near to the average mean. The overall mean and mode scores for the commitment to team success and shared goals parameter indicate that respondent' perceptions of a common goal in teamwork fall somewhere between "Neutral" and "Agree."

Description	N	Min	Max	Mean	Standard Deviation
The team goals that have been set for the team to achieve are genuine and attainable.	52	1	5	3.154	1.017
When the project begins, there is agreement on shared goals and objectives.	52	1	5	3.423	0.915
The project deliverables are communicated clearly.	52	1	5	3.269	1.069
The project duties and tasks assigned to be completed are realistic and achievable.	52	1	5	3.135	1.010
The projects aim and objectives are straightforward, simple and measurable, even though they are not measured, their accomplishment is determined	52	1	5	3.000	0.950
The project team's purpose and aim are consistent with the larger organizational goal.	52	1	5	3.365	1.030
The team goals that are set to be achieved are realistic and achievable	52	1	5	3.231	1.022
Overall Mean				3.225	1.00

Table 5 Commitment to team success and shared goals parameter

Open communication and positive feedback

The next section examines the significance of open communication and positive feedback as teamwork factors. The seven questions in the below-mentioned questionnaire define this aspect of teamwork.

The mean score for open communication and positive feedback as a part of teamwork ranges from 2.90 to 3.26, with a mean value of $M=3.126$ indicating neutral agreement. In general, this result indicates that open communication and positive feedback are practiced in a neutral to disagreeable attitude. As shown in the table below, the standard deviation of the communication parameter of teamwork measurement is 0.904, which is low, indicating that the majority of individual responses are near to the average mean. According to this examination of the data, there is a considerable decrease in communication between project teams.

Description	N	Min	Max	Mean	Standard Deviation
Information is freely and widely shared within and beyond the team	52	1	5	2.904	0.891

All important topics are openly discussed	52	1	5	3.231	0.899
All members of the team express their views adequately	52	1	5	2.962	0.839
Team members are comfortable asking for clarification if they don't understand a requirement	52	1	5	3.192	0.908
During conversations, project team members avoid diverting from the topic.	52	1	5	3.135	1.048
There is a presence of easy communication and flow of ideas that lead to effective teamwork	52	2	5	3.192	0.793
The messages communicated throughout any form of team discussion or project meeting are relevant and reliable.	52	1	5	3.269	0.952
Overall Mean				3.126	0.904

Table 6 Open communication and positive feedback parameter

Appropriate team composition

Where team members are completely aware of their individual team role and understand what level of commitment to the team and project is expected of them. The six questions in the below-mentioned questionnaire define this aspect of teamwork.

Appropriate team composition as a component of team work is scored on a scale of 3.05 to 3.42, with a mean score of M=3.28 indicating a level of agreement that is largely Neutral. In general, this finding demonstrates that proper team composition practice is neutral. As shown in the table below, the standard deviation of the cohesiveness parameter of teamwork measurement is 0.949, which is low, indicating that the majority of individual responses are near to the average mean. The overall mean and median scores for the metric indicate that respondent' perceptions of appropriate team composition fall between "Neutral" and "Agree."

Description	N	Min	Max	Mean	Standard Deviation
The nature of the project team is cohesive and complementary	52	1	5	3.308	0.829
There is a clearly defined Functional structure or chain of command for the team	52	1	5	3.250	0.988
There is a contextual support of tasks and duties for the team members	52	1	5	3.288	0.936
There is a visible team diversity in place	52	1	5	3.058	1.037
There are personality traits of particular importance for team performance	52	1	5	3.423	1.016
The project team is composed of functional/technical expertise, intellectual skills, and interpersonal skills.	52	1	5	3.385	0.889

Table 7 Appropriate team composition parameter

4.3.2. Descriptive analysis of Project Performance

The project's performance is measured across three dimensions, totaling eleven questions: project budget, project schedule, and beneficiary satisfaction. The respondents include representatives from the beneficiaries as mentioned above which would provide a good perspective to the project performance aspect.

The average agreement to these statements ranges from the lowest mean 2.94 (Beneficiaries are happy with the project deliverables and overall process and result) to the highest means 3.42 (The project deliverable has or will meet the beneficiary identified needs). With M=3.18, this implying that teamwork has a moderate influence on performance. The standard deviation of organizational performance measurement is 0.811, which is low, indicating that most individual responses for this dimension are close to the average mean, as shown in the table below.

Project performance

Completed/ongoing according/ within planned Budget	N	Min.	Max	Mean	Standard Deviation
Correct amount of budget is allocated for each corresponding task and need	52	2	5	3.346	0.738
There is understanding in project cost before project launch	52	2	5	3.365	0.742
There was a regular continuous forecast	52	1	5	3.250	0.905
There was no unnecessary costs and un-planned expenses	52	1	4	3.096	0.823
Completed/ongoing within Planned project schedule	N	Min.	Max	Mean	Standard Deviation
There is understanding in project schedules and deadlines before project launch	52	2	5	3.269	0.689
Appropriate amount time is allocated for each task and activity	52	2	5	3.019	0.779
There is a system to follow up schedule throughout the project and are successful	52	1	4	3.019	0.779
Project is or will be completed on time without delay	52	1	5	3.058	0.958
Beneficiary Satisfaction	N	Min.	Max	Mean	Standard Deviation
The project has a reputable image and recognition before its beneficiaries	52	1	4	3.192	0.817

Beneficiaries are satisfied with the project deliverables and overall procedure and outcome	52	1	5	2.942	0.850
The project deliverable has or will meet the beneficiary identified needs.	52	1	5	3.423	0.848
Overall Mean				3.180	0.811

Table 8 Project performance parameter

4.4. Relation among Variables

The main objective of this study is to find out the relationship of team work to project performance of the selected case project, “capacity development in the field of training for health care specialists and technicians”. A Pearson Product Movement Correlation Coefficient is used to examine this relationship, with the results presented in the matrix below. A correlation coefficient analysis enables to quantify the strength of the linear relationship between variables. This coefficient is usually represented by ‘r’ and can take only the value from -1 to +1.

The purpose of the correlation analysis was to discover the relationships between independent and dependent variables, as well as their influence on project performance. The correlation coefficient, denoted by r, is a measure of the strength of the straight-line or linear relationship between two variables. If the p-value is less than 0.05, then there is a statistically significant relationship between the variables. Correlation coefficient(r) strength of the correlation is as follows. From 0.01 up to 0.09 is negligible association; from 0.1 to 0.29 is low association. From 0.30 to 0.49 is moderate association. From 0.50 to 0.69 is substantial association and if 0.70 and above, it is a very strong association between the study variables.

Team work determinants	Project Performance	
Commitment to team success and shared goals	Pearson Correlation	0.289*
	Sig. (2-tailed)	0.038
	N	52
Open communication and positive feedback	Pearson Correlation	0.431*
	Sig. (2-tailed)	0.001
	N	52
Appropriate team composition	Pearson Correlation	0.177
	Sig. (2-tailed)	0.209
	N	52

Table 9 Correlation Analysis Matrix

Source: own analysis (excel, correl function)

* Correlation is significant at the 0.05 level (2-tailed).

According to the correlation matrix table above, the correlation coefficient, r , demonstrated that project success and all three collaboration determinants had a positive relationship. However the p value of the analysis determined only 2 of the variables result to be significant, namely; Commitment to team success and shared goals ($r = 0.289$, $p=0.038$) and open communication and positive feedback ($r = 0.431$, $p = 0.001$). This indicates for both variables that they have a positive correlation even though the relationship is weak and their result is also identified to be significant.

For the variable of appropriate team composition ($r=0.177$, $p=0.209$) the r value indicates that there is a weak positive relationship with project performance, but p value indicates that the result is not significant on both $p<0.05$ and $p<0.1$ significance level.

The correlation analysis overall reveals that, commitment to team success and shared goals, and open communication and positive feedback, have a positive correlation to project performance. This shows that project performance has increased due to an adequate level of practice of these two teamwork performance determinants. An increase in one teamwork parameter is associated with an increase in project performance.

However, even though the result indicates that there is a weak correlation between appropriate team composition and project performance, result has shown to have no significance.

4.5. Regression Analysis

4.5.1. Skewness and Kurtosis

Skewness assesses the extent to which a variable's distribution is symmetrical. If the distribution of responses for a variable stretches toward the right or left tail of the distribution, then the distribution is referred to as skewed. Kurtosis is a measure of whether the distribution is too peaked (a very narrow distribution with most of the responses in the center)." (Hair et al., 2017, p. 61).

"When both skewness and kurtosis are zero (a situation that researchers are very unlikely to ever encounter), the pattern of responses is considered a normal distribution. A general guideline for skewness is that if the number is greater than +1 or lower than -1, this is an indication of a substantially skewed distribution. For kurtosis, the general guideline is that if the number is greater than +1, the distribution is too peaked. Likewise, a kurtosis of less than -1 indicates a distribution that is too flat. Distributions exhibiting skewness and/or kurtosis that exceed these guidelines are considered non normal." (Hair et al., 2017, p. 61).

Statistics			
		Teamwork	Project Performance
N	Valid	52	52
	Missing	0	0
Skewness		0.191	0.010
Std. Error of Skewness		0.330	0.330
Kurtosis		0.609	-0.391
Std. Error of Kurtosis		0.650	0.650

Table 106 Statistics of Skewness and Kurtosis

Source: own analysis, SPSS

Provided the above description for Skewness and Kurtosis, both teamwork and project performance have a skewness value between -0.5 and 0.5, meaning the distribution is fairly symmetrical. As for the kurtosis, teamwork is leptokurtic (positive kurtosis), which means that it has a sharper peak and heavier tails compared to a normal distribution. For Project performance is platykurtic (negative kurtosis) which means that it has a flatter peak and thinner tails compared to a normal distribution.

4.5.2. Normality Test

The Normality test determines whether or not the observations are concentrated around a straight line. For the normality test, graphs of normality plots, and histogram graphs, were created. The majority of the data cluster around the straight line in the Normality plot graph below, indicating that the distribution is normal and that it may be utilized to do multiple regression analysis. The data in the histogram graph below has a bell-shaped structure, indicating that it is fairly normally distributed. Because the majority of the plots are

distributed about a straight line if we draw a straight line, the scatter plot indicates that the distribution is approximately normal.

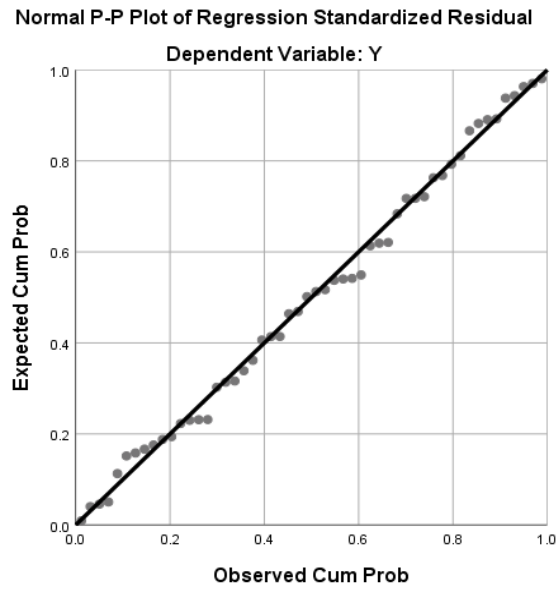


Figure 6 Normality P-P Plot Graph

Source: own analysis from, SPSS

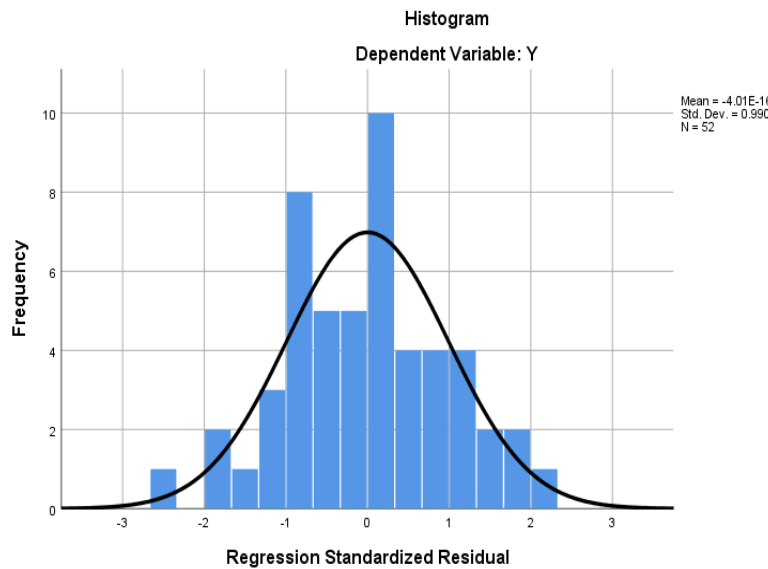


Figure 7 Histogram Graph

Source: own analysis from SPSS

4.5.3. Model Summary

The coefficient of determination, which is R Square, is computed to score 0.22=22%. That implies 22% of the variation of project performance of the selected case project is able to be predicted by the independent variables namely: Commitment to team success and shared goals, open communication and positive feedback, and appropriate team composition The other 78% of the selected project, project performance can be explained by other variables.

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.469a	0.220	0.171	0.42328
a. Predictors: (Constant), Commitment to team success and shared goals open communication and positive feedback, appropriate team composition				
b. Dependent Variable: Project Performance				

Table 11 Model Summary of Regression Analysis

Source: own analysis from SPSS regression Result

4.5.4. ANOVA Test

The F-ratio in the ANOVA table indicates that the independent variables predict the dependent variable substantially. The F value of 4.513 at $p=.007$ indicates that the regression model is a good/sufficient fit to the data. The ANOVA table Shows that accepting at least one of the teamwork determinants of the case project (Commitment to team success and shared goals, open communication and positive feedback, appropriate team composition,) had a prediction on project performance measures, since the p-value for F-Statistics (0.007) is less than the significance level 0.05.

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.426	3	0.809	4.513	.007b
	Residual	8.600	48	0.179		
	Total	11.026	51			
a. Dependent Variable: Project Performance						
b. Predictors: (Constant), Commitment to team success and shared goals, open communication and positive feedback, appropriate team composition						

Table 12 Table of ANOVA

Source: own analysis from SPSS regression Result

4.5.5. Hypothesis Testing

The standardized beta coefficient, which is the output of the equation for predicting the dependent variables from the independent variables, is provided by the regression analysis, and it shows us how much each variable contributes to the mode independently.

The multiple regression equation for the study is $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon_0$. Y being the dependent variable project Performance, where $\beta_0, \beta_1, \beta_2,$ and $\beta_3,$ are the coefficient regression, $X_1, X_2,$ and $X_3,$ are the independent variables and ϵ_0 is the error term.

The independent variable has made a statistically significant contribution to the dependent variable if the beta value is high and the p value is low (<0.2): 80% confidence level. A small beta value and a high p value ($p >0.2$) on the other hand, imply that the independent variable has little or no effect on the dependent variable.

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	80.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	1.998	0.391		5.106	0.000	1.489	2.506
	Commitment to team success and shared goals	0.134	0.096	0.187	1.403	**0.167	0.010	0.258
	Open communication and positive feedback	0.289	0.106	0.415	2.732	*0.009	0.152	0.426
	Appropriate team composition	-0.047	0.099	-0.070	-0.472	0.639	-0.175	0.081

a. Dependent Variable: Project Performance

Table 13 sssCoefficient Table

Source: own analysis from SPSS regression Result

*Significant at alpha: CI, 80% ($p <0.2$) confidence level of 80% was used throughout the study

The research null hypotheses were tasted based on the standardized coefficients and beta and p-value to test whether the research hypotheses are rejected or failed to reject.

H10. There is no significant relationship between commitment to team success& shared goals and project performance within MoE project

Commitment to team success and shared goals has a Positive and significant relationship to project performance at $B=0.187$, $p=0.167$. The beta value (0.187) shows as one-unit increase in Communication .there will be 18.7% increase on project performance. This result means Commitment to team success and shared goals has a positive and significant influential relationship to project performance. However, with a p value of 0.167, which is <0.2 , indicating that the result is statistically significant; the researcher rejects the null hypothesis.

H20. There is no significant relationship between open communication and positive feedback of team and project performance within MoE project

Open communication and positive feedback a low Positive and significant relationship to project performance at $B=0.415$, $p=0.009$. The beta value (0.415) shows as one-unit increase in open Communication there will be 41.5% increase on project performance. This result means open communication has a positive and significant influential relationship to project performance. In addition, with a p value of 0.009, which is <0.05 , indicating that the result is statistically significant; the researcher rejects the null hypothesis

H30. There is no significant relationship between appropriate team composition and project performance within MoE project

Appropriate team composition has a negative and significant relationship to project performance at $B=-0.07$, $p=0.639$. The beta value (-0.07) shows as one-unit increase in appropriate team composition, there will be 7% decrease on project performance. This result means appropriate team composition has a negative and significant influential relationship to project performance. However, with a p value of 0.468, which is >0.05 , and >0.2 indicating that the result is not statistically significant so the researcher fails to reject the null hypothesis.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1. Introduction

The primary objective of this study was to assess and identify the impact of teamwork on project performance in the selected MoE project "capacity building in the field of training for healthcare specialists and technicians." As a result of the data acquired and evaluated, the researcher summarized the findings and presented conclusions and suggestions.

5.2. Summary of Findings

Key findings of this study are presented objectively as follows;

- A census survey was undertaken for the purpose of this study, and 52 of the 58 targeted respondents responded sufficiently, resulting in an 89.6 % response rate, making the data valid for analysis.
- Out of the total 52 respondents, about 35 (75%) of the respondents were male while 13 (25%) were female. In regards to age, 19 (36.5 %) of respondents are between the ages of 20 and 30, 20 (38.5 %) are between the ages of 31 and 40, and 9 (17.3%) are between the ages of 41 and 50. The statistics clearly demonstrates that the majority of responders were between the ages of 20 and 40.
- Educational status of the respondents, about 2 (3.8%) of the respondents have Diploma, the 24(46.2%) holds BA/BSc, the 23 (44.2%) respondents have MA/MSc degree in different specialists and there are 3 (5.8%) of respondents in the "other" educational category. The findings show that respondents with BA/BSc and MA/MSc degrees are more frequent, and that the respondents are able to read, comprehend, and answer the questions.
- The majority of the 52 respondents, 50 (96.2%) are team members, while the remaining 2 (3.8%) are team leaders in the case project, indicating the engagement of both team members and team leaders in the study. In terms of experience working on selected projects, over 24 (46.2 %) of

respondents had experiences ranging from 1 to 2 years, 13 (25 %) had 2 to 3 years, 10 (19.2%) had 3 to 4 years, and 5 (9.6%) had worked for 4 years or more.

- For Commitment to team success and shared objectives parameter, the result reveals a moderate degree of relationship, which was measured using seven components established on a Likert scale in the questionnaire and concluded to have been practiced to the level of $M=3.225$.
- For open communication and positive feedback parameter, the result reveals a moderate degree of relationship, which was measured using seven components established on a Likert scale in the questionnaire and concluded to have been practiced to the level of $M=3.126$.
- For appropriate team composition parameter, the result reveals a moderate degree of relationship, which was measured using six components established on a Likert scale in the questionnaire and concluded to have been practiced to the level of $M=3.285$.
- For perspective of project performance, with the average agreement to these statements ranging from the smallest mean 2.94 (Beneficiaries are satisfied with the project deliverables and overall procedure and outcome) to the largest mean 3.42 (The project deliverable has or will meet the beneficiary identified needs.) implies that teamwork affects the performance moderately to the level $M=3.18$.
- Based on the Pearson Product Movement Correlation Coefficient is conducted to evaluate relationship among variables, Commitment to team success and shared goals ($r = 0.289$, $p=0.038$) and open communication and positive feedback ($r = 0.431$, $p =0.001$) have a positive significant relationship to project performance whereas. Appropriate team composition ($r=0.177$, $p=0.209$) the r value indicates that there is a weak positive relationship with project performance, but p value indicates that the result is not significant on both $p<0.05$ and $p<0.1$ significance level.
- Based on the regression analysis model summary, the coefficient of determination, which is R Square, is computed to be $0.22=22\%$ implying that 22% of the variation of project performance of

the case project can be predicted by the independent variables, the other 74.3% of the selected project, project performance can be explained by other variables.

- Regression analysis ANOVA revealed that the F-ratio in the ANOVA table shows that the independent variables significantly predict the dependent variable. The F value, $F= 4.513$, at $p=0.07$, indicating that the regression model is a good/sufficient fit of the data.
- Hypothesis testing, out the three, null hypothesis stated, Two hypothesis were rejected: H10 and H20 while H30 has been “failed to reject” Coefficient table revealed values of, Commitment to team success and shared goals has a significant and positive relationship to project performance at $B=0.187$, $p=0.167$, Open communication and positive feedback has a Positive and significant relationship to project performance at $B=0.415$, $p=0.009$, Appropriate team composition has a negative and significant relationship to project performance at $B=-0.07$, $p=0.63$.

5.3. Conclusion

Based on the research objectives, conclusions are drawn from the findings presented above. The outcomes of this study led to conclusions on teamwork determinants and their role on project performance. Based on the data, this study shows that some teamwork determinants have a positive relationship with project performance. The study's findings indicate that there is a significant and positive relationship between teamwork and project performance in the case project, specifically on the account of the teamwork determinant, “commitment to team success and shared goals” and "open communication and positive feedback."

Based on the result of the study, it is fair to conclude that Commitment to team success and shared objectives is moderately practiced, although not enough, in the case project, this means that team members are motivated, involved and intend to accomplish at the at a moderate level. Respondents understand their purpose and share their goals the combination achieves mission and members must share a strong common goal and groups provide each member of the team with prestige and recognition. The result also reveals that Commitment to team success and shared goals has a positive and significant influential relationship to project performance.

Based on the results, open communication and positive feedback is practiced on the case project at a moderate level, which is fair to say is not adequate. This means that the practice of managers within organization actively listen to the concerns and needs of team members and also admire and value their contribution and commitment is moderate. At the same time, team members must express willingness to provide and accept constructive criticism and to give true and valid feedback. The results indicates that open communication and positive feedback has a positive and significant relationship to project performance in the case project. The more this determinant is practiced the better the project performance.

Assessment of the teamwork determinant, appropriate team composition” revealed that it is also practiced moderately in the case project. This means that there is no sufficient practice of team members being fully attentive to their specific team role and knowing what level is expected from them regarding their contribution to the team and the project. It is fair to say that there is a greave deal of room for improvement in this regard. The result indicates that appropriate team composition has a negative and significant relationship to project performance, although the result was proven to be insignificant.

According to the findings of this study, communication practice is at a lower level in the case project, with a mean of 3.126. This means that, in contrary to the other variables, establishing simpler and more frequent communications is not the best practiced. On the other hand, the remaining four criteria have been found to be moderately practiced within the case project.

The overall project performance was rated to have a mean score of 3.180 on the parameters of project budget, project schedule and beneficiary satisfaction, which is not an adequate level of performance.

In conclusion, the study has revealed that there is a significant and positive association between teamwork and project performance in the case project, specifically on the account of two teamwork determinant, The study's main findings indicating teamwork has an impact on project performance, will agree with the findings of other research suggesting a significant association between teamwork and project performance.

5.4. Recommendation

According to the findings, there is a need to emphasize teamwork more in order to increase project performance. As a result, for a better project outcome, the organization, MoE, must encourage team members and team leaders in establishing these key teamwork traits. According to the study's findings, team work practice is moderately practiced on all three recognized effective team work determinants, at the selected MoE project. Based on the summary of findings and conclusion, the following recommendations are given.

5.4.1. Recommendation to MoE; particularly for healthcare projects;

- Since healthcare operations are mainly handled by teams, the MoE must foster teamwork and recognize the successes of high-performing teams in order to generate better teamwork results for future healthcare projects.
- It would be greatly beneficial to MoE future projects to practice assessing the level of teamwork of its workforce in order to acquire what it has intended to get from each team. Following an examination of the quality of teamwork, appropriate actions should be created based on where teams are in terms of either developing their strong points or working on their shortcomings.
- When it comes to open communication and positive feedback, it is found to be the most practiced determinant, the researcher recommends to MoE current and future projects to develop the habit of open communication and positive feedback as it is proven in this research to positively and significantly affect project performance.

5.4.2. Recommendation for further researches

- Other than healthcare projects, research on the role of teamwork and its relationship with project performance might be carried out.
- An in-depth assessment of the remaining team effective determinants to understand and compare them to one another, as well as project performance, may be included in future research.

- Future study might investigate the association between effective teamwork determinates and project performance in various project-based organizations at different phases of the project life cycle.
- This research can also be conducted on organizational performance factors other methods than the balanced score card.
- This study can focus more particularly on teams such as doctors and specialists, engineering experts or teams, among others, to clearly determine the relationship between specific teamwork and project performance.

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Annex 1: Questionnaire

Addis Ababa University
School of Commerce
Department of Project Management

Dear respondent The purpose of this research project, named "role of Team Work on Project Performance in Health Care Projects: The Case of "capacity development in the field of training for health care specialists and technicians," is to investigate the relationship between teamwork and project performance. You are kindly requested to reply to the statements that outline a specific situation. To participate in the study, you do not need to share any personal information. The information you provide will be kept strictly confidential and used for academic reasons only. Your results' credibility and validity are heavily reliant on your honest and sincere answer. As a result, I respectfully urge that you complete the form completely and submit it as soon as possible. I sincerely appreciate all of your help and the time you took to complete the questionnaire.

Section 1: respondent profile

Please put (X) mark in the box that best describes you

1. Gender: Male (1) _____ Female (2) _____
2. Age (years) 20-30 yrs (1) _____ 31-40 yrs (2) _____ 41-50 yrs (3) _____ 51-60 yrs (4) _____
3. Education Background; Diploma (1) _____ BA/BSc (2) _____ MS/MSc (3) _____ Others (4) _____
4. Role on the team; Team member (1) _____ Team leader (2) _____
5. Years of Experience in on the project 1-2 years _____ 2-3 years _____ 3-4 years _____

Section 2: Effective Teamwork Determinants

Please indicate the degree of your agreement/disagreement with the following statements associated with team effectiveness. Please put (√) on the alternative choice that best describes your view

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

No.	Commitment to team success and shared goals	1	2	3	4	5
1	The team goals that have been set for the team to achieve are genuine and attainable.					
2	When the project begins, there is agreement on shared goals and objectives.					
3	The project deliverables are communicated clearly.					
4	The project duties and tasks assigned to be completed are realistic and achievable.					
5	The project's aim and objectives are straightforward, simple, and measurable. Even though they are not measured, their accomplishment is determined.					
6	The project team's purpose and aim are consistent with the larger organizational goal.					
7	The team goals that are set to be achieved are realistic and achievable					
No.	Open communication and positive feedback	1	2	3	4	5
1	Information is freely and widely shared within and beyond the team					
2	All important topics are openly discussed					
3	All members of the team express their views adequately					
4	Team members are comfortable asking for clarification if they don't understand a requirement					
5	During conversations, project team members avoid diverting from the topic.					
6	There is a presence of easy communication and flow of ideas that lead to effective teamwork					
7	The messages communicated throughout any form of team discussion or project meeting are relevant and reliable.					
No.	Appropriate team composition	1	2	3	4	5
1	The nature of the project team is cohesive and complementary					
2	There is a clearly defined Functional structure or chain of command for the team					
3	There is a contextual support of tasks and duties for the team members					
4	There is a visible team diversity in place					
5	There are personality traits of particular importance for team performance					
6	The project team is composed of functional/technical expertise, intellectual skills, and interpersonal skills.					

Section 3: Project performance of “capacity building in the field of training for healthcare specialists and technicians”

For ongoing project activities/components, please indicate your level of agreement with the following statements relating to the performance of the overall project by putting a tick (√) in the number that describes best how you feel about the statement.

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

No	Project performance	1	2	3	4	5
Completed/ongoing according/ within planned Budget						
1	Correct amount of budget is allocated for each corresponding task and need					
2	There is understanding in project cost before project launch					
3	There was a regular continuous forecast					
4	There was no unnecessary costs and un-planned expenses					
Completed/ongoing within Planned project schedule						
1	There is understanding in project schedules and deadlines before project launch					
2	Appropriate amount time is allocated for each task and activity					
3	There is a system to follow up schedule throughout the project and are successful					
4	Project is or will be completed on time without delay					
Beneficiary Satisfaction						
1	The project has a reputable image and recognition before its beneficiaries					
2	Beneficiaries are satisfied with the project deliverables and overall procedure and outcome					
3	The project deliverable has or will meet the beneficiary identified needs.					