ADDIS ABABA UNIVERSITY

COLLEGE OF BUSSINESS AND ECONOMICS

SCHOOL OF COMMERCE

The Role of Team Work on Project Success in COVID 19 Vaccine Rollout Project in selected Hospitals in Addis Ababa Ethiopia, 2022.

By-Nurhusen Kedir (GSD/2207/12)

Project work submitted to Addis Ababa University, School of Commerce

In Partial Fulfillment of the Requirements for MA Degree

In Project Management

Advisor-Bahren Asrat (PhD)

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DECLARATION

I, Nurhusen Kedir, hereby declare that the study entitled "The Role of Team Work on Project Success in COVID 19 Vaccine Rollout Project in selected Hospitals in Addis Ababa Ethiopia, 2022." Is my own project work and so far it has not been presented in or any other University or Academic institution. All other contributors or sources used for the study have been duly acknowledged.

Nurhusen Kedir

Signature_____

Date_____

Confirmation by advisor

Bahran Asrat (PhD)

Signature_____

Date_____

STATEMENT OF CERTIFICATION

This is to certify that Nurhusen Kedir's project work on the topic entitled "The Role of Team Work on Project Success in COVID 19 Vaccine Rollout Project in selected Hospitals in Addis Ababa Ethiopia, 2022" is his original work and suitable for submission for the award of Master's Degree in project management. The project paper is submitted for examination with my approval as a university advisor.

_____

Bahran Asrat (PhD)

(Advisor)

APPROVAL

We Examiners and Advisor Certify this thesis prepared and presented by Nurhusen Kedir, with a title of : The Role of Team Work on Project Success in COVID 19 Vaccine Rollout Project in selected Hospitals in Addis Ababa Ethiopia, 2022. Submitted in partial fulfillment of the requirements for the Degree of Master of Arts in Project Management complies with the regulations of the University and meets the accepted standards with respect to originality and quality.

Signed by the Examining Committee:

Examiner: _____ Signature: _____ Date: _____

Examiner: _____ Signature: _____ Date: _____

Advisor: _____ Signature: _____ Date: _____

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Acronyms

AMC Advanced Market Commitment

AVAT Africa Vaccine Acquisition Trust

CDC Centre for Disease Control

CEPI Coalition for Epidemic Preparedness Innovations

CHWs Community Health Workers

COVID-19 Coronavirus Disease -2019

DRC Democratic Republic of Congo

EPI Expanded Programme of Immunization

EPHI Ethiopian Public Health Institute

EPSA Ethiopian Pharmaceutical Supply Agency

EFDA Ethiopian Food and Drug Administration

FMOH Federal Ministry of Health

GAVI The Global Alliance for Vaccines and Immunizations

HICs High-Income Countries

SAGE Scientific Advisory Group of Experts on Immunization

SARS-COV-2 Severe Acute Respiratory Syndrome-Coronavirus-2

SPHMMC- Saint Paul Hospital Millennium Medical College

SSA Sub Saharan Africa

UNICEF United Nations Children's Fund

Abstract

Over the past decades there were few to none prior literature addressing the vital role of project team members play towards project success. This project work focuses on the role of project teamwork for the successful outcome of a project and Questions whether a leader alone can successfully complete a project or not. The objective of this study was to identify the Determining factors in Team work for the success of the COVID-19 Vaccine Rollout project and determine whether the COVID-19 Vaccine Rollout Project was a Success or a failure. Therefore, this study has assessed teamwork practice in the COVID-19 Vaccine Rollout project and the relationship it has with in achieving project deliverables successfully. The general objective of this study is to determine whether the Project was a Success or a failure and to identify the Determining factors in Team work for the success or failure the project in selected Hospitals in Addis Ababa, Ethiopia. In this project, five hospitals were selected randomly as a targeted population and primary data was gathered through questionnaires. The researcher used Cross sectional analytical research in order to produce quantitative data and provide statistically conclusive argument. The results have revealed that team work has played a role in project success in the COVID-19 Vaccine rollout project and out of the studied five teamwork determinants all five of them has shown a positive correlation and 2 parameters from the total 5 parameters, namely Unity of Direction and Team Composition had a major significance towards project success.

Keywords*: Projects, Project management, Project Teamwork, Team effectiveness, Healthcare projects, Project success.*

CHAPTER 1: INTRODUCTION

1.1 Background of the study

Project management is a discipline that encompasses more than just resource management, risk management, and change management (PMI, 2013). Evidence reveals that how project teams are organized and managed, rather than how the project timeline, budget, or quality management are planned, determines project performance (Adair, 2004).

Scarnati (2001, p. 5) defines teamwork as "a cooperative process that allows ordinary people to generate extraordinary results'. According to Harris & Harris, "a team has a common mission or purpose where team members can form successful, mutual ties to achieve team goals" (1996).Any project team will use this cooperative procedure to achieve the common targets and goals stated by creating effective, mutual relationships in order to achieve the desired end result. Teamwork is defined as an interaction and coordination of team members to achieve a specified, common goal by combining their professional abilities.

In every project, teams form the foundation for organizing and managing project activities and tasks within companies. As a result, the overall performance of the team members involved in the project is largely determined by their overall performance, as they are an essential ingredient for seamless project execution, accelerating work processes in accomplishing the objectives, increasing effectiveness, providing assistance in the resolution of project hurdles, ensuring that resources are well-managed, and taking less time to complete. Good teamwork can lead to more successful project outcomes and, as a result, more revenues.

As a success criterion, project success can be measured against the project objectives and determined by a variety of elements, covering the project's specific objectives, work procedure, personnel, funds, and so on.

A typical project consists of a team of people and a project manager who work together to finish the task on time and on budget. Any project will have a team made up of several skilled specialists who will carry out various activities in order to attain the goal. The project team is a collection of professionals that are responsible for carrying out project operations on a daily basis.

This study has selected the COVID 19 vaccine rollout project in 5 selected Hospital in Addis Ababa, Ethiopia and attempted to examine the degree of cooperation and team members' perceptions of teamwork, as well as their possible role to the vaccine deployment project's success and performance. **COVID 19**, a disease caused by Severe Acute Respiratory Virus-2 (SARS-COV-2), has engulfed the world since the first diagnosis in China (Perlman S,2020). In the second year of this pandemic, 512 million people have tested positive for the virus, and 6.2 million deaths were recorded as of the time of April, 2022. These numbers do not account for mortality and morbidity due to health system disruptions. Besides the tragedy for human lives, the disease and associated control measures have disrupted economies and have plunged millions into poverty. Countries have attempted to mitigate the impact through non-pharmacological interventions (NPIs). They Introduced lockdowns, restricted movements, mandated social distancing and face mask use. Nonetheless, repeated waves of the pandemic instigated by new variants have made the complete control of the disease impossible.

Pending the development of curative treatment, the discovery of effective vaccines offers the first possible route out of the pandemic. Recent real-life studies indicate vaccines offer protection

from severe illness and hospitalization. To date, 15 vaccines are being used worldwide. The WHO (World Health Organization) has issued emergency authorization for six types of vaccines manufactured by eight different companies. Currently, 4.76 billion vaccines have been administered globally, which amounts to 62 doses per 100 people. Countries that have successfully vaccinated a large share of their populations, such as the UK (United Kingdom), have managed to lift almost all restrictions and return to a quasi-normal life. The speed at which doses are administered, and vaccine coverage is taken as proxy measures of a successful campaign. In that regard, there are substantial inequities around the world, and the severest form is seen in Africa. Only 2%(77.3Million) of people in Africa have been fully vaccinated at the time of writing(August 15, 2021) compared to 8.8% in India, 50.7% in the US, 54% in the European Union and 59.7% in the UK. Vaccine inequity is a term widely used to refer to global disparities in access to vaccines.

As the result of these inequities and new variants of COVID 19, several African countries are currently battling a deadly third wave. WHO has set up the COVAX facility as the vaccines arm of ACT (Access to COVID 19 Tools) accelerator to fast-track the development of vaccines. 44 African countries benefit from free access to vaccines. Additional doses are acquired through different mechanisms, including the African Vaccine Acquisition Trust (AVAT). After a long supply crunch following India's third wave and hoarding by wealthy nations, delivery is starting to pick up as of late July. Consequently, most African countries have received the first round of vaccines and have administered 67.9% of their supplied doses, ranging from 4.55% in Guinea Bissau to 71% in South Africa. Evidence points to logistical, financial challenges and vaccine hesitancy slowing down the deployment of vaccines in the region. In severe cases, countries like

Malawi and South Sudan have disposed of expired doses. Hence, it is critical to assess rollout of the first round of deliveries and identify pressing challenges and emerging opportunities.

Ethiopia's administrative divisions include eleven regional states and two city governments, making it Africa's second most populous country. There are 115 Zones, 1054 Woredas (Districts), and 17,574 Kebeles that make up the regions (administrative units). Ethiopia is one of the few success stories in SSA (Sub Saharan Africa) with regards to achievements in MDG4, with a 67% drop in under five mortalities from a 1990 estimate and a significant reduction in maternal mortality. With a Health policy primarily focused on prevention and health promotion, Ethiopia has managed to expand access to essential health services in the past decade.

Ethiopia discovered the first case of COVID 19 on March 13, 2020. Two days later, the government announced comprehensive steps to stem the spread of COVID 19, including school closures, obligatory quarantine for international travelers, facility-based isolation for contacts of cases, and prohibitions on all types of gatherings. Even though implementation was debatable, these methods contributed to the slower growth of cases, along with the expansion of testing and tracing. As of April 29 2022, there have been close to 470,550 cases and 7510 confirmed deaths. This number is likely an underestimation based on a mortality survey, which indicated 30% excess deaths earlier in the pandemic. The second wave is the deadliest yet in Ethiopia, similar to other countries in Africa with an increasing number of cases and hospital admissions.

Ethiopia launched COVID 19 vaccination campaign on the 13th of March, a year after the first case was diagnosed. The campaign began with 2.2 million doses of AstraZeneca vaccine received form the COVAX facility.(34). To date, Ethiopia has employed three types of vaccines Sinopharm, Janseen(Johnson and Johnson) , and CovidShield (Oxford AstraZeneca). Ethiopia

is following a phased approach similar to several countries across the world. The first phase of vaccinations is divided into phase IA ,intended to reach health care professionals, and phase IB for people older than 65 and those above 55 with comorbidities, including essential workers such as teachers ,border control staff and prison guards.(36)In phase II the country's national vaccine deployment plans will include all over 18 adults. Due to increasing supply there are plans to accelerate vaccination.

There is a severe limitation in literature on COVID-19 vaccine rollout in Ethiopia and the rest of SSA. Hence, this study has assessed the role of team work in COVID-19 vaccine rollout project and also on the Ethiopian health system's capacity to deploy COVID-19 vaccines. As mentioned above, this is crucial information that would help Ethiopians and countries with similar health care systems in SSA undertake measures to improve the culture of team work in healthcare projects.

1.2 Statement of the problem

According to Kerzner (2016), successful project management is only as good as the persons and leaders in charge of the critical functions, regardless of the organizational structure. He also emphasizes that project management is not a one-person job and that it necessitates a team of people committed to achieving a certain goal. Project management necessitates abilities in team building, leadership, dispute resolution, technical expertise, and resource allocation.

In the process of project management, managing people means having the right people, with the right skills, at the right time. It also means ensuring that the project staff knows what needs to be done, when and how and motivating them to take ownership in the project (Remacle, 2011).

Vaccines are primarily obtained by three ways in African countries. The first is the COVAX facility, which aims to cover 20%-30% of the population in low-income countries (LICs). (59) All African countries except Eritrea have joined the scheme. AU member states have agreed to pool their purchasing power through the AVAT, a specialized purchasing agent on behalf of the African Union member states. Thirdly, fewer countries in SSA have shown interest to purchase vaccines.Yet, only Senegal, South Africa, Uganda have procured vaccines from manufacturers. Additionally, countries like Angola and Zimbabwe have partnered with the private sector to secure more doses. However, for most countries in SSA, this still leaves a gap to cover the rest of the vaccination required to achieve the global target of herd immunity which is 70%.

Ethiopia got 2.2 million doses of COVID 19 vaccine from COVAX a year ago, and commenced COVID 19 vaccination on March 13, 2021. According to the UNICEF 2021 Humanitarian Situation Report, by the end of 2021, Ethiopia saw a cumulative total of 420,342 confirmed COVID 19 cases and 6,937 deaths (Case Fatality Rate (CFR) of 1.65%) since the onset of the outbreak in March 2020. A total of 355,046 (84.5%) patients were reported to have recovered and 290 severe COVID 19 cases were admitted in designated treatment centers. More than 21.5 million persons out of a total population of over 100 million have received at least one dose, and more than 20.5 million have been fully vaccinated.

In Ethiopia, the role and impact of teamwork on project success has not been effectively addressed in research and project-based projects, particularly in the health sector. The lack of sufficient empirical studies depicting the role of effective teamwork on project success and illustrating the crucial function of teamwork in the association between project success, and also the need to bridge gaping holes in knowledge, drove the conception of this study.

1.3 Research questions

The subsequent research questions was chosen for this study derived from the literature evaluation and various teamwork models of team success.

- What was the COVID-19 Vaccine Rollout Project outcome in terms of Success or failure?
- To what level teamwork has brought success in projects through effective **Communication**?
- To what level teamwork has brought success in projects through Team **Cohesiveness**?
- To what level teamwork has brought success in projects through effective **Collaboration** among team members?
- To what level teamwork has brought success in projects through having a **Unity of Direction** between team members?
- To what level teamwork has brought success in projects by having a diverse **Team Composition**?
- To what level has teamwork been employed in the COVID-19 Vaccine Rollout Project?

1.4 Research objectives

General Objective

• The general objective of this research is to study the role of team work and identify the Determining factors in Team work for the success or failure of the COVID-19 Vaccine Rollout project in selected Hospitals in Addis Ababa, Ethiopia**.**

Specific Objectives

- To determine whether the COVID-19 Vaccine Rollout Project was a Success or a failure
- To identify the Determining factors in Team work for the success or failure of the COVID-19 Vaccine Rollout project

1.5 Significance of the study

There are plenty of articles and books written about the essential processes and challenges of project team management. However, the resources written in specific Health sector projects context are limited. From Academic perspective, this research provides new Project Management graduates or new Project Managers with comprehensive information on current best practices of project team management in projects that are being implemented in the Healthcare Sector in Ethiopia with the emphasis to understand the processes to manage project teams.

This research adds to existing of understanding about teamwork and project success in the COVID-19 vaccine rollout project. It also aids team members and leaders in appreciating the aspects that lead to enhanced project teamwork and project success, in addition to focusing on successful teamwork and its success component of projects.

This research is relevant for different stakeholders in the healthcare industry who want to improve effective project delivery. Team members will educate themselves and accept responsibility for the way things are done, and they will be able to modify their thinking accordingly. This research can also be applied to similar healthcare sector initiatives in the planning and execution phases to better comprehend and focus on teamwork perceptions and

their impact on project success. The purpose of this study is to demonstrate teamwork and the characteristics that lead to extremely effective teamwork. like communication, cohesiveness, collaboration, unity of Direction and Team composition have a positive relation with project success

1.6 Scope of the study

The scope of this research focuses on Health Sector Projects, particularly The COVID-19 Vaccine Rollout Project. The thematic scope of the study will focus on assessment of the effectiveness of team work in project success in line with project management. The research focused on Addis Ababa Regional project team and randomly selected 5 hospitals who have been serving as a vaccination center project teams. The total number of project team members is 107 members comprised from the selected 5 Hospitals (26 From ALERT Hospital, 24 from St. Paul Hospital and Millenium Medical College, 25 from Ekka General Hospital, 15 from Saint Peter Comprehensive Specialized Hospital and 17 from Ethiopian Public Health Institute) and information will be gathered through a self-administered structured questionnaire. The process will be studied by interviewing project team members to collect the necessary information, as well as examining available studies.

1.7 limitations of the study

With regard to limitations of the study only perception of team members who were involved in the COVID-19 vaccine rollout project were used, other stakeholders of the project were not included in the study. To gather information and draw conclusions, a questionnaire was employed.

1.8 Organization of the study

This research project will have an introductory section that includes information about the study's history, problem statement, objectives, research questions, significance of the study, probable constraints, and definitions of words as well as the organization of the study. The literature review will provide an overview of the concepts and work that are relevant to this investigation, as well as a review of different literature on concepts that are relevant to the study, an empirical review, and the conceptual framework that will drive the study. The study's research methodology section discusses the study's research methodologies, which includes the research design, data collection tools, data source, sampling procedures and study population. The study's data presentation, analysis, and interpretation, as well as the participants' demographic characteristics and response rate, descriptive analysis of teamwork and performance of the project will all be covered.

The study's conclusion will include a summary of the findings, conclusions, and recommendations. It will expound on the study's findings before drawing a conclusion. Following the conclusion and completion of the study, recommendations will be made to the National Covid-19 vaccination Rollout task team and other relevant healthcare stakeholders, as well as for future research.

1.9 Definition of key terms

Conceptual Definitions

- **COVID-19**- a mild to severe respiratory illness caused by a coronavirus (Severe Acute Respiratory Syndrome coronavirus 2 of the genus Betacoronavirus), which is transmitted primarily through contact with infectious material (such as respiratory droplets) or with objects or surfaces contaminated by the causative virus, and is characterized by coughing, wheezing, and fever.
- **Team -** A body of individuals who have all of the skills and abilities required to complete a task, activity, or project.
- **Teamwork-** is a term that describes the labor that is done by a group of people, each of whom performs a specific task while putting the group's efficiency first.bringing together a group of people in order to finish a project swiftly and with a minimum resource.
- **Project-** A project is a short-term social organization (work system) developed by teams (inside or outside of companies) to fulfill certain tasks under a set of time constraints.
- **Project success-** A project is seen as being effective if it achieves the desired business case, which must be clearly specified and defined throughout the project inception and selection phase before moving further with development.
- **Healthcare-**refers to efforts done by skilled and licensed experts to maintain or restore physical, mental, or emotional well-being.
- **Vaccine-** a substance that is given to stimulate the immune system's response to a specific infectious agent or disease (e.g., through injection).

Operational Definitions

- **Project Success**- When all 3 parameters used to measure success are above the mean value.
- **Project Failure**- When all 3 parameters used to measure success are below the mean value.
- **Good Communication-** When the parameters used to measure communication are above the mean value.
- **Poor Communication-** When the parameters used to measure communication are below the mean value.
- **Strong Cohesion-** When the parameters used to measure cohesion are above mean value.
- **Weak Cohesion-** When the parameters used to measure cohesion are below mean value.
- **Good Collaboration-** When the parameters used to measure collaboration are above mean value.
- **Poor Collaboration-** When the parameters used to measure collaboration are below the mean value.
- **Strong Unity of Direction-** When the parameters used to measure Unity of Direction are above the mean value.
- **Weak Unity of Direction-** When the parameters used to measure Unity of Direction are below the mean value.
- **Good Team Composition-** When the parameters used to measure Team Composition are above the mean value.
- **Poor Team Composition**- When the parameters used to measure Team Composition are below the mean value.

CHAPTER 2: LITERATURE REVIEW

2.1 Theoretical Review

A team, according to Katzenbach and Smith (1993), is a set of individuals with varying abilities who are dedicated to a similar goal and a set of performance standards, as well as a formal and known method for which they are all held responsible. Members of a team are interdependent and undertake tasks that have an impact on other people and groups. Teams are created because their diverse functional talents enable them to do what one individual cannot. Furthermore, social demands are easily met in a group setting (Stewart, et al 1999).

This project is about healthcare projects and the importance of effective teamwork in project success. Because the healthcare field necessitates ongoing collaboration among many professions, doctors, nurses, and other health professionals from various disciplines must work as a team to provide the best possible care to their patients. Numerous literatures on teams overall, individual characteristics, different models, project success variables, and natures of team effectiveness will be examined in an effort to comprehend teams, teamwork, and team effectiveness in a project.

Team

While a team is defined as a group of people that collaborate (Robinson & Robinson, 1994; Thamhain, 1988), not all groups are considered teams. A community may be established for official reasons, to fulfill specific personal goals, or perhaps to bring people members together socially. A team is made up of individuals that collaborate to meet agreed-upon deadlines, are committed to attaining their common goals, and are ready to deliver high-quality products (Prabhakar, 2008). According to Verma (1997), a team strategy is a means of cooperating to optimize the combined passion, abilities, skills, and expertise of group members.

Teams, on the other hand, are "a group of people who share a common team purpose and a number of ambitious targets," according to Kohn and O'Connell (2007). The words "team" and "group" should not be used interchangeably; teams are far more than collections of people. A group is defined as a group of people who communicate with one another through time, and it is basically a collection of individuals (Verma, 1997).

Table 2. 1 Team and Group Difference (Managing the Project Team, Volume Three, Vijay K. Verma,1997)

Area	Groups	Teams
Purpose	1. Think they are placed together for administration purposes only.	1. Have been coached to meet goals.
Mode of Working	2. Work independently and sometimes at cross-purposes. Members attempt personal gain at expense of group (turf wars not uncommon).	2. Work interdependently and help each other win. Members contribute to team goals (promote constructive attitudes and team welfare as a priority).
Level of Participation	3. Not actively involved in setting goals (only act as hired hands).	3. Actively involved in setting goals. (feel ownership for their tasks).
Trust and Communication	4. Distrust each other's motives. Roles have never been clarified. Disagree-ments seen as personal attacks.	4. Work in a climate of trust and open communication. Accept that different roles enable different perspectives and enhance problem-solving.
Working relationships	5. Play politics which may harm other's credibility. (no sincere working relationships).	5. Are open and honest because leader is open and honest. Information is readily given. (Long-term relationships are important).
Conflict Resolution	6. Indulge in difficult conflict situations. Supervisor puts off conflict resolution until serious damage is done.	6. Have been trained to turn conflict into opportunity to generate new ideas and deepen relationships.
Decision Making	7. Do not participate in decisions affecting the group. Conformity, not results, is the desired outcome.	7. Team leaders encourage teams to make their own decisions. Coach shows confidence in their competence and experience (eventually leading to self-motivated project teams).

The authors of the book "The Wisdom of Teams: Creating the High-Performance Organization." Smith and Katzenbach (1993) describes a team as a combination of people that have complimentary qualities and are committed to achieving a common goal, performance objectives, and methodology.

Project Teamwork

Our distinct motivation to join and exhibit kindness is linked to teamwork (Kohn and O'Connell 2007). We tend to align with people who share our perspectives, and when we do, we want to help and give back. With the proper people and the correct attitude, project objectives and goals can be readily met. Teamwork will contribute to individual belongingness, growth and achievement along with successful project performance.

Teamwork is a coordinated approach that yields a far superior result than the sum of individual achievements (Prabhakar, 2008).. According to Thamhain (1988), successful teams deliver high-quality outcomes while conquering numerous hurdles, such as cultural or philosophical difference.

The building of a solid team is one of the most significant jobs a project manager must accomplish. Team building is indeed a means of bringing aligning people together who have different interests, histories, and skills in order to form a cohesive and efficient working body (Prabhakar, 2008).

2.1.1 Team effectiveness models

The GRPI Model

Goals, Roles, Processes, and Interpersonal Relationships is the acronym for the "GRPI Model." And was developed by Rubin, Plovnick, and Fry in 1977. Similar to Maslow's Hierarchy of Needs Theory, the authors' concept is represented as a pyramid (1954). This paradigm, unlike Maslow's theory, starts at the summit of the pyramid. According to the approach, every team should begin with a team-level aim.

Once the goal has been decided, the roles and responsibilities will become evident. Individuals will notice that goals and duties are frequently unclear as they collaborate (processes). As a result, team members of the team will have to redefine by themselves. They might change and reconfigure team procedures including decision-making, conflict resolution, and work flow as a result of this redefinition. They will be creating the interpersonal ties necessary to relate to other team members and the team leader while doing all of this.

Goal Definition: Goal setting is by far the most basic necessity for a functional team since it explains the collective knowledge of what the team is attempting to accomplish, where it aims to go, and how it will know if it is on route. Setting targets and intended outcomes is also vital for being productive because a lack of clear guidance can lead to conflicts and disagreements. Every project should include clear objectives and intentions for individual and team goals, along with strong and open communication regarding priorities and expectations.

Role Clarification: Because team members are responsible for bringing goals to life, each team member must understand their tasks, roles, and accountability since not understanding can lead to failure. A specified team leader with leadership abilities and unambiguous authority, as well as individuals assigned to duties that fit their competence, are also required for the entire team. Who is in command of what, who is liable for what, and who has what power are all defined by roles.

Processes and workflow: It is required since the team must follow a series of processes in order to be successful in decision-making, workflow procedures, problem-solving guidelines, conflict resolution techniques, and high communication practices. Processes that are clearly defined allow for effective collaboration in problem-solving, overcoming hurdles, effective and transparent communication, and successful decision.

Interpersonal Relationships: It's critical because, in order to be productive, team members must form bonds with each other built on honesty, open communication, flexibility, and adaptability. Because their members may relate to one another, teams can be considered of as communities. These interactions and bonds have a vital role on the team's morale, healthy emotions and overall team effectiveness as they help us respect, build trust and shared accountability among team members.

Katzenbach and Smith Model

Most people recognize the value of teams, according to Katzenbach and Smith (1993), but there is a natural aversion to moving beyond individual roles, duties, and accountability. Individuals are hesitant to assume responsibility for others' performance or to value others taking responsibility for them. To overcome this resistance, team members must first comprehend, embrace, and apply "the basics" of teamwork. Katzenbach and Smith illustrate these team fundamentals as a triangle. The three broad goals of Katzenbach and Smith's (1993) paradigm are as follows: (a) Collective Work Products, (b) Personal Growth, and (c) Performance Results. The triangle's vertices indicate the kind of results that teams can achieve. The sides and center of the triangle, on the other hand, represent the team elements needed to make it happen: commitment, skills, and accountability.

The Lencioni Model

As per Lencioni (2005), each team has the potential towards becoming dysfunctional. Understanding the type and severity of dysfunction is crucial to improving a team's performance. A pyramid is utilized to show the hierarchical growth of team development once more. There are five levels, each of which must be completed before moving on to the next, comparable to Maslow's Hierarchy of Needs Theory (1954).

In Lencioni's approach, there are five potential team dysfunctions:

The first dysfunction is a **lack of trust** among team members, which arises when individuals are afraid to be candid with one another and disclose their faults, inadequacies, or need for assistance. A foundation of trust cannot be built without a certain level of familiarity among team members.

The second Dysfunction is **Fear of Conflict**; trust-deficient teams are unwilling to participate in unfiltered, passionate debate about crucial issues**.** It generates settings in which team friction can readily devolve into veiled discussions and backchannel remarks. Poor decisions are made when team members do not openly communicate their ideas at work.

Then there's the issue of **lack of commitment**, that makes it hard for coworkers to commit to decisions, leading to an environment of uncertainty. Employees, particularly star employees, can become disillusioned and disenchanted due to a lack of direction and dedication.

Another Dysfunction is the **avoidance of accountability**. Even the most focused and motivated individuals are reluctant to call out their colleagues on behaviors and activities that may appear counterproductive to the team's ultimate benefit when teams do not commit to a specified plan of action.

Inattention to result-When people aren't held accountable, they naturally prioritize their own needs (e.g., ego, career advancement, recognition, and so on) over the team's collective goals. If a team loses sight of the need for success, the company suffers as a result.

LaFasto and Larson Model

The "Five Dynamics of Team Work and Collaboration," established by LaFasto and Larson (2001), is a model of team effectiveness. They believe there are five key factors or components that must be understood and actively handled in order for a team to function well. LaFasto and

Larson, like other model writers, provide extensive definition and guidance for each of the model's components.

In their book, the authors spend an entire chapter to defining teamwork and then give advice on how to improve team effectiveness (LaFasto & Larson,2001). They devised a five-part model of what constitutes an effective team.

Team members: are important since task performance hugely rely on the talents, skills and qualities of team members, as well as whether they are the correct match for the role. Members of the team should have the necessary skills and abilities to work in a group setting and with others.

Team relationships: As interpersonal relationships are critical in the GRPI model, the right team building behaviors are crucial to gain the maximum team capabilities. Also it facilitates creation of strong professional relationships if you choose someone with a positive mindset.

Team problem solving: In teams with solid team interconnection, high levels of trust will be developed, which can help with conflict resolution and team productivity. In the absence of trust, the results can be disastrous. When team members have solid working relationships, they can help make collective choices easier and reduce disagreement.

Team Leadership: An effective, proactive team leader who leads the team in a sound direction is essential in any Project team effectiveness model. It is crucial for a Project team's achievement to have a leader that inspires and actively engages them.

Environment in the workplace: supports collaborative work processes and a company culture that values the project team members' effort and responsibility. When the appropriate system and business culture are in place, a team's performance and output will increase.

2.1.2 Selected Team Effectiveness Determinants

The word "project teamwork" refers to a conversation about the members of a team that is working on a project under the supervision of someone. The "teamwork processes" that are needed components for an efficient team are the foundation for good project teamwork. Dionne, Yammarino, Atwater, and Spangler (2004), for example, advised team communication and cohesion as a component of collaboration processes and argued that there are numerous teamwork variables to consider in teamwork processes.

Project teamwork procedures, according to Yang, Huang, and Wu (2011), are built on three-dimensional constructs such as project team communication, cohesiveness, and collaboration among team members.

The researcher considers five factors for project teamwork processes in this study, including project team **communication, cohesiveness, collaboration, unity of direction,** and **team composition**. This study's findings add to current literature and knowledge by taking three existing dimensions and adding two new ones: unity of direction and team composition of team members.

Communication: The process of transmitting information to other team members is known as communication (Lussier, 2003).The level to which members exchange ideas and opinions with one another in order to fulfill the task is referred to as team communication (Campion et al.,1993). It is critical to have a high degree of communication in order to form an effective

working team. When a group of people works together to achieve a common goal, the first rule is to know and understand what has to be done, who will do it, and how it will be done. Communication is another critical feature for excellent teamwork in any project since team members must be able to effectively communicate with one another to overcome barriers, settle conflict, avoid confusion, and execute tasks properly as individuals and as a team. Communication between team members also improves cohesion.

Cohesiveness: The Degree of cohesiveness of a team determines its performance. Cohesiveness refers to how much members of a team appreciate being a part of it and how devoted they are to being on it. It determines the degree to which team members feel linked to each other. It is the chain that binds the team together and confirms that everyone fulfills their individual and collective responsibilities (Verma 1997).

Collaboration: It's the ability to perceive and utilize other people's perspectives in order to attain the team's goal and carry the team to a major victory without compromising one's own point of view. Negotiation, problem-solving, and open-mindedness are all required for team collaboration (Nir, 2013). People that prefer a collaborative approach seek to address the requirements of everyone involved. These individuals can be aggressive, but unlike their competitors, they work well together and recognize everybody is important.

Unity of Direction: The development of a realistic aim is the most important condition for any firm to function. The finest teams devote a significant amount of time and attention to discovering, defining, and agreeing on a collective and individual purpose. Real teams, in fact, never stop "purposing" due of its significance in clarifying consequences for members of the team (Katzenbach and Smith). Mostly in case of projects, there will be a defined common goal

that is the major reason for the team's existence, and it is vital that all team members can picture the goal as the ultimate accomplishment.

Team Composition: The ability to use one's information efficiently and conveniently in execution or performance is defined by Webster Dictionary as "skills." and "the capacity to apply individual's understanding and abilities and easily in execution or performance." Technical skills are the specialized knowledge and competence required to complete complicated actions, activities, and processes in the fields of computational and physical technology, as well as a wide range of other businesses. A project team with the right combination of interpersonal and technical skills is critical to the project's success. Shenhar and Dvir (1996) claimed that technical qualification of team members is also a critical element in project success.

2.1.3 Project Success

The study primarily looked at project success as a dependent variable to see what characteristics contribute to project success. Because project failure is more common than success in the majority of initiatives around the world, including the Covid-19 Vaccine Rollout Project. One of the key causes for each project's failure is its uniqueness, as there are no pre-sets of standards in the literature to establish universal success of a project (Muller & Jugdev, 2012). It's also worth noting that project failures have an effect on national economies (Zwikael & Unger-Aviram, 2010).

There isn't a clear definition of project success in the previous research. It's a complex concept with many distinct interpretations for different people. Project success is defined as the accomplishment of a task, action, or process as intended at the outset of the project and in accordance with the agreed-upon criteria (Bannerman, P. L. 2008). According to J. Pinto (1996), project performance has long been judged against traditional parameters such as meeting

deadlines, staying within budget, and performing as expected, all of which are referred to as the triple constraint and the iron triangle (Atkinson,1999; J. K. Pinto & Mantel, 1990).

In recent years, J. Pinto (1996) has reexamined the classic concept of project success, suggesting that the previous triple constraint should be replaced by a new model that adds a fourth constraint to project success: client satisfaction, because a project is only successful if the clients are happy. He coined the term "quadruple" constraint model to describe these four perceived project success requirements. The current research not only evaluates J. Pinto's quadruple constraint model, but also the impact of project performance on organizational success. Finally, J. K. Pinto and Mantel (1990) claimed that these criteria are generic enough to be applied across a number of organizations and project kinds, therefore the study chose this exact combination.

There hasn't been a systematic study that looks at the impact of project cooperation on project success in the past (Yang et al., 2013). The goal of current research is to look into the connections among project teamwork and project success.

2.1.4 Teamwork and Project Success

The significance of teamwork has been demonstrated as a factor influencing team performance. Many other research has indicated that teamwork is crucial to team effectiveness, particularly in terms of communication, collaboration, and cohesiveness (Trist, 1981; Jewell and Reitz, 1981; Gladstein, 1984; Schwarz, 1994). There is a correlation between teamwork and team performance, according to previous study. The impact of cooperation on project performance is addressed in this study, which builds on earlier studies.

According to the study, project teamwork can help a project succeed in a favorable and meaningful way. The performance of the team, according to M. Afzalur Rahim (2001), is favorably related to project outcomes. However, no empirical research has been done in any industry to prove a link between project teamwork and project success (Yang et al., 2013). Project efficiency can be measured in terms of project team performance, according to Unger-Aviram, Zwikael, and Restubog (2013), which refers to the extent to which project team members completed the project within the stipulated cost and schedule. They argued that increasing team efficiency would result in a lesser departure from the project's expected schedule and cost.

Project teamwork has been examined through five layers of project activities, including project team communication, collaboration, cohesion, unity of direction, and team makeup. The following literature has been compiled to assess if there is a link between individual project teamwork dimensions and project success. According to the experts, improved team performance leads to higher project success rates. According to Solomon et al., communication is critical to team effectiveness (2001). Similarly, a number of study have determined that team communication is still a useful technique for improving team performance (Kotlarsky &Oshri, 2005; Thamhain, 2004). Furthermore, team cohesion is an important aspect in achieving superior project results (Levine & Moreland, 1990; McGrath, 1964).

They came to the conclusion that the project would perform better if the team was more cohesive and united. The willingness of team members to stay in the team can also be used to assess team cohesiveness (Wang, Chou, & Jiang, 2005). Furthermore, Yang et al. (2013) asserted that team cohesion is a key component in project success.

Another crucial aspect of teamwork is team collaboration, which entails functioning as a unit (Thamhain, 2004). When team members collaborate, workplace ties are enhanced (Nelson & Cooprider, 1996). Gladstein (1984) also stated that team collaboration is a critical component of team success. Similarly, (Kotlarsky & Oshri, 2005) stated that successful team collaboration can lead to effective team performance.

Furthermore, Shenhar and Dvir (1996) claimed that technical qualification of team members is a critical component in project success. According to Zwikael and Unger- Aviram (2010), skilled project teams are essential to achieve the intended outcomes. Similarly, Dong, Chuah, and Zhai (2004) suggested that project team technical expertise is a critical element in project success. As a result, project teams with technical knowledge and abilities can be efficient in solving problems quickly and completing projects on schedule and to the appropriate quality (Clark & Fujimoto,1991; Atuahene-Gima, 2003; Scott-Young & Samson, 2004). Ultimately, Baker, Murphy, and Fisher (2008) asserted that a project's success is dependent on its technical criteria being met. As a result, a project team with the right mix of interpersonal and technical skills can be a critical component of a project's success.

Yang et al. (2013) came to the same conclusion: project teamwork is positively connected with project success. They emphasized that more empirical studies in various industries should be conducted to determine the possible impact of the above-mentioned links, as prior researchers have primarily studied project-related studies in projects other than higher education (Giritli & Civan, 2008; Ozorovskaja, Voordijk, &Wilderom, 2007; Sunindijo, Hadikusumo, & Ogunlana, 2007; Yang et al., 2013).

2.2 Empirical Review

To consolidate the topic, some prior research works and papers were researched and referred to. As a result, both national and global studies were looked in to focus this section on the role of team work on project success. Empirical researches on teamwork, team effectiveness and the role it plays on project success are discussed to support the conceptual framework of the study. One research investigated the role of Teamwork on Project Success in Pakistan (Muhammad et al, 2017) reiterates the significance of project teamwork for project success and suggested that a project can't be completed by without the involvement of project team members. The research work was based on Higher Education Commission projects in Pakistan, where data collection involved from project leaders and members on project performance and project team contributions to project success.

Four determinant factors of the positive and direct link between project teamwork and project success were anticipated by the study: communication, cohesiveness, collaboration, and technical competence. The findings revealed a good and substantial association between team collaboration team communication and cohesiveness, with the project team's technical capabilities having the least effect. Project teamwork was determined to be an effective technique for project success in a study conducted in a developing country. Furthermore, project team members who work at the same rate can have a positive and value adding influence on project success variables. Members of the project team should also realize how important their contributions are to the project's success.

Using hypothetical data, Ijeoma Okoronkwo of Harrisburg University of Science and Technology investigated team effectiveness and project success to establish the major characteristics that influence team performance and project success. Team members' performance is at its greatest in

a high-trust atmosphere, according to the data from the survey questions. Trust allows teams to have meaningful communication, which in turn leads to team commitment and interdependence. Accountability and good results in teams are established, nurtured, and sustained in a workplace with trust as its core principles. Collaboration and cohesiveness are beneficial in a trust-based team relationship and generate performance and success.

2.3 Conceptual Framework of the Study

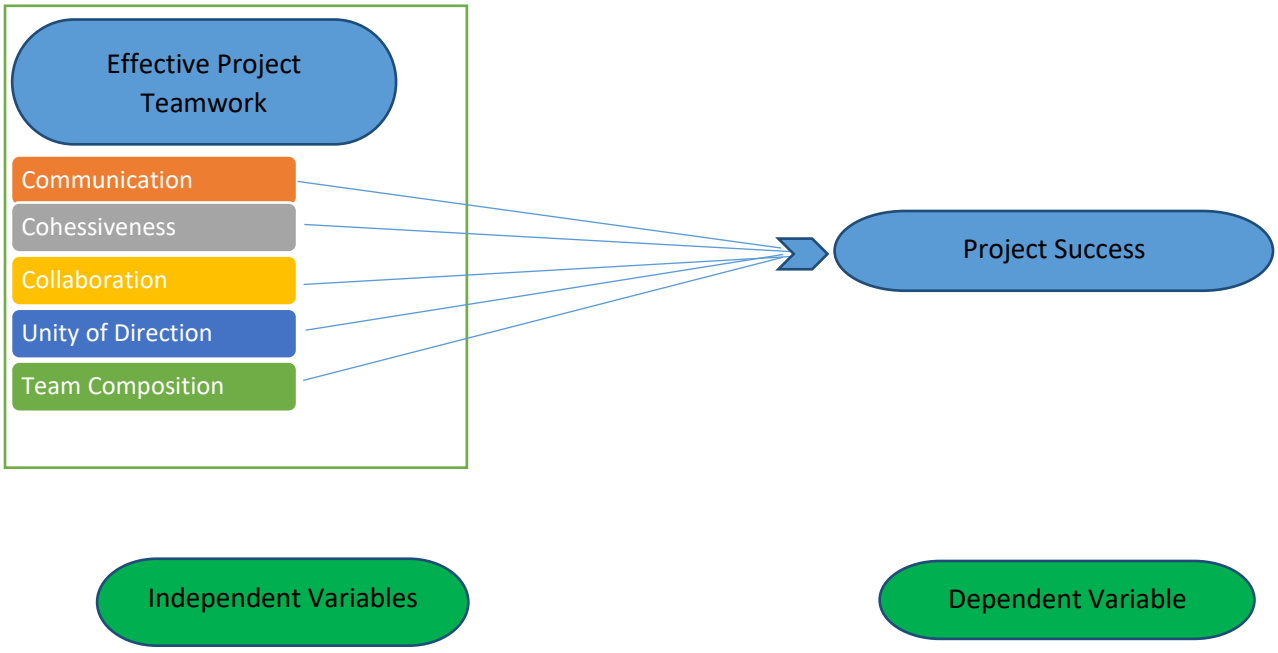

Figure 1 Conceptual Framework of the Study

CHAPTER 3: RESEARCH METHODOLOGY

3.1 Overview

After analyzing relevant literatures on teamwork and what signifies effectiveness in their correlation with project performance, important behavioral factors that determine team effectiveness and that are relevant in team's success are selected using sources such as the internet, library databases, and books from various authors. The methodology chosen by the researcher for this study was motivated by a desire to match these findings with a plan that would accurately fulfill the study's goal. The next sections will go over the research design, study variables, study population, sampling technique, sample size, data collection instrument, data collection method, data analysis, and presentation tools.

3.2 Research design

The primary goal of this study was to determine whether there is a direct link between teamwork and project success. The research will be conducted in the following manner: Analytical Cross-Sectional Study. Through this research the researcher can get a clear understanding on teamwork determinants which are the cause and project success which is the effect, and will help us determine the kind of relationship they have.

The study focused on quantitative data using questionnaires for both team members and team leaders. The research time line will be cross section and because it will allow the study to compare many different variables at the same time. And also, since data will be collected at one point in time will make the study cross sectional too. A cross-sectional study helps to analyze data of variables collected at one given point in time across a sample population and on a pre-defined subset. The reason for using this it is relatively its quick to conduct can collect all variables on my study at one time and multiple results can be researched at once.

The current research employed a quantitative approach, including cross-sectional survey tools like questionnaires. There are certain important considerations to consider while choosing a survey method, such as location flexibility, cost, and the need for a quick and efficient response (Sekaran & Bougie, 2010).The researcher used quantitative since numerical data will be collected and analyzed on teamwork and the selected determinant characteristics to test relations and find patterns to make predictions, and generalize results to the whole project. Quantitative is best suited for these researches because few variables are involved which can make it accurate and objective. Also, it's cost effective and faster.

3.3 Description of study variables

Dependent Variable

- Project Success

Independent variables

- Communication
- Cohesiveness
- Collaboration
- Unity of Direction
- Team Composition

3.4 Description of study area and Period

According to Hamed (2016), the first step in the sample selection is to determine the target demographic. Cooper and Schindler (2014) define a target population as the complete community of individuals or objects from which the research aims to extrapolate its findings. A population, according to Nicholas W. (2011), is a communal term that involves the aggregate number of examples of the kind that are the subject of the study.

The research took place in Addis Ababa between March 15 and June 10, 2022. Ethiopia's capital city is Addis Ababa. It is situated in Africa's horn of Africa. It is the seat of Ethiopia's federal government as well as the African Union's headquarters (AU). It also hosts the United Nations Economic Commission for Africa's headquarters, as well as a number of other regional and international organizations. According to Ethiopia's national statistics bureau, Addis Ababa has a population of 3,384,569 people. There are 11 sub-cities, 116 districts, and 842 sub-woredas in the city (kebeles). According to the Minister of Health's 2019 Annual Performance Report, there are 64 hospitals, 15 of which are government hospitals and 49 of which are private hospitals, 97 public health facilities, and 700 private clinics of various levels.

The researcher focused on Addis Ababa Regional project team and used simple random sampling method and selected 5 hospitals who have been serving as a vaccination center project teams. The total number of total team members is 107 members comprised from the selected 5 Hospitals (ALERT Hospital, St. Paul Hospital and Millennium Medical College, Ekka General Hospital, Saint Peter Comprehensive Specialized Hospital and Ethiopian Public Health Institute) and information will be collected through questionnaires.

3.5 Population

The population of the study, according to Kothari (2004), refers to the total number of things for which information was obtained. The population of this survey are team members involved in the covid-19 vaccine Rollout Project.

Source population

All Project team members who were involved in the COVID-19 Vaccine Rollout Project

Study population

All Project team members who were involved in the COVID-19 Vaccine Rollout Project in 5 selected Hospitals Addis Ababa, Ethiopia, 2022

Inclusion and exclusion criteria

Inclusion criteria

Project team members who were involved in the COVID-19 Vaccine Rollout Project at least for a month

Exclusion criteria

Project Team leaders who were involved in the COVID-19 Vaccine Rollout Project

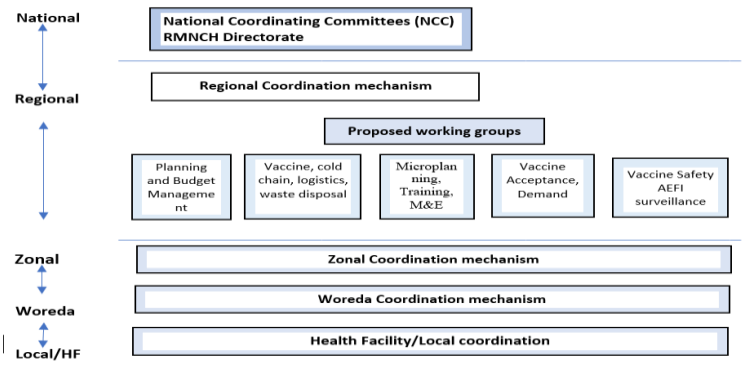

Figure 2-Sub-national Vaccine Rollout Coordination structure

All the necessary data will be gathered from the primary source who are members of the COVID-19 Vaccine Rollout Project. The primary data was collected through questionnaire from project team members still working at different levels of the project.

3.6 Sampling Procedure and Method

The process of selecting a portion of a population or the complete population from a sampling frame is known as sampling (Hamed, 2016). Sampling can be used to form conclusions about an existing hypothesis or to draw generalizations about a population. Probability and non-probability sampling methods are the two types of sampling procedures. Generalization is the most important goal of quantitative research. In any quantitative study, the researcher is unlikely to be able to study the full population of interest. Researchers employ samples, which are subgroups of the population, to gather information and make inferences about the population of interest (Lind et al., 2008).

As mentioned above, the target population are team members of the COVID-19 vaccine rollout Project in the 5 hospitals which are randomly selected in Addis Ababa who worked on same projects. The researcher grouped the Organization into Addis Ababa Region Project Team and 05 Selected Health Facility Project (ALERT Hospital, St. Paul's Millenium Medical College, Ekka Kotebe General Hospital, Saint Peter Comprehensive Specialized Hospital and Ethiopian Public Health Institute) Teams in Addis Ababa.

The 5 Hospitals were selected randomly and in those hospitals there is a sample frame of 26 Team members from ALERT Hospital, 24 from St. Paul's Millenium Medical College, 25 from Ekka Kotebe Hospital, 15 from Saint Peter Hospital and 17 from Ethiopian Public Health Institute, making the population size of the project team members 107.

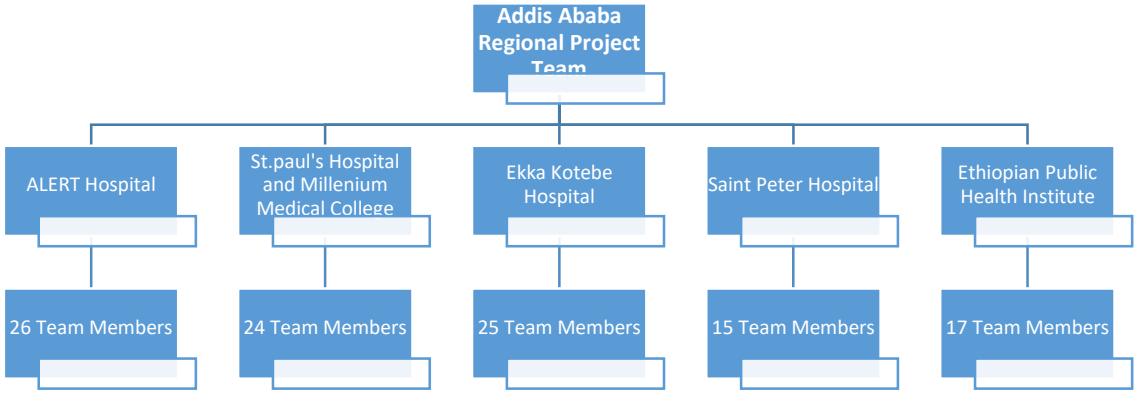

Figure 3- Selected 05 Hospitals with their Total number of project teams

3.7 Sample size

The size of the study sample is very important for getting accurate, statistically significant results and running the study successfully and will be using online sample size calculator. Accordingly, for this study will use confidence interval of 95%, which is the level of certainty whether the response for each question is the true answer or not and 5% margin of error which is the amount of error from difference in the responses that can be tolerated when drawing a conclusion from the data. The standard of deviation indicates how much variation the study expect from responses.

For this study the researcher has set the P value at 0.5 (50%) because this is the worst-case scenario percentage which will guarantee that the calculated sample size is large enough to accurately represent the overall population within the confidence interval and confidence level. The Z-score is a constant value automatically set based on the confidence level which is 95% therefore the z- score will be 1.96.

Sample Size= $[(Z)^2 * P(1-P)] / e^2$

N = population size of the project team members is 107

z = z-score (1.96)

e = margin of error (5%)

p = standard of deviation (0.5)

Sample Size (n)= $[(1.96)^2 * 0.5(1-0.5)] / 0.05^2$

=384.16

= 384.16+10% (*Then by Adding a 10% Non-response Rate)

=422

According to these calculations, the sample size will be 422 team members.

But since the calculated sample size exceeds the population size of the project team members, the researcher has used the Correction formula.

Correction Formula = n/ 1+(n-1/N)

=422/1+(421/107)

=86

After using the Correction formula**, the sample size is 86 Team members**

Based on Proportional Allocation formula, the proportional allocation percentage will be

= sample size/population size=86/107

= 0.8%

Using the proportional allocation percentage, the sample size is divided amongst the 5 Hospital

- **ALERT Hospital= 26x0.8 = 21**
- **St.paul's Hospital and Millenium Medical College= 24x0.8 = 19**
- **Ekka Kotebe Hospital= 25x0.8 =20**
- **Saint Peter Hospital= 15x0.8 =12**
- **Ethiopian Public Health Institute= 17x0.8= 14**

3.8 Data Types and Instruments

Data Type

Hard copy questionnaires as well as online Google Form Questionnaires was used to collect data. They were used to obtain the desired information from the population of interest and each item designed addressed specific objective of the study. The questions were simplified in order to promote conveniences and ease of use by the respondent.

Data Instruments

A **questionnaire** is chosen as a primary data gathering method. The questionnaire is a versatile data gathering instrument with the advantages of using a standardized format, being straightforward and pleasant for subjects, and being cheap and quick to administer to a large range of cases covering a broad range of topics (Walliman, 2011).

The data collection questionnaire is a structured Questionnaire and it is adopted from a prior research on similar area of study and it is developed having three parts: **Part I** is mainly about demographic data and questions to assess the role and level of the respondent in the COVID-19 Vaccine Rollout Project, **Part II** is questions to assess the respondent's level of agreement on effective teamwork determinants **Part III** contains questions to assess to what extent the project success is achieved according to the respondent.

Closed ended questions with a Likert scale from Strongly Disagree (1) to Strongly Agree (5) were used in the measurement scales .The questionnaires were both hand delivered and sent online to their social media accounts to the respondents to be filled and Duration of 1 week was given to the responders.

3.9 Data analysis – model, techniques and software

Data analysis entails condensing large amounts of information into manageable chunks, creating summaries and looking for trends, and employing statistical tools. Converting raw data into valuable information that is relevant to the study's purpose is required. A descriptive analysis method, as well as SPSS software, will be utilized to analyze the raw data. Tables, graphs, and pie charts will be used to show the outcome.

To aid in getting the relationship between the Project teamwork and the success of projects, Correlation and regression will be applied. The parameter β (the *regression coefficient*) denotes the amount that a change in x must be multiplied by to get the equivalent average change in y, or the amount that y changes for a unit increase in x. The degree to which the line slopes upwards or downwards is represented in this fashion.

3.10 Reliability and validity

To measure the quality of research, the terms reliability and validity are utilized. They show how accurate a method, methodology, or test is at measuring something. Validity refers to the precision of a measurement, whereas reliability refers to its consistency. Cronbach's alpha is a scale reliability measurement that assesses the internal consistency of a group of items. Cronbach's alpha (or coefficient alpha) is a measure of reliability and a test to assess if multiple-question Likert scale surveys are reliable. It was established by Lee Cronbach in 1951. (Stephanie Glen). In most social science study contexts, a reliability coefficient of.70 or above is regarded "acceptable." Cronbach's Alpha test was used to determine the questionnaire's reliability, and the result was 0.89, which is deemed "Good."As a data quality control and Validity tool, the researcher used less leading Questions on the Questionnaire, the privacy of

respondents were kept as they were given the time and space to fill the Questionnaire without influence and also Questions with social desirability bias were omitted.

3.12 Ethical Consideration

All questionnaire participants will be made aware of the study's goal and objectives. When asking for their willingness to participate in the study, all respondents will be treated with the utmost respect and dignity. Participants have the right not to participate, thus no pressure will be applied to those who prefer not to. Privacy and confidentiality will be maintained. When transcribing the data to the software and converting the data to meaningful information, the researcher will be objective and impartial as possible. All information gathered will be logged and kept private from the general public. Furthermore, when announcing the results of this study, the respondents' identities will be kept anonymous.

CHAPTER 4: DATA ANALYSIS AND INTERPRETATION

4. 1 INTRODUCTION

This chapter explains how the data on the relationship between cooperation and project success was analyzed and interpreted. Percentages, mean, standard deviation, and coefficients are some of the strategies used.

Introduction, demographic characteristics of respondents, response rate and rating of important study variables are some of the topics covered in this chapter. The link between variables, hypothesis testing, and conclusions will be provided. Finally, using correlation and regression analysis, the chapter examines the relationship between teamwork and project success.

4.2 Demographic Characteristics and Respondents Response Rate

Respondents Response Rate

A total of 86 questionnaires were issued to members of the team in 5 selected hospitals who were involved in the vaccine rollout project in Addis Ababa, 84 of questionnaires were collected and the response rate was 97.6%, and all questionnaires were properly filled and completed.

Respondents' Demographic Characteristics

The demographic profile of respondents is covered in the first section of the questionnaire, which includes gender, age, educational level, role in project team and length of stay in the project. The results obtained from the structured questionnaires are presented on the table 4.1.

Table 4.1 shows the findings of the structured questionnaires. There were 42 (50%) female respondents and 42 (50%) male respondents out of a total of 84 respondents. This means that the respondents in this survey sample were equally represented. When it comes to age, 46 (54.8 percent) of the respondents are between the ages of 20 and 35, 28 (33.3 percent) are between the ages of 36 and 50, and 10 (11.9 percent) are between the ages of 51 and 65. The statistics clearly demonstrates that the bulk of responders were between the ages of 20 and 35.

When we look at the educational standing of the respondents, we find that 7 (8.3%) have a diploma and 17 (20.2%) have a bachelor's degree, the 25 (29%) respondents are General Practitioners who graduated in medicine, 20(23.8%) are respondents with MA/MSc/MPH degree, 13 (15.5%) of the respondents are Specialist Physicians in different specialty and there is 2 (2.4%) with other educational status among the respondents. In terms of educational status, the data indicates that the numbers of respondents who are General Practitioners and those who hold MA/MSc/MPH degree are greater in number.

All the 84 respondents are capable of reading, understanding and answering the questions. In terms of length of stay in the project as part of project team, about 56 (66.7%) of respondents answered that they have Joined the Project from the Beginning, 15 (17.9%) of respondents answered that they have Joined in the middle of the Project, and 13 (15.5%) of respondents answered that they have Joined in the late in the course of the Project. This shows that the majority of respondents had considerable exposure and time in working as part of a project and as a team, and can effectively respond to the questions posed, as well as being well-versed in providing responses on the nature of teamwork in the COVID-19 Vaccine rollout project. Most respondents are literate and well-educated in their work lives, according to the data.

Also, the result suggests that more than half of the respondents have joined the project from the beginning working as part of a project and as part of a team the COVID-19 Vaccine Rollout Project.

As a result, the researcher determines that the responses generated from the respondents will be accurate and beneficial in demonstrating the importance of cooperation for project success.

Table 4. 1 Demographic Characteristic of the Respondents

	Description	Frequency	Percent	Valid Percent
Gender	Female	42	50.0	50.0
	Male	42	50.0	50.0
Age	20-35 yrs	46	54.8	54.8
	36-50 yrs	28	33.3	33.3
	51-65 yrs	10	11.9	11.9
Education Background	Diploma	7	8.3	8.3
	Degree	17	20.2	20.2
	Msc/MA/MPH	20	23.8	23.8
	General Practitioner (GP)	25	29.8	29.8
	Senior Specialist	13	15.5	15.5
	Other	2	2.4	2.4
Length of stay in the project	Joined the Project from the Beginning	56	66.7	66.7
	Joined in the middle of the project	15	17.9	17.9
	Joined the Project lately	13	15.5	15.5

4.3 DESCRIPTIVE ANALYSIS ON DETERMINANTS

Based on the chosen determinants from the variety of team work models, members of the COVID-19 vaccine rollout Project at selected hospitals in Addis Ababa were asked to rate their level of agreement with the three project success measuring factors. The questionnaire was designed to gauge participants' degree of comprehension of teamwork, as well as their level of agreement on the five factors and their perceptions of project success, using a Likert scale.

The various indications were rated on a 5-point Likert scale, with 5-points for 'Strongly Agree', 4-points for 'Agree, 3 points for 'Neutral',' 2 points for 'Disagree,' and ' 1 point for 'Strongly disagree,. The replies were evaluated using descriptive statistics such as the mean and standard deviation.

A. Communication

The first section examines the communication portion of the COVID-19 vaccine rollout project's teamwork determinants. The five questions listed in the form below define the communication component of teamwork.

At, communication is one of the parameters of teamwork in the COVID-19 vaccine rollout project scored mean runs from 4.19 to 4.36, with an average of M=4.26 indicating a good level of agreement. In general, this study demonstrates that the practice of communicative attunement at the COVID-19 vaccine rollout project was optimal.As shown in table 4.2, the standard deviation of the communication parameter of collaboration measurement is 0.66, which is low, indicating that the majority of individual responses are near to the average mean. According to this study of the data, there is a significant and high level of communication across project teams.

The means recorded were interpreted as follows:-1-2.33= Low agreement, 2.34-3.67= Moderate (Medium) Agreement and 3.68 and above=Strong agreement (Zaidatol et al,2016)

Table 4. 2 Communication Parameter

Description	N	Minimum	Maximum	Mean	Std. Deviation
A. Information is freely and widely shared within and beyond the team	84	2	5	4.36	.705
B. Team members are comfortable asking for clarification if they don't understand a given task	84	1	5	4.19	.938
C. There is brain storming and group discussion sessions among team members	84	2	5	4.24	.801
D. All members of the team express their views freely and adequately	83	1	5	4.29	.804
E. All-important topics are openly discussed	83	2	5	4.27	.798
Overall Mean	84	4.26			

B. <u>Cohesiveness</u>

Teamwork performance and project success are improved when project teams are cohesive. The five questions in the form below assess how well a team works together.

One of the teamwork parameters is cohesiveness and in the Project the scored mean runs from 4.05 to 4.25, with an average of M=4.13 indicating a higher level of agreement.

In general, this outcome demonstrates that the team works well together cohesively at the Covid-19 vaccine Rollout Project and in the selected 5 hospitals Cohesion is high. As shown in table 4.3, the standard deviation of the cohesion parameter of teamwork assessment is 0.67, which is low, indicating that most individual responses are near to the average mean. The total mean scores for the cohesion criterion show that respondents' perceptions of collaboration cohesiveness fall somewhere between "Agree" and "strongly agree."

The means recorded were interpreted as follows:-1-2.33= Low agreement, 2.34-3.67= Moderate (Medium) Agreement and 3.68 and above=Strong agreement (Zaidatol et al,2016)

Table 4. 3Cohesiveness Parameter

Description	N	Minimum	Maximum	Mean	SD
A. There is a strong sense of ownership and identity drawn from the project	84	1	5	4.08	.824
B. There is unity among team members throughout a project life	84	1	5	4.14	.823
C. As a team member I feel connected and driven to achieve a common goal	84	1	5	4.15	.799
D. There is flexibility and Willingness to consider alternative views and change with the common goal in mind	84	1	5	4.05	.863
E. There is a feeling of actual contribution to the group's success	84	2	5	4.25	.758
Overall Mean	84	4.13			

C. Collaboration

In this section, we'll talk about the role collaboration plays in teamwork and project success. The five questions included in the form below define the collaborative aspect of teamwork. At, collaboration is a parameter that is used as part of a team's work.

The scored mean runs from 4.05 to 4.29, with an average score of M=4.16 indicating a good level of agreement. In general, this result demonstrates the high level and importance of Collaborative teamwork at the selected 5 hospitals involved in the vaccine Rollout Project.

As shown in table 4.6, the standard deviation of the cooperation parameter of teamwork measurement is 0.67, which is low, indicating that the majority of individual responses are near to the average mean. The overall mean and mode values for the cooperation parameter indicate that respondents' attitudes toward collaboration in teams are somewhere between "agree" and "strongly agree."

The means recorded were interpreted as follows:-1-2.33= Low agreement, 2.34-3.67= Moderate (Medium) Agreement and 3.68 and above=Strong agreement (Zaidatol et al,2016)

Table 4. 4Collaboration Parameter

Description	N	Minimum	Maximum	Mean	Std. Deviation
A. There is a joint planning on tasks, schedules and budget for projects	84	2	5	4.06	.910
B. There is consensus based decision-making process about work approaches and processes	84	1	5	4.14	.823

C. Team members work well together to accomplish all activities and tasks	84	1	5	4.29	.785
D. Project team members discuss problem-solving methods and collaborated with others to address them	84	2	5	4.27	.766
E. The project teams strives for innovation with a minimum of formal procedures.	84	2	5	4.05	.917
Overall Mean	84	4.16			

D. Unity of Direction

The common aim aspect and unity of direction among team members of the Covid-19 vaccine Rollout Project is discussed in this section. The five questions listed in the form below decide what constitutes teamwork's Unity of Direction.

The scored mean of Unity of Direction along with Common goal and purpose as one part of team work parameter at the vaccine rollout project runs from 4.18 to 4.33, with an average of M=4.26. In general, this finding demonstrates that the practice of working for a common aim and purpose with a unity of direction among project team members at the selected 5 hospitals involved in the Covid-19 vaccine Rollout Project is beneficial.

As shown in table 4.5, the standard deviation of the unity of Direction parameter of teamwork measurement is 0.66, which is low, indicating that the majority of individual responses are near to the average mean. The overall mean and mode scores for the common objective and purpose criterion indicate that respondents' perceptions of unity of direction in teamwork fall somewhere between "Agree" and "Strongly Agree".

The means recorded were interpreted as follows:-1-2.33= Low agreement, 2.34-3.67= Moderate (Medium) Agreement and 3.68 and above=Strong agreement (Zaidatol et al,2016)

Table 4. 5Unity of Direction Parameter

Description	N	Minimum	Maximum	Mean	Std. Deviation
A. The goals given for the team to achieve are real and achievable.	83	1	5	4.27	.885
B. The project task and activities given to be delivered are achievable	84	2	5	4.21	.808
C. Project purpose and goals are clear and measurable.	84	2	5	4.32	.731
D. There is an agreement on common goals and objectives for the project when it begins	84	2	5	4.18	.794
E. The team purpose and goal within the project is in line with the greater project purpose.	84	2	5	4.33	.734
Overall Mean	84	4.26			

E. Team Composition

The final section delves into the team composition and technical skills aspects of the teamwork determinants of the COVID-19 vaccine Rollout Project. The five questions in the form below assess the effectiveness of teamwork. Team composition is one of the parameters that affect how well a team works together.

In terms of scored mean , Team Composition at the selected 5 hospitals involved in the COVID-19 Vaccine Rollout Project ranged from 4.07 to 4.51, with M=4.37 indicating a good level of agreement. In general, this outcome demonstrates that the Team composition and technical skills at the COVID-19 Vaccine Rollout Project is really high.

As shown in table 4.6, the standard deviation of the commitment parameter of collaboration measurement is 0.59, which is low, indicating that the majority of individual responses are near to the average mean. This study of the data reveals that there is a diversity of team composition. The means recorded were interpreted as follows:-1-2.33= Low agreement, 2.34-3.67= Moderate (Medium) Agreement and 3.68 and above=Strong agreement (Zaidatol et al,2016)

Table 4. 6 Team Composition Parameter

Description	N	Minimum	Maximum	Mean	Std. Deviation
A. The project team is comprised of different team members with a variety of skills	83	2	5	4.51	.705
B. knowledge and skills of Team members were effective in timely solving problems arising in the project	84	2	5	4.42	.680
C. Technical knowledge and skills were crucial to accomplish the project in time and as per desired quality	83	2	5	4.37	.760
D. Skills performance review is done at a regular interval	84	1	5	4.07	1.003
E. Team Member's different background and skills is used as a learning and experience sharing opportunity	84	2	5	4.49	.685
Overall Mean	82	4.37			

4.4 Descriptive Analysis on Project Success

The Degree of Project Success is assessed by three parameters each having five questions, Completion within budget, Completion within time and Completion within scope Customer satisfaction.

The average agreement to these statements spans from M=3.63 (There were no needless expenditures or unforeseen expenses) to M=4.38 (The Project Team has completed tasks required to fulfill the project's goals).

As a result of the analysis, it appears that teamwork receives a high ranking by having an impact on Project Success. This implies that teamwork affects the performance to the level of an Overall mean of M=4.03. The standard deviation of project success measurement is 0.65, which is low, as shown in table 4.7, indicating that the majority of individual responses for this dimension are near to the average mean.

The means recorded were interpreted as follows:-1-2.33= Low agreement, 2.34-3.67= Moderate (Medium) Agreement and 3.68 and above=Strong agreement (Zaidatol et al,2016)

Table 4. 7 Project Success Parameter

Description	N	Minimum	Maximum	Mean	SD
Completed Within Scheduled Time					
A. Project gets finished on time without delay	84	2	5	4.07	.921
B. Correct amount time is allocated for each task &activity	84	2	5	4.04	.898
C. There is a system to follow up schedule throughout the project and are successful	84	1	5	4.13	.875
D. There is understanding between project team members in project schedules and deadlines before project launch	84	2	5	4.10	.816
E. Based on the Plan, Project scope is delivered within the estimated project timeline	84	1	5	4.10	.983
Completed within Budget					
A. There was a regular and continuous budget forecast	84	1	5	3.70	.941
B. There is understanding in project cost before project launch	84	1	5	3.83	.916
C. Correct amount of budget is allocated for each corresponding task and need	84	2	5	3.85	.988
D. There was no unnecessary costs and unplanned expenses	84	1	5	3.63	1.180
E. Based on the Plan, Project scope is delivered without additional budget	84	2	5	3.93	.967

Completed within Scope and client satisfied					
A. The Project Team has completed tasks required to fulfill the project's goals	84	2	5	4.38	.693
B. The Project has been accessible to the target population as defined in the project planning phase	84	2	5	4.30	.673
C. Project Time and Cost were delivered Based on the project plan, without any scope variation	84	2	5	4.05	.820
D. The General Population receiving the Vaccine were happy and satisfied by the service delivered by the project Team	84	1	5	4.13	.833
E. Relevant Stakeholders and donors of this project are satisfied with the project performance	84	2	5	4.27	.766
Overall Mean	**84**	**4.03**			

4.5 RELATIONSHIP BETWEEN VARIABLES

As a means of determining correlations between independent and dependent variables, as well as their impact on project success in the COVID-19 Vaccine Rollout Project correlation analysis was done. Table 4.8 Depicts a Pearson Product Movement Correlation Coefficient, which is crucial in examining this Correlation, is displayed with the result shown below in.

The dependent variable, project success, is used in the correlation analysis, as is the independent variables which are communication, cohesiveness, collaboration, Unity of Direction and Team Composition. It also involves analyzing impact on project success in the COVID-19 Vaccine Rollout Project in the selected 5 hospitals.

Table 4. 8 Correlation Analysis

		LOG_Pro_Success	LOG_CO_M	LOG_CO_H	LOG_CO_L	LOG_UO_D	LOG_TE_C
Pearson Correlation	LOG_Pro_Success	1.000	.543	.681	.629	.729	.656
	LOG_CO_M	.543	1.000	.714	.631	.427	.621
	LOG_CO_H	.681	.714	1.000	.773	.697	.710
	LOG_CO_L	.629	.631	.773	1.000	.713	.632
	LOG_UO_D	.729	.427	.697	.713	1.000	.605
	LOG_TE_C	.656	.621	.710	.632	.605	1.000
Sig. (1 tailed)	LOG_Pro_Success		.000	.000	.000	.000	.000
	LOG_CO_M	.000		.000	.000	.000	.000
	LOG_CO_H	.000	.000		.000	.000	.000
	LOG_CO_L	.000	.000	.000		.000	.000
	LOG_UO_D	.000	.000	.000	.000		.000
	LOG_TE_C	.000	.000	.000	.000	.000	
N	LOG_Pro_Success	84	84	84	84	84	84
	LOG_CO_M	84	84	84	84	84	84
	LOG_CO_H	84	84	84	84	84	84
	LOG_CO_L	84	84	84	84	84	84
	LOG_UO_D	84	84	84	84	84	84
	LOG_TE_C	84	84	84	84	84	84

The correlation coefficient ranges from −1 to 1 and the conclusion of the correlation coefficient, **r**, demonstrated that there is a positive association between project success and teamwork determinants, according to the correlation matrix table 4.8. There is a favorable association between all five teamwork determinants with project Success, having a coefficient of >0.5.

Communication (r =0.543), cohesiveness (r =0.681), Collaboration (r =0.629), Unity of Direction (r =0.729) and Team Composition (r =0.656) parameters have positive and strong relationships with project success.

In the COVID-19 Vaccine Rollout Project, All five of the team's work measurement parameters have been determined to be related to project success. These positive associations between five collaboration determinants and project success suggest that project performance is positively related to and improved as a result of adequate levels of practice of these determinants among project team members. The most powerful association project success in the COVID-19 Vaccine Rollout Project has is with Unity of Direction, Cohesiveness, Team Composition, Collaboration and Communication respectively.

4.6 REGRESSION ANALYSIS

The information gathered to determine the relationship between independent and dependent variables was subjected to normality testing by using the Kolmogorov-Smirnov test prior to computing multiple regression analysis.

Normality Test

One of the assumptions in linear regression is to establish if the residuals are regularly distributed.. Different types of Normality tests are used to see used to determine if the data is clustered around the mean or not. The Kolmogorov-Smirnov test was generated for the normality test.

In th**e** normality test performed, the kolomogrov-smirnov test does not show normality in Mean Transformation. In the Kolomogrov-smirnov test shown in Table 4.9, the significance value of the Project Success parameter is 5.6% which is >5% and it doesn't show normality.

Table 4. 9 Tests of Normality for Mean Transformation

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
CO_M	.133	84	.001	.893	84	.000
CO_H	.147	84	.000	.904	84	.000
CO_L	.114	84	.009	.928	84	.000
UO_D	.143	84	.000	.893	84	.000
TE_C	.144	84	.000	.890	84	.000
COW_TP	.173	84	.000	.898	84	.000
COW_BP	.147	84	.000	.945	84	.001
COW_SP	.137	84	.000	.931	84	.000
Pro_Success	.096	84	.056	.952	84	.003
a. Lilliefors Significance Correction						

Since the data is not normally distributed, log-transformation, which is a non-linear transformation was used. As Depicted in Table 4.10 After log transformation, Normality Test was done and the finding showed a normal result with all the values of kolomogrov-smirnov test are found to be below 5% which shows normality.

The data type of this research is Likert scale so to decide whether to use parametric or non-parametric first the data must pass the normality test if not the data must be transformed into log and test the normality using kolomogrov-smirnov test. If the test is significant we proceed to parametric test which is multiple linear regression if not we proceed to non-parametric test which is ordinal but the test of normality is significant after transformation and the researcher uses the parametric one which is linear regression.

Table 4. 10 Tests of Normality after log transformation

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
LOG_CO_M	.178	84	.000	.805	84	.000
LOG_CO_H	.195	84	.000	.759	84	.000
LOG_CO_L	.138	84	.000	.868	84	.000
LOG_UO_D	.187	84	.000	.834	84	.000
LOG_TE_C	.165	84	.000	.856	84	.000
LOG_Pro_Success	.133	84	.001	.909	84	.000

a. Lilliefors Significance Correction

4.7 MULTIPLE REGRESSION ANALYSIS

The independent and dependent variables were assumed to have a linear relationship, hence a linear regression test was performed. This must be determined, as well as the amount to which the independent variables; communication, cohesiveness, Collaboration, Unity of Direction and Team Composition; affect project success therefore a regression test was carried out.

The results of the regression analysis exploring the links between the study variables; teamwork determinants and project performance in the covid-19 vaccine rollout project is depicted in the following table. The analysis is performed to determine whether between project performance and the five determinants of teamwork, there is a statistically significant factor. a statistically significant factor between project success and the five determinants of team work.

R square is 0.628, which represents a relationship between the observed and projected values of the dependent variables, as indicated in the model summary below table 4.11. This demonstrates that the independent variables namely common goal and purpose, communication, cohesiveness, collaboration, , Unity of Direction and Team Composition for 62.8% of project success in the COVID-19 Vaccine Rollout Project in the Selected 5 Hospitals in Addis Ababa. The R square here is 0.628, which suggests that when all other factors are held constant, the independent variables, which are the selected five teamwork determinants, have a 62.8 percent influence on the dependent variable project performance.

Table 4. 11 Model Summary

Model Summary[b]				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.792[a]	.628	.604	.04870
a. Predictors: (Constant), LOG_TE_C, LOG_UO_D, LOG_CO_M, LOG_CO_L, LOG_CO_H				
b. Dependent Variable: LOG_Pro_Success				

Table 4. 12 Coefficient Table

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.001	.059		-.013	.990
	LOG_CO_M	.137	.105	.139	1.304	.196
	LOG_CO_H	.100	.121	.114	.832	.408
	LOG_CO_L	-.022	.119	-.023	-.186	.853
	LOG_UO_D	.484	.111	.476	4.340	.000
	LOG_TE_C	.260	.126	.215	2.061	.043
a. Dependent Variable: LOG_Pro_Success						

After Computing multiple regressions, as shown in the above table 4.12, Among the 5 Team work determinants 2 variables namely Unity of Direction and Team composition were found to be significant, having a value of <5%.

With regards to Unity of Direction, a 1% increase in Unity of Direction parameter, the rate of Project success will increase by 48.4% and as for Team Composition, a 1% increase in Team Composition parameter, the rate of project Success will increase by 26.0%.

CHAPTER 5: SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 INTRODUCTION

Conclusions and recommendation of the study are summarized in this report. The primary goal of this research was to evaluate and identify the impact of collaboration on project success in the COVID-19 Vaccine Rollout Project in selected hospital in Addis Ababa, Ethiopia.

To meet the objectives of the study, the researcher used a Cross sectional analytical research in order to produce quantitative data and provide statistically conclusive argument through Self-administered Structured questionnaire. As a result, the researcher summed up the findings and provided conclusions and recommendations based on the data gathered and examined.

5.2 SUMMARY OF FINDINGS

The goal of this study was to look into the importance teamwork has in project success in COVID 19 Vaccine Rollout Project in selected Hospitals in Addis Ababa Ethiopia, 2022. The study has examined five teamwork determinants to see if they had a positive association with project success. The target population for the study was team members of the 5 hospitals involved in the COVID-19 Vaccine Rollout Project; From ALERT Hospital, St. Paul Hospital and Millenium Medical College, Ekka General Hospital, Saint Peter Comprehensive Specialized Hospital and from Ethiopian Public Health Institute.

In the questionnaire, the five effective teamwork factors were set on a Likert scale ranging from strongly disagree to strongly agree, and the practice level was assessed. The first determinant of team work, Communication, at the COVID-19 vaccine Rollout project has a mean score of M=4.26. The second determinant of team work, Cohesiveness, at the COVID-19 vaccine Rollout project has a mean score of M=4.13 which is in the range between “Agree” and “Strongly Agree”.

Collaboration at the Covid-19 vaccine Rollout Project scored a mean score of M=4.16 which is in the range between “Agree” and “Strongly agree”. Unity of Direction along with Common goal and purpose at the COVID-19 vaccine rollout project scored a mean score of M=4.26 which is in the range between “Agree” and “Strongly Agree”. Team Composition at the Covid-19 vaccine Rollout Project scored a mean score of M=4.37 which is in the range between “Agree” and “Strongly agree”. And the computed result shows that there is a high level of association between teamwork and project success with a mean score of M= 4.03.

In Correlation Analysis, All the five teamwork determinants communication, cohesiveness, Collaboration, Unity of Direction and Team Composition have a strong and positive correlation with project success.

A Multiple Regression Analysis was used to determine the importance of successful teamwork determinants in project performance of the COVID-19 Vaccine Rollout Project.

According to the regression result, the coefficient of determination, i.e the R square is 0.628, and it represents a link between the dependent variables' observed and predicted values. This demonstrates that the independent variables namely common goal and purpose, communication,

cohesiveness, collaboration, , Unity of Direction and Team Composition for 62.8% of project success in the COVID-19 Vaccine Rollout Project in the Selected 5 Hospitals in Addis Ababa.

The R square here is 0.628, which suggests that when all other factors are held constant, the independent variables, which are the selected five teamwork determinants, have a 62.8 percent influence on the dependent variable project performance. Furthermore, the coefficients revealed that the five cooperation characteristics have a considerable impact on project success at the COVID-19 Vaccine Rollout Project.

5.3 CONCLUSION

This study was conducted in a developing country and a healthcare project which as documented in previous studies of project teamwork as an effective determinant for project success in different sectors apart from the healthcare sector. The effectiveness of teamwork is critical to the success of any project undertaken by a group. As a result, it's critical that project team members are astute enough to focus on fostering and developing team performance.

The goal of this investigation was to identify the Determining factors in Team work for the success or failure and to determine whether the COVID-19 Vaccine Rollout Project in selected Hospitals in Addis Ababa, Ethiopia was a Success or a failure. In order to do this, the researcher's review of the literature on the subject led to the selection of five effective teamwork determinants, which are: communication, cohesiveness, Collaboration, Unity of Direction and Team Composition. The above-mentioned findings are then used to draw conclusions based on the research objectives. The findings of this study's research show that there is a favorable relationship and there is significant factor between the five teamwork determinants and project success in the COVID-19 Vaccine Rollout Project in selected Hospitals in Addis Ababa, Ethiopia.

Based on the results of the study, Unity of Direction and Team Composition have the highest influence on project success. In terms of Unity of Direction, according to the respondents, the targets and plans set for the team are realistic and attainable. The project task and actions that must be completed are feasible. The project's purpose and objectives are well-defined and measurable. When the project begins, there is consensus on common aims and objectives. The project's objective and goal are aligned with the big picture of the project.

In terms of Team Composition, as per the response of the majority of the respondents, the project team was comprised of different team members with a variety of skills. Knowledge and skills of Team members were effective in timely solving problems arising in the project. Technical knowledge and skills were crucial to accomplish the project in time and as per desired quality. Skills performance review is done at a regular interval. Team Member’s different background and skills was used as a learning and experience sharing opportunity.

In Summary, With regards to Unity of Direction, a 1% increase in Unity of Direction parameter, the rate of Project success will increase by 48.4% and as for Team Composition, a 1% increase in Team Composition parameter, the rate of project Success will increase by 26.0%.

Finally, the study discovered that project success in the COVID-19 Vaccine Rollout Project is influenced by teamwork. The selected five effective teamwork determinants; communication, cohesiveness, Collaboration, Unity of Direction and Team Composition; have been put to the test, and a strong and positive correlation with project success has been discovered in the COVID-19 Vaccine Rollout Project. Finally the researcher concludes that teamwork has an impact of project success which is in line with the findings from other studies as well indicating strong relationship between teamwork and project Success.

5.4 RECOMMENDATIONS

While taking in mind the uniqueness of each project, the researcher offers the outlined recommendations for future projects of a similar nature:

- The researcher strongly suggests and recommends similar projects to take the five teamwork determinant factors as a pillar while designing future projects and organizing project Teams.
- The Project organization needs to invest and cultivate the culture of Open Communication between team leaders and team members and also among team members.
- Project Managers and Project Team leaders need to work on building a sound and energetic team chemistry whereby they will strengthen the cohesion amongst project team members.
- The researcher highly suggests that team members be included by the project manager and team leaders within the project organization as early as possible specially during the goal setting phase of projects.
- The researcher recommends the project to strengthen the practice and Culture of establishing Unity of Direction and a Diverse and technically competent team composition more to increase team effectiveness and project success in the COVID-19 Vaccine Rollout Project because the two determinants have a significant and strong relationship with project success.
- The researcher advises future project managers to focus on Communication, Collaboration, and Cohesiveness among the five determinants, because they have a positive correlation with project success but their significance is low.
- Final Recommendation of the researcher is that team leaders should assess their team member’s effectiveness on a regular basis to assess which teamwork characteristics are lacking and which are contributing to the project's success

5.5 AREAS OF FURTHER RESEARCH

The Researcher Suggests the following points for further research

- Future researchers can also use more analytical method to analyze the relationship between effective teamwork determinants and project success at various life cycle stages of projects in different project-based organization.
- Future studies can be conducted on how to advance this research on teamwork by performing an analysis on other remaining team effective determinants to comprehend and compare them against each other and against project Success.
- A study on the role of teamwork and its relation with project success along with its effects on organizational performance should be carried in other an industries and project sectors apart from the Healthcare sector.

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ANNEXES

ANNEX I- QUESTIONNAIRE

Addis Ababa University

College of Business and Economics

School of Commerce

MA in Project Management Program

Dear Respondent My name is Nurhusen Kedir, I am a Master's degree Candidate in Project Management: This research project entitled as "**The Role of Team Work on Project Success in COVID 19 Vaccine Rollout project"** is designed to examine the role that teamwork has on successful delivery of the project. You are kindly requested to respond to the statements which describe a specific situations you encountered during your involvement in the project.

The information you provide will be used purely for academic purpose and will be kept confidential. The soundness and validity of findings highly depend on your honest and thoughtful responses. Therefore, I kindly request you to fill the questionnaire carefully and return at your earliest convenience. I would like to thank you in advance for all the kind contribution, support and considerable time you spent filling this questionnaire.

With regards

Nurhusen Kedir

MA candidate in Project Management Program

AAU, School of Commerce

Please mark the box that best describes you with an X.

I. Demographic Data

1. Gender: (1) Male _____ (2) Female_____

2. Age (years) (1) 20-35yrs _____ (2) 36-50yrs_____

(3)51-65yrs _____ (4) Others (Please Specify) _____

3. Education Background: (1) High school Graduate____ (2) Diploma ____ (3) Degree ____

(4) MSc/MPH___ (5) GP___ (6) Specialist_____ (7) Others_____

4. Length of stay in the project:

(1)Joined the Project from the Beginning ____ (2) Joined in the middle of the project ___

(3) Joined the project lately _____

Please put (X) on the alternative choice that best describes your view

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

II. Effective Teamwork Determinants

Please put (√) on the alternative choice that best describes your view

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

	Teamwork Determinants	1	2	3	4	5
1.	**Communication**					
A.	Information is freely and widely shared within and beyond the team					
B.	Team members are comfortable asking for clarification if they don't understand a given task					
C.	There is brain storming and group discussion sessions among team members					
D.	All members of the team express their views freely and adequately					
E	All-important topics are openly discussed					

	Teamwork Determinants	1	2	3	4	5
2.	**Cohesiveness**					
A.	There is a strong sense of ownership and identity drawn from the project					
B.	There is unity among team members through-out a project life					
C.	As a team member I feel connected and driven to achieve a common goal					
D	There is flexibility and Willingness to consider alternative views and change with the common goal in mind					
E.	There is a feeling of actual contribution to the group's success.					

	Teamwork Determinants	1	2	3	4	5
3.	**Collaboration**					
A.	There is a joint planning on tasks, schedules and budget for projects					
B.	There is consensus based decision-making process about work approaches and processes					
C.	Team members work well together to accomplish all activities and tasks					
D.	Project team members discuss problem-solving methods and collaborated with others to address them					
E.	The project teams strives for innovation with a minimum of formal procedures.					

	Teamwork Determinants	1	2	3	4	5
4.	**Unity of Direction**					
A.	The goals given for the team to achieve are real and achievable.					
B.	The project task and activities given to be delivered are achievable					
C.	Project purpose and goals are clear and measurable.					
D.	There is an agreement on common goals and objectives for the project when it begins					
E.	The team purpose and goal within the project is in line with the greater project purpose.					

	Teamwork Determinants	1	2	3	4	5
5.	**Team Composition**					
A.	The project team is comprised of different team members with a variety of skills					
B.	knowledge and skills of Team members were effective in timely solving problems arising in the project ,					
C.	Technical knowledge and skills were crucial to accomplish the project in time and as per desired quality					
D.	Skills performance review is done at a regular interval					
E.	Team Member's different background and skills is used as a learning and experience sharing opportunity					

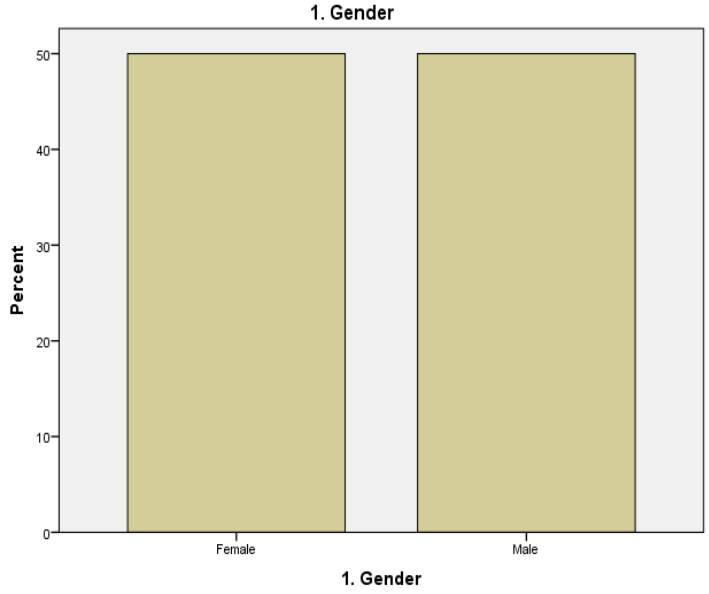
III. **COVID 19 Vaccine Rollout Project Success**

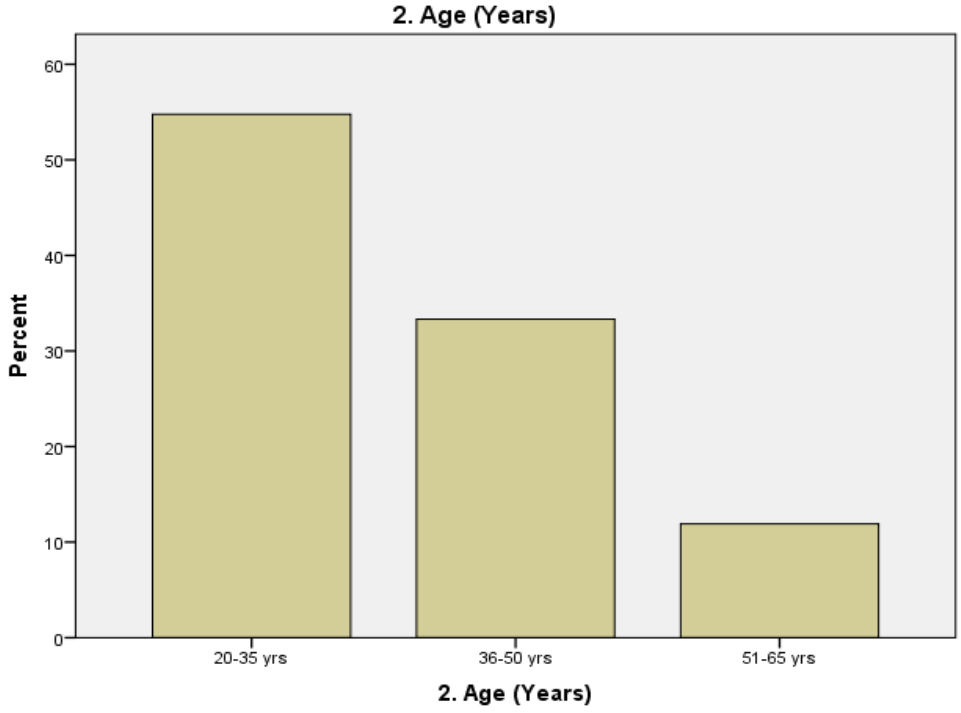
Please indicate your level of agreement with the following statements relating to the performance of the overall project by putting a tick (√) in the number that describes best how you feel about the statement.

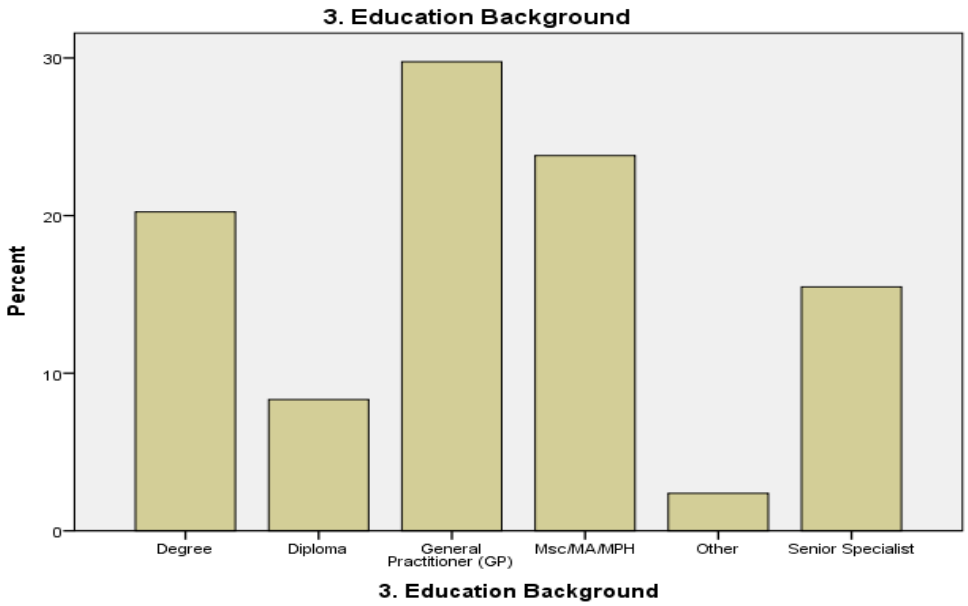
1. Strongly disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly Agree

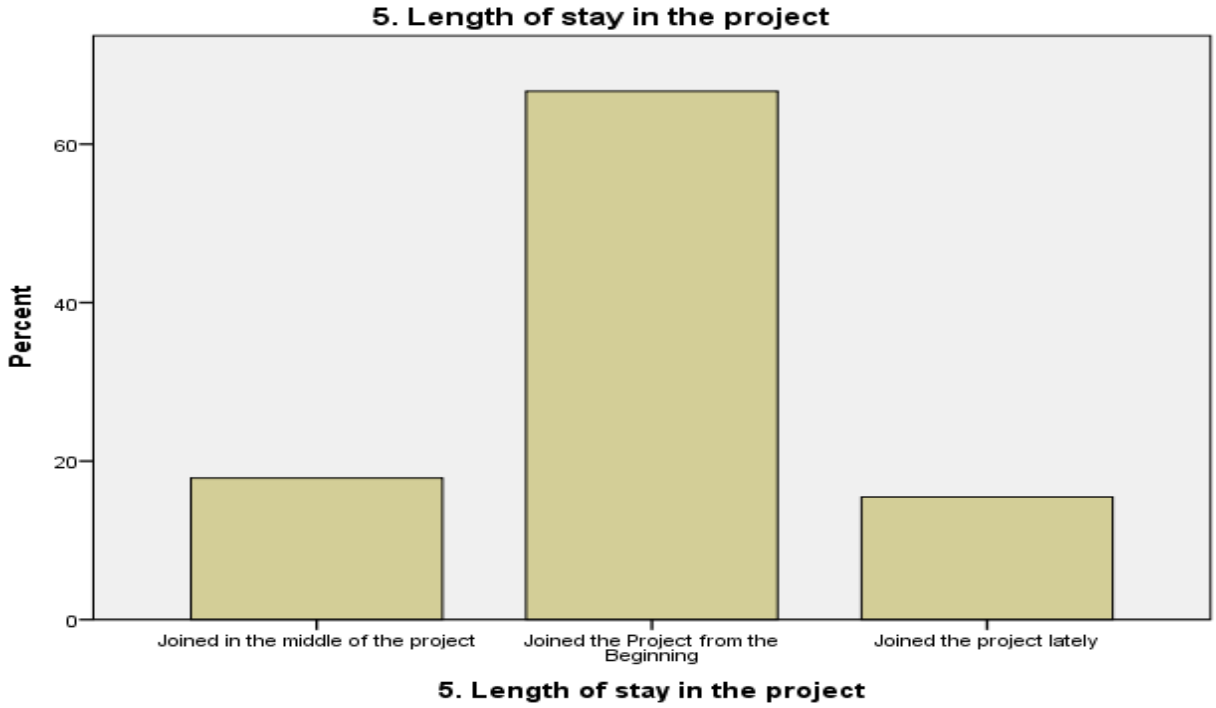
II.	**Project Success**	1	2	3	4	5
1.	**Completed within schedule time**					
A.	Project gets finished on time without delay					
B.	Correct amount time is allocated for each task and activity					
C.	There is a system to follow up schedule throughout the project and are successful					
D.	There is understanding between project team members in project schedules and deadlines before project launch					
E.	Based on the Plan, Project scope is delivered within the estimated project timeline					
2.	**Completed within budget**					
A.	There was a regular and continuous budget forecast					
B.	There is understanding in project cost before project launch					
C.	Correct amount of budget is allocated for each corresponding task and need					
D.	There was no unnecessary costs and unplanned expenses					
E.	Based on the Plan, Project scope is delivered without additional budget					
3.	**Completed within Scope and End User Satisfaction**					
A.	The Project Team has completed tasks required to fulfill the project's goals					
B.	The Project has been accessible to the target population as defined in the project planning phase.					
C.	Project Time and Cost were delivered Based on the project plan, without any scope variation					
D.	The General Population receiving the Vaccine were happy and satisfied by the service delivered by the project Team					
E.	Relevant Stakeholders and donors of this project are satisfied with the project performance					

ANNEX II-Bar Chart






3. Education Background
Percent
30
20
10
0
Degree
Diploma
General Practitioner (GP)
Msc/MA/MPH
Other
Senior Specialist
3. Education Background


5. Length of stay in the project
Percent
60
40
20
0
Joined in the middle of the project
Joined the Project from the Beginning
Joined the project lately
5. Length of stay in the project

ANNEX III- Frequency Tables

A. DEMOGRAPHIC PARAMETERS

1. Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	42	50.0	50.0	50.0
	Male	42	50.0	50.0	100.0
	Total	84	100.0	100.0	

2. Age (Years)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	20-35 yrs	46	54.8	54.8	54.8
	36-50 yrs	28	33.3	33.3	88.1
	51-65 yrs	10	11.9	11.9	100.0
	Total	84	100.0	100.0	

3. Education Background

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Degree	17	20.2	20.2	20.2
	Diploma	7	8.3	8.3	28.6
	General Practitioner (GP)	25	29.8	29.8	58.3
	Msc/MA/MPH	20	23.8	23.8	82.1
	Other	2	2.4	2.4	84.5
	Senior Specialist	13	15.5	15.5	100.0
	Total	84	100.0	100.0	

4. Length of stay in the project

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Joined in the middle of the project	15	17.9	17.9	17.9
	Joined the Project from the Beginning	56	66.7	66.7	84.5
	Joined the project lately	13	15.5	15.5	100.0
	Total	84	100.0	100.0	

B. TEAM DETERMINANT PARAMETERS

1. Communication

A. Information is freely and widely shared within and beyond the team					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	2	2.4	2.4	2.4
	3	5	6.0	6.0	8.3
	4	38	45.2	45.2	53.6
	5	39	46.4	46.4	100.0
	Total	84	100.0	100.0	

B. Team members are comfortable asking for clarification if they don't understand a given task					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	2	2.4	2.4	2.4
	2	3	3.6	3.6	6.0
	3	9	10.7	10.7	16.7
	4	33	39.3	39.3	56.0
	5	37	44.0	44.0	100.0
	Total	84	100.0	100.0	

C. There is brain storming and group discussion sessions among team members					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	3	3.6	3.6	3.6
	3	10	11.9	11.9	15.5
	4	35	41.7	41.7	57.1
	5	36	42.9	42.9	100.0
	Total	84	100.0	100.0	

D. All members of the team express their views freely and adequately					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	1.2	1.2	1.2
	2	1	1.2	1.2	2.4
	3	9	10.7	10.8	13.3
	4	34	40.5	41.0	54.2
	5	38	45.2	45.8	100.0
	Total	83	98.8	100.0	

E. All-important topics are openly discussed					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	3	3.6	3.6	3.6
	3	9	10.7	10.8	14.5
	4	34	40.5	41.0	55.4
	5	37	44.0	44.6	100.0
	Total	83	98.8	100.0	

2. Cohesiveness

A. There is a strong sense of ownership and identity drawn from the project					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	1.2	1.2	1.2
	2	1	1.2	1.2	2.4
	3	16	19.0	19.0	21.4
	4	38	45.2	45.2	66.7
	5	28	33.3	33.3	100.0
	Total	84	100.0	100.0	

B. There is unity among team members throughout a project life					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	1.2	1.2	1.2
	2	1	1.2	1.2	2.4
	3	14	16.7	16.7	19.0
	4	37	44.0	44.0	63.1
	5	31	36.9	36.9	100.0
	Total	84	100.0	100.0	

C. As a team member I feel connected and driven to achieve a common goal					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	1.2	1.2	1.2
	2	1	1.2	1.2	2.4
	3	12	14.3	14.3	16.7
	4	40	47.6	47.6	64.3
	5	30	35.7	35.7	100.0
	Total	84	100.0	100.0	

D. There is flexibility and Willingness to consider alternative views and change with the common goal in mind					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	1.2	1.2	1.2
	2	4	4.8	4.8	6.0
	3	11	13.1	13.1	19.0
	4	42	50.0	50.0	69.0
	5	26	31.0	31.0	100.0
	Total	84	100.0	100.0	

E. There is a feeling of actual contribution to the group's success					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	3	3.6	3.6	3.6
	3	7	8.3	8.3	11.9
	4	40	47.6	47.6	59.5
	5	34	40.5	40.5	100.0
	Total	84	100.0	100.0	

3. Collaboration

A. There is a joint planning on tasks, schedules and budget for projects					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	5	6.0	6.0	6.0
	3	17	20.2	20.2	26.2
	4	30	35.7	35.7	61.9
	5	32	38.1	38.1	100.0
	Total	84	100.0	100.0	

B. There is consensus based decision-making process about work approaches and processes					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	1.2	1.2	1.2
	2	2	2.4	2.4	3.6
	3	11	13.1	13.1	16.7
	4	40	47.6	47.6	64.3
	5	30	35.7	35.7	100.0
	Total	84	100.0	100.0	

C. Team members work well together to accomplish all activities and tasks					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	1.2	1.2	1.2
	2	1	1.2	1.2	2.4
	3	8	9.5	9.5	11.9
	4	37	44.0	44.0	56.0
	5	37	44.0	44.0	100.0
	Total	84	100.0	100.0	

D. Project team members discuss problem-solving methods and collaborated with others to address them					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	3	3.6	3.6	3.6
	3	7	8.3	8.3	11.9
	4	38	45.2	45.2	57.1
	5	36	42.9	42.9	100.0
	Total	84	100.0	100.0	

E. The project teams strives for innovation with a minimum of formal procedures.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	8	9.5	9.5	9.5
	3	9	10.7	10.7	20.2
	4	38	45.2	45.2	65.5
	5	29	34.5	34.5	100.0
	Total	84	100.0	100.0	

4. Unity of Direction

A. The goals given for the team to achieve are real and achievable.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	1.2	1.2	1.2
	2	3	3.6	3.6	4.8
	3	9	10.7	10.8	15.7
	4	30	35.7	36.1	51.8
	5	40	47.6	48.2	100.0
Total		84	100.0		

B. The project task and activities given to be delivered are achievable					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	3	3.6	3.6	3.6
	3	11	13.1	13.1	16.7
	4	35	41.7	41.7	58.3
	5	35	41.7	41.7	100.0
	Total	84	100.0	100.0	

C. Project purpose and goals are clear and measurable.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	1	1.2	1.2	1.2
	3	10	11.9	11.9	13.1
	4	34	40.5	40.5	53.6
	5	39	46.4	46.4	100.0
	Total	84	100.0	100.0	

D. There is an agreement on common goals and objectives for the project when it begins					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	2	2.4	2.4	2.4
	3	14	16.7	16.7	19.0
	4	35	41.7	41.7	60.7
	5	33	39.3	39.3	100.0
	Total	84	100.0	100.0	

E. The team purpose and goal within the project is in line with the greater project purpose.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	3	3.6	3.6	3.6
	3	4	4.8	4.8	8.3
	4	39	46.4	46.4	54.8
	5	38	45.2	45.2	100.0
	Total	84	100.0	100.0	

5. Team Composition

A. The project team is comprised of different team members with a variety of skills

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	2	2.4	2.4	2.4
	3	4	4.8	4.8	7.2
	4	27	32.1	32.5	39.8
	5	50	59.5	60.2	100.0
	Total	83	98.8	100.0	
Missing	System	1	1.2		
Total		84	100.0		

B. knowledge and skills of Team members were effective in timely solving problems arising in the project

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	1	1.2	1.2	1.2
	3	6	7.1	7.1	8.3
	4	34	40.5	40.5	48.8
	5	43	51.2	51.2	100.0
	Total	84	100.0	100.0	

C. Technical knowledge and skills were crucial to accomplish the project in time and as per desired quality

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	1	1.2	1.2	1.2
	3	11	13.1	13.3	14.5
	4	27	32.1	32.5	47.0
	5	44	52.4	53.0	100.0
	Total	83	98.8	100.0	
Missing	System	1	1.2		
Total		84	100.0		

D. Skills performance review is done at a regular interval

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	2	2.4	2.4	2.4
	2	5	6.0	6.0	8.3
	3	12	14.3	14.3	22.6
	4	31	36.9	36.9	59.5
	5	34	40.5	40.5	100.0
	Total	84	100.0	100.0	

E. Team Member's different background and skills is used as a learning and experience sharing opportunity					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	1	1.2	1.2	1.2
	3	6	7.1	7.1	8.3
	4	28	33.3	33.3	41.7
	5	49	58.3	58.3	100.0
	Total	84	100.0	100.0	

C. Project Success Parameters

1. Completed within Scheduled Time

A. Project gets finished on time without delay					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	6	7.1	7.2	7.2
	3	14	16.7	16.9	24.1
	4	31	36.9	37.3	61.4
	5	32	38.1	38.6	100.0
	Total	83	98.8	100.0	
Missing	System	1	1.2		
Total		84	100.0		

B. Correct amount time is allocated for each task and activity					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	7	8.3	8.3	8.3
	3	11	13.1	13.1	21.4
	4	38	45.2	45.2	66.7
	5	28	33.3	33.3	100.0
	Total	84	100.0	100.0	

C. There is a system to follow up schedule throughout the project and are successful					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	1.2	1.2	1.2
	2	3	3.6	3.6	4.8
	3	12	14.3	14.3	19.0
	4	36	42.9	42.9	61.9
	5	32	38.1	38.1	100.0
	Total	84	100.0	100.0	

D. There is understanding between project team members in project schedules and deadlines before project launch					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	4	4.8	4.8	4.8
	3	12	14.3	14.3	19.0
	4	40	47.6	47.6	66.7
	5	28	33.3	33.3	100.0
	Total	84	100.0	100.0	

E. Based on the Plan, Project scope is delivered within the estimated project timeline					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	1.2	1.2	1.2
	2	6	7.1	7.2	8.4
	3	12	14.3	14.5	22.9
	4	29	34.5	34.9	57.8
	5	35	41.7	42.2	100.0
	Total	83	98.8	100.0	
Missing	System	1	1.2		
Total		84	100.0		

2. Completed within budget

A. There was a regular and continuous budget forecast					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	1.2	1.2	1.2
	2	6	7.1	7.1	8.3
	3	29	34.5	34.5	42.9
	4	29	34.5	34.5	77.4
	5	19	22.6	22.6	100.0
	Total	84	100.0	100.0	

B. There is understanding in project cost before project launch					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	1.2	1.2	1.2
	2	6	7.1	7.1	8.3
	3	19	22.6	22.6	31.0
	4	38	45.2	45.2	76.2
	5	20	23.8	23.8	100.0
	Total	84	100.0	100.0	

C. Correct amount of budget is allocated for each corresponding task and need					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	8	9.5	9.5	9.5
	3	24	28.6	28.6	38.1
	4	25	29.8	29.8	67.9
	5	27	32.1	32.1	100.0
	Total	84	100.0	100.0	

D. There was no unnecessary costs and unplanned expenses					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	3	3.6	3.6	3.6
	2	15	17.9	17.9	21.4
	3	16	19.0	19.0	40.5
	4	26	31.0	31.0	71.4
	5	24	28.6	28.6	100.0
	Total	84	100.0	100.0	

E. Based on the Plan, Project scope is delivered without additional budget					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	7	8.3	8.3	8.3
	3	21	25.0	25.0	33.3
	4	27	32.1	32.1	65.5
	5	29	34.5	34.5	100.0
	Total	84	100.0	100.0	

3. Completed within Scope and Client Satisfaction

A. The Project Team has completed tasks required to fulfill the project's goals					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	1	1.2	1.2	1.2
	3	7	8.3	8.3	9.5
	4	35	41.7	41.7	51.2
	5	41	48.8	48.8	100.0
	Total	84	100.0	100.0	

B. The Project has been accessible to the target population as defined in the project planning phase					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	1	1.2	1.2	1.2
	3	7	8.3	8.3	9.5
	4	42	50.0	50.0	59.5
	5	34	40.5	40.5	100.0
	Total	84	100.0	100.0	

C. Project Time and Cost were delivered Based on the project plan, without any scope variation					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	4	4.8	4.8	4.8
	3	14	16.7	16.7	21.4
	4	40	47.6	47.6	69.0
	5	26	31.0	31.0	100.0
	Total	84	100.0	100.0	

D. The General Population receiving the Vaccine were happy and satisfied by the service delivered by the project Team					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	1.2	1.2	1.2
	2	1	1.2	1.2	2.4
	3	15	17.9	17.9	20.2
	4	36	42.9	42.9	63.1
	5	31	36.9	36.9	100.0
	Total	84	100.0	100.0	

E. Relevant Stakeholders and donors of this project are satisfied with the project performance					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	3	3.6	3.6	3.6
	3	7	8.3	8.3	11.9
	4	38	45.2	45.2	57.1
	5	36	42.9	42.9	100.0
	Total	84	100.0	100.0	