Assessment of Project Management Practice of Health Projects in the Times of COVID-19: The Case Study of Jhpiego, Addis Ababa Ethiopia.

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Assessment of Project Management Practice of Health Projects in the Times of COVID-19: The Case Study of Jhpiego, Addis Ababa Ethiopia

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Letter of Certification

This is to certify that MELAKU GEBREMICHAEL has carried out his thesis on the topic — Assessment of Project Management Practice of Health Projects in the Times of COVID-19: The Case Study of Jhpiego, Addis Ababa Ethiopia,

This work is original in nature and suitable for the award of Masters of Arts in Project Management (MAPM).

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Tenkir Seifu (PhD.)

Date : _____

Declaration

I hereby declare that this project work entitled — Assessment of Project Management Practice of Health Projects in the Times of COVID-19: The Case Study of Jhpiego, Addis Ababa Ethiopia- has been carried out by me under the guidance and supervision of Dr Tenkir Seifu (PhD.)

The thesis is my own work and that all the sources that have been indicated and acknowledged by means of complete references.

Melaku Gebremichael Godebo

Date: April 12, 2023

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Abstract

In the context of the COVID-19 unprecedented crisis, organizations had to face new challenges and to adapt to a work environment with less social interactions. Projects being unique in their nature had increased risk of failure during multi-dimensional COVID-19 crisis. This project work aimed to assess the changes made to the project management approach taking the case of Jhpiego, a project-based organization. A qualitative study with a narrative approach was employed. A purposively selected seven key informants who had different positions and experiences in implementing three health projects during the active COVID-19 pandemic period was involved in the study. Data were collected via key informant interviews. The interviews were prearranged, led by principal investigator, and except one interview, all interviews were conducted virtually using Microsoft teams. The audio-recorded interviews were transcribed and analyzed using narrative thematic analysis so that the content within the text was the focus. The results were presented as themes with supportive verbatim quotes. Seven participants selected from three different projects and supportive departments (finance, compliance and administration) participated in the study. The participants reported that COVID-19 pandemic succumbed projects to revise their workplan, reduce number of intervention facilities, reschedule activities, reshuffle activities, procure initially unplanned items (COVID-19 IPC), compromised quality standard of deliverables, reduced their budget utilization rate, loosen communication with project sites. To lessen the impact, it was reported that different mitigation measures were being implemented like working from home, shifting to virtual communication means. They also explained the pandemic gave them a lesson that virtual communication technologies could help do their task. It was also indicated that the situation also exposed many project teams to digital communication technologies. In conclusion, the multi-dimensional impact of the pandemic succumbed Jhpiego to change the routine project management practice on all project management knowledge areas. The mitigation measures helped the project somehow achieves their objectives. Hence, we recommend project-based organization to consider becoming more adaptive and flexible, and enabling rapid innovation. In addition, we suggest organizations to use working from home as alternative means of getting work done.

***Keyword**: COVID-19, project management, qualitative study, Jhpiego,*

List of Acronyms and Abbreviations

ENAT	Enhancing Nutrition and Antenatal Infection Treatment for Maternal and Child Health
HR	Human Resource
HW21	Health workforce for 21 Century
MOA	Memoranda of Agreement
PMBOK	Project Management Body of Knowledge
PMI	Project Management Institute
SOW	Statement of Work
SLA	Service Level agreement
SSISO	Strengthening Systems for Improved Surgical Outcome
WHO	World Health Organization

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Chapter one: Introduction

1.1. Background of the study

The novel coronavirus (SARS-CoV-2) that causes COVID-19 has spread rapidly since emerging in late 2019, leading the World Health Organization (WHO) to declare the disease a global pandemic on March 11, 2020(WHO, 2020a). The disease is highly contagious and therefore followed a rapid growth of number of cases all around the world reaching 356,955, 803 cases and 5,610,291 deaths as of Jan 26, 2022 (WHO, 2022). In addition to causing high mortality and morbidity to the population, the pandemic also induced economical damage with varying extent across countries; countries hit hardest includes India, USA, Brazil and Russian Federation (Worldometer, 2022).

Following the pandemic, WHO has been guiding the coordinated action that must be implemented at national, regional, and global levels to overcome the ongoing challenges in the response to COVID-19, address inequities, and plot a course out of the pandemic. In line with this, WHO has been recommending countries to take standard measures and responses to tackle effects of viruses since the pandemic started (WHO, 2020b). In response, governments around the world had quickly adapt and responded to curb transmission of the virus and to provide care for the many who have been infected (WHO, 2020c, p. 19). One response taken by many governments was to impose strict physical distancing and hygiene measures (Anderson et al., 2020; WHO, 2020b) and the halt of all non-essential travel and any gatherings (WHO, 2020b). Giving priority for keeping the mortality as low as possible, many countries also put in place measures to ameliorate the inevitable economic downturn (Anderson et al., 2020)

Despite of different prevention measures taken, COVID-19 has been and continued to be the biggest global health crisis of our times, leading to severe socioeconomic disruption, closures of educational institutions, significant mortality, shortages of medical supplies and major unprecedented challenges for healthcare systems around the world. The health system put under intense pressure to handle the COVID-19 management of surge cases. In addition, it impacted the routine service provision of different health programs leading to poor health outcomes. The deferral of activities deemed non-essential are common during this pandemic (Riley et al., 2020; Van Bulck et al., 2020).

Project based organizations are among the many that have been impacted by the pandemic which led to disruption of the routine operation and the management of projects they were running. The sudden and dynamically changing situation has left little time for complex

planning and for effective implementation, thus creating challenging conditions for the implementation of projects while requiring highest competency levels on the part of managers. But these conditions were also determined by the nature of organization's operations and by diversification of their stakeholders (Bednarz et al., 2021). Unless mitigation measures are taken, such multifaceted crises are more likely to retard project implementation and eventually cause project failure.

Many project-based organizations responded to the pandemic through adapting the routine project management approach, which helped many to survive. The adaptation could be done on either of the ten-project management body of knowledge areas: project integration management, project scope management, project schedule management, project cost management, project risk management, project quality management, project resource management, project procurement management, project communication management, project stakeholder management. To the best of our knowledge, the extent of COVID-19 pandemic influence on each project management body of knowledge areas and the mitigation measures taken to cope up the impact is not adequately in-depth studied Thus, this study examined the COVID-19 pandemic's impact on practices of project management body of knowledge areas in non-government organizations, taking the case of Jhpiego, an international non-governmental organization and affiliate of John Hopkins University.

Jhpiego began working in Ethiopia in 2003 with funding from the President's Emergency Plan for AIDS Relief (PEPFAR) through the U.S. Centers for Disease Control and Prevention (CDC). Over the years, Jhpiego's presence in Ethiopia has expanded and diversified. And it works with different spectrum of donors, including USAID and technical areas where support provided are COVID 19, health system strengthening, HIV, Tuberculosis and other infectious disease, maternal newborn and child health, and safe surgery the health system.

1.2. Statement of the Problem

Managing projects in an organization is not uncommon these days and has become progressively important for the growth of an organization. Projects hold the key to an organization's productive future. Done well, projects can give a firm a significant competitive advantage; but if done poorly can lead to the failure of a business. Though there exist an infinite number of reasons for project failure, they can be broadly categorized into people, process or communication factors (Discenza and Forman, 2007).

Project failure isn't uncommon especially in developing countries and it can happen in any organization and to any project. In countrywide crises situation, the project failure rate even increases to the maximum level. COVID-19 pandemic causing a multifaceted crisis had negative effect in organization's management process and routine operations; and subsequently on their project success. Projects, being unique and temporary undertakings in their nature, were highly affected by the pandemic. To lessen the impact, organizations were forced to respond to the multifaceted and unprecedented crises so as to deliver projects in predefined cost, time and quality.

The concept of risk management is central to corporate management and essential to successful project management in complex setting. It provides benefits when it is implemented according to good practice, principles and with organizational commitment to taking the decisions and performing actions in an open and unbiased manner (Benta et al., 2011). Accordingly, COVID-19 posing a threat of failure to projects need to be managed following a risk management approach.

In addition to disrupting the economic and social systems, COVID-19 pandemic had greater impact on organizations than expected (Teng-Calleja et al., 2020). These multi-dimensional impacts of the pandemic succumbed organizations to change the routine management on different knowledge areas. The changes made includes, but not limited to, work-from-home to abide by government-imposed lockdown orders, shifting to digital means of communication and delivering products and services (ILO, 2020).

Shift in the means of communication, challenges and changes in the management of stakeholders, extra pressure on the project teams, delay in the project delivery and disruption of the supply chain were the major issues that COVID-19 posed on the various process and practices of managing project (Mahfuzul, 2022).

COVID-19 causing a multifaceted crisis was and still is one of the major aspects causing projects to collapse, and this has become an obstacle to each and every project during the times of COVID pandemic. Such unprecedented crisis requires special management type which determine the project success or failure. Some managers succeed to convert the risk to opportunities and some, on the contrary, increase the treats and the uncertainty (Danila and Adam, 2020). Ignoring and failing to take mitigation measures can bring about a lot of costs to the project sponsor hence spoiling the relationship between an organization and the client/customer to which the project is being developed for. (Mobey and Parker, 2002)

In developing countries, organizational response during pandemic is not well researched and documented area. For instance, only few researches are available on response to SARS and Ebola. But exploring the organizational response to crises like Covid-19 pandemic and studying the challenges encountered while implementing adaptations to mitigate disruptions happened to project management practice help to better manage such situation in the future. Thus, this study specifically assessed the project management practice and challenges that Jhpiego encountered during implementing its project during the times of COVID-19 pandemic.

1.3. Research Question

The research questions to be addressed in this project work are outlined below.

i. What coping strategies were implemented to mitigate COVID-19 impact on health projects run by Jhiego?
ii. What were the lessons learnt, opportunities, and challenges encountered in the management of health projects during the times of COVID-19 pandemic at Jhpiego?
iii. What best practices and coping strategies could be obtained that will be used for effective management of health project during occurrence of such crises?

1.4. Research Objectives

1.4.1. General Objective of the study

The general objective of this study was to assess the changes made to project management practice, to identify COVID-induced opportunities and challenges that Jhpiego encountered during implementing its project during the times of COVID-19 pandemic.

1.4.2. Specific Objective of the study

- To explore the coping strategies implemented to mitigate the COVID-19 impact on health projects run by Jhpiego.
- To identify lesson learnt, opportunities and challenges encountered in the management of health projects during the times of COVID-19 pandemic at Jhpiego.
- To highlight the best coping strategies implemented for effective management of health project during occurrence of such crises like COVID-19 pandemic.

1.5. Significance of the Study

This research work provided valuable information on coping strategies that were implemented to effectively manage projects during the times of COVID-19 pandemic, taking the case of Jhpiego. Thus, it will give Jhpiego an insight what issues and challenges arose, and mitigation

measures taken to get the project activities accomplished; pointing out the gaps in the process also help Jhpiego to improve its efficiency in risk management practice. Other organizations of similar nature can use the findings from this research work to improve and strengthen their risk management practice. Furthermore, this paper will also contribute to the project management knowledge area by serving as a reference on the subject matter.

1.6. Scope of the Study

The study focused on health projects that were implemented by Jhpiego during the intense period of COVID-19 pandemic. This study is only concentrated on assessing the COVID induced changes to the project management practices that aimed to mitigate the COVID-19 impact. The assessment touched the ten project management knowledge areas defined by PMBOK, which enhanced the management of projects

1.7. Limitation of the Study

This study focused on exploring the responses to COVID-19 pandemic by Jhpiego so as to mitigate the implementation of its projects. Thus, this study findings may not infer to other organizations different from the one being studied.

1.8. Organization of the Study

This research proposal has five chapters. The first chapter discusses introductory part with background of the study, background of the project, statement of the problem, research objective, research questions, significance of the study, scope of the study and limitation of the study. Chapter two focuses on review of literature where relevant issues taken from various books and journal articles are discussed to base the study on existing literature. Chapter three contains the details of the research methodology to gather and analyze data from which findings are drawn. Chapter four discusses the research data presentation, analysis and interpretation. And the last chapter summarizes the findings, present conclusion and recommendation. The references used in the study, interview guide and questionnaire used are included in the Appendix section.

Chapter two: Review of Related Literature

2.1. Project and project management

Many definitions had been given to project by different authors, due to the fact that project is multidisciplinary word which exists in several disciplines: engineering, business enterprises, architecture, health sector; hence, scholars tend to define it relating to their experience and profession. Nevertheless, most definitions have common elements mentioned in their narrative; one-off nature, being unique, time limited and goal-directed are the most prominent features of a project. According to PMBOK guide, a project is a temporary endeavor undertaken to create a unique product, service, or result. And it has objectives towards which work is to be directed, a strategic position to be attained, a purpose to be achieved, a result to be obtained, a product to be produced, or a service to be performed. The temporary nature of project indicates that a project has a definite beginning and end (Project Management Institute, 2017).

Likewise, project management is also defined in different ways; and this is somehow attributed to the relatively young age of project management as a discipline. Project management institute in their PMBOK guide defined project management as the application of knowledge, skills, tools, and techniques to project activities to meet the project requirements.*(Project Management Institute, 2017).*

According to project management association, project management is the application of processes, methods, skills, knowledge and experience to achieve specific project objectives according to the project acceptance criteria within agreed parameters. And project management has final deliverables that are constrained to a finite timescale and budget *(Association for Project Management, 2019)* .

Another scholar, Albert Lester, defined project management as the process of planning, monitoring and control of all aspects of a project and motivation of all involved in it, in order to achieve the project objectives within agreed criteria time, cost and performance. (Lester, 2007). The ISO 10006, a standard for quality in project management also defines it in a similar fashion as; “Unique process consisting of a set of coordinated and controlled activities with start and finish dates, undertaken to achieve an objective conforming to specific requirements, including constraints of time, cost and resources” (ISO, 2017).

Despite the numerous definitions of project management, most authors agree that project management is about achieving time, cost and quality targets, within the context of overall

strategic and tactical client requirements, by using project resources.(Kerzner, 2017) There is also general agreement that project management is concerned with the life cycle of the project: planning and controlling the project from inception to completion (Addis Ababa University-course material, 2015).

Organizations begin different projects with the aim of creating new service or improving the functional efficiency of the existing ones. To achieve these objectives, appropriate skills and techniques are required, which can be availed through project management, to manage limited budgets, and monitor shrinking schedules and unpredicted issues, while as same time dealing with people and organizational issues (Abbasi and Al-Mharmah, 2000)

2.3. Success of Project

Project success is a core concept of project management and quite often discussed topic in the field, but it is least agreed upon area. Various success measures have been offered to express success of a project – most common among them are meeting schedule, budget and performance. According to PMBOK guide, success is measured by product and project quality, timeliness, budget compliance, and degree of customer satisfaction objectives (Project Management Institute, 2017). Earlier, Freeman and Beale stated seven common criteria were used to measure success: technical performance, efficiency of project execution, managerial and organizational implications, personal growth, project termination, technical innovativeness, and manufacturability and business performance. (Freeman and Beale, 1992)

Kerzner argued that the definition of project success as completion of an activity within the constraints of time and cost, and performance is no longer valid and needs modification. He suggested the definition should be modified to include completion within allocated time period, within the budgeted cost, at the proper performance or specification level, with acceptance by the customer/user, with minimum or mutually agreed upon scope changes, without disturbing the main work flow of the organization, and without changing the corporate culture (Kerzner, 2009).

There are several challenges which project managers encounter while practicing different tools and techniques of project management. At times, failure to take mitigation measures leads to project failure. Inadequate communication, undefined project mission, lack of management support, lack of project scheduled plan, non-involvement of clients, poor personnel selection, low technical know-how, poor monitoring and feedback system and poor conflict management

were mentioned as constraints facing project management implementation.(Nwachukwu and Emoh, 2011)

2.2.4. Project management practices

Project management processes and techniques are used to coordinate resources to achieve predictable results. Effective and efficient project management should be considered a strategic competency within organizations. It enables organizations to tie project results to business goals, compete more effectively in their markets, sustain the organization, and respond to the impact of business environment changes on projects by appropriately adjusting project management plans (Project Management Institute, 2017).

According to PMBOK (Project Management Institute, 2017), there are ten identified areas of project management defined by its knowledge requirements and described in terms of its component processes, practices, inputs, outputs, tools, and techniques. The ten knowledge areas are used in most projects most of the time.

i. Project Integration Management.

This knowledge area includes the processes and activities to identify, define, combine, unify, and coordinate the various processes and project management activities within the project management process groups. These actions should be applied from the start of the project through completion. Project integration management includes making choices about resource allocation, balancing competing demands, examining any alternative approaches, tailoring the processes to meet the project objectives, and managing the interdependencies among the project management knowledge areas (Project Management Institute, 2017).

ii. Project Scope Management.

This project management knowledge area includes the processes required to ensure that the project includes all the work required, and only the work required, to complete the project successfully. Scope management is primarily concerned with defining and controlling what is and is not included in the project (Project Management Institute, 2017).

Effective Scope Management is the identification, definition and documentation of the project objectives as well as selecting the best approach to achieving the project objectives. The project work is then identified and defined to a common framework, the Work Breakdown Structure. The definition of project scope and associated planning documents are then reviewed for formal work authorization before commencement of work. Following authorization of work, baseline

changes are controlled in a structured manner through a control system. Authorization is necessary before work is initiated on the change, thus providing a good audit trail of baseline changes (Cockfield, 1987)

iii. Project Schedule Management.

In PMBOK guide, it is indicated that project schedule management includes the processes required to manage the timely completion of a project. The process are 'plan schedule management', 'define activities', 'sequence activities', 'estimate activity duration', 'develop schedule' and 'control schedule'.

Schedule development flows from the selection of an appropriate scheduling method, followed by selection and use of a scheduling tool. Next, project-specific data are entered into the scheduling tool to produce the schedule model. From there, instances of the schedule model are saved for use as what-if platforms, targets, and for formal approval as a baseline.

iv. Project Cost Management.

According to PMBOK guide, the cost management knowledge area includes the processes involved in planning, estimating, budgeting, financing, funding, managing, and controlling costs so the project can be completed within the approved budget. Effective project cost management requires cost management planning, cost estimation, determine budget and control costs. In resource planning, what resources and what quantities of each need to be identified to perform project activities. After determining resources, the second process would be estimating the cost by developing an approximation (estimate) of the costs of the resources needed to complete project activities, which includes indirect cost and contingency reserves. Then allocating the overall cost estimate to individual work items, and determine when to spend the money would be the next process. Finally, there has to be change control to the project budget by checking against the project funding requirements

v. Project Quality Management.

This project quality management includes the processes for incorporating the organization's quality policy regarding planning, managing, and controlling project and product quality requirements in order to meet stakeholders' objectives. It also supports continuous process improvement activities as undertaken on behalf of the performing organization (Project Management Institute, 2017)

Project quality management is broken down into three main processes: Quality Planning, Quality Assurance, and Quality Control. One of the most important aspects of quality planning is the establishment of quality metrics. Project managers must go beyond the traditional metrics of scope, time, and cost. The process of quality assurance is associated with continuous improvement and process analysis. Before quality levels can be verified, it is imperative to have accurate data (Rever, 2007)

vi. Project Resource Management.

Includes the processes to identify, acquire, and manage the resources needed for the successful completion of the project. These processes help ensure that the right resources will be available to the project manager and project team at the right time and place.

vii. Project Communications Management.

This knowledge area includes the processes required to ensure timely and appropriate planning, collection, creation, distribution, storage, retrieval, management, control, monitoring, and ultimate disposition of project information.

A communications' plan must be developed which identifies the information and communication needs of the role-players. According to PMI in PMBOK guide, there are four major processes under this knowledge area. The first is communications planning which helps in determining the information and communications needs of the stakeholders who needs what information, when will they need it and how will it be given to them. Then it is information distribution which supports to make all needed information available to project stakeholders in a timely manner. The third is performance reporting which helps in collecting and disseminating performance information which includes status reporting, progress measurement and forecasting. Finally, administrative closure comes so as to generate, gather and disseminate information to formalize phase or project completion and to ensure optimal information flow for effective stakeholder expectation management.

viii. Project Risk Management.

This knowledge area includes the processes of conducting risk management planning, identification, analysis, response planning, response implementation, and monitoring risk on a project. Risk management is one aspect of sound project management and seeks to increase the probability of project success; thus, early warning signs of problems (risks) in the project must be responded in good time. (Kerzner, 2009; Project Management Institute, 2017).

The sub processes in project risk management are risk identification which helps to determine which risks are likely to affect the project and documenting the characteristics of each. Then it is risk quantification which supports in evaluating risks and risk interactions to assess the range of possible project outcomes. The third is risk response development for defining enhancement steps for opportunities and responses to threats. The last process would be risk response control which aids in responding to changes in risk over the course of the project and check if assumptions are still valid, procedures are being followed and any deviance. It also includes identifying new risks and evaluate effectiveness of risk response plan.

ix. **Project Procurement Management**.

This knowledge area includes the processes necessary to purchase or acquire products, services, or results needed from outside the project team. Procurement Statement of Work (SOW) is a legal document subject to legal reviews, and legal advice should be sought throughout the whole procurement process. Project procurement management includes the management and control processes required to develop and administer agreements such as contracts, purchase orders, memoranda of agreements (MOAs), or internal service level agreements (SLAs). The personnel authorized to procure the goods and/or services required for the project may be members of the project team, management, or part of the organization's purchasing department if applicable.

Project Procurement Management processes include the following:

- Plan Procurement Management—the process of documenting project procurement decisions, specifying the approach, and identifying potential sellers.
- Conduct Procurements—the process of obtaining seller responses, selecting a seller, and awarding a contract.
- Control Procurements—the process of managing procurement relationships, monitoring contract performance, making changes and corrections as appropriate, and closing out contracts

x. Project Stakeholder Management.

According to PMBOK guide, project stakeholder management includes the processes required to identify the people, groups, or organizations that could impact or be impacted by the project, to analyze stakeholder expectations and their impact on the project, and to develop appropriate management strategies for effectively engaging stakeholders in project decisions and execution

The Project Stakeholder Management processes are:

- Identify Stakeholders—the process of identifying project stakeholders regularly and analyzing and documenting relevant information regarding their interests, involvement, interdependencies, influence, and potential impact on project success.
- Plan Stakeholder Engagement—the process of developing approaches to involve project stakeholders based on their needs, expectation, interests, and potential impact on the project.
- Manage Stakeholder Engagement—the process of communicating and working with stakeholders to meet their needs and expectations, address issues, and foster appropriate stakeholder engagement involvement.
- Monitor Stakeholder Engagement—the process of monitoring project stakeholder relationships and tailoring strategies for engaging stakeholders through the modification of engagement strategies and plans

2.2.5. Impact of COVID-19 Pandemic on Projects

Having multifaceted influence and being unprecedented event, COVID-19 pandemic put many organizations in crises situations that seriously threats their realization and endangered their projects to failure. To minimize the impact of the pandemic, organizations were forced to implement mitigation strategies such as working from home, shifting to digital means of communication, and others. However, skillful management could also reduce the risk of occurrence of crises situation (ILO, 2020; Spalek, 2007).

COVID-19 pandemic caused increment of work off days and even loss of workforce, finance and reputations. Due to its high infectiousness nature, the pandemic affected significant number of workforce and succumbed many to death. It also strained employees working on projects; management team was overwhelmed as there were an increase in the number of activities to be coordinated and managed (Shamim, 2022). Financial loss also happened due to disrupting operations, a loss of market share/purchase intentions, or spawning lawsuits related to the crisis (Gashahun, 2020).

COVID-19 pandemic had impact on the management practice of projects in an organization. A survey conducted revealed that the pandemic requires the top-management provide high support for human resource, HR managers were able to maintain work-life-balance and display a very pro-active attitude towards their work. In addition, a moderate to loose ties between individual performance and pay raise was also observed during the times of COVID-19 (Wunderlich and Løkke, 2020).

Another study showed the pandemic had impact on research projects as well, causing modification or suspension of data collection due to logistical barriers and the risk or biased results. Moreover, as COVID-19-specific research has been prioritized, projects may encounter delays or difficulties when seeking funding and/or ethics approval (Van Bulck et al., 2020).

Chapter Three: Research Methodology

3.1. Description of the Study Area

This research study was conducted in Jhpiego, an international non-governmental organization and an affiliate of John Hopkins University. The head office of Jhpiego Ethiopia is located in Addis Ababa and its regional offices are situated in Bahir Dar, Hawassa and Mekelle. Jhpiego Ethiopia has a total of 95 technical and administrative staffs that support implementation of different projects. The current and recent donors of Jhpiego are USAID, UNICEF, Bill & Melinda Gates Foundation, Children's Investment Fund Foundation, CDC, Department for International Development, Gavi the Vaccine Alliance, and UBS Optimus Foundation. With the grant obtained from the donors, Jhpiego has been supporting to strengthen health system and improve public health in Ethiopia since 2003. Technical areas where Jhpiego provide support are COVID 19, health system strengthening, HIV, Tuberculosis and other infectious disease, maternal newborn and child health, and safe surgery.

By the time COVID-19 entered Ethiopia and government imposed different restriction, there were about seven active projects implemented by Jhpiego; and three projects from the eight were considered in this study: Strengthening Systems for Improved Surgical Outcome (SSISO), Enhancing Nutrition and Antenatal Infection Treatment for Maternal and Child Health (ENAT), and Health Workforce for 21 century (HW21)

3.2. Research Approach

A qualitative method with a narrative approach was employed to address the research objectives. Key informant interview was conducted to collect in-depth and wide range of perspectives so that the research questions can be answered well. (Greener, 2008) The qualitative method enables to best explore experiences and perspectives on a particular topic (Creswell, 2002; Mishara and Alok, 2011); hence it is appropriate to use qualitative method to explore what was going on with project management practice during the COVID-19 pandemics. In this study, the narrative approach is chosen as it enables to collect substantial amount of data and narratives, which in turn provides rich descriptions of participant experience.

3.3. Research Design

Exploratory research design was employed to address the research objectives. This research design fits this study because the health project management practice in the times of COVID-19

pandemic is not thoroughly investigated. In addition, it provides an opportunity to have better understanding of the existing phenomenon by investigating in a detailed manner.

3.4. Population and Sample

Source population for this study was list of key project staffs that were actively engaged in the management of projects implemented by Jhpiego. Key project staffs include project managers, finance manager, Monitoring and Evaluation lead, Human resource manager, Operation and administrative manager.

Maximum variation purposive sampling was used to select key informants for interview sessions. And for this study, seven key informants were carefully chosen and interviews conducted; these study participants assumed different positions: two project managers, Monitoring and Evaluation lead, finance and grant manager, compliance manager, operations manager and senior project advisor.

3.5. Data Sources and Types

For this study, primary data was used to address the research objectives. Primary data is the type of data that is directly collected by the researcher through observations, surveys, questionnaires, case studies and interviews according to his requirements. On the other hand, secondary data are already existing data generated by large government Institutions, healthcare facilities etc. as part of organizational record keeping or for their own research purpose; the data is then extracted for further analysis by another researcher. In this study, however, secondary data was not collected (Oluwatsin, 2017).

In this study, interview guide was used to capture qualitative data from key informants.

3.6. Data Collection Procedures

Qualitative interview guide was used to capture primary data focusing on Covid-19 induced changes to the management of projects. The data collection tools were designed in such a way all project management knowledge areas are addressed and it was also tailored for different participants. The guides were prepared in English and translated to local Amharic language for easy communication. The interviews were prearranged, led by principal investigator, and interviews were conducted face-to-face at a venue of the participants' choice or virtually using Microsoft teams. All interviews were audio-recorded and note taking was also implemented, alongside with the recording.

3.7. Ethical Consideration

Ethical clearance was obtained from Addis Ababa university ethical review board. Letters of collaboration was obtained from the school of commerce to acquire permission for the data collection.

Written consent was obtained from each participant. Participants had the right to refuse participation. Research data didn't contain personal identifiers or questions about personal opinions, instead focusing only on professional opinions and experience.

No risk to study participants in participation of the study; confidentiality was also maintained through anonymity and taking precaution measures.

3.8. Data management and Analysis

The audio-recorded interviews were transcribed, and aligned with interview notes. Lines of text were numbered. Once the transcription was complete, it was read while listening to the recording to ensure consistency. The transcripts were anonymized so that the participants could not be identified from anything that was said.

Narrative thematic analysis was used so that the content within the text was the focus of the analysis. Data analysis occurred iteratively with data collection to assess the saturation level, develop codes, and observe emerging themes. Themes were noted while transcribing the audio from the interviews and researcher kept reading the extracted transcripts to understand the hidden meanings in the text. The codebook was developed when reviewing the transcripts. The codes were reduced and placed into logical categories with descriptive segments of data to develop themes and the themes were developed in line with the objective of the study. The results were presented as themes with supportive verbatim quotes. Microsoft word was used for both data reduction and analysis.

Chapter Four: Data Presentation, Analysis and Interpretation

This project work assessed the changes made to project management practices undertaken by Jhpiego while running its projects during the active COVID-19 period. For this study, qualitative data was collected from project managers, senior project manager, monitoring and evaluation personnel, finance and grant manager and compliance manager who were actively engaged in three projects which were under active implementation phase. The findings are presented based on the project management body of knowledge areas.

Data analysis and Presentation

4.1. Project Scope management practice

The respondents reported their project scope management experiences during the active period of COVID pandemic. It was articulated that the pandemic induced changes to the projects scope baseline and also affected the process of monitoring the projects and products scope. All project managers explained that the initial project work plan was revised to accommodate few activities in response to COVID-19 pandemic,

> *"…. In addition, we were involved in executing unplanned activities like procure and distribute COVID infection prevention materials; hence, it made us engaged in additional tasks." [Project Manager, ENAT project]*

It was also noted that the pandemic accompanied with other reasons contributed to the reduction of intervention facilities for a project which was launched late in 2019.

> *"…during the pandemic, movement from place to place including travel to intervention sites was restricted. And this compromised many things for instance, the number of intervention sites were reduced from 66 to 31 sites. This decision was passed as it might be difficult to reach out remotely located facilities due to the pandemic."[Project Adviser, SSISO Project]*

4.2. Project Integration management Practice

The study participants reported that most project activities were halted especially during the first months of the confinement period. It was noted that travel restrictions and social distance imposed by government hindered execution of planned capacity building training and onsite mentorship activities, which used to happen in face-to-face modality. The usual implementation strategies needed to be changed to direct and manage the project work; it was reported that the

pandemic enforced the organization staff including project managers to think of a new way of doing things. All participants reported working from home was endorsed as organization policy and use of virtual communication technologies such as teams, zoom, telegram was also started as alternative strategy to get project activities accomplished.

> *"As COVID-19 cases increased and entered here in Ethiopia, restriction of movement and social distance was imposed by the government. That means, we couldn't provide training, attend workshop and conduct site visits/ supportive supervisions as we used to do in the earliest times. And we were forced to perform our duties at home, so we were forced to modify our activity plan. That means, the training which was initially planned to be delivered in-person were shifted to virtual modality" [project manager, HW21 project]*

It was reported that the pandemic presented difficulty to monitor and control projects work effectively. The intervention facilities where projects actually implement initiatives had diverted their focus to the COVID-19 response. And it was indicated that this had severely affected the project performance measures.

> *"…In our project, there was a plan to visit a facility at least once in a month. But during the pandemic period, we were totally detached from facilities for about 4 or 5 months. The other thing, facilities that would have great influence in project performance were changed to COVID treatment center. So, we were unable to explore their performance and then provide corrective action." [project manager, ENAT Project]*

> *"The project had many deliverables which were measured using key performance indicators. Let me point out one to explain you, for instance, at the design phase, the plan for major surgical volume was to increase by 50% at different phases. But during the pandemic, the performance showed decrease from the baseline value. The reasons were decrease in patient flow due to restrictions, the health professional unavailability, and ambiguity on covid-19 related algorithm. There was not clear guidance whether surgical procedure is possible for COVID infected cases. Some facilities were deciding by their own like no one will get surgical service without being tested for COVID" [project adviser, SSISO Project]*

4.3. Project schedule Management practice

It was explained that there was disruption of project activities both in their sequence, time of execution and duration during the confinement period. In the first months of pandemic period,

all projects were halted their activities; later most activities were performed using virtual communication technologies; but it was reported that there happened activity duration extension due to internet connectivity problem. Activities that must happen in face-to-face approach such as skill trainings were either modified or rescheduled;

> *"About 13-14 biomedical engineers were trained virtually, but this one was initially planned in face to face approach. But other skill-based training like maintenance focused ones could not be delivered virtually. And we were forced to delay such type of training; instead, we organized virtual discussion forum on the existing maintenance problems for biomedical engineers in the presence of EPHI and EPHA counterparts. And advice and guidance on how to solve the problems were forwarded; necessary tools and maintenance guidelines were also shared with the team." [Project Manager, HW21]*

> "*During the very active period, the ENAT project activities in the facilities were halted for few months and we were spending on document preparation like developing training guidelines and manuals. So, it indeed affected the project time management practice." [M&E Adviser, ENAT project]*

4.4. Project Cost Management Practice

As most project activities were executed virtually, it was reported that such change in strategy affected their budget utilization rate. Initially most of the activities [training, mentorship, site visit, workshop] were planned considering they would happen in-person; but, shifting it to virtual mode saved a huge amount of budget; thus, all projects were forced to request no cost extension period.

> *"we were forced to modify the plan. The modification was focused on changing the face to face events to virtual approach and prioritize the virtual events. Face to face events (supportive supervision, joint visit) incur cost. Travel and logistics cost including peridiem excluded when the events were changed to virtual modality."[project manager, HW21]*

It was also reported that projects suffered from unplanned costs related to procurement of COVID-19 infection prevention materials (Masks, Sanitizers and Gloves). Projects involved in these material support to safeguard the health care providers who were implementing project

initiatives at health facilities. In addition, it was reported that cost of budgeted items increased significantly due to the fact that there were supply scarcity.

> *"Unplanned costs were introduced due to COVID pandemic. For instance, procurement of sanitizers, mask and gloves were made and these items were distributed to the health facilities to prevent transmission." [Project adviser, SSISO Project]*

> *"....one thing you could not get items even if you have the budget as there were scarcity of supplies. ..... Even the manufacturers also shifted to producing of COVID items. Some kits production such as syphilis test, which is our main input, totally stopped; its cost escalated from 1000 to 4000; it almost increased four times. In addition, we were also forced to procure COVID-19 prevention items, which were initially not planned. But to get the providers safe and perform project activities, we procured them; and this increased the project expense .,,,, The price of IPC materials also increased dramatically to extent of 700%." [Project manager, ENAT project]*

4.5. Project Quality Management Practice

It was reported that the pandemic had somehow affected the project activities implementation to the initially desired level. Participants noted that virtual trainings wouldn't provide equivalent output as the face-to-face trainings; in addition, they reported that the projects couldn't reach the targeted beneficiaries. Even those who benefited from the projects could get full package service due to scarcity of supplies.

> *"the project already started group antenatal service in select woredas of Amhara region prior to the pandemic. As the outbreak started to happen, the group antenatal care discussion (in a group of 8-12 mothers), which reached its 4th round, totally stopped." [M&E adviser, ENAT Project]*

> *"...there were no means of ensuring whether all the attendees were actively attending the session unless you ask question in middle by mentioning a name. sometimes, the attendees were less motivated in virtual sessions." [project manager, HW21 project]*

4.6. Project resource management

The respondents clearly pointed out that the pandemic had changed the usual human resource management practices which the organization used to implement. The adaptation made to the HR management was to introduce working from home policy, which aligned to the government's lockdown measures and social distancing policies. It was also reported that training was provided to staffs on how to effectively work remotely.

"While working from home, you need to obey work discipline. To be more disciplined, staff need to be oriented or trained on this area. I remember that Jhpiego delivered training on "how to perform work from home" [HW21, project]

4.7. Project Communication Management Practice

The study participants reported that shifting to virtual communication means was one aspect of project management that had to be amended during the active period of COVID -19 pandemic. They also emphasized that communication is very crucial for a project success especially during the execution phase; and the communication means entirely rely on virtual communication technologies such as zoom, teams, telegram. But it was reported that the poor telecom infrastructure at health centers and district health office affected their communication; which in turn affected the actual task completion. The upward and side communication went smoothly as before.

"...to communicate the achievement in these facilities through review meeting and dissemination session, we weren't able to engage all stakeholders. Attending virtual meeting were not possible for some stakeholders for various reasons: connectivity issue, unable to afford internet cost. Especially mentee facilities could not attend virtual sessions. So, we couldn't confidently tell that project performance information was adequately disseminated to all stakeholders. As accessibility to virtual communication technologies is relatively good, communication management with HQ, and ministry of health was good" [project adviser, SSISO Project]

4.8. Project Risk management Practice

The participants pointed out that COVID-19 pandemic was unanticipated risk for their project success. Hence, they reported they were closely examining what potential issue it could arose and were devising possible corrective responses.

"... facilities that would have great influence in project performance were changed to COVID treatment center. So, we were unable to explore their performance and then provide corrective action. As mitigation, we were providing virtual support, collect performance data remotely and then identify root cause for low performance areas and took appropriate action." [project manager, ENAT project]

"... Inaccessibility of COVID testing leads to increased cancellation rate. The plan was to keep cancellation rate below 10%, but at some facilities, it raised even to 35%. As mitigation, risk assessment and mitigation plan were prepared; and then backlog clearance was indicated to increase surgical volume. The target was COVID induced backlogs; and about 1500 cases were performed in 4 hospitals." [project adviser, SSISO project]

4.9. Project Stakeholders Management Practice

The participants reported that the stakeholder's engagement particularly government institutions in the project activities decreased as their focus was on COVID-19 response. But the communication practice was not interrupted and continued to happen virtually.

"... And there was total communication shift attributed to COVID pandemic. Our project staffs stationed at woreda health office used to communicate these stakeholders quite often before COVID. But as COVID happened, all of us were forced to stay home; the communication frequency decreased. There were times when you couldn't communicate even with phone. And this reduced our level of engagement" [project manager, ENAT]

4.10. Project Procurement Management Practice

It was explained that identification and getting multiple potential sources for the items to be procured had been difficult. This was related to supply scarcity in the market. At times, vendors tend to re-negotiate contract.

"....one thing you could not get items even if you have the budget as there were scarcity of supplies. ..... Even the manufacturers also shifted to producing of COVID items. Some kits production such as syphilis test, which is our main input, totally stopped; .... We almost waited for one and half years to get the syphilis test kit. " [Project manager, ENAT project]

4.11. Lesson-learnt, opportunities and challenges

4.11.1. Lesson-learnt from managing project during COVID

The participants noted that project activities can be accomplished using virtual communication technologies. Even it was shown a well-informed workshop can be organized to reach as much as hundred participants with minimal expense. Other project activities such as performance

review meeting, knowledge sharing workshops, mentorship visits could be also performed virtually. Other important lesson was the necessity of becoming more adaptive and flexible, and enabling rapid innovation.

> *"...it gave us a lesson that we can also do our task virtually using the available technologies…" [Project manager, HW21 Project]*

4.11.2. Opportunities obtained from managing project during COVID

The new normal exposed many individual especially those working at facility level to virtual communication technologies such as Microsoft teams, Zoom, telegram. The more frequent virtual communication that used to happen increased cohesion among project team.

4.11.3. Challenges encountered in managing projects during COVID

The participants reported the poor telecom infrastructure at health facilities and woreda health offices was the major challenge to use virtual communication technologies. It was reported that there was frequent internet interruption from the participants end, and full attendance for the whole session was very rare.

> *"..especially the session we plan with the project sites, internet connectivity was a main challenge and there were times that we doubt whether the messages and lessons were all transmitted through. There were frequent on and off from the participants end..." [project manager, HW21 project]*

Scarcity of commodities which were crucial to provide health services to the beneficiaries affected the project performance. This happened as the manufacturers temporarily diverted to the production of COVID infection prevention materials.

> *"…Some kits production such as syphilis test, which is our main input, totally stopped; its cost escalated from 1000 to 4000; it almost increased four times…" [project manager, ENAT Project]*

It was also reported that staff resistance to adapt to the new coping strategies and failure to comply to work disciple while working from home were the challenges during the COVID-19 pandemic period.

> *"…in the beginning, there were resistance as we were adapting the usual way of doing tasks. The other thing, the internal control system became loose; I used to question how many staff really devoted the eight working hours. Staff used to consider the work from*

home as if he/she was on leave; some staff claimed to work remotely, but they were involved in other things and couldn't respond to your communication timely..." [compliance manager]

4.12. Best Practices and Coping strategies

During the pre-pandemic period, staffs used wet signature to authorize an office document or request for any service, which was later found to be in appropriate practice as it would expose staff to COVID. Thus, online digital signature software application was developed and it indeed simplifies and speed-up the signing process. Any staff has access to the system anywhere and can sign on it in no time. This system is still in use by the organization.

"…there were changes on finance documentation practice. The parties who are delegated to authorize any documents [finance document including cash disbursement, activity report, and other requests] used to put wet signature as per the delegation of authority. And due to COVID-19 pandemic, we were forced to introduce digital signature platform. Though it caused many damage and crisis, the pandemic on the hand urged citizens and organization to discover problem-solving solution. And this online digital signature was developed in response to the problem created by COVID. Still we are using it…" [Compliance manager, Jhpiego]

Data Interpretation

The research findings showed that COVID-19 pandemic enforced Jhpiego adapt its project management practice in all knowledge areas, which helped projects survive the challenging situation.

COVID-19 pandemic had affected the scope management practice of projects. It enforced the organization to adapt the workplan, revise product and geographic scope of its projects; and the adaptations made to scope management practices prevented the project from failure.

The organization were also forced to adapt its project integration management practice to mitigate the impact due to COVID-19 pandemic. Working from home and use of virtual communication technologies were among the adaptations made to direct and manage project work. A study conducted in Jordan also indicated working remotely and virtual communication platforms were the coping strategies used during COVID-19 pandemic times.(Salamin et al., 2021)

The study identified project schedule management was one area that was adapted to mitigate the COVID's impact on sequence and duration of activities. Reordering the sequence of activities and revising the duration as well helped the organization not to be far from the set timeline. Regarding the impact on the cost management practice, the pandemic enforced projects procure unplanned COVID-19 infection prevention items and also suffered them from increased price of budgeted project items. On the other hand, the virtual mode of executing project activities led to low budget utilization rate which eventually put them into no cost extension period.

It was noted that adaptation to the usual management practice were made on project quality and resource management areas. Working from home modality helped the organization implement its project activities. However, there were gaps in reaching the initially targeted beneficiaries and quality of project deliverables were somehow compromised.

The study identified that though adaptation to the stakeholder management practice was made to keep the interaction as usual, there was loose stakeholders' engagement particularly government institutions as their focus was on COVID-19 response. Regarding the risk management practice, more close monitoring than ever before was being conducted so that they could detect any issues and devise corrective actions timely.

The researchers identified that virtual communication technologies were more frequently and widely used by projects to get their work accomplished. However, poor telecom infrastructure at health facilities and woreda health offices was noted as the major challenge to use the full potential of such modality. Before the pandemic, though there existed rare virtual means of communication, executing most project activities virtually was uncommon in the organization.

The study identified the project teams were more adaptive and flexible, and innovative which helped them mitigate the impact of COVID-19 pandemic. Such characters of project team are essential to cope up the implementation challenges of in the times of multi-dimensional crises.

Chapter Five: Summary, Conclusion, and Recommendation

In this section, the major findings are summarized and based on that summary a conclusion is drown. Then, recommendations are forwarded that will improve the better implementation of coping strategies for project management during COVID like crisis.

5.1. Summary

The objective of this study was to assess the changes made to project management practice, to identify COVID-induced lessons, opportunities and challenges that Jhpiego encountered during implementing its project during the times of COVID-19 pandemic. And key project staffs from three different projects and administration and operation departments were interviewed to address the study objectives.

The findings from this study revealed that COVID-19 pandemic affected the project management practice of Jhpiego. It was reported that the scope management practice was somehow disrupted, leading the organization to revise initial work plan of its projects. The revision was targeted to include some activities focused on COVID-19 response. In one project which was launched in the beginning of the pandemic, COVID-19 was considered as one determinant factor to diminish the project's intervention sites.

The participants reported that it was difficult to direct and manage the project work especially during the first months of the pandemic period; most projects halted their activities which require travel to the intervention and in-person gatherings. The intervention facilities where projects actually implement initiatives diverted their focus to the COVID-19 response. Later, project work resumed using virtual communication technologies. Activities which was initially planned to be accomplished in face-to-face modality were executed virtually.

Project activity duration extension, activity delay and reschedule, reshuffle of activities order of execution were observed in the projects which were during the active COVID-19 pandemic period. As most project activities were executed virtually, it was also reported that such change in strategy affected their budget utilization rate and all projects were forced to request no cost extension period. On the other hand, projects suffered from unplanned costs related to procurement of COVID-19 infection prevention materials (Masks, Sanitizers and Gloves).

The assessment revealed that the project quality standard and performance was affected by the COVID-19 pandemic; participants reported that they couldn't reach the targeted beneficiaries. In addition, virtually conducted activities could not be effectively delivered to all participants given the poor infrastructure at the project intervention sites.

Regarding the resource management, it was reported that working from policy was introduced in the organization. It was also reported that training was provided to staffs on how to effectively work remotely.

The participants pointed out that they were closely examining what potential issue the pandemic could arose and were devising possible corrective responses virtually. It was also explained that stakeholder's engagement particularly government institutions in the project activities decreased as their focus was on COVID-19 response.

The participants mentioned that the possibility of using virtual communication technologies for executing project work was the great lesson they learnt. In addition, it gave them lesson on necessity of becoming more adaptive and flexible, and enabling rapid innovation. The opportunities created included improved cohesion among project team and creating exposure to new virtual communication technologies. However, poor telecom infrastructure at health facilities and woreda health offices was the major challenge to use virtual communication technologies. Inflation of the price of some project items was the big challenge that disrupted provision of health services to the beneficiaries.

5.2. Conclusion

Based on what the study finding dictated and the research questions, the below listed conclusion points are drawn.

- The multi-dimensional impact of the pandemic succumbed Jhpiego to change the routine project management practice on all project management knowledge areas. The mitigation measures implemented to lessen the negative influence of the pandemic were primarily working from home and shifting to virtual communication technologies to provide information and execute other activities.

- Virtual communication technologies can really help in executing most project activities provided that the telecom infrastructure in project sites is good. Many people participated

workshops, webinars, capacity building trainings, and review meeting can be organized virtually with minimal project expense.

- Project managers need to be more vigilant than ever before in a period such multi-faceted crises. They need to strengthen their risk monitoring and controlling practice and provide prompt response. In this aspect, the projects under consideration done great.

- COVID-19 presented opportunities for Jhpiego in way that it opened the floor for the digitization of wet signatory process. The online digital signature really facilitated project financial work and allows parties to sign digitally where ever they are.

5.3. Recommendation

Based on the findings of this study the following recommendations were derived that can be considered for better managing projects in the times multi-faceted crisis like COVID

- Adapting the routine project management approach taking the staff competency into account is important for survival during a multi-faceted crisis. So, project-based organization shall consider becoming more adaptive and flexible, and enabling rapid innovation.
- Working-from-home strategy really lessen the impact that was to be imposed by multi-faceted COVID-19 pandemic. But internal control system will be somehow loose and orientation on work-discipline could help to mitigate that. So, project-based organizations can consider remote working as one alternative of getting their work done.
- The online digital signatory software helped Jhpiego to safeguard its staff from COVID and also facilitated the administrative work process. Hence, project-based organizations shall consider using online digital signatory software.

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Annex I: Key Informant Interview Guide

Project Title: Assessment of Project Management Practice of Health Projects in the Times of COVID-19: The Case Study of Jhpiego, Addis Ababa Ethiopia.

Thank you for speaking to me today. I am interested in hearing your views and experiences related to project management in your organization, Jhpiego, during the times of COVID-19 pandemic. To be recalled, this unprecedented event disrupted our day-to-day routines and organizational activities as well. And this study will explore whether disruption happened to project management area and the below open-ended question are focused on assessing the changes happened due to the pandemic. We appreciate you taking time to talk with us. There are no right or wrong answers. I am here to learn from you. You may stop the interview at any time and you may choose to not answer any question you would prefer not to answer.

Do you have any questions before we start?

Date of interview in GC: _____ Start Time (in EAT): _____ End Time (in EAT): _____
(dd/mm/yy)

Background information:

First, I would like to start by asking you some questions about your background and your role.

[Please write information in or circle appropriate response]

1. Participant Gender: Male Female (circle)

2. Participant profession: _____

2. Participant Job Title in the organization: _____
(Job title should be the one that was assumed during the active pandemic periods; Jan 2020 through Dec 2021))

Part I: Open-ended questions focused on exploring the adaptations your organization made to the project management practice during the times of COVID-19 pandemic

Let's talk about your role in project (s) that was implemented during the pandemic.

1. What was your roles and responsibilities in the project(s) that was being implemented during the active pandemic period? **(All)**
    a. ***Probe:*** when did you undertake the position?
    b. ***Probe***: How many projects were you supporting?
2. How did Covid-19 pandemic disrupt project scope management practice in your organization? What were the adaptations made to mitigate the disruption? **(All)**
    a. ***Probe*:** requirement changed from the beginning?
    b. ***Probe:*** what about modification to the WBS?
    c. ***Probe:*** was there change in scope control system?
3. How did Covid-19 pandemic disrupt project time management practice in your organization? What were the adaptations made to mitigate the disruption? **(PM, ME)**
    a. ***Probe:*** disruption in the schedule management practice? Duration of activities?
    b. ***Probe:*** disruption in project schedule control system?
4. How did Covid-19 pandemic disrupt project quality management practice in your organization? What were the adaptations made to mitigate the disruption? **(PM, ME)**
    a. ***Probe***: describe changes in the quality standard of the project?
    b. ***Probe***: describe changes in project performance review practice?
5. How did Covid-19 pandemic disrupt project cost management practice in your organization? What were the adaptations made to mitigation such disruptions? **(PM)**
    a. ***Probe***: change in the quantity of necessary resources?
    b. ***Probe***: change in the cost of project resources?
    c. ***Probe***: changes to the project control system?
6. How did Covid-19 pandemic disrupt project risk management practice in your organization? What were the adaptations made to mitigate such disruptions? **(PM)**
    a. ***Probe***: change in the risk response practice?
    b. ***Probe***: change in identified risk monitoring and controlling practice?
7. How did Covid-19 pandemic disrupt project integration management practice in your organization? What were the adaptations made to mitigate such disruptions? (for Project Managers only)
    a. ***Probe:*** *how it changed the process of leading and performing the work defined in the project management plan?*

b. **Probe:** how it affected the process of using existing knowledge and creating new knowledge to achieve project objectives and contribute organizational learning.
c. **Probe:** how it affected the process of tracking, reviewing, and reporting overall progress to meet the performance objectives defined in the project management plan
d. **Probe:** how it affected the process of reviewing all change requests; approving change and managing change to deliverables, organizational process assets, project documents, and the project management plan; and communicating the decisions.
e. **Probe:** how it affected the process of finalizing all activities of a project?

8. How did Covid-19 pandemic disrupt **project stakeholder management practice** in your organization? What were the adaptations made to mitigate such disruptions? **(PM)**
    a. ***Probe:*** change in the stakeholder communication practice?
    b. ***Probe:*** change in way of controlling stakeholder engagement?
9. How did Covid-19 pandemic disrupt **project human resource management practice**? What were the adaptations made to mitigate such disruptions? **(HR, PM)**
    a. ***Probe:*** change in role and responsibility among project staff?
    b. ***Probe:*** change in way of managing project team?
10. How did Covid-19 pandemic disrupt project communication management practice in your organization? What were the adaptations made to mitigate such disruptions? **(PM, M&E)**
    a. ***Probe:*** change in the way of collecting and disseminating performance information?
11. Does the pandemic induced the organization adapt the **project procurement management** practice? If yes, what were the adaptations made to this dimension? **(PM, M&E)**
    a. ***Probe:*** *change in the identification process of potential sources?*
    b. ***Probe***: change in the procurement process?
12. What challenges and opportunities you encountered while implementing adaptations? **(All)**

Annex II: Information sheet and Consent form for key informants

Part I: Information on the proposed project work

Project title: Assessment of project management practice of health projects in the times of COVID-19 pandemic: The case study of Jhpiego, Addis Ababa Ethiopia.

Project approved by: Addis Ababa University, School of Commerce.

Purpose of the project work: This project work provides valuable information on coping strategies that were implemented to effectively manage projects during the times of COVID-19 pandemic, taking the case of Jhpiego. And this gives an opportunity for the organization to thoroughly examine and further improve project management practice during the times of such unprecedented and multifaceted crises. It will also uncover the opportunities and underlying challenges the organization encountered while implementing the coping strategies.

Why are you invited to participate in the study?

Since you are/were directly involved in the management of different aspects of project during COVID-19 pandemic, your experience, knowledge and insights about the project management practice might help us to assess the changes made to project management practice, to identify COVID-induced opportunities and challenges at Jhpiego.

What is expected from you?

We will ask you some questions related to project management practices specific to project you were/are supporting. We would like to discuss with you to understand in-depth your experiences how the project was managed during the COVID-19 pandemic. We will record the interview with audio/video recorder. The whole process of the interview will take approximately 45 minutes. The interview will take place in a location of your choice.

We would be happy to answer to your question about our study now, and you would also be able to communicate with us at the following address (see below) in the event you want to have further information

Risk and benefits

There is no major risk involved in the participation of you in the study. Your feedback will not be reported to anyone in Jhpiego or any others, as your participation is meant to help better understand the project management practice during COVID pandemic. There are no direct

benefits for participation, but your participation may be helpful for collecting evidence for further implementation of mitigation measures during similar crises.

Privacy, anonymity and confidentiality

Recruitment and written consenting of key informants will occur at the organization, in a private, enclosed space that provides auditory and visual privacy. The information you provide will be kept confidential. Data will be kept in a secure area and will only be accessed by the investigator. Any identifier related to you will be removed if the findings of the study are to be published.

Right not to participate and withdraw

Your participation in the study is voluntary, and you are the sole authority to decide for and against your participation in this study. You would also be able to withdraw your participation any time during the study. Your decision not to participate in the study or to withdraw has no impact on you.

Principle of compensation

The participation in this study is entirely voluntary. There will be no payment for the study participants.

Key contact person: In case of any questions regarding the study, you can contact the below individual:

- **Name of the PI:** Melaku Gebremichael. Tel: (+251) 913 18 51 14. Addis Ababa, Ethiopia.
- **Name of adviser:** Dr Tenkir Seifu. Tel: (+251) 911 54 10 65, Ethiopia.

Review of the informed consent process: Now, you have the INFORMATION on the proposed study, you may ask any QUESTIONS regarding the study. If you AGREE to our proposal of enrolling you in our study, please indicate that by putting your signature at the specified space below. Thank you.

Part II: Consent form for Organization Staff

I have READ and UNDERSTOOD the above information and have AGREED to participate in the study voluntarily.

_____ _____

Signature of participant Date

_____ _____

Name & signature of PI/Interviewer Date

Annex III: Key Informant List for interview sessions

No	Area	Full Name	Position	Interviewed?	Phone	Email
1.	SSISO Project	Dr Tewodros	Project Adviser	Yes		
2.		Mr Ezedin Aman	Monitoring & Evaluation Adviser	No		
3.	ENAT Project	Mr Solomon	Project lead	Yes		
4.		Mr Gebeyehu	M&E	Yes		
5.	Compliance	Mr Efrem Bekele	Compliance Manager	Yes		
6.	Finance and Grants	Mrs Abeba Zenebe	Finance manager	Yes		
7.	Human Resource and Operations	Mrs Kelemwork Messay	HR and Operations Director	No		
8.	Administration	Mrs Helina Demeke	Administration manager	Yes		