ADDIS ABABA UNIVERSITY

SCHOOL OF COMMERCE

COLLEGE OF BUSINESS AND ECONOMICS

The Role of Monitoring & Evaluation on Performance of Public Organization Projects in Ethiopia: A Case of Ethiopian Public Health Institution

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In Partial fulfillment of the Requirements for the Award of Master of Arts Degree in Project Management

June, 2018

Addis Ababa, Ethiopia

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DECLARATION

I, the undersigned, declare that the thesis titled "The Role of Monitoring and Evaluation on Performance of Public Organization Projects in Ethiopia: A Case of Ethiopian Public Health Institution", is my original work and that all sources of materials used for the thesis have been dully acknowledged.

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This is to certify that the above declaration made by the candidate is correct to the best of my knowledge.

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Advisor **Signature** **Date**

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ACRONYMS

CPWF	Challenge Program on Water and Food
DFID	Department for International Development
EFY	Ethiopian Fiscal Year
EHNRI	Ethiopian Health and Nutrition Research Institute
EPHI	Ethiopian Public Health Institute
EU	European Union
HSDP	Health Sector Development Program
IFRC	International Federation of Red Cross
IIRR	International Institute of Rural Reconstruction
LFA	Logical framework approach
MDGs	Millennium Development Goals
M&E	Monitoring & Evaluation
NGO	Non -Government Organization
NORAD	North American Aerospace Defense
OECD	Organization for Economic Co-operation and Development
PMBOK	A Guide to the Project Management Body of Knowledge
PMI	Project Management Institute
POC	Project-oriented Company
SCs	State Corporations
UK	United Kingdom
U.N	United Nation
UNAIDS	Joint United Nations Programme on HIV/AIDS
USAID	United States Agency for International Development
UNDP	United Nations Development Programme
UNICEF	United Nations Children's Fund
WHO	World Health Organization

ACKNOWLEDGEMEN

I am grateful to my university Advisor, Teklegiorgis Assefa (Asst. Prof.), for his technical input and guidance in undertaking this research project. I thank the Ethiopian Public Health Institution's Directors, Team leaders and Staffs who gave me appropriate information at the time of data collection. I would like to thank my family (Abaye, Alish, Nati & Miki) for your unconditional love, encouragement and motivation to complete my study. I would also like to express my sincere appreciation to my friends: Fikreab Admasu, Yoseph G/Yohannes, Fisseha Moges, Bizuayehu, Firdeawoke & Gete Awoke for the guidance, assistance and constant support throughout this study.

ABSTRACT

Project management is very relevant to establish project controlling system to ensure that the projects perform towards the success of the project objectives. Monitoring and evaluation can help an organization extract relevant information from past and ongoing activities that can be used as the basis for project planning, performance monitoring and evaluation. Most of public organization doesn't have effective and efficient Monitoring and Evaluation system to accomplish the project activities within the planned budget, scheduled time and required quality. The main objective of the research is to assess the role of Monitoring and Evaluation on the performance of the public organization projects in Ethiopia. The study employed a descriptive survey and targeted 345 scientific staffs who have used Monitoring and Evaluation system for designing, planning and implementing of different EPHI's projects. A sample of 78 employees were selected using stratified sampling techniques and data were collected from the project managers, team leaders and project staffs using self-administered questionnaire. Data were analyzed using regression and correlation analysis to establish the relationship between the variables. The finding showed that all independent variables such as M&E human resource, M&E implementation strategies, M&E training and management support for M&E have a significant and positive effect on the performance of projects in Ethiopian Public Health Institution(EPHI). The study recommends that EPHI should hire sufficient staffs who have M&E technical skills for projects and assess the performance and competences of staffs regularly. Good M&E system should be established and revised based on the objectives of the projects. The project managers should be committed and provide high emphasis for designing and implementing of M&E related activities. The project managers and team leaders should be ensured all staffs have required technical skill to perform M&E activities and regularly provided tailored M&E training.

Key words: *Monitoring, Evaluation, Human resource, implementation strategies, training, management support*

CHAPTER ONE
INTRODUCTION

1.1. Background of the Study

The MDGs are among the most ambitious of global initiatives to adopt a results-based approach toward poverty reduction and improvement in living standards. The eight comprehensive MDGs were adopted by 189 U.N. member countries and numerous international organizations in 2000. They consist of a series of goals for the international community—involving both developed and developing nations—to achieve by the year 2015. This new development agenda emphasizes the need to measure the results of aid financing (Kusek, 2004).

The Ethiopian Government-developed a 20-year rolling Health Sector Development Program (HSDP) in 1997/98 (1990 EFY), which proposes long-term goals for the health sector, and the means to attain them through a series of phases. This HSDP aims to develop a health system, which provides comprehensive and integrated primary care services, primarily based at community level health facilities. It focuses on different diseases prevention and control and health care administrative issues such as establishing quality health care, human resource management and financial resource mobilization. The phases of all HSDP have clear strategies for making targeted interventions against poverty related health issues (HSDP, 1997/98).

Ethiopian Public Health Institute (EPHI) is the result of the merger of the three Institutes: National Research Institute of Health, Ethiopian Nutrition Institute, and Departments of Traditional Medicine. EPHI conducts research on nutrition, traditional medicines, and medical practices as well as on the causes and spread of diseases. The Ethiopian Public Health Institute (EPHI) was established in 2014. EPHI's work builds upon the strong foundation of the Ethiopian Health and Nutrition Research Institute (EHNRI) which opened in 1996 with the goal of using health research to inform national health policy. Valid health information is crucial as the basis for effective decisions to improve health and general well-being of the population, and the government is committed to improve and develop health-related research activities in the country. In response to

prevailing and newly emerging health problems, EPHI has developed and implemented different projects based on HSDP focus areas (EPHI, 2014).

There has been a global sea change in public sector management as a variety of internal and external forces have converged to make governments and organizations more accountable to their stakeholders. Governments are increasingly being called upon to demonstrate results. Stakeholders are no longer solely interested in organizational activities and outputs; they are now more than ever interested in actual outcomes (Kusek, 2004).

Project management has the task of establishing sufficient controls over a project to ensure that it stays on track towards the achievement of its objectives. This is done by monitoring, which is the systematic and continuous collection, analysis and use of information for management control and decision-making. Project monitoring is an integral part of day-to-day management. It provides information by which management can identify and solve implementation problems, and assess progress.

Evaluation is an assessment, as systematic and objective as possible, of an ongoing or completed project, programme or policy, its design, implementation and Results. The aim is to determine the relevance and fulfilment of objectives, developmental efficiency, effectiveness, impact and sustainability. An evaluation should provide information that is credible and useful, enabling the incorporation of lessons learned into the decision-making process of stakeholders (EU, 2017). According to UNDP (2009) definition, Monitoring can be defined as the ongoing process by which stakeholders obtain regular feedback on the progress being made towards achieving their goals and objectives while evaluationis a rigorous and independent assessment of either completed or ongoing activities to determine the extent to which they are achieving stated objectives and contributing to decision making (UNDP, 2009).

According to Mutinda (2015), monitoring and evaluation (M&E) systems and structures is often linked to public service reform initiatives in budgeting and accountability. Monitoring and evaluation can help an organization extract relevant information from past and ongoing activities that can be used as the basis for programmatic fine-tuning, reorientation and future planning. Without effective planning, monitoring and evaluation, it would be impossible to judge if work is going in the right direction, whether progress and success can be claimed, and how future efforts

might be improved. Programmes and projects with strong monitoring and evaluation components tend to stay on track. Additionally, problems are often detected earlier, which reduces the likelihood of having major cost overruns or time delays later (UNDP, 2009).

Every country needs to have a strong monitoring and evaluation system in place as the foundation for national health sector strategic planning, covering all major disease programmes and health systems activities. The national M&E plan should address all components of the M&E framework and lay the foundation for regular reviews during the implementation of the national health plan and for related poverty-reduction and development plans (WHO, 2009). According to Engela (2010), building monitoring and evaluation systems helps strengthen governance in countries by improving transparency, by strengthening accountability relationships, and by building a performance culture within governments to support better policymaking, budget decision making, and management (Engela, 2010).

1.2. Statement of the Problem

Public organization projects must be completed within the planned budget, scheduled time and required quality. However, some of the projects experienced project delay and cost overrun. Projects without effective and efficient Monitoring and Evaluation, it would be difficult to monitor performance and accomplishment of the projects based on the desired requirements.

In Ethiopian public health institution, some of the projects haven't achieved the desired objectives based on the projects plan. Project overrun and time delay are the main problem of the projects in the institution. Having effective Monitoring and Evolution would help the organization to monitor and control the progress and success of the project's goal. Evaluation is used in government to increase transparency, strengthen accountability, and improve performance, whereas performance management systems establish outcome-oriented goals and performance targets, monitor progress, stimulate performance improvements, and communicate results to higher policy levels and the public (Wholey, Hatry, & Newcomer, 2010). However, most of public projects don't have ability to hire skilled professional who understand Monitoring and Evaluation to develop and implement appropriate Monitoring and Evaluation system to each project. Monitoring and Evaluation are not

implemented properly in public projects as a decision tool, instead their activities are considered as Non-government organization(NGO) projects controlling system. Similarly, Kamunga (2000) stated that the State Corporations (SCs) have not been able to achieve their objectives due to mismanagement, bureaucracy, wastage, pilferage, incompetence and irresponsibility by directors and employees. Despite the government intervening to save the SCs by re-examining their objectives and targets, training employees, increasing their salary and benefits, the state corporations still did not improve on their performance.

There is no enough evaluation/study to assess the role of Monitoring and Evaluation on performance of public organization projects in Ethiopian public health institution. Therefore, this study was to investigate variables that affect the Monitoring and Evaluation and effects of Monitoring and Evaluation on performance of the projects and the knowledge gained by this study will help design effective Monitoring & Evaluation, thereby improving the performance of public organization projects.

1.3. Research questions

The study is guided by the following key research questions:

1. What is the existing Monitoring and Evaluation of public organization projects in EPHI?
2. What is the effect of Monitoring & Evaluation human resource on performance of public projects in EPHI?
3. What is the effect of Monitoring & Evaluation implementation strategies on performance of public projects in EPHI?
4. What is the effect of Monitoring & Evaluation training on performance of public projects in EPHI?
5. How does management support for Monitoring & Evaluation affect performance of public projects in EPHI?

1.4. Objectives of the study

General Objective:

The general objective of the project work is to examine the role of Monitoring and Evaluation human resource, implementation strategies, training and management support on the performance of the public organization projects in Ethiopia.

Specific objectives:

1. To examine the existing Monitoring and Evaluation process of public organization projects in EPHI.
2. To evaluate the effect of Monitoring and Evaluation human resource on the success of public projects in EPHI.
3. To examine the effect of Monitoring & Evaluation implementation strategies on performance of public projects in EPHI.
4. To Examine the effect of Monitoring and Evaluation training on performance of public organization projects in EPHI.
5. To determine the effect of Management support for Monitoring & Evaluation activities on performance of public projects in EPHI.

1.5. Significance of the study

The expected results of the research are related to advancement of understanding on the use of Monitoring and Evaluation for improving the outcomes of the project, which represents a phenomenon that is relevant to almost all public organization projects. This research would help to understand how public organization projects Monitoring and Evaluation can be improved, specifically how to conduct Monitoring and Evaluation to improve the performance of the projects. It may give some understanding about the association or r/ship between Monitoring & Evaluation and performance of public organization projects. The finding of this research work may be an input for public organizations to review and include these results appropriately to improve Monitoring & Evaluation of public organization projects.

By combining different fields of project management, the project work will have the potential to discover the existing Monitoring and Evaluation strategies and it will also help as a roadmap for new strategy openings in the area of Monitoring and Evaluation. Moreover, findings of this project work would also provide information useful for other researchers and further studies to understand and improve the role of Monitoring and Evaluation on performance of public organization projects.

1.6. Scope of the study

The study was conducted at Ethiopian Public Health Institution(EPHI) located in Addis Ababa, Ethiopia. It involved EPHI staffs who have participated in the design and implementation of different projects at the time of interview, and have used the process of monitoring and evaluating system. The managers, researchers or project staffs of the organization were interviewed in this study. Ethiopian Public Health Institution (EPHI) has a total number of 884 permanent and contract staff and it serves Ethiopian population as an autonomous public authority having its own legal personality. Out of the total staffs, 345 scientific staffs have directly/indirectly involved in Monitoring and Evaluation activities to design and implement the organization's projects. Therefore, the 345 staffs of the EPHI will be the target population of the study. This study was focus and limited on Ethiopian public health institution for the quality and specialization of the research and considering time and resource constraints. However, the findings will be equally applicable to all other public-sector's projects in Ethiopia.

The study assessed the effect of Monitoring and Evolution human resource, implementation strategies, training and management support on performance of public projects on Ethiopia. In addition, the study evaluated the existing Monitoring and Evaluation system of the EPHI's projects impressing their human resource development, implementation strategies, training and management support for Monitoring and evaluation. Sample of projects staffs were selected using stratified random sampling method. The data were collected from the project managers or the project staffs using Semi-structured questioner. Data were analyzed using correlation and regression analysis to establish the relationship between the variables.

1.7. Limitation of the study

There have been some problems during the research study, some of them were solved without significant effects on the study others are beyond the scope of the authors. Due to resource constraints the research addressed only one public organization whose interventions focus on health. As a result, the research finding may not be generalized for all public organizations executing different projects in Addis Ababa. The study only uses quantitative research method due to time and finance constraints, so the study findings may not be strong like triangulated research results.

1.8. Organization of the research

This study is organized and presented in to five chapters. Accordingly, the first chapter deliberates an introduction part of the study including background of the study, statement of the problem, significance of the study, scope of the study, limitation of the study and organization of the research. The second chapter discusses the details of theoretical and empirical review on Monitoring and Evaluation and conceptual framework of the study. The third chapter explains the methodology and model development. In the fourth chapter, the research findings are presented and discussed, according to certain key topics. Finally, the conclusions and recommendation are presented and discussed based on the findings of the study in chapter five.

CHAPTER TWO
LITERATURE REVIEW

2.1.Theoretical review

2.1.1. Program theory

Program theory and the evaluation of a program' s theory have gained interest in the evaluation field (Sharpe, 2011). According to Sethi and Philippines (2012), the program theory has been used to guide evaluation for many years; it shows the capability of the program to fix a problem by addressing the needs in the need assessment. It also gives tools to determine areas of impact in evaluation. A program theory consists of a set of statements that describe a particular program, explain why, how, and under what conditions the program effects occur, predict the outcomes of the program, and specify the requirements necessary to bring about the desired program effects (Sedani & Sechrest, 1999). Program theories are underlying rationales for programs, describing how and why a program should lead to the intended outcomes. Identifying and assessing the strength of the program theory are critical for increasing the likelihood that programs will be effective (Wilder Foundation, 2009). The primary stage to program development is the conceptual foundation. Once this has been established, the program theory can be used to develop outcome and intermediate goals (Sharpe, 2011).

A program theory is similar in concept to logic models, which have become increasingly popular in human services programs over the past several years. In simple terms, a logic model is a picture of your theory – a drawing that shows how one thing leads to the next, like a flow chart. A logic model is one commonly-used tool for illustrating an underlying program theory. Most often, it is presented in the form of a flow chart that illustrates the linkages between program components and outcomes (Wilder Foundation, 2009).

According to Wilder Foundation (2009), a well thought out logic model can have a number of benefits to programs, including guiding stakeholder engagement, program management, and evaluation of outcomes.

2.1.2. Theory of change

A ‘theory of change’ explains how activities are understood to produce a series of results that contribute to achieving the final intended impacts. It can be developed for any level of intervention an event, a project, a programme, a policy, a strategy or an organization (Rogers, 2014). According to Laing (2015), theory of change is a theory-based approach to planning, implementing or evaluating change at an individual, organizational or community level. An assumption is made that an action is purposeful.

A theory of change can be used for strategic planning or programme/policy planning to identify the current situation (in terms of needs and opportunities), the intended situation and what needs to be done to move from one to the other. This can help to design more realistic goals, clarify accountabilities and establish a common understanding of the strategies to be used to achieve the goals (Rogers, 2014). A theory of change articulates explicitly how a project or initiative is intended to achieve outcomes through actions, while taking into account its context (Laing, 2015).

As a planning tool Theory of Change helps organizations ask important questions about their work. It can strengthen partnerships, support organizational development, and facilitate communication (Dana, 2013). Theories of change may be developed and used at various points in the lifecycle of an initiative or programme, from planning an idea through to implementation, delivery and review. It can be used as an approach to programme evaluation. A theory of change may be used to plan a project from the start. Using a theory of change when the project is underway can enable an understanding of why a programme does or does not work, and lets an evaluator or practitioner see where in the chain things are not going as they should. It can improve planning and prevent project drift, and highlight gaps in knowledge or thinking that is lacking in clarity (Laing, 2015).

Valters (2014) described that theories of Change are increasingly mandatory for implementing agencies to submit to donors in the aid industry. This appears to have begun with the UK’s Department for International Development (DFID), but has since mushroomed so that most donors now require Theories of Change as a standard component of programme design. What is clear is that in part, whatever the donor or context, the approach seeks to address the problems inherent in

existing models of analyzing change, with its core aim of uncovering and critically interrogating assumptions about how change happens.

The process of identifying the hierarchy of results, or results chain, unanimously helped clarify the logic of a project, and articulate the intended change from each of the activities and how they link together. The process of developing a hierarchy of results also identified whether the assumptions underpinning activities were sound and helped reveal whether the planned activities would likely achieve the goal. Articulating the theories of change associated with the activities within the hierarchy enabled people to identify the intended change of each activity, what would constitute success of a specific activity, and what was essential to achieve results. This process made it possible to strengthen significantly the impact of the projects reviewed (CARE International UK., 2012).

2.1.3. Evaluation theory

Rossi et al. (2004) suggest that evaluations are a "systematic, rigorous, and meticulous application of scientific methods to assess the design, implementation, improvement or outcomes of a program".Program evaluation is the use of social research methods to systematically investigate the effectiveness of social intervention programs. (Rossi, Lipsey, Freeman, 2004, p. 28). Moreover, in OECD 2000 the use of evaluations is also highlighted in some definitions "An evaluation should provide information that is credible and useful, enabling the incorporation of lessons learned into the decision-making process of both recipients and donors" (OECD, 2002: 22).

According to Vendung, Evaluation itself was born at a time when policy-makers and administrators believed in constructing a better society through rational interventions and social engineering based on the lessons of past successes and failures (Vedung, 2010). The inherent logic of mainstream evaluation theory is therefore realist and rational, and perfectly aligned with the economic theory and theories of rational choice from which it arose (Albæk, 1995; Van der Knaap, 1995; Schwandt, 1997; Sanderson, 2000).

The ultimate objective of evaluation is social betterment, because evaluation helps policymakers make better policies, and in turn those policies improve people's lives. In other words, part of this

positivist paradigm was a belief in the ability of policymakers and administrators to learn lessons from previous interventions and thus to constantly improve the quality, efficiency and effectiveness of public spending and interventions (Vedung, 1997- Henry and Mark,). Evaluation theory assesses project effectiveness in achieving its goals and in determining the relevance and sustainability of an ongoing project (Alex, A. 2016). According to McCoy, (2005) evaluation theory compares the project impact with what was set to be achieved in the project plan. Evaluation theory gives effective strategies for dealing with the problems of concern regarding the evaluation process. Lessons are learned about what does not work which may save program designers and evaluator's time and resources (Donaldson, 2001).

Two key types of evaluations are identified by Cain and Hollister (1972): process evaluation and outcome evaluation. The former determines if an existing programme is implemented and delivered effectively; it is "mainly administrative monitoring" (Cain and Hollister, 1972: 110). The seconded, outcome evaluations measure the effects of the programme, determining if it was a success or a failure (Cain and Hollister, 1972). An outcome is defined as "the likely or achieved short-term and medium-term effects of an intervention's outputs" (OECD, 2002: 28). Outcome evaluation aims at estimating "the magnitude of a hypothesized effect of some treatment variable on some outcome variable or variables of interest" (Judd, 1987: 23). In addition, a process evaluation is "an evaluation of the internal dynamics of implanting organizations, their policy instruments, their service delivery mechanisms, their management practices, and their linkages among these" (OECD, 2002: 30). It aims at understanding the strengths and weaknesses of a programme by examining how it was implemented (Patton, 2008). Overall, process evaluations critically examine the "quality or value of everything about the programme (what it is and does) except outcomes and costs" (Davidson, 2005: 56, cited in Patton, 2008).

According to Shapiro (2004) Evaluations are mainly of two types depending on when they take place. These are formative and summative evaluations. A key distinction in evaluations arises between formative and summative evaluations. A formative evaluation is undertaken during the implementation phase of a programme and aims at improving its performance and ensuring quality (OECD, 2002; Stufflebeam and Shinkfield, 2007). Formative Evaluation is concerned more with efficient use of resources to produce outputs and focuses on strengths, weakness, and challenges of the project and whether the continued project plan will be able to deliver the project objectives

or it needs redesigning, Passia (2004). Formative evaluations are sometimes called interim or midterm evaluations. Its purpose is to support the improvement of policy and practice (Pinkerton and Katz, 2003). Interactive evaluations presented by Owen and Rogers (1999) present similar characteristics since they consider the implementation of specific aspects of a programme. This type of evaluation (i.e. formative) facilitates learning and informs decision-making in programmes that evolve constantly (Owen and Rogers, 1999).

A summative evaluation is carried out at the end of the project and aims at determining how the project progressed, what went right and wrong and capture any lessons learned. A summative evaluation takes place at the end of the programme and examines the outcomes. It provides a judgment of the worth of the programme (OECD, 2002; Stufflebeam and Shinkfield, 2007). In Owen and Rogers‟ (1999) classification, impact evaluations can be characterized as summative. They examine the impact of a programme through the assessment of the intended and non-intended outcomes, reached objectives and the level of performance of indicators. Pinkerton and Katz (2003) note that formative and summative evaluations represent the ends of a continuum rather than conflicting types of evaluations.

2.2.Empirical review

2.2.1. Project and Project management

There are several definitions of projects in the literature. As defined in A Guide to the Project Management Body of Knowledge (PMI, PMBOK® Guide, 2000), a project is a temporary endeavor undertaken to create a unique product or service. Temporary means that every project has a definite beginning and a definite end. Unique means that the product or service is different in some distinguishing way from all other projects or services. According to Turner (1999) definition, “a project is an endeavor in which human, financial and material resources are organized in a novel way to undertake a unique scope of work, of given specification, within constraints of cost and time, so as to achieve beneficial change defined by quantitative and qualitative objectives.”

A project is temporary in that it has a defined beginning and end in time, and therefore defined scope and resources and a project is unique in that it is not a routine operation, but a specific set

of operations designed to accomplish a singular goal. So, a project team often includes people who don't usually work together – sometimes from different organizations and across multiple geographies. (PMI 2018). Gittinger (1972) defines projects as a whole complex of activities involved in using resources to gain benefits. Gittinger (1982) explains that generally projects form a clear and distinct portion of a larger, less precisely identified program.

According to PMI (2013) Project management, then, is the application of knowledge, skills, tools, and techniques to project activities to meet the project requirements (PMBOK 5th ed.). Kerzner (2003) defines project management as the planning, organizing, directing, and controlling of company resources for a relatively short-term objective that has been established to complete specific goals and objectives.

Project management is accomplished through the use of the processes such as: initiating, planning, executing, controlling, and closing. The term project management is sometimes used to describe an organizational approach to the management of ongoing operations also referred to as management by projects. In the same many aspects of ongoing operations are treated as projects so as to apply the project management practices easily to them (Prabhakar G.P., 2008). According to Gareis and Huemann (2000) the Project-oriented Company (POC) is an organization which defines "Management by Projects" as an organizational strategy, applies temporary organizations for the performance of complex processes, manages a project portfolio of different project types, has specific permanent organizations to provide integrative functions, applies a "New Management Paradigm", has an explicit project management culture, and perceives itself as being project-oriented.

2.2.2. Monitoring and Evaluation system

The OECD (2002a) defines monitoring and evaluation as follows: Monitoring is a continuous function that uses the systematic collection of data on specified indicators to provide management and the main stakeholders of an ongoing development intervention with indications of the extent of progress and achievement of objectives and progress in the use of allocated funds (p. 27). Evaluation is the systematic and objective assessment of an ongoing or completed project, program, or policy, including its design, implementation, and results. The aim is to determine the

relevance and fulfillment of objectives, development efficiency, effectiveness, impact, and sustainability. An evaluation should provide information that is credible and useful, enabling the incorporation of lessons learned into the decision-making process of both recipients and donors (p. 21).

Results-based monitoring and evaluation (M&E) is a powerful public management tool that can be used to help policymakers and decisionmakers track progress and demonstrate the impact of a given project, program, or policy. Results-based M&E differs from traditional implementation-focused M&E in that it moves beyond an emphasis on inputs and outputs to a greater focus on outcomes and impacts. (Kusek, 2004)). Monitoring and evaluation (M&E) are essential components of results based management (Rist & Martin, 2011). The increased level of emphasis given to results (outcomes), as opposed to activities and output, has also brought some major changes in the focus, approach and application of monitoring and evaluation systems whereby as focus of management changes from activities to results, focus of M&E also changes from the traditional M&E system, which focuses on assessing inputs and implementation process (progress monitoring) to results-based M&E system, which emphasizes assessment of the contributions of interventions to development outcomes (Gebremedhin et al,2010).

M&E framework for a policy research project can be designed and structured, with practical examples from several ongoing or recently ended policy research projects. It does not attempt to provide comprehensive guidance on all aspects of developing an M&E system, for example how to collect, manage, analyses and use data. Ultimately, many of the choices about deciding the scope, intensity and timing of the M&E areas will depend largely on the resources available – personnel, time and funds as well as capacity, experience and skills of those people dedicated to, and involved in, the M&E work Pasanen and Shaxson (2016).

A monitoring and evaluation (M&E) plan is a document that outlines how an implementation research project is monitored and evaluated, and that links strategic information obtained from various data collection systems to decisions about how to improve the project on an ongoing basis. Each project has different M&E needs, depending on the operating context, implementing agency capacity, donor requirements, and other factors. In preparing an M&E plan, it is important to identify these needs and coordinate the methods, procedures and tools used to meet them; this

conserves resources and streamlines M&E planning. (WHO, 2014). Monitoring and evaluation plan, as an integral part of the overall project plan, depending on the size of the project, could include: - responsible parties for M&E, issues to monitor & evaluate, and methods employed, resources and plan for dissemination of findings (UNDP, 2009).

Once your team has developed the M&E plan, defined the indicators, and identified the data sources necessary, the appropriate methods by which data can be collected and analyzed should be determined. (WHO, 2014). Indicators simply mean yardsticks or standards against which change or progress are measured. Some authors have further expounded the definition of indicators. Lynn *et al* (2008) state that indicators are pieces of information on which when studied over time show change in people's lives. Kusek (2004) defines indicators as quantitative and qualitative variables that provide simple and reliable means to measure achievement and reflect changes connected to a project. According to UNICEF programmes (2010), the indicators of the UNICEF programme include percentage of the children seeking treatment at the health facility (as an outcome indicator) and number of the mothers who have the information on importance of seeking health from health facilities within their locality.

More generally, the building and sustaining of comprehensive results-based M&E systems at the country and donor levels will be key to measuring and monitoring achievement of the MDGs. Building an M&E system essentially adds that fourth leg to the governance chair. What typically has been missing from government systems has been the feedback component with respect to outcomes and consequences of governmental actions. This is why building an M&E system gives decisionmakers an additional public-sector management tool. (Kusek, 2004)). Monitoring and Evaluation (M&E) systems and structures is often linked to public service reform initiatives in budgeting and accountability (MBIT1, 2015). Wholey (2010) states that evaluation is used in government to increase transparency, strengthen accountability, and improve performance, whereas performance management systems establish outcome-oriented goals and performance targets, monitor progress, stimulate performance improvements, and communicate results to higher policy levels and the public (Wholey, Hatry, & Newcomer, 2010).

2.2.3. Effect of Monitoring and Evaluation on project performance

2.2.3.1.Monitoring and Evaluation Human resource

Human resource aspects such as staff entrusted with monitoring and evaluation should have technical skills, be dedicated to the function, roles and responsibilities of monitoring and evaluation personnel need to be specified at the start of projects (MBIT1, 2015). The UNDP (2009) handbook on planning, monitoring and evaluation for development results, emphasizes that human resource is vital for an effective monitoring and evaluation, by stating that staff working should possess the required technical expertise in the area in order to ensure high-quality monitoring and evaluation. In its‟ framework for a functional M&E system, UNAIDS (2008) notes that, not only is it necessary to have dedicated and adequate numbers of M&E staff, it is essential for this staff to have the right skills for the work. Moreover, M&E human capacity building requires a wide range of activities, including formal training, in-service training, mentorship, coaching and internships UNAIDS (2008).

The human resource capabilities determine a lot for company in term of achieving its goals. The technical capacity of the organization in conducting evaluations, the value and participation of its human resources in the policymaking process, and their motivation to impact decisions, can be huge determinants of how the evaluation's lessons are produced, communicated and perceived (Vanessa & Gala, 2011). The finding is that there were limited human resources both in terms of quality and quantity to conduct monitoring and evaluation at all levels (Dereje, 2016). There is need to have an effective M&E human resource capacity in terms of quantity and quality, hence M&E human resource management is required in order to maintain and retain a stable M&E staff (World Bank, 2011). Therefore, understanding the skills needed and the capacity of people involved in the M&E system (undertaking human capacity assessments) and addressing capacity gaps (through structured capacity development programs) is at the heart of the M&E system (Gorgens & Kusek, 2010).

Despite the undoubted importance of human resources to the functions of health systems, there is little consistency between countries in how human resource strategies are monitored and evaluated.

The required financial and human resources for monitoring and evaluation should be considered within the overall costs of delivering the agreed results and not as additional costs (UNDP, 2009).

2.2.3.2.Monitoring and Evaluation implementation strategies

According to Bryson (1995), strategic planning is an organization management activity that is used to set priorities, focus energy and resources strengthen operations. Strategic planning involves identification of most important options towards the realization of a practical vision (goal). M&E system is part of management tool which provide feedback on performance fundamental for governance and decision making of projects and NGOs (Gorgens et al., 2010). The M&E system therefore provides information both to the internal (management) and external (donors) users.

A monitoring and evaluation framework on how success of the projects should be measured forms part of the project proposal due to demand to demonstrate results and accountability requirements on projects performance (IIRR, 2012). The M&E framework should also include details on budgeting and allocation of technical expertise, as well as inform donors and project management on the its implementation (Guijt et al., 2002). The logical frame work approach started in early 1960s in response to planning and monitoring of development projects (Pradhan, 2011). The first logical frame developed was for USAID at the end of 1960s and NORAD made a significant contribution in 1990s (Pradhan, 2011). Logical framework approach (LFA) is a systematic planning procedure for complete project cycle management. It is a problem-solving approach that takes in views of all stakeholders. It is criteria for project success and lists the major assumptions (Pradhan, 2011).

Projects require different M&E needs depending on the operating context, implementing agency capacity and donor requirements. It is therefore important, when preparing an M&E plan to identify methods, procedures, and tools to be used to meet the project's M&E needs Chaplowe (2008) and Kusek (2004) defines indicators as quantitative and qualitative variables that provide simple and reliable means to measure achievement and reflect changes connected to a project.

2.2.3.3.Monitoring and Evaluation training

The purpose of training is mainly to improve knowledge and skills. Changing technology requires that employees possess the knowledge, skills and abilities needed to cope with new processes and production techniques Cole (2002). Implementing of an effective M&E demands for the staff to undergo training as well as possess skills in research and project management, hence capacity building is critical (Nabris, 2002). M&E practical training is important in capacity building of personnel because it helps with the interaction and management of the M&E systems. M&E training starts with the understanding of the M&E theory and ensuring that the team understands the linkages between the project theory of change and the results framework as well as associated indicators (CPWF, 2012). Training should therefore be practical focused to ensure the understanding (CPWF, 2012).

Cole (2002) further argued that training brings a sense of security at the workplace which reduces labor turnover and absenteeism is avoided; change management training helps to manage change by increasing the understanding and involvement of employees in the change process and also provides the skills and abilities needed to adjust to new situations; provide recognition, enhanced responsibility and possibility of increase promotion; give a feeling of personal satisfaction and achievement, and broaden opportunities for career progression; and help to improve the availability and quality of staff.

2.2.3.4.Monitoring and Evaluation planning

Planning can be defined as the process of setting goals, developing strategies, outlining the implementation arrangements and allocating resources to achieve those goals (UNDP, 2009). It is important to note that planning involves looking at a number of different processes: Identifying the vision, goals or objectives to be achieved, Formulating the strategies needed to achieve the vision and goals, determining and allocating the resources (financial and other) required to achieve the vision and goals, outlining implementation arrangements, which include the arrangements for monitoring and evaluating progress towards achieving the vision and goals. (UNDP, 2009). Planning for monitoring helped to clarify project objectives, assumptions, indicators and activities.

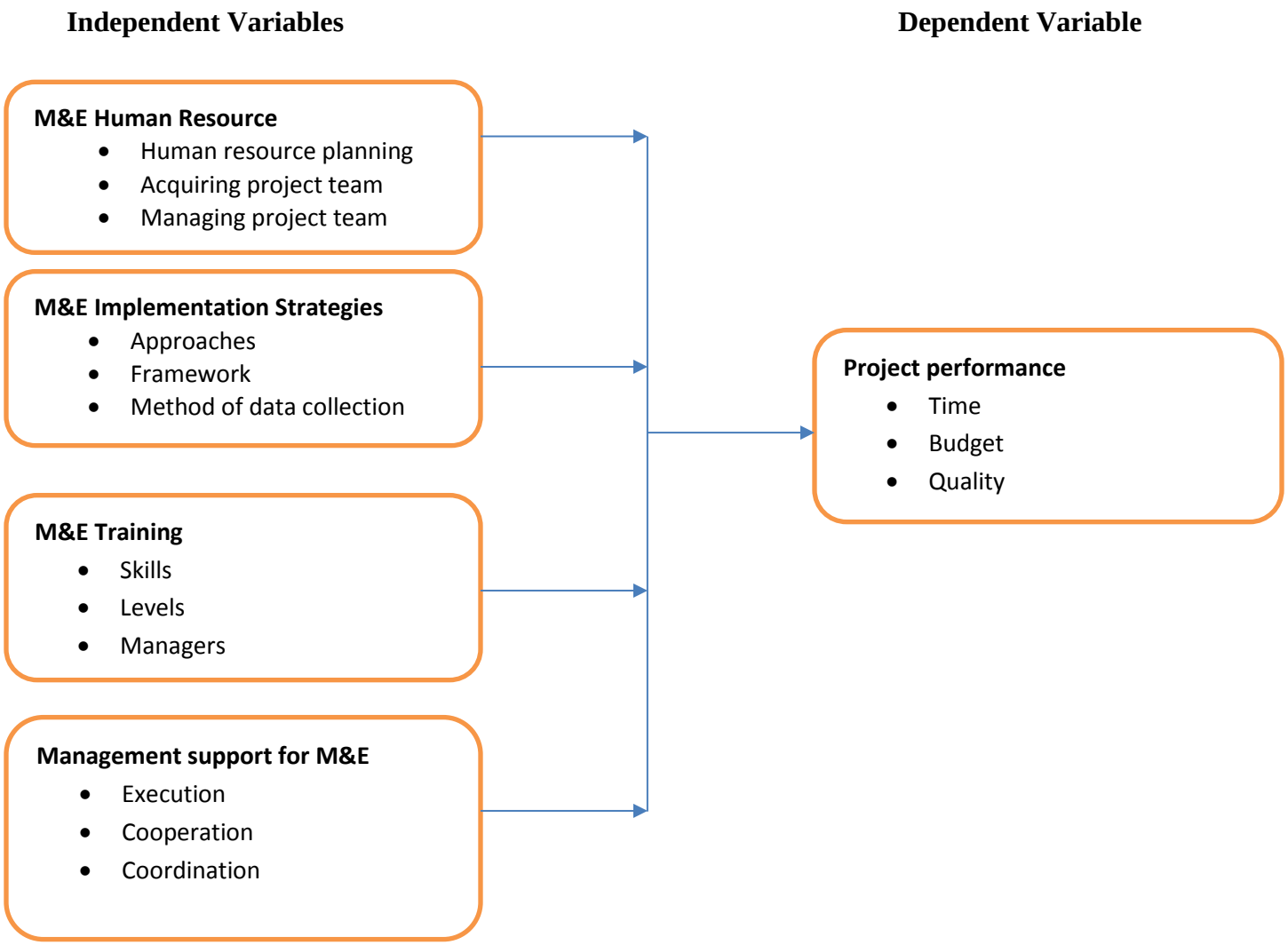
Good indicators for which data could be collected, analyzed and used to make decisions about the project's direction, made monitoring and project management easier (ACF, 2011).

M&E systems use different tools and approaches, some of which are either complementary or substitute to each other, while others are either broad or narrow (World Bank, 2002). According to Elkins (2011), monitoring and evaluation (M&E) supports evidence-based decision-making through rigorous approaches to collecting and using quality data on programme performance, results and impact. Projects require different M&E needs depending on the operating context, implementing agency capacity and donor requirements. It is therefore important, when preparing an M&E plan to identify methods, procedures, and tools to be used to meet the project's M&E needs (Chaplowe, 2008). The M&E process hence provides useful information for decision-making to all levels of project management (Gaitano, 2011). Monitoring and evaluation is therefore a learning process that centers on efficiency, effectiveness and impact of the project. However, for M&E to deliver proper planning must be in place, by which progress and achievements are measured against (Shapiro, 2011).

The project management is responsible for making decisions and strategic planning of the project. It also manages the M&E system by tracking indicators, producing quarterly project reports and annual strategic reports (IFRC, 2011). To ensure the success of the M&E system, the management needs to support it (World Bank, 2011). The project manager ensures that the project staffs carry out their jobs effectively (Guijt, 2002). It is the project management also that decides when project evaluation should be done (Welsh, 2005). If the project management fails to pay attention to the operations of the M&E, it diminishes its importance to the rest of the project staff.

2.3.Conceptual framework

Using exhaustive literature review, a conceptual framework for assessing the role of Monitoring and Evaluation on performance of public projects has be developed. The conceptual framework clearly stated the relationship of the Monitoring and Evaluation factors including human resource, implementation strategies, trainings and planning as independent factors and performance of public organization projects as a dependent factor.



Adopted with modification from MBIT1(2015)

Fig.2.3: Conceptual framework of the project

MBIT1(2015) identified the human resource, implementation strategies, training and management support as independent factors and have effect on the performance of the projects which is measured based on the project's cost, schedule and quality. They have categorized the factors that affect project performance in the four categories.

2.3.1. Explanation of variable

M&E Human resource: ensure an individual who is directly in charge of the monitoring and evaluation as a main function and an identification of different personnel for the different activities

of the monitoring and evaluation such as data collection, analysis, report writing, dissemination of the monitoring and evaluation findings.

M&E Implementation Strategies: Projects require different M&E approaches needs depending on the operating context, implementing agency capacity and donor requirements. It is therefore important to identify methods, procedures, and tools to be used to meet the project's M&E needs.

M&E Training: M&E practical training is important in capacity building of personnel because it helps with the interaction and management of the M&E systems. M&E training starts with the understanding of the M&E theory and ensuring that the team understands the linkages between the project theory of change and the results framework as well as associated indicators.

Management support for M&E: To ensure the success of the M&E system towards the achievement of project objectives, the management needs to support the project throughout the project period. The project management is responsible for making decisions and strategic planning of the project.

Dependent variable

Project performance: projects are expected to have specific objectives; that is, an end result, which costs so much and should be completed within a certain time-frame and within required quality. Therefore, projects which achieve cost, schedule and quality objectives are successful.

CHAPTER THREE

METHODOLOGY

3.1.Study design

This study employed a descriptive and explanatory survey design using stratified random sampling design. Based on Ethridge description “Descriptive studies may be characterized as simply the attempt to determine, describe or identify what is, while analytical research attempts to establish why it is that way or how it came to be” (Ethridge, 2004). This research describes the role of Monitoring and Evaluation role on the performance of public organization projects.

3.2.Study Population

The population of the study is Ethiopian public health institution(EPHI)employees who have worked in the EPHI’S projects. Based on the nature of their job position, a total of 345 scientific staffs have used Monitoring and Evaluation system for designing, planning and implementing of different EPHI’s projects, these scientific staffs are the target population of the study.

3.3.Sampling Design and Technique

A stratified random sampling is a sampling method, which involves the division of a population into smaller groups, known as strata. A random sample from each stratum is taken, in a number proportional to the stratum's size when compared to the population. Then these subsets of the strata are then pooled to form a random sample.

The researchers expected that employees in different managerial level experienced different problems and have different perspectives. Therefore, in the present study stratified random sampling technique is adopted as an appropriate sampling design for selecting a representative sample since the employees are placed to different directorates (strata). Employees managerial level was used as the main criteria of classification of the population of study into stratum. So, the population of the study was divided in to three strata. Employees from each stratum were selected using simple random sampling method.

3.3.1. Sample Size Determination

In this study the sample size was determined by (Cochran, 1997) given by,

$$n = \frac{\sum_{i=1}^{k} \frac{N_i^2 P_i\ (1-P_i)}{W_i}}{N^2 \left(\frac{d^2}{Z^2}\right) + \sum_{i=1}^{k} N_i\ P_i(1-P_i)}$$

where,
n = the sample size
N = the total number of employees
Z = the inverse of the standard normal cumulative distribution that correspond to the level of confidence (Z=1.96)
k= the total number of managerial level in the EPHI
N_i = the number of employees in each managerial level i
W_i = the estimated proportion of Ni to N
P_i =is the subpopulation proportion of the i^{th} stratum
d = the level of precision of the estimates

The sample size is selected from the target population of the study using stratified random sampling method. The target population of the study is the 345scientific staffs of the EPHI. This number of scientific staffs was used to calculate the sample size. Using an assumption proportion of performance of public projects is 50%, using 95% confidence interval, and 10% margin of error. The STATCALC function of Epi Info version 7 was used for this calculation.

Table 3.1: Sample size distribution

Stratum	Population	Sample size
General/Department Directors	14	4
Case Team leaders	20	5
Other scientific staffs	311	69
Total	**345**	**78**

3.4.Method of Data Collection

The study uses both primary and secondary data. The primary data were obtained from the project employees, using self-administered questionnaire while the secondary data were obtained from projects document to get detail information of the issue. Scholarly published literatures; journals, books, series papers, thesis, and different reports were examined. Quantitative research methods were used to assess the role of Monitoring and Evaluation on performance of public organization projects. Self-administered questioner was distributed and collected to interview the randomly selected project employees.

3.4.1. Employees interview survey

An employee survey was conducted with employees who are working in EPHI projects using self-administered questioner interviews with a representative sample of each directorate. This survey focuses on Monitoring & Evaluation human resource, Monitoring & Evaluation implementation strategies, provided training on Monitoring and Evaluation, the involvement of manager on Monitoring and Evaluation planning and overall effects of Monitoring and evaluation on performance of the Ethiopian public health institution projects. Totally, 78sample scientific staffs in EPHI who have worked on designing, planning & implementing of EPHI's projects were interviewed. Data collection instrument is Self-administered questionnaire developed based on the objectives of the study. It is consisted of two parts, namely Demographic Information (which included: age, gender, educational degree, years of service) and effect of Monitoring and Evaluation human resource, implementation strategies, trainings and planning on performance of the public organization projects constituted of a six-point Likert scale and questionnaire is annexed (see Annex I).

3.5. Validity and reliability

The quality of data collection instruments was checked using validity and reliability test. Validity of the questionnaire was obtained by checking all questioners using professional experts, including the researcher's advisor and construct validity is determined by expert judgment. Beside to ensure reliability, the questionnaire was pre-tested to a small group of employees before going in to actual

data collection and reliability test was conducted using Cronbach alpha to ensure the reliability of the questioners.

3.6. Methods of Data Analysis

Along with descriptive statistics the following statistical methods were employed for data analysis purpose: Multiple regression and correlation. The collected data was tabulated, cleaned, analyzed and interpreted systematically through some scientific research protocols. For the present study, SPSS version13.0 and STATA were used for analyzing the collected data.

3.6.1. Multiple Regression Model

Multiple regression analysis is used to see if there is a statistically significant relationship between sets of variables. It's used to find trends in those sets of data. A population model for a multiple linear regression model that relates a dependent variable to independent variables is written as

$$\mathbf{Y_i = \alpha + \beta_1\ M\&E\ human\ resource + \beta_2 M\&E\ implementation\ strategies + \beta_3 M\&e\ training + \beta_4 Management\ support\ for\ M\&E + £_i}$$

This simply means that each parameter multiplies an independent *v*ariable including human resource, implementation strategies, training and management support, while the regression function is a sum of these "parameter times independent variable" terms. Each independent variable can be a predictor variable or a transformation of predictor variables (such as the square of a predictor variable or two predictor variables multiplied together).

3.7.Ethical Considerations

By considering scientific research ethics, the research proposal and data collection instruments were reviewed and approved. The researcher had explained the objectives of the study and the research was conducted for academic purpose only. Participants were informed that their participation in this study is voluntary and can be declined or withdrew at any time of the study period. Employee's information was collected anonymously. Those who agree to participate in the interviews undertook an informed verbal consent process before the interview and informed of the risks and benefits associated with participating in this study. All information provided by study participants will be anonymous and confidential.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1. Reliability Test

The reliability test was calculated using Cronbach alpha test to determine the reliability level of the data collection instrument. The pilot data collection was conducted to check the consistency of the questions in the questioner. Cronbach's alpha (α) > 0.6 indicates satisfactory internal consistency reliability (commonly accepted level) (Nunnally & Berstein, 1994). Based on the standard, the finding showed that overall Cronbach alpha value is greater than 0.8 and all items under each construct have a factor loading greater than 0.8. Therefore, the proposed constructs of the questioner are satisfactory consistency reliability level. The table below shows the reliability test of Cronbach alpha values for each constructs of the questioner.

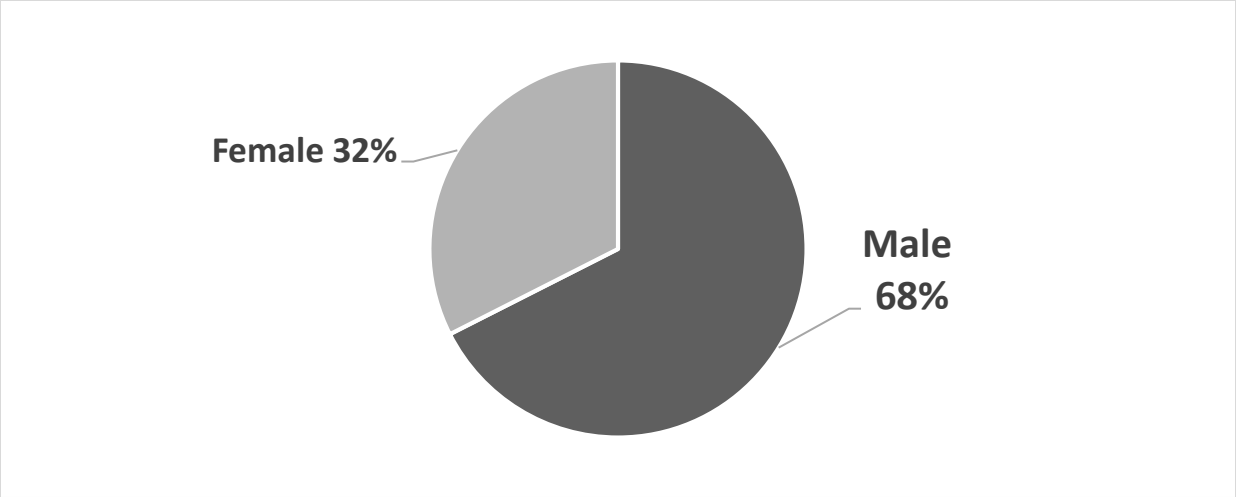
Table 4.1. Reliability test result

Variables	No. of items	Scale	Cronbach's Alpha	Mean	SD
M&E Human Resource factors	5	1-5	0.853	3.2	0.152
M&E Implementation strategies factors	7	1-5	0.877	3.77	0.452
M&E training factors	5	1-5	0.851	3.12	0.235
Management support for M&E factors	5	1-5	0.811	3.58	0.084
Project performance factors	4	1-5	0.878	3.5	0.118

4.2. Demographic characteristics

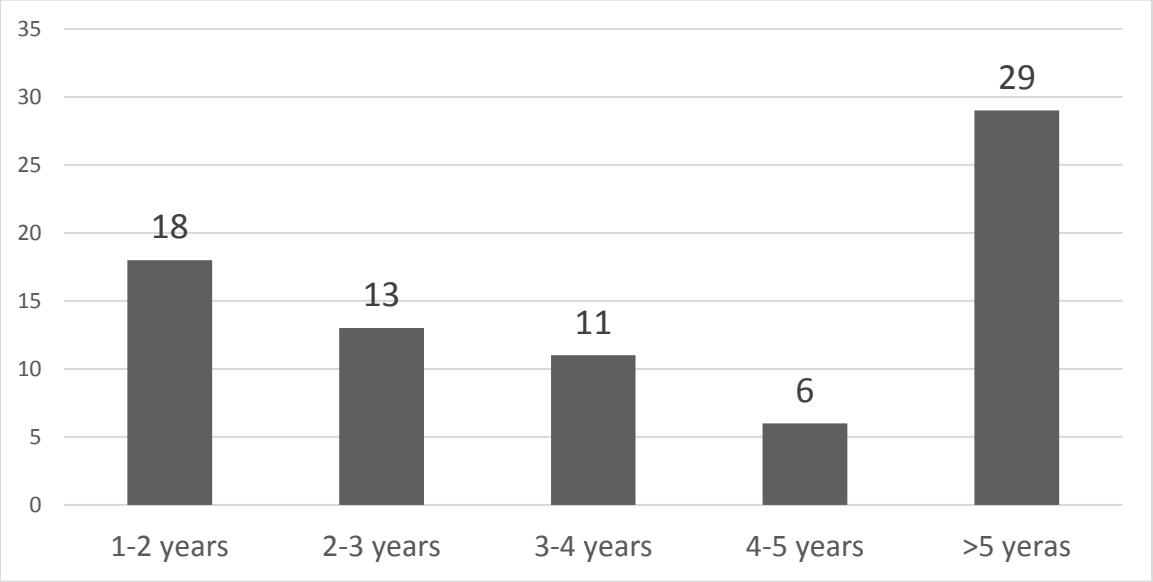
A total of 78self-administered questionnaires was distributed to EPHI's scientific staffs and 77questionnaires were filled and returned, which represents a 99% response rate. The response rate greater than 70% is very good (Mugenda, 2003). Therefore, the response rate was satisfactory. Out of the 77 employees, 68% were male and 32% were females.

Fig.4.1. Distribution of respondent's sex



The majority, 32(42%) of employees were in the age group 30-40 years. Most of participants, 29(38%) of employees have more than five-year experience in EPHI. From the study findings majority 62(81%) graduated in university master level, followed by 14(18%) of the respondents had graduated in university undergraduate degree.

Fig 4.2. Distribution of respondent's work experience in EPHI



4.3. Descriptive Analysis

4.3.1. Descriptive analysis of M&E Human Resource Factors

The study sought to determine the extent of respondents who agreed on the factor groups of M&E human resource. The M&E human resource group factors are presented in Table 4.3. Based on the research findings, Staff working on monitoring and evaluation are dedicated to the function has highest score (mean=3.25, standard deviation=0.891), followed by Staffs who have Monitoring and evaluation technical expertise in the area are assigned as shown by a mean of 3.19 and 0.904 standard deviation, roles and responsibilities of monitoring and evaluation personnel have been specified at the start of the project has shown a mean of 3.17 and 0.865 standard deviation and the projects have a unit in charge of M&E has a mean of 3.12 and 0.946 standard deviation.

On the contrary, the projects have sufficient number of staff with M&E competences is lowest (mean=2.83, standard deviation=0.938), only 22% of employees agreed on the projects have sufficient number of staff with M&E competences.

Table 4.3. Descriptive analysis of M&E Human Resource factors group

Factors	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean	SD
Staffs who have Monitoring and evaluation technical expertise in the area are assigned	2	14	33	23	5	3.19	0.904
Staff working on monitoring and evaluation are dedicated to the function	2	13	30	28	4	3.25	0.891
Roles and responsibilities of monitoring and evaluation personnel have been specified at the start of the project	2	14	33	25	3	3.17	0.865
The projects have sufficient number of staff with M&E competences	3	28	29	13	4	2.83	0.938
The projects have a unit in charge of M&E	2	20	26	25	4	3.12	0.946

4.3.2. Descriptive analysis of M&E Implementation Strategies Factors

The descriptive analysis of M& E implementation strategies is presented in the table 4.4. according to the finding of the research, there are data collection tools and computerized database for storage and analysis are conducted using software showed the highest mean score (mean=3.96, standard

deviation=1.01), the majority 76% of the respondents agreed on there are data collection tools and computerized database for storage and analysis are conducted using software. There are progress and results review platforms and reporting templates is the second highly scored factor (mean=3.77, standard deviation=0.887), followed by the factor the projects have own input, output, outcome and impact indicators as shown by a mean of 3.71 and standard deviation of 0.871.

The remaining M&E implementation strategies factors when carrying out evaluation in EPHI's projects does look at the time period, project components, and focus on the target group factor, the projects conduct a needs assessment/Baseline survey before implementing program/project planning, the projects have appropriate M&E system & M&E plan, and the projects use logical/result framework for project planning & implementation were a mean of 3.66, 3.55, 3.51 and 3.49, respectively.

Table 4.4. Descriptive analysis of M&E implementation strategies factors group

Factors	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean	SD
The projects conduct a needs assessment/Baseline survey before implementing program/project planning	3	12	16	32	14	3.55	1.083
The projects have appropriate M&E system & M&E plan	1	10	25	31	10	3.51	.927
The projects use logical/result framework for project planning & implementation	2	9	25	31	10	3.49	.955
The projects have own input, output, outcome and impact indicators	1	6	19	39	12	3.71	.871
There are data collection tools and computerized database for storage and analysis are conducted using software	2	6	11	32	26	3.96	1.019
When carrying out evaluation in EPHI's projects does look at the time period, project components, and focus on the target group	0	9	19	38	11	3.66	.868
There are progress and results review platforms and reporting templates	0	8	17	37	15	3.77	.887

4.3.3. Descriptive analysis of M&E Training Factors

According to the descriptive analysis of M&E training factors, most respondents agreed on projects donors have supported for capacity training and development by a mean of 3.39 and

standard deviation of 0.934. The result showed that there are sufficient M&E field visits factor also showed high mean score (mean=3.06, standard deviation=1.00), followed by training needs are regularly assessed at EPHI's project about monitoring and evaluation and there is sufficient budget allocated for staff training and development factors have a mean of 3.03 and 3.01, respectively.

However, staffs are regularly trained in M&E reporting has showed a lowest mean score (mean=2.78, standard deviation=0.955), only 19% of employees agreed on staffs are regularly trained in M&E reporting.

Table 4.5. Descriptive analysis of M&E training factors group

Factors	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean	SD
Training needs are regularly assessed at EPHI's project about monitoring and evaluation	4	21	32	9	11	3.03	1.088
Staffs are regularly trained in M&E reporting	5	26	31	11	4	2.78	.955
There is sufficient budget allocated for staff training and development	6	17	28	22	4	3.01	1.019
Projects donors have supported for capacity training and development	2	11	26	31	7	3.39	.934
There are sufficient M&E field visits	5	16	30	21	5	3.06	1.004

4.3.4. Descriptive analysis of Management Support for M&E Factors

The study also sought to examine how the role of management affected the performance of the projects. Based on the findings, majority of the respondents agreed on the managers are involved in knowledge dissemination of lessons learnt and Management always demands for monitoring & evaluation reports by a mean of 3.31 & 3.27 and standard deviation of 0.815& 0.853, respectively. The factor managers are involved when clarifying scope, purpose, intended use, audience and budget for evaluation has a 3.26 mean and 0.865 standard deviation. The result also showed that the managers are involved in the design, implementation and reporting on M&E and Decisions are made arising from monitoring &evaluation reports were 3.22 & 3.18 mean, respectively.

Table 4.6. Descriptive analysis of management support for M&E factors group

Factors	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean	SD
The managers are involved in the design, implementation and reporting on M&E	2	16	28	25	6	3.22	.955
The managers are involved when clarifying scope, purpose, intended use, audience and budget for evaluation	2	11	33	27	4	3.26	.865
The managers are involved in knowledge dissemination of lessons learnt	1	11	31	31	3	3.31	.815
Management always demands for monitoring & evaluation reports	1	13	31	28	4	3.27	.853
Decisions are made arising from monitoring &evaluation reports	2	17	28	25	5	3.18	.942

4.3.5. Descriptive analysis of EPHI'S Project performance

According to the findings, the projects were completed based on the required quality as shown highest mean score (mean=3.39, standard deviation = 0.861), majority (46%) of the respondents agreed on the projects were completed based on the required quality. The projects were completed within the planned budget has the second highest mean score (mean=3.23, standard deviation= 1.05) and 45% of the respondents also agreed on the projects were completed within the planned budget. On the contrary, the projects were completed on the planned schedule has the lowest mean score (mean=2.92, standard deviation=0.97), only 30% of the respondents agreed on the projects were completed on the planned schedule. The descriptive analysis of the project performance factors is presented on table 4.7 below.

Table 4.7. Descriptive analysis of project performances factors group

Factors	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean	SD
The projects were completed on the planned schedule	2	29	23	19	4	2.92	.970
The projects were completed within the planned budget	2	21	19	27	8	3.23	1.050
The projects were completed based on the required quality	2	7	33	29	6	3.39	.861
Overall the projects completed within the planned budget, on the planned schedule and with the required quality	8	15	27	22	5	3.01	1.082

4.8. Correlation and Regression Analysis

4.8.1. Correlation Analysis

Pearson correlation was employed to measure the strength of the linear relationship between variables. Pearson's correlation coefficients (r) can range from -1 to 1. An r of -1 indicates a perfect negative linear relationship between variables, an r of 0 indicates no linear relationship between variables, and an r of 1 indicates a perfect positive linear relationship between variables.

In this section correlation test was conducted to find the correlation between factors affecting Project performance (correlation between Monitoring and Evaluation input factors and Project performance), the analysis result was presented in table 4.8.

Table 4.8. Correlation coefficients

	M&E human resource	M&E implementation strategies	M&E training	Management support for M&E	Project performance
M&E human resource	1				
M&E implementation strategies	.616***	1			
M&E training	.759***	.738***	1		
Management support for M&E	.595***	.656***	.723***	1	
Project performance	.716***	.739***	.799***	.737***	1

***correlation coefficient is significant at 0.05 level

The finding of the results show M&E training has a strongest positive relationship with performance of projects of EPHI ($r=0.799$, $P<0.01$), followed by M&E implementation strategies has also strong positive relationship with performance of projects ($r=0.739$, $P<0.01$), Management support for M&E and M&E human resource have strong positive relationship with performance of projects of EPHI ($r= 0.737$, $p<0.01$). Based on this result, the project performance in EPHI are

affected by the identified four input factors including M&E human resource, M&E implementation strategies, M&E training and Management support for M&E.

4.8.2. Regression Analysis

Regression analysis was employed to investigate the relationship between the dependent variable the performance of projects in EPHI and predictor variables.

Table 4.9. Analysis of variance (ANOVA)

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	34.290	4	8.573	50.283	.000
Residual	12.275	72	.170		
Total	46.566	76			

Based on ANOVA Table 4.9, the overall regression model had a significant level (<0.001) which implies that the sig. value of the study (<0.001) is less than 0.05. Therefore, M&E human resource, M&E implementation strategies, M&E trainings and management support for M&E have a significant effect on the performance of projects of EPHI at 5% level of significance. The findings of this study similar with the research (Julia & Helen (2011), MBIT1. M. V (2015)) which observed that human resource, implementation strategies, training, management support have effects on the performance of projects.

Regression Coefficients

The estimated regression coefficient is presented in table 4.10, these regression coefficients represent the mean change in the performance of the projects (Dependent variable) for one unit of change in the predictor variable including M&E human resource, implementation strategies, training, management support while holding other predictors in the model constant.

Table 4.10. Regression coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
(Constant)	-.419	.310		-1.351	.181	-1.037	.199
M&E human resources	.229***	.108	.199	2.115	.038	.013	.445
M&E implementation strategies	.299***	.118	.236	2.523	.014	.063	.535
M&E trainings	.286***	.115	.291	2.479	.016	.056	.515
Management support for M&E	.283***	.102	.254	2.789	.007	.081	.486

** Regression coefficient is significant at 0.05 level

The results revealed that a unit increase in M&E Human resource would lead to increase in Performance of projects of EPHI by a factor of 0.229, a unit increase in Implementation strategies would lead to increase Performance of projects of EPHI by factor of 0.299, a unit increase in training would lead to increase in Performance of projects by a factor of 0.286 and unit increase in management support for M&E would lead to increase in performance of projects by a factor of 0.283.

The following model represents the regression equation representing the relationship between the dependent variable performances of projects as a linear function of the independent variables: M&E human resource, M&E implementation strategies, M&E trainings and management support for M&E, with ε representing the error term. The regression model was therefore used to describe how the mean of the dependent variable changes due to changes in independent variables.

$$\mathbf{Y_i = -0.419 + 0.229X_1 + 0.299X_2 + 0.286X_3 + 0.283X_4 + £}$$

Where Y_i= performance of projects of EPHI
X_1=M&E human resource
X_2=M&E implementation strategies
X_3=M&E training
X_4=Management support for M&E
£= Error term

Regression Model Summary

The model summary showed that 74% of variation in performance of projects is explained by variables in the model such as M&E human resource, M&E implementation strategies, M&E trainings and management support for M&E.

Table 4.11. Regression model summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	.858	.736	.722	.41290

4.9. Discussion of Results

The study showed that Staff working on monitoring and evaluation are dedicated to the function, Staffs who have Monitoring and evaluation technical expertise in the area are assigned, roles and responsibilities of monitoring and evaluation personnel have been specified at the start of the project and the projects have a unit in charge of M&E have shown as high mean. This finding is consistent with the statement of World Bank (2011) that M&E human resource management, both in quality and quantity, is required in order to have an effective M&E staff. Based on the finding, M&E human resource factors have statistically significant effects on the project performance. This finding is agreeing with MBIT1 (2015) stated that human resource on monitoring and evaluation contributed a lot to performance of projects. The finding on there is no sufficient number of staff with M&E competences are consistent with Kasule (2016) who found the highest number 23 (60.5%) of the respondents interviewed disagreed with the statement that Nurture Africa staff possess M&E skills and experience. This finding of M&E human resource is consistent with (Dereje, 2016) who found that there were limited human resources both in terms of quality and quantity to conduct monitoring and evaluation at all levels.

The majority 76% of the respondents agreed on there are data collection tools and computerized database for storage and analysis are conducted using software. Most of respondents also agreed on M&E implementation strategies factors when carrying out evaluation in EPHI's projects does look at the time period, project components, and focus on the target group factor, the projects conduct a needs assessment/Baseline survey before implementing program/project planning, the projects have appropriate M&E system & M&E plan, and the projects use logical/result framework for project planning & implementation. The findings are consistent with Gorgens (2010) which recommends that M&E system is part of management tool which provide feedback on performance fundamental for governance and decision making of projects and NGOs. The findings are also consistent with the Paris Declaration (2006) which recommends that development organizations should carry out development projects while focusing on predetermined changes by laying them in a plan. The findings above concur with Coninck et al, (2008) who argue that baseline survey is supposed to be done at the beginning of the project implementation. Baseline information is important for two main reasons; one, the baseline information becomes the benchmark upon which progress is measured and, secondly, it is used for monitoring achievements of the project's targets.

According to the M&E training factors finding, most respondents agreed on projects donors have supported for capacity training and development, there are sufficient M&E field visits, training needs are regularly assessed and there is sufficient budget allocated for staff training and development. This outcome is congruent with the findings of Vanessa and Gala (2011), who found that training helps employee to develop a positive attitude towards a given task. Ebeto and Justin (2013) also found that M&E training improves the quality of project's monitoring and evaluation practices by equipping the employees with requisite skills and knowledge. However, the result of this study shows there is no adequate regular training on M&E to improve the skill and competency of staffs, this is inconsistent with (CPWF, 2012) which recommends that M&E practical training is important in capacity building of personnel because it helps with the interaction and management of the M&E systems. This result is also inconsistent with Vanessa and Gala (2011) findings, which revealed that training of staff improves the technical capacity and expertise of the organization in conducting monitoring and evaluation leading to better M&E performance. OECD (2002) also found that training increases the independence of project team members when it comes to monitoring and evaluation.

The research finding revealed that majority of the respondents agreed on the managers are involved in knowledge dissemination of lessons learnt and Management always demands for monitoring & evaluation reports. The study results are similar with Yusuf & Saffu (2009) which stated that management plays a key role on monitoring and evaluation thus affecting performance of government funded projects. According to (IFRC, 2011), the management is responsible of making decisions and strategic planning of the project as well as manages the M&E system. The management as well relies on the information provided by the M&E system for its decision-making (Gaitano, 2011).

CHAPTER FIVE

CONCLUSION AND RECOMMENDATION

5.1. Conclusion

The M&E human resource factors have a great contribution to the performance of the projects in EPHI including Staff working on monitoring and evaluation are dedicated to the function, Staffs who have Monitoring and evaluation technical expertise in the area are assigned, roles and responsibilities of monitoring and evaluation personnel have been specified at the start of the project and the projects have a unit in charge of M&E. However, the research showed that the project doesn't have sufficient number of staffs with M&E competences. The human resource factors have statistical significant effects on the performance of the projects in EPHI.

In addition, M&E implementation strategies factors have also showed a lot of contribution on the performance of the projects in EPHI. The study showed that projects have data collection tools and computerized database for storage and analysis are conducted using software, projects use progress and results review platforms and reporting templates, projects have own input, output, outcome and impact indicators, projects have appropriate M&E system & M&E plan, and the projects use logical/result framework for project planning & implementation. The M&E implementation strategies factors have a significant effect on the performance of projects in EPHI.

M&E training is also very relevant to the performance of project. According to the study findings, project's donors have supported for capacity training and development, there are sufficient field visit and enough budget allocated for staff training and development. However, staffs didn't obtain M&E training regularly. The M&E training factors have a significant contribution to the performance of the projects.

Moreover, management support for M&E affects the performance of the projects in EPHI. The study showed that most of the respondents agreed on the managers are involved in knowledge dissemination of lessons learnt and Management always demands for monitoring & evaluation reports. The performance of projects in EPHI were significantly affected by management support for M&E factors. Finally, M&E human resource factors, M&E implementation strategies factors, M&E training factors and management support for M&E factors are statistically significant

implied that the project performance were affected by M&E human resource, M&E implementation strategies, M&E training and Management support for M&E.

5.2. Recommendation

The EPHI should hire sufficient staffs who have M&E technical skills for projects and assess the performance and competences of staffs regularly. All projects M&E staff's role and responsibility should be specified at the start of the projects. Good M&E system should be established and revised based on the objectives of the projects. It is recommended to budget enough amount of money to M&E activities. M&E tools and techniques should be identified when preparing an M&E plan and their limitation puts into consideration. Engage staffs in regular project follow up and evaluation to control the performance of the projects. All projects should be conducted baseline and end line survey to assess the performance of the projects and lesson learnt. Training should be tailored towards the effective application of these M&E tools and techniques. Staffs should be provided M&E training in regular base. Managers should be involved throughout the M&E process. The project managers should be committed and provide high emphasis for designing and implementing of M&E related activities. The project managers and team leaders should be ensured all staffs have required technical skill to perform M&E activities. This study was conducted in Ethiopia Public Health Institution(EPHI) staffs so other study should be conducted in another public-sector organization and Non-Government organizations to assess the existing M&E systems in another public organizations and NGOs. In addition, this study only uses quantitative research method because of time and financial problem, therefore I recommend for other researcher to use both quantitative and qualitative research methods.

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ANNEX I: QUESTIONNAIRE

INTRODUCTION

My name is SAMUEL MULUYE WELELAW, a student from Addis Ababa University, School of Commerce, Faculty of Business and Economics. This research work is for in partial fulfillment of the requirements for the award of the Master of Art Degree in Project Management. I would like to seek your consent for completing this research questionnaire on **"Assessment on the Role of Monitoring & Evaluation on Performance of public Organization Projects in Ethiopia, A case of Ethiopian Public Health Institution".**

Questioner ID: _____

Please circle the appropriate answer

Section A: Background Information		
1	Respondent position:	_____
2	Sex	1. Male 2. Female
3	Age	_____
3	Highest education level	1. Diploma 2. Degree 3. Master 4. PHD and above
4	Number of experience in EPHI	_____months/years
5	What is your position in EPHI?	_____

Please circle your appropriate opinion for each question using the following scales: 1=Strongly disagree, 2=Disagree, 3=Neutral, 4=Agree and 5=Strongly agree.

No.		Strongly disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly agree (5)
Section B: M&E Human Resource						
1	Staffs who have Monitoring and evaluation technical expertise in the area are assigned	**1**	**2**	**3**	**4**	**5**
2	Staff working on monitoring and evaluation are dedicated to the function	**1**	**2**	**3**	**4**	**5**
3	Roles and responsibilities of monitoring and evaluation personnel have been specified at the start of the project	**1**	**2**	**3**	**4**	**5**
4	The projects have sufficient number of staff with M&E competences	**1**	**2**	**3**	**4**	**5**
5	The projects have a unit in charge of M&E related activities	**1**	**2**	**3**	**4**	**5**
Section C: M&E implementation strategies						
1	The projects conduct a needs assessment/Baseline survey before implementing program/project planning	**1**	**2**	**3**	**4**	**5**
2	The projects have appropriate M&E system & M&E plan	**1**	**2**	**3**	**4**	**5**
3	The projects use logical/result framework for project planning & implementation	**1**	**2**	**3**	**4**	**5**
4	The projects have own input, output, outcome and impact indicators	**1**	**2**	**3**	**4**	**5**
5	There are data collection tools and computerized database for storage and analysis are conducted using software	**1**	**2**	**3**	**4**	**5**
6	When carrying out evaluation in EPHI's projects does look at the time period, project components, and focus on the target group	**1**	**2**	**3**	**4**	**5**
7	There are progress and results review platforms and reporting templates	**1**	**2**	**3**	**4**	**5**
Section D: M&E Training						
1	Training needs are regularly assessed at EPHI's project about monitoring and evaluation	**1**	**2**	**3**	**4**	**5**
2	Staffs are regularly trained in M&E reporting	**1**	**2**	**3**	**4**	**5**

3	There is sufficient budget allocated for staff training and development	**1**	**2**	**3**	**4**	**5**
4	Projects donors have supported for capacity training and development	**1**	**2**	**3**	**4**	**5**
5	There are sufficient M&E field visits	**1**	**2**	**3**	**4**	**5**
Section E: Management support for M&E						
1	The managers are involved in the design, implementation and reporting on M&E	**1**	**2**	**3**	**4**	**5**
2	The managers are involved when clarifying scope, purpose, intended use, audience and budget for evaluation	**1**	**2**	**3**	**4**	**5**
3	The managers are involved in knowledge dissemination of lessons learnt	**1**	**2**	**3**	**4**	**5**
4	Management always demands for monitoring & evaluation reports	**1**	**2**	**3**	**4**	**5**
5	Decisions are made arising from monitoring &evaluation reports	**1**	**2**	**3**	**4**	**5**
Section F: Project Performance						
1	The projects were completed on the planned schedule	**1**	**2**	**3**	**4**	**5**
2	The projects were completed within the planned budget	**1**	**2**	**3**	**4**	**5**
3	The projects were completed based on the required quality	**1**	**2**	**3**	**4**	**5**
4	Overall the projects completed within the planned budget, on the planned schedule and with the required quality	**1**	**2**	**3**	**4**	**5**

G. What do you think about the influence of applying Monitoring &Evaluation tools on project implementation and completion?

H. Please comment on the overall situation of monitoring and evaluation in EPHI's projects?

I. What can be done to enhance monitoring and evaluation at EPHI's project?

THANK YOU FOR YOUR PARTICIPATION!