ADDIS ABABA UNIVERSITY

SCHOOL OF COMMERCE

DEPARTMENT OF PROJECT MANAGEMENT

Project Implementation challenges of setting up Kidney Transplant Service in Ethiopia. The Case of St. Paul's Hospital Millennium Medical College

Project work submitted to School of Graduate Studies of Addis Ababa University for Partial Fulfillment of the Requirements on Master of Arts (MA) Degree in Project Management

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SCHOOL OF GRADUATE STUDIES

MASTER OF ARTS DEGEREE PROGERAM IN

PROJECT MANAGEMENT

Project Implementation Challenges of Setting up Kidney Transplant Service in Ethiopia;

The Case of St. Paul's Hospital Millennium Medical College

Approval Board Committee:

Dr. Solomon Markos	_____	_____
Advisor	Signature	Date
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Examiner	Signature	Date

DECLARATION

I the undersigned, declare that this research paper entitled “Project Implementation Challenges of Setting up Kidney Transplantation Service in Ethiopia .The Case of St. Paul’s Hospital Millennium Medical College” is the work of my own effort and study. All the sources of data used in the research have been acknowledged regarding originality.

Signature: _____ Date: _____

LETTER OF CERTEFICATION

This is to certify that Mr. Abrham Getachew has carried out this project work entitled “Project Implementation Challenges of Setting up Kidney Transplant Service in Ethiopia; The case of St. Pail’s Hospital Millennium Medical College” is under my supervision.

This work is original and suitable for the submission in partial fulfillment of the requirement for the award of Master of Arts Degree in Project Management.

Dr. Solomon Markos	_____	_____
Advisor	**Signature**	**Date**

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ACRONYM

ESRF...End Stage Renal Failure

FMHACA- Food, Medicines and Health care Administration and Control Authority

FMOH-Federal Ministry of Health

ICU-Intensive Care Unit

IDI-In-Depth Interview

NIH-National Institute of Health

OPD-Out Patient Department

OR-Operation Room

PFSA- Pharmaceuticals Fund and Supply Agency

PMBOK- Project Management Body of Knowledge

SPHMMC- St. Paul's Hospital Millennium Medical College

UoM-University of Michigan

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First and foremost; my heartfelt gratitude is to the almighty God who gives me strength and wisdom at every step of my life and during the whole research period. Following, I am grateful to my family who had given a lot of encouragement and motivation to complete my study. I would also like to express my sincere appreciation to my advisor Dr. Solomon Markos for the guidance, assistance and constant support throughout this study. I also want to acknowledge St. Paul's Hospital Millennium Medical College for the unlimited support during the data collection process. Last but not least, to those who had contributed assistance, either directly or indirectly, yet their names are not cited here, they deserve my greatest gratitude.

ABSTRACT

The main objective of the present research was to assess the project implementation challenges of kidney transplant project in Ethiopia by considering the only project being implemented nationally, in the case of St. Paul's hospital millennium Medical College. With this objective in mind this research assessed the four project implementation challenges related to project team, resource, top management support, risk identification and management. Therefore people working in the different level of the project after identifying the work flow of the project activities were contacted; including top managers, surgeons, clinicians and support staffs involved in pre, during and post kidney transplant activities were contacted. Using a convenient sample a total of 21 quantitative questionnaires were collected supported with ten in-depth interviews with key respondents. The data collection was conducted after checking for validity and reliability of the questionnaire. SPSS version 20 was employed for the data analysis process and a narrative analysis of in-depth interviews was done. The descriptive statistics was used to describe the general result of the variables. The mean average scores were presented in a table by considering the four project implementation challenges considered in the study. In the project team challenges adequacy of team number was the highest score and provision of on job training was with the lowest mean score of 2.52 in which more than 47% of the respondents complain about. Regarding the project resource challenges the highest mean score was on the allocation of appropriate budget where as on time delivery of purchase orders was the lowest mean showing more than 76% proportion of respondents complain. Similarly demand for project implementation progress reports was observed as a contributor for top management support challenge. The result also shows highest mean score of possible risk identification at the early phases of the project. Similarly the in-depth interview findings indicate lack of on job training as a project team challenge. Delayed request of purchase order and delay in obtaining purchased supplies were a major challenge in resource related factor. It is recommended that a continuous top management support is required to alleviate project implementation challenges and project team training is necessary for improving project performance and to manage challenges appropriately.

Key Words: Implementation challenges, kidney transplant, St. Paul's Hospital

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The process of project implementation, involving the successful development and introduction of projects in the organization, presents an ongoing challenge for managers. The project implementation process is complex, usually requiring simultaneous attention to a wide variety of human, budgetary, and technical variables. (Jeffrey k, 2015)

Project implementation or execution is the stage that follows initiation and planning in project life cycle that involves the actual "work" of the project. Materials and resources are procured, the project is produced, and performance capabilities are verified. (King w, 1983)

Similarly, the implementation phase is where the project manager and team actually do the project work to produce the deliverables that are the products or services for the client, customer, or sponsor, including all the project management documents that will be put together.

(Adrienne W, 2014)

At this phase, it is important to maintain control and communicate as to continuously monitor and make appropriate adjustments and record as variances from the original plan. In any project, a project manager spends most of the time in this step. During project implementation, people are carrying out the tasks, and progress information is being reported through regular team meetings. The project manager uses this information to maintain control over the direction of the project by comparing the progress reports with the project plan to measure the performance of the project activities and take corrective action as needed. (Barron, 2013)

In order to deal with the challenges with project implementation different authors use implementation success as a means of comparison:-

Project implementation success has been defined in many ways to include a large variety of criteria. However, in its simplest terms, project success can be thought of as incorporating four basic facets. A project is generally considered to be successfully implemented if it comes in on-schedule (time criterion), Comes in on-budget (monetary criterion), Achieves basically all the goals originally set for it (effectiveness criterion) and when accepted and used by the clients for whom the project is intended (client satisfaction criterion). (Monis, 1983)

The ten factor model was proposed as project implementation challenges (Jeffery K, 2015). Out of which three relate to top management support, project team challenges related in selection, recruitment and training and crisis management which is risk identification and management.

Likewise project implementation challenges are considered as project management challenge as implementation takes majority of the time and budget from the project life cycle. The different challenges in project management were summarized in five thematic areas as:

i. Challenges within Corporate Projects that are associated with undefined goals and scope changes.
ii. Challenges from working as a team that associate with Inadequate Skills for the Project and lack of accountability.
iii. Challenges in dealing with risk that are resulted from improper risk Management and ambiguous contingency plans
iv. Challenges in poor communication
v. Managing Expectations that is resulted from impossible deadlines, resource deprivation and lack of stakeholder engagement. (Bisk,2018)

Authors outlined that challenges related to implementation that is not handled systematically would lead to failure.

In the health information system projects three major challenges that complicated the project and eventually led to its failure, namely difficulties in (1) defining an appropriate scope for implementation, (2) coping with unanticipated technical and practical problems, and (3) ensuring commitment from users and their managers. (Jørgen P. Banslera, 2010)

According to a community health intervention program the challenges facing this intervention relate to the existing political atmosphere and the difficult process of building and maintaining a partnership. (Barbir, 2010)

According to P. R. Harper and M. A. Pitt, health care challenges in implementation could relate to Scale, complexity and change in technology and clinical conditions. (Pitt, 2004)

On the other hand authors identified ten challenges in improving quality in health : convincing people that there is a problem that is relevant to them; convincing them that the solution chosen is the right one; getting data collection and monitoring systems right; excess ambitions and 'projectness'; organizational cultures, capacities and contexts; tribalism and lack of staff engagement; leadership; incentivizing participation and 'hard edges'; securing sustainability; and risk of unintended consequences. (Dixon W, 2012)

From the perspectives of development projects, European Union Development Fund stated different project implementation challenges which relate to Partners(stakeholders) ,bad or lack of communication , queuing for verification, discrepancies in interpretations , E-cohesion – electronic systems, Lack of funds at programmed account. (Interact, 2017)

1.2 Statement of the problem

Kidney transplant is the expensive management in the end stage renal failure (ESRF) the burden to the patient, the family and the country is very huge as there was an only solution to get the service out of the country where the organ transplant is available. Paying millions of birr for a client will have a direct challenge in the future economic and social condition of the whole family. (Matri, 2015)

As the kidney transplant at Saint Paul's Hospital Millennium Medical College was started with collaboration between SPHMMC and University of Michigan; there should be a sustainable service in future as the problem is a demanding service in future. Therefore the lessons taken from the challenges of the implementation will be important in the sustainability of the service when the hospital is performing independently.

During the preliminary assessment in understanding the current existing problem, the researcher found out that there was delay in schedule in constructing the transplant center, around one fold of estimated budget was spend during the actual construction and establishment. In addition, the current performance in transplant service has long waiting list of patients who are waiting for the service within the project life. One of the identified problems was delay in implementation of the service; 150 transplant surgeries were planned from September 2015 to mid 2018 were as only 84 transplants were conducted till the end of April 2018. Nevertheless the Ethiopian Federal ministry of health is planning to mainstream the service with other health care services and the above variations in schedule, performance and budget should impose a need to understand the reasons for challenges faced during the implementation.

1.3 Research Question

In light of the problems discussed above the research specifically aims to answer the following research questions:

- What were the challenges in relation to human resource; specifically in acquiring the skill, competency and capacity of the project team?
- What were the challenges in relation to the top management support?
- Does SPHMMC have an appropriate facilities and equipment to provide safe and appropriate Kidney transplant service?
- Is SPHMMC fully capacitated to mainstream the Kidney transplant service after the support from University of Michigan seizes?

1.4 Objective of the Study

1.4.1 General Objective

The overall aim of this study was to assess the challenges in implementing the kidney transplant service in Ethiopia, under the case of SPHMMC.

1.4.2 Specific Objective

The study specifically aims:

- To investigate the implementation challenges of the kidney transplant project associated with resource.
- To investigate the implementation challenges of the kidney transplant project from the perspective of the project team.

- To investigate the implementation challenges of the kidney transplant from the perspective of top management.
- To investigate the challenges of the kidney transplant project from the perspective of risk management.

1.5 Significance of the Study

As Kidney transplant is a unique service provided in Ethiopia at a single public hospital, the service is not believed to reach at this level with an easy path. While reaching to attain successful organ transplant surgery a number of preparations had been in place and it hadn't happened overnight.

Thus, the subject matter of this research and the resulting lessons drawn from the finding are likely to benefit different stakeholders and the ministry of health in the following way. This study will be significant for its contribution to:

i. **Knowledge**

The finding will provide an insight on how and what kind of preparations should be given attention while setting up similar projects.

ii. **Managerial Decision Making**

The study's findings and recommendations are highly important to management of the hospital and beyond at the FMOH level because it draws their attention to some of the points where corrective actions and necessary on time supports could be made which would benefit to the sustainability of the service.

iii. **Literature and Reference**

The research could be used to establish an inquiry of future studies by building up on the current available finding especially to the practices in low and middle income countries.

iv. **Policy Framing**

The findings and recommendations of the study are highly important to policy makers because it draws their attention to bind the service with legal protections and rights as it relates to the health and safety of beneficiaries; specifically the donor and receptors of the organ.

1.6 Scope of the Study

This study was focused on only selected challenges that fall under the categories of resource, project team challenges, top management support and challenges related to risk management. As there are other challenges during the project implementation like IT related challenges; this study gave coverage to only the above mentioned groups of challenges.

1.7 Limitation of the Study

Even though the researcher tried his best to obtain maximum number of respondents to obtain a creditable result some of the key implementers the study was limited to only four challenges related to resource, project team, top management support and risk identification and management. Since the center is the only currently available kidney transplant center in Ethiopia there was absence of similar study and data in similar socio economic setup.

1.8 Organization of the Study

Structurally, the paper is composed of five chapters in which the researcher clearly state the entire process of the study, this include:

Chapter one: Introduction: - This chapter presented the background of the study, statement of the problem, basic research questions, objectives of the study, significance of the study, scope of the study, limitation and organization of the study.

Chapter Two: Review of Related Literature:-This part of the study presented details of the theoretical and empirical reviews on the project implementation challenges by giving focus on project resource, top management, project team, and risk identification and management.

Chapter Three: Research Methodology of the Study:- In this chapter the researcher described the type and design for the proposed research that is adapted from the previous studies, the subject/participant of the study, the sources of the data, the data collection instruments employed, the procedures of data collection and the method of data analysis.

Chapter Four: Results and Discussion:-This chapter would summarize the results, and findings of the study, and also interpret or discuss the findings according to key topics.

Chapter Five: Conclusions and Recommendations: - It is a chapter that comprises four sections, which include summary of findings (which is optional), conclusions, limitations of the study as well as hint for future research and recommendations.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Theoretical Review

Concepts and definitions

This section describes concepts and definitions related to project, project implementation and project implementation challenges.

Project: is a temporary endeavor undertaken to create a unique product, service or result (PMDOK, 2004)

Project implementation

The project cycle essentially regards the project environment as continuous. Four major stages in the cycle are planning, scoping and design, execution (implementation and control), and closeout (evaluation and feedback). (Lutchman C,2011)

Implementation (Execution) involves putting the project management plan into action. It's here that the project manager will coordinate and direct project resources to meet the objectives of the project plan. The Executing process keeps the project plan on track and ensures that future execution of project plans stays in line with project objectives. This process group is typically where approved changes are implemented. The Executing process group will utilize the most project time and resources, and as a result, costs are usually highest during the Executing processes. Project managers will experience the greatest conflicts over schedules in this cycle. (Heldman K, 2009)

The execution stage of a project sees the transfer of a concept, idea, or process into physical structures and tangible entities. During this stage, we see the actual site preparation; buildings,

equipment, and machinery constructed (systems) and begin functioning to deliver the project objectives. The organizational framework and structure (people) are developed, personnel are hired and trained to operate the project, and adequate systems for managing and operating the project are developed. Also, processes such as procurement (supply chain management), maintenance management, accounting, and marketing are developed to meet the operational needs of the project. During this stage of the project cycle, the project has the greatest potential for falling off the rails since both schedule delays and cost overruns generally occur in this stage. Adequate controls are required to avoid cost overruns or schedule delays. Critical to avoiding delays and cost overruns are the tools provided to, or developed by, the project leaders for early recognition and avoidance of these situations. The project leader, who now acts as the principal agent between the project and senior management of the organization, becomes the eyes and ears of the organization so that the right decisions are made at the right time with regard to the project.(Lutchman C,2011)

Challenges in project implementation phase

Development of the ten-factor model of project implementation:

The sustainable success of project implementation was aligned with managing the challenges of the ten factors model (Jeffery K, 2015). which uses a procedure, sometimes called Project Echo, was developed by Alex Bavelas .The ten factors are the once in which the challenges can be indicated that are project mission, top management support, project schedule, client consultation, personal ,client acceptance, monitoring and feedback, communication and trouble shooting. Hence the current research focuses on four challenges the concepts related to those specific challenges are presented as follows:

1. Top Management Support-Willingness of top management to provide the necessary resources and authority and power for project success.

2. Project team challenges relate to personnel-Recruitment, selection, and training of the necessary personnel for the project team.

3. Resource- relate to Availability of the required material, equipment, supply, technology and expertise to accomplish the specific technical action steps.

4. Risk identification and management is related to troubleshooting or ability to handle unexpected crises and deviations from plan. (Jeffery K, 2015).

Similarly Bisk education course of villanova university states five major categories of challenges in project implementation that are challenges with in the corporate or organization, challenges within a team, challenges in dealing with risk, communication challenge and challenges in managing expectations or risk. The detail of those challenges which relate to the current study is presented as follows (Bisk, 2018)

Challenges of Working with a Team

A project sometimes requires skills that the project's contributors do not possess. Project management training can help a project leader determine the needed competencies, assess the available workers and recommend training, outsourcing or hiring additional staff. A project manager's leadership qualities can shine when each member of the team takes responsibility for his or her role in achieving project success. Conversely, a lack of accountability can bring a project to a complete halt. Finger-pointing and avoiding blame are unproductive, but all-too-common features of flawed project management. (Bisk, 2018)

Challenge in Dealing with Risk

Learning to deal with and plan for risk is another important piece of project management training. Risk tolerance is typically a desirable project manager trait because projects rarely go exactly to plan. Similarly it's important for project managers to know what direction to take in pre-defined "what-if" scenarios. If contingencies are not identified, the entire project can become mired in an unexpected set of problems. Asking others to identify potential problem areas can lead to smoothen and successful project.

Resource challenge – In order for a project to be run efficiently and effectively, management must provide sufficient resources. (Bisk, 2018)

2.2 Empirical review

Nature, characteristics and challenges of implementation in projects of Health Service

According to studies conducted, the implementation challenges in the health related project is an extraordinarily complex and dynamic socio-technical process in which difficult technical and organizational problems must be resolved within a conflict-laden arena. In the health information system projects there are three major challenges that complicated the project and eventually led to its failure, namely difficulties in (1) defining an appropriate scope for implementation, (2) coping with unanticipated technical and practical problems, and (3) ensuring commitment from users and their managers. (Jørgen P. Banslera, 2010)

According to a community health intervention program the challenges facing the intervention relate to the existing political atmosphere and the difficult process of building and maintaining a

partnership. (Barbir, 2010). The political context relate to their involvemnent in the intervention appart from power sturuggele and different political affiliation. On the other hand partnership is related to building trust; which is the most important challenge in community-based interventions. Partnership is a long process requires time, effort and a high level of engagement with the community, and requires identifying key people.

According to P. R. Harper and M. A. Pitt, health care challenges in implementation could relate to Scale, complexity and change in technology and clinical conditions. (Pitt, 2004)

Similarly the political and socio-economic elements of the healthcare system give rise to the need for structural reform. Some of the multi-dimensional factors contributing to the general complexity of the system include: demographic change, social and behavioral change, organizational change, political change, strategic change, technological and clinical change, inherent variation and uncertainty in treating individuals. Often a change at one level of an organization can impact in an unforeseen way on other levels of operation. The multiple interactions inherent in the operations of healthcare are spawning a growing interest in the integration of complexity science and healthcare management. For example, changes to the number of beds will impact on the number of necessary theatre sessions. Thus, organizational and strategic changes cannot be considered in isolation from the complex network of inter- and intra-relating hospital services. The size, complexity, interactivity and continuous dynamism of the healthcare services present a particular challenge for modelers who seek to develop workable abstractions of underlying systems from which meaningful outputs can be deduced. (Pitt, 2004)

According to Mary Dixon-Woods, Sarah McNicol, and Graham Martin; the Ten challenges in improving quality in healthcare: they have identified 10 key challenges in securing improvement, covering three broad themes: challenges 1to 4 relate to the design and planning of improvement

interventions; 5to 8 describe organizational and institutional contexts, professions and leadership and; 9 and 10 refer to sustainability and spread beyond the initial intervention period and unintended consequences. . (Dixon W, 2012)

DESIGN AND PLANNING OF IMPROVEMENT INTERVENTIONS

Challenge 1: Convincing people that there is a problem:

One fundamental, but often poorly met, challenge for improvement efforts is that of convincing healthcare workers that there is a real problem to be addressed. This challenge can be addressed by using hard data and to secure emotional engagement by using patient stories and voices.

Challenge 2: Convincing people that the solution chosen is the right one:

Improvement interventions are often 'essentially contested': everyone may agree on the need for good quality but not on what defines good quality or how it should be achieved. Clinicians and others may resist change on grounds that interventions lack sufficient evidence or are incongruent with preferred ways of practicing that already appear to deliver good results.

Challenge 3: Getting data collection and monitoring systems right:

Data collection and feedback are indispensible to improving quality. Data help in demonstrating the scale of a quality problem and show what is happening in response to an intervention. But data collection, monitoring and feedback systems are remarkably hard to get right: they are often poorly understood, poorly designed and poorly implemented.

Challenge 4: Excess ambitions and 'projectness'

Enthusiasm for improving quality is very natural but it can easily overwhelm the available resources. Ambitious 'stretch goals' and talk of 'transformation' may risk alienating people early on and later lead to disillusionment if aims are not realized. The scale of resource required to support improvements is often underestimated, but without adequate financial support,

infrastructure, managerial skills and dedicated time, efforts to improve quality can quickly run into difficulties. (Dixon W, 2012)

ORGANISATIONAL AND INSTITUTIONAL CONTEXTS, PROFESSIONS AND LEADERSHIP

Challenge 5: Organizational cultures, capacities and Contexts:

Trying to secure improvement in situations where organizational capacity is inadequate, and culture is adverse can result in emotional exhaustion and evaporation of support. Differences in morale, leadership and management in organizational settings may lead to variation in outcomes.

Challenge 6: Tribalism and lack of staff engagement:

Engaging staff and overcoming a perceived lack of ownership are among the biggest challenges in improvement efforts. Boundaries between professional, disciplinary and managerial groups present important obstacles to change, and consensus within one profession is not always shared by others.

Challenge 7: Leadership

Leading improvement efforts well is challenging and delicate, requiring a combination of technical skills, facilitation skills and personal qualities.12 It needs to happen at multiple levels and needs to ensure alignment with staff priorities, and active work among staff to foster collaboration and engagement with improvement aims.

Challenge 8: Incentivizing participation and 'hard edges'

Busy clinicians may need incentives if they are to prioritize improvement activities. Many improvement efforts seek to draw on the intrinsic motivation of healthcare professionals to maximize the quality and effectiveness of the care they provide for patients. Visible improvements and unequivocal evidence of potential patient benefit through credible feedback

can encourage greater clinician involvement in what may otherwise be seen as relatively low-status activity with poor rewards. (Dixon W, 2012)

BEYOND THE INTERVENTION: SUSTAINABILITY, SPREAD AND UNINTENDED CONSEQUENCES

Challenge 9: Securing sustainability:

Besides their potential to meet resistance at their inception, 'projects' may be especially vulnerable to challenges of sustainability. Clinicians' and managers' interest may dwindle when, at a project's end, they are faced with new, competing priorities.

Challenge 10: Risk of unintended consequences:

Though it is often assumed that quality improvement programmes are harm-free, there is some evidence that they can produce unintended and unwanted consequences. (Dixon W, 2012)

Even though there were different literatures reviewed to see the types of challenges in health related projects the literatures published are more focusing on underlying clinical factors than project based factors. However the challenges stated in the project environment share similar characteristics in most cases.

2.3 Conceptual and Theoretical Framework

Using exhaustive literature review, a conceptual framework for assessing the challenges of project implementation has be developed. The conceptual framework has been developed by giving due emphasis on the project team, project resource, project top management support and risk management related challenges.

Conceptual framework

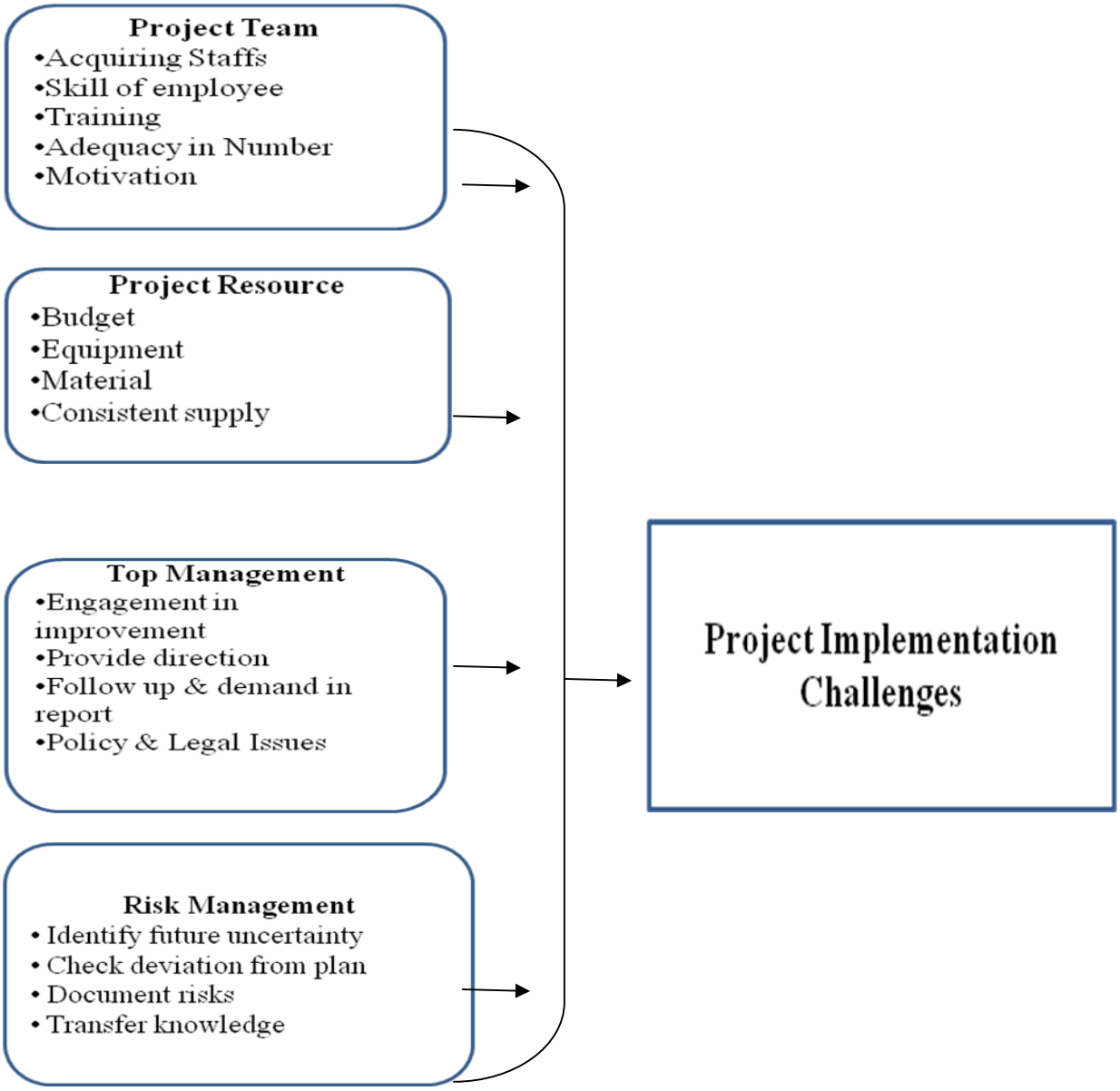

Figure 2.1 ten key factors of the project implementation profile.

Adapted from Randall L. Schultz and Dennis P. Slevin

CHAPTER THREE

RESEARCH METHODOLOGY

3. Research Design

This study employed a descriptive survey design supported by In-depth interviews with key implementers and actors involved in the project implementation was used to explore their experience in facing the different challenges in setting up the kidney transplant service at St. Paul's .On the other hand the quantitative data was used to collect data regarding the attitudes and opinions of those involved in the implementation using Likert scale.

3.1 Data Type

Using a combination of qualitative and quantitative data can improve the quality of the data by ensuring that the limitations of one type of data are balanced by the strengths of another. Thus, mixture of both qualitative and quantitative data was used to present a more complete and synergistic research analysis. The triangulation would help in clearing out the misunderstandings of data during interpretation of the results.

3.2 Data sources

3.2.1 Primary data sources

The primary data was collected from those professional employees and top management in the organization who are directly involved in the specific implementation of the project were chosen to fill the questionnaire that helped to receive unbiased and more accurate response. Similarly the

qualitative data was collected from the mouth of the respondents who can really provide their deep experience in the implementation phase.

3.2.2 Secondary data sources

To strengthen the reliability of research data and to supplement the information missing in the questioner survey, information was collected from other related publications like researches, Journals, the organizations procedure and policy and relevant reports and proceedings.

3.3 Sampling size and sampling design

3.3.1 Sampling design

The study design adopted quantitative questionnaire from Pennsylvania health Department Post implementation survey tool of data collection with some modification by focusing on the specific objective of the study and referring to project execution book. (Pennsylvania,2016)

3.3.2 Sample size determination

Sampling is the process of selecting units (eg. People, organizations) from population of interest so that by studying the sample we may fairly generalize our results back to the population from which they were chosen. (Trochim, 2006)

Because qualitative methods are so effective at examining processes. Qualitative methods can be used to explore variables that are not easily identifiable or that have not yet been identified, as well as investigating topics for which there is little or no previous research and addressing contradictions in the literature that arise from prematurely, inaccurately, or inadequately operationalized variables. (Morrow, 2007)

In principle, accurate information about given population could be obtained only from census study. However, due to time constraint, in many cases, a complete coverage of population is not possible; thus sampling is one of the methods, which allow the researcher to study relatively small number of units representing the whole population (Sartnakos, 1998)

To select sample respondents from total study population, convenience sampling method was employed and as per the quota and availability during the survey by considering the different segments of the project implementation personnel were available in the work flow. i.e providers in the preparation, operation, intensive care unit after post transplant, pharmacy, laboratory and managers were voluntarily requested to fill the survey questionnaire until the researcher obtained the adequate number of responses. Furthermore qualitative respondents were identified purposely who could be key informants and have better experience through the specific project.

Table 3. 1: Composition of respondents for the study

S.NO	Respondent Category	Qualitative	Quantitative
1	Kidney Transplant surgeons	01	02
2	Nurse (OR, ICU, Ward, OPD) Nephrologists	03 01	12 01
3	Top manager	01	01
4	Counseling psychiatrist/social worker	01	01
5	Clinical support person from pharmacy and laboratory units	01	04
6	Engineering department &	01	
7	Purchasing department	01	
	Total	10	21

3.4 Data collection methods and tools

Qualitative data will be collected by using an in-depth interview guide; the interview guides will be of 2 types. One for health providers and top managers and the second for the engineering department key informants to seek for their construction related opinion. The quantitative data will be collected from primary data. A Structured Questionnaire with modification will be used to collect data from the key implementers and actors of the project. Most of the questions will be 5 point Likert scale types. (Lutchman, 2011)(Pennsylvania,2016)

The questionnaire has two parts. The first part addresses the demographic characteristics of respondents and second part deals with questions of opinion regarding the sub thematic areas of the study regarding top management, project team, resource and risk management.

3.5 Data Analysis and Presentation

As data means row material, it has to pass through a process of analysis and interpreted accordingly before their meaning and implications are understood. Hence, both qualitative and quantitative data analysis techniques were employed to analyze the data. The data from document analysis and Likert scale questionnaire was presented in a narrative form by using tables. The analysis of the scales prepared to assess the possible challenges under the thematic areas of top management support, dimension of project team, project resources and risk management will made using Statistical Package for the Social Sciences (SPSS).Descriptive analysis of frequencies for the Likert scale showing the mean and standard deviation was presented. A narrative report of the qualitative study finding was made under the specified themes to explore more challenges which are specific to the unique project.

3.6 Ethical Standards and Procedures

According to the publication of Clinical Center researchers at National Institute of there are seven main principles to guide the conduct of ethical research: (NIH, 2016)

- **Social and clinical value:** Every research study is designed to answer a specific question. The answer should be important enough to justify asking people to accept some risk or inconvenience for others
- **Scientific validity:** A study should be designed in a way that will get an understandable answer to the important research question.
- **Fair subject selection:** The primary basis for recruiting participants should be the scientific goals of the study — not vulnerability, privilege, or other unrelated factors.
- **Favorable risk-benefit ratio:** Everything should be done to minimize the risks and inconvenience to research participants to maximize the potential benefits, and to determine that the potential benefits are proportionate to, or outweigh, the risks.
- **Independent review:** To minimize potential conflicts of interest and make sure a study is ethically acceptable before it starts, an independent review panel should review the proposal and ask important questions.
- **Informed consent:** Potential participants should make their own decision about whether they want to participate or continue participating in research.
- **Respect for potential and enrolled subjects:** Individuals should be treated with respect from the time they are approached for possible participation; even if they refuse enrollment in a study, throughout their participation and after their participation ends.

This includes: privacy, confidentiality, respecting their right to change their mind, to decide that the research does not match their interests, and to withdraw without a penalty.

Accordingly Ethical clearance will be obtained from the ethics committee of Addis Ababa University School of Commerce and a letter of support will be used to support the researcher's actual field work. Further review of the proposal will also be made by the Institutional Review Board of SPHMMC to check for the three criteria's of research in health setting which are autonomy, Justice, mal efficiencies and beneficence.

CHAPTER FOUR

RESULT AND DISCUSSION

This chapter presents the main findings of the research. In particular, the results of descriptive analysis like frequency, mean, Standard deviations. Findings of the qualitative assessments are also presented in narratives.

4.1 Reliability and validity

SPSS version 20 was used to calculate Cronbach's alpha in order to determine how reliable the data collection instrument (questionnaire) was over the data the study collected. Most of the constructs are good. Cronbach's alpha (α) < 0.6 indicates unsatisfactory internal consistency reliability (Malhotra & Birks, 2007) and Cronbach's alpha (α) > 0.6 indicates satisfactory internal consistency reliability (commonly accepted level) (Nunnally & Berstein, 1994). All of the items under each construct have a factor loading ≥ 0.8. The data collection tool was reviewed by the advisor for validation.

4.2 Socio Demographic Characteristics of study participants

The socio demographic data of the study participants show that majority of the respondents (71.4%) were project team followed by middle manager (23.4 %) and the rest top manager.

Around 62% of them were female and 38 % male. Majority of the respondents were belonging to the age group of 20-30 that account more than 60 %. The professional composition of the participant show large proportion of nurses and physicians totally account more than 80 %. Regarding the educational status, around 20% % were master and PhD holders.

The mean average years of experience of study participants were 2.395 years with a standard deviation of .9912.

Table 4.1 Socio- Demographic Characteristics of Respondents (N=21)

Socio Demographic character	Category	Frequency	Valid Percent
Respondents Position	Top Manager	1	4.8
	Middle Manager	5	23.8
	Project Team	15	71.4
Sex	Male	8	38.1
	Female	13	61.9
Age	20-30	13	61.9
	31-40	5	23.8
	41-50	2	9.5
	>50	1	4.8
Profession	Physician	4	19.0
	Nurse	13	61.9
	Lab-technician	2	9.5
	Pharmacist	2	9.5
Educational Status	Diploma	1	4.8
	Degree	16	76.2
	Masters	2	9.5
	PhD and Above	2	9.5

4.3 Descriptive statistics for Project team Challenges in implementation of Kidney transplant Project

The Likert scale results of the descriptive statistics regarding the challenges of kidney transplant project in relation to project team show a lowest score in providing on job training to develop the implementation status of the project team (mean 2.52, standard deviation=3.38) followed by acquiring skilled kidney transplant project team members ((mean= 2.9, standard deviation=1.221) . On the contrary the highest score in relation to project team was adequacy of the team number (mean 3.48, standard deviation=0.873)

Table 4. 2 Descriptive statistics for Project team Challenges in implementation of Kidney transplant Project

Project Team factors	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Mode	SD
Selection of Project team members	3 (14.3)*	1(4.8)	10(47.6)	6(28.6)	1(4.8)	3.05	3	1.071
Skill of project team	4 (19.0)	3 (14.3)	6 (28.6)	7 (33.3)	1(4.8)	2.9	4	1.221
Provision of on job training	6(28.6)	4(19.0)	6(28.6)	4(19.0)	1(4.8)	2.52	1[a]	3.38
Adequacy of the team number	0	3(14.3)	7(33.3)	9(42.9)	2(9.5)	3.48	4	0.873
Appropriate motivation of teamwork	1(4.8)	6(28.6)	2(9.5)	8(38.1)	4 (19.0)	3.38	4	1.244

3 (14.3)*:- 3 = frequency, 14.3= percent

Considering Mode as a measure of central tendency and taking the mean average of strongly disagree and disagree as a category of dissatisfaction ; mean average of agree and strongly agree as a category of satisfaction the descriptive statistics THE PROJECT TEAM CHALLENGE result shows: -

Regarding the selection of project team employees, 19% of the respondents have a response of dissatisfaction with an average of 1.25 and 33.3 % have satisfaction with an average of 4.14 which is above the mode of 3.

Regarding the skill of project team employees, 33.3 % of the respondents have a response of dissatisfaction with an average of 1.42 and 38 % have satisfaction with an average of 4.12 which is above the mode of 4.

Regarding the challenge in provision of on job training, 47.6 % of the respondents have a response of dissatisfaction with an average of 1.4 and 23.5 % have satisfaction with an average of 4 where as the mode is 1. In this case the respondents' response is closer to the dissatisfaction.

Regarding the adequacy in number of project team, 14.3 % of the respondents have a response of dissatisfaction with an average of 2 and 52 % have satisfaction with an average of 4.18 which is above the mode of 4.

Regarding the motivation of project team, 33.3 % of the respondents have a response of dissatisfaction with an average of 1.86 and 57 % have satisfaction with an average of 4.33 which is above the mode of 4.

4.4 Descriptive statistics for resource Challenges in implementation of Kidney transplant Project

The analysis result of the collected data showed that obtaining the supplies requested to be purchased were the main challenges in relation to resources in the kidney transplant project (mean =2.24,standard deviation=0.995) with highest rate in disagreement by study respondents that account about 66.7% .This is also shown by purchase request and procurement process, two third of participants were highly unsatisfied about the on time request status of supplies during

the implementation (mean=2.29,standard deviation=1.189). This was also shown by affecting the consistent supply of equipments and laboratory reagents.(mean=2.52,standard deviation=1.078). On the contrary the highest scores were observed in conducting baseline assessment and allocation of appropriate budget for the project implementation (mean=3.38, Standard deviation=1.071).

Table 4.3 Descriptive statistics for Project resource Challenges

Project resource	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Mode	SD
Baseline assessment of requirement	1(4.8)	2(9.5)	10(47.6)	4(19.0)	4(19.0)	3.38	3	1.071
Allocation of appropriate budget	0	4(19.0)	10(47.6)	2(9.5)	5(23.8)	3.38	3	1.071
On time request of purchase/procurement	6(28.6)	8(38.1)	3(14.3)	3(14.3)	1(4.8)	2.29	2	1.189
On time delivery of requested items	5(23.8)	9(42.9)	4(19.0)	3(14.3)	0	2.24	2	.995
Consistent supply of pharmaceuticals	3(14.3)	4(19.0)	5(23.8)	8(38.1)	1(4.8)	3.00	4	1.183
Consistent supply of equipments and reagents	4 (19.0)	7(33.3)	5(23.8)	5(23.8)	0	2.52	2	1.078
Consistent supply of consumables	1(4.8)	6(28.6)	3(14.3)	9(42.9)	2 (9.5)	3.24	4	1.136

Considering Mode as a measure of central tendency and taking the mean average of strongly disagree and disagree as a category of dissatisfaction ; mean average of agree and strongly agree as a category of satisfaction the descriptive statistics THE PROJECT RESOURCE CHALLENGE result shows: -

Regarding the conducting baseline assessment for requirement to define specifications and quantity of resources required, 24 % of the respondents have a response of dissatisfaction with an average of 1.67 and 42.9 % have satisfaction with an average of 4 which is above the mode of 3.

Regarding the allocation of appropriate budget , 19 % of the respondents have a response of dissatisfaction with an average score of 2 and 33.3 % have satisfaction with an average score of 4.71 which is above the mode of 3 and has the highest result.

Regarding the allocation of on time request of purchases, majority (66.67%) of the respondents have a response of dissatisfaction with an average score of 1.57 and only 19 % have satisfaction with an average score of 4.25 which is above the mode of 2.

Regarding the on time delivery of requested items (purchase orders) , majority (66.67%) of the respondents have a response of dissatisfaction with an average score of 1.64 below the mode of 2 and only 14.2 % have satisfaction with an average score of 4.

Regarding the consistent supply of pharmaceuticals, 33.3 % of the respondents have a response of dissatisfaction with an average score of 1.57 below the mode of 4 and around 43 % have satisfaction with an average score of 4.1.

Regarding the consistent supply of equipments and reagents, majority (52.3 %) of the respondents have a response of dissatisfaction with an average score of 1.63 below the mode of 2 and only 23.8 % have satisfaction with an average score of 4.

Regarding the consistent supply of consumables, 33.3 % of the respondents have a response of dissatisfaction with an average score of 1.86 below the mode of 4 and 52.4 % have satisfaction with an average score of 4.18.

4.5 Descriptive statistics for Top management support challenges in of Kidney transplant Project implementation

The descriptive statistic result of the challenges in regarding top management support shows the highest score in top manager involvement in designing the project

(mean=3.57,standarddeviation=0.926), followed by involvement is clarifying scope, purpose and intended use (mean=3.52,standard deviation=0.9881), the third largest score was (mean=3.24,standard deviation= .831) ; whereas the score in demand for implementation reports by top managements was small with a score (mean= 2.81,sstandard deviation=.928) followed by the second lowest score (mean= 2.95,standard deviation=1.071) . the proportion of disagreement and strongly disagree where quite high which is more than 33% in the demand for implementation report and around 43% of respondents indicate their disagreements in the involvement of top management by providing direction in decision making & corrective actions .

Table 4.4 Descriptive statistics for Project Top Management support

Project Top management support	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Mode	SD
Involvement in design ,implementation& follow-up	1(4.8)	2(9.5)	3(14.3)	14(66.7)	1(4.8)	3.57	4	.926
Involvement in clarifying scope, purpose, intended use & implementation budget	1(4.8)	1(4.8)	8(38.1)	8(38.1)	3(14.3)	3.52	3	.981
Involvement in knowledge dissemination	2(9.5)	4(4)	8(38.1)	6(28.6)	1(4.8)	3.00	3	1.049
Demand for implementation reports	2(9.5)	5(23.8)	9 (42.9)	5(23.8)	0	2.81	3	.928
Direction in decision making & corrective actions	1(4.8)	8(38.1)	4(19.0)	7(33.3)	1(4.8)	2.95	2	1.071
Support in identifying policy, legal& administrative issues	0	3(14.3)	12(57.1)	4(19)	2(9.5)	3.24	3	.831

Considering Mode as a measure of central tendency and taking the mean average of strongly disagree and disagree as a category of dissatisfaction ; mean average of agree and strongly agree as a category of satisfaction the descriptive statistics THE TOP MANAGEMENT CHALLENGE result shows: -

Regarding the top management involvement in the design and implementation only 14.2 % of the respondents have a response of dissatisfaction with an average score of 1.67 below the mode of 4 and majority (71 %) have satisfaction with an average score of 4.06.

Regarding the top management involvement in clarifying scope, purpose and budget only 9.5 % of the respondents have a response of dissatisfaction with an average score of 1.5 below the mode of 3 and majority (52.38 %) have satisfaction with an average score of 4.27.

Regarding the top management involvement in knowledge transfer 28.6 % of the respondents have a response of dissatisfaction with an average score of 1.67 below the mode of 3 and 33.3 % have satisfaction with an average score of 4.14.

Regarding the top management involvement in demand for report 33.3 % of the respondents have a response of dissatisfaction with an average score of 1.7 below the mode of 3 and 19 % have satisfaction with an average score of 4.

Regarding the top management involvement in providing direction & corrective action 42.9 % of the respondents have a response of dissatisfaction with an average score of 1.88 below the mode of 2 and 38 % have satisfaction with an average score of 4.125.

Regarding the top management involvement in support in identifying policy, legal and administrative issues 14.28 % of the respondents have a response of dissatisfaction with an average score of 2 below the mode of 3 and 28.5 % have satisfaction with an average score of 4.3.

4.6 Descriptive statistics for risk identification and management challenges in implementation of Kidney transplant Project

The analysis result regarding the risk identification and management shows the highest score in risk identification at early phases (mean=3.90, standard deviation=.831), this was also manifested by the occurrence of identified risks during implementation (mean=3.57, standard deviation=.978).

Table 4.5 Descriptive statistics for risk identification and Management support

Project risk identification & mgt	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Mode	SD
Possible risk identification at early phases	0	1(4.8)	5(23.8)	10(47.6)	5(23.8)	3.90	4	.831
Occurrence of identified risk at implementation	1(4.8)	2(9.5)	4(19.0)	12(57.1)	2(9.5)	3.57	4	.978
New and un anticipated risks	0	4(19.0)	8 (38.1)	8(38.1)	1(4.8)	3.29	3	.845
Easily managing identified risks	1(4.8)	8(38.1)	5(23.8)	6(28.6)	1(4.8)	2.90	2	1.044
Knowledge transfer from risk management	3(14.3)	2(9.5)	6(28.6)	9(42.9)	1(4.8)	3.14	4	1.153

Considering Mode as a measure of central tendency and taking the mean average of strongly disagree and disagree as a category of dissatisfaction ; mean average of agree and strongly agree as a category of satisfaction the descriptive statistics THE PROJECT RISK CHALLENGE result shows: -

Regarding the possible risk identification at the early phase only 4.8 % of the respondents have a response of dissatisfaction with an average score of 2 below the mode of 4 and majority 71.4 % have satisfaction with an average score of 4.33.

Regarding the occurrence of identified risks, 14.3 % of the respondents have a response of dissatisfaction with an average score of 1.67 below the mode of 4 and majority 66.67 % have satisfaction with an average score of 4.14.

Regarding the challenge from new and un anticipated challenges , 19 % of the respondents have a response of dissatisfaction with an average score of 2 below the mode of 3 and 42.85 % have satisfaction with an average score of 4.11.

Regarding the challenge in managing identified risks easily , majority (42.9 %) of the respondents have a response of dissatisfaction with an average score of 1.88 that was below the mode of 2 and 33.3 % have satisfaction with an average score of 4.14.

Regarding the challenge in transferring knowledge from risk management , 23.8 % of the respondents have a response of dissatisfaction with an average score of 1.4 that was below the mode of 4 and 47.6 % have satisfaction with an average score of 4.1.

4.7 QUALITATIVE RESULT

A total of ten in-depth interviews were conducted with key informants involved in the project that included the top manager; director of kidney transplant center, project team that include transplant surgeon, nurses from Outpatient department (OPD),Operation, Intensive care units, pharmacists, lab technicians, social worker and an engineer involved in construction of the center and purchasing department. Six of the in-depth interview participants were male and the rest female. Two of the key informants were a sub specialist (equivalent to PhD), two were masters holders and the rest first degree.

4.7.1 Project Performance result from SPHMMC National Kidney transplant Center

The kidney transplant project has been launched in 2014 with the support from University of Michigan (UoM). The project was collaboration between SPHMMC and UoM under the Ethiopian Federal Ministry of Health.

The project was designed for the period of 5 years. The first year was to construct the hospital and the following four years were planned for conducting a total of 150 kidney transplants. During the project phase-out, the exit strategy was to hand over the service as an independent transplant center. A total of about 125 million birr was allocated for the project period without estimating the cost of the work hours of flying surgeons from the UoM as it was voluntary and the scope was to provide 150 kidney transplant surgeries within the three functional years from 2015-2017 September. By the end of the project till the second week of May a total of 84 transplants were completed with a patient outcome success rate of 98.9%.

4.7.2 Result of Responses from the in-depth interviews

Key informants were selected purposively from each department so that challenges from each project team's perspective would be clearly assessed. The results of the in-depth interviews are presented in four thematic areas. The first one deals with challenges from the project team, the second portion presents the challenges from project resources, the third portion presents challenges from top management side and risk management is presented in the last portion.

4.7.3 Project Implementation Challenges from project team

The uniqueness of the kidney transplant service was a challenge to acquire a professional in specific field of study. The project team was having frustration while joining the project because of inability to anticipate the future of the project. There was absence of specifically trained or expert clinician and provider in pharmacy, laboratory, nurse, physician etc disciplines.

Even though few of the project team , around six have got a chance to have experience sharing in neighboring country kidney transplant centers there was absence of orientation and on job training for providers joining the team lately which sometimes perceived as absence of attention from the top managers. The project currently has about 70 staffs including managers and project team. Because of the absence of locally available trained physicians the result of the project teams' work was highly dependent on the voluntary availability of transplant surgeons from university of Michigan. This has created unanticipated Schedule delay, cancelation and extension of transplant operations.

The project team also believes that there is no continues communication among departments to share knowledge and skill in an ordinarily and scheduled manner. However providers have

become skill full through time while the foreigners are performing the procedures and receiving order from them.

Regarding the construction and design of the center a similar challenge has faced to the engineer as there wasn't a hospital architect nationwide as a result redesigning the already existing building to be a transplant center was big challenge that results in difficulties to set clear design, requirement and deliverables related to construction.

4.7.4 Project Implementation Challenges from Resources

Unavailability of land, the building in which the transplant center is established wasn't initially build for transplant center rather for hotel. "Re building is very difficult than building a new one." said an engineer. This was the main cause of the space shortage in addition to in availability of building open land in the compound. This created design problem. Inadequacy of space to serve the customers/clients in the preparation work, post transplant, Intensive care units and admissions and rooms were results of the problem observed during actual implementations.

Regarding the clinical service resources there was lack of supply consistency throughout the year. Scarcity of consumables which seem small and cheep but not available in the local market were a challenge to implementation. Absence of backup machines like dialysis, laboratory machines, beds were also observed. Even though the kidney transplant center is a separate project it relies on SPHMMC clinical investigation services like X-ray and MRI this resulted in the long wait turn and schedule delay in the service.

Supplies even though were requested for purchases the orders will take long arrive. Sometimes Lack of attention to the continuous availability of different formats, sheets and documentation was seen.

Absence of benchmark to make an estimate of quantity, type and clear specification of equipments, machines, reagents, consumables etc required for the kidney transplant were resource related problems too. A data was also seen as a resource in which is absence regarding the national data on End Stage Renal failure status of the country was a challenge to plan effectively that has affected the implementation.

As the transplant service for a single patient will take around a year to return the patient to a relatively previous level of productivity patients who were out Addis were required to stay long in hotels or in rent houses with own expense. Absence of waiting area for people from rural Ethiopia was a challenge.

4.7.5 Project Implementation Top Management support

As a result of the uniqueness of the project setting up a clear scope, deliverable, plan etc was difficult. Similarly setting up a clear financial system for procurement and purchasing of all supplies unavailable in the local market was a challenge. This was also manifested by Bureaucratic flows for decision making in importing drugs, supplies, pharmaceuticals, equipments etc and obtaining foreign currency . While thinking of the new kidney transplant project there should have been a legal frame work that supports consents and legalization of live donors for kidney.

The in-depth interview results also show inconsistent attention, follow up and absence of recognition to the center and the clinical providers in the center.

Assigning the skillful and appropriate kidney transplant center director on permanent basis

Selection of effective experience sharing site for few health care providers as a short term clinical attachment was a challenge. Providers believe the team should get training in a machine on which he/she is actually doing the actual task. As different supplies come from different suppliers getting the right key and lock at the same time was challenging as a respondent top manager said. This was observed also practically; top managers choose a neighboring country for low cost where there was language barrier. The expected knowledge and skill wasn't obtained from the three months clinical attachment. Even patient card review and communication was very difficult.

The how parts were very challenging in relation to the unique kidney transplant service; designed how parts: How to import, How to prepare bids, what to prepare a specification, How much to buy, what legislations could prohibit from importing were challenges during the implementation.

4.7.6 Project Implementation Risk Identification and management

Patient related identified risks were low economic status of the community, inability to pay for preparations, transplant and post transplant medications. Poor quality of life in nutrition, hygiene etc were challenges to achieve the planned number of kidney transplant surgeries. Similarly readmissions can occupy the number of beds and rooms for subsequent transplant services.

Uniqueness of the service might have been identified as a risk of death during operations and post operations. Availability of uninterrupted electric supply was a challenge. A big drainage pipe inside the building floor of the transplant center was a risk identified and was a challenge to implementation as it affected the budget and schedule of construction.

Absence of other back up suppliers other than the only Kidney transplant center in the country was a risk when there is a sudden stock out occur because of internal and external facors like absence of foreign currency and political stability which could also lead to increased defaulter rate and problem in adherence to the follow-up.

Clinical condition related risks like viral infections and HIV that cannot be managed as per the current protocol of the country.

The future probable risks identified by respondents were Inability to afford for paying medications after free 2 months post transplant supply. Finding the appropriate donors and performing intensive laboratory and clinical investigations was a challenge and loss of experienced employee of the project like transplant surgeons.

Sophistication of technologies used like Laparoscopy and unique machines to handle and maintain. Similarly absence of hospital architect in the country to consult the design of the kidney transplant center was a challenge from engineering side.

The other most important risk is losing an expert in the area was a big challenge in the kidney transplant center; an expert who has participated from the initiation, planning and part of the implementation who has god deep-rooted knowledge, skill and the project has invested on is a big asset to the project.

Social and economic benefit of the project to the patient and the family; tangibility and sustainability

A nurse from the transplant center explained the benefit of the service as “Patients, recipients and their family who are attending them will have a chance to repeatedly communicate with their physicians, nurses, social workers and psychiatrists in the language they can understand and consider that they are blessed to get their kidney transplanted in their home country accompanied by relatives and their citizen; this is really a privilege.”

Similarly a social worker said “it is really un-comparable benefit for them to get this chance in Ethiopia. Their cost of dialysis ranges from 3000-4000 ETB per week. Even if they could afford and go out of the country for the service it costs them a million birr on average. Since the service is free of charge this all costs went to almost zero after the transplant. I can read how happy they are from their face’’

A senior nurse responded that “the option of having kidney transplant is like a very bright light in the deep darkness. I knew my patients who got engaged, who gave birth; I know most of my clients returned back to work after four months follow up and become productive. This is a continuation of hope and confidence. ”

Generally the benefit was expressed by respondents in avoiding cost of subsequent dialysis, medication and family time and reduced effect in negatively impact on the productivity of the patient and his/her family was valuable. Retaining the foreign currency could also be seen as a national benefit.

Almost all respondents agree that the kidney transplant center is currently equipped with the required equipments and staffs to provide the appropriate kidney transplant service.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATION

5.1 CONCLUSION

This study has been conducted in assessment of the challenges of project implementation by considering the case of St. Paul's hospital millennium medical college. Implementation challenges were considered to identify the status of project implementation challenges by considering only four challenge factors which were project team challenges, project resource challenges, top management support challenges and risk identification and management.

The observed challenges contributing for project team were problems in relation to provision of on job training with a mean score of 2.52 in a five point Likert scale. Obtaining skilled project team for the kidney transplant service as a result of the uniqueness of the project was also having a second small mean among the team factor. (mean=2.9,Standard deviation=1.221).

Considering the project implementation challenge from the perspectives of resource shows problems in on time delivery of purchase requested orders and on time request of purchases of consumables and supplies; the lowest results were (mean=2.24 and 2.29)respectively.

The challenges in top management supports were also reflected with low scores in demand for implementation reports and passing corrective actions and decisions. In the project team challenges adequacy of team number was the highest score and provision of on job training was with the lowest mean score of 2.52 in which more than 47% of the respondents complain about. Regarding the project resource challenges the highest mean score was on the allocation of appropriate budget where as on time delivery of purchase orders was the lowest mean showing

more than 76% proportion of respondents complain. Similarly demand for project implementation progress reports was observed as a contributor for top management support challenge. The result also shows highest mean score of possible risk identification at the early phases of the project.

The qualitative interview findings show the benefit of the project for the kidney patients at the end stage of renal (kidney failure) and to the families and the nation in general. However the uniqueness of the project, difficulties in obtaining supplies, pharmaceuticals, reagents and consumables were a big challenge as there wasn't any local supplier. Similarly the in-depth interview findings indicate lack of on job training as a project team challenge. Delayed request of purchase order and delay in obtaining purchased supplies were a major challenge in resource related factor. It is recommended that a continuous top management support is required to alleviate project implementation challenges and project team training is necessary for improving project performance and manages challenges appropriate

5.2 RECOMMENDATIONS

From both quantitative and qualitative finding a researcher recommend the following points to tackle the implementation challenges of the project and its sustainability beyond the life time of the project.

Develop a clear system for consistent and uninterrupted supply of pharmaceuticals, laboratory and consumables.

Providing professional development trainings which are task oriented which is focusing on the specific duties and responsibilities of health care providers to improve confidence and the total quality of service.

Assignment of middle managers /team leaders on continuous basis than the ordinary rotation to different sub units; to continuously obtain management support throughout the life cycle of the project especially in the implementation.

To solve inconsistent supply of medical stokes availing a backup mini store for pharmaceuticals and lab reagents will help to overcome un-expected stock outs.

Organize short workshops/seminars and discussions to identify and learn from challenges and take corrective actions through team work.

Engage partners in the supply of drugs and consumables. Allow private sectors to work in the area too with a regulatory based service provision. One hand –creates competitors and on the other hand opportunities for supply of stocks will be available locally when private partners are working in the area.

Develop electronic database record of patients to manage the space shortages associated with medical records of patients. In the mean time it will serve as a national benchmark database for end stage renal failure (ESRF).

To revise the live donor legislation as it abides only with blood tie and marriage relationships which could be a problem for few but against human right.

FMOH to give the initial attention to the center as it was a focus to perform a successful first transplant.

Putting the drugs required for kidney transplant in the national drug list registers and allowing specific competitor private partners for supply related services.

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Annex

Addis Ababa University

School of Commerce

Department of Project Management

Appendix A

In-depth Interview Guide

Dear Participant,

I am Abrham Getachew, a student of Addis Ababa University, alumni from department of Project Management. I am doing a Master's Degree thesis for the requirement of the degree in Project Management. For successful accomplishment of the research paper in titled "Project Implementation Challenges of setting up Kidney transplant Service in Ethiopia .The Case of St. Paul's Hospital Millennium Medical College."

I kindly request your cooperation and am sure that any of the information taken should be kept confidentially.

If you have any question or require further clarification please contact me with the following address.

Abrham Getachew

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Here below are some of the demographic data needed for analysis and the in-depth interview questions for review purpose.

Section I. Participants Background Information (Please encircle)

1	Respondents Position	1. Top Manager 2. Middle Manager 3. Project team 4. Other Specify----------
2	Sex:	1. Male 2. Female
3	Age	1. 20-30 2. 31-40 3. 41-50 4. > 50
4	Profession	1. Physician 2. Nurse 3. Lab-tech 4. Pharmacist 5. Other Specify----------
5	Highest education achieved	1. Diploma 2. Degree 3. Masters 4. PhD and above
6	Number of years of experience in kidney transplant project	----------year----------months

IDI guide (1)

Questions

1. What are the major problems related with the implementation of projects in the kidney transplant project? Probe: to launch the service? To conduct the first kidney transplant service? Etc

2. What are the specific challenges with the implementation projects from the perspective of the hospital? Probe: culture, organizational structure
3. What challenges were resource related challenges you have faced in implementing the kidney transplant project in the first 3 years? Probe: budget, pharmaceuticals , lab supplies etc
4. How was the human resource fulfilled for the kidney transplant service?
   Probe: What were the challenges in relation to human resource; specifically in selection, acquiring, training and developing the team? How the skill is acquired and will be maintained?
5. How was the top management involved in the implementation? Probe: participate in developing SOP, policy frameworks, allocating the necessary budget etc ?
6. Were the possible risks identified early that could affect the implementation? What are the actual risks faced during the implementation? How did it affect the implementation?
   Probe: people ,place, policy, procedure and practice related risks ?
7. As a service provider, manager in the project do you think that your communities benefited from the project of kidney transplant?
8. What were some of the problems encountered by the people who receive the kidney transplant service? (only to be responded by clinical staffs and medical related personnel's)
9. How do you see the involvement of partners in supporting the implementation of the project? Who were the stakeholders involved in the implementation of the project? Probe: was a specific expectation set for each partner?
10. Were the people receiving the service fully accepted the implementation of those projects compared with other possible options?
11. Finally what do you think are the issues left being not raised? And if any comment or suggestions you are welcomed.

    The following subsection is a specific question to the engineering department only to obtain a practical opinion in relation to the construction aspects.

1. Were the scope of the project clear
2. Were the specifications and requirements of the project clearly defined
3. Was there a major scope change during the implementation of the project
4. How was the procurement and purchases of supplies and materials happen for the kidney transplant project ?
5. Was the project completed on the planned schedule?
6. Was the project completed within the planned budget?
7. Were the projects completed based on the required quality?

THANK YOU FOR YOUR PARTICIPATION!

Appendix B

Survey questionnaire

Section A. Participants Background Information (Please encircle)		
1	Respondents Position	1. Top Manager 2. Middle Manager 3. Project team 4. Other Specify----------
2	Sex:	1. Male 2. Female
3	Age	1. 20-30 2. 31-40 3. 41-50 4. > 50
4	Profession	1. Physician 2. Nurse 3. Lab-tech 4. Pharmacist 5. Other Specify----------

5	Highest education achieved	1. Diploma 2. Degree 3. Masters 4. PhD and above
6	Number of years of experience in the kidney transplant center	_____

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: Project Team						
1	Staffs assigned in the kidney transplant service are selected appropriately	**1**	**2**	**3**	**4**	**5**
2	Staffs assigned in the kidney transplant service are with the appropriate skill	**1**	**2**	**3**	**4**	**5**
3	Staffs assigned in the kidney transplant service are provided with necessary on job trainings	**1**	**2**	**3**	**4**	**5**
4	Staffs assigned in the kidney transplant unit are adequate in number	**1**	**2**	**3**	**4**	**5**
5	Staffs assigned in the Kidney transplant unit are appropriately motivated to work as a team	**1**	**2**	**3**	**4**	**5**
Section C: Section C: Project Resource						
1	A baseline assessment has been conducted to implement the kidney transplant service	**1**	**2**	**3**	**4**	**5**
2	Appropriate budget is allocated to the kidney transplant service establishment	**1**	**2**	**3**	**4**	**5**

3	On time request of purchase request is prepared for the kidney transplant service	**1**	**2**	**3**	**4**	**5**
4	On time delivery of purchase request is made for the kidney transplant service	**1**	**2**	**3**	**4**	**5**
5	There is appropriate pharmaceutical supply throughout the implementation of the kidney transplant service	**1**	**2**	**3**	**4**	**5**
6	There is appropriate laboratory equipment & reagent supply throughout the implementation of the kidney transplant service	**1**	**2**	**3**	**4**	**5**
7	Shortage of consumables and supplies interrupted the schedule of the service implementation	**1**	**2**	**3**	**4**	**5**
Section D: Top Management						
1	The managers are involved in the design, implementation and follow up of the project- Kidney transplant service	**1**	**2**	**3**	**4**	**5**
2	The managers are involved when clarifying scope, purpose, intended use, and budget for implementation	**1**	**2**	**3**	**4**	**5**
3	The managers are involved in knowledge dissemination of lessons learnt in the kidney transplant unit	**1**	**2**	**3**	**4**	**5**
4	Management always demands for achievement reports and challenges faced	**1**	**2**	**3**	**4**	**5**
5	Decisions and corrective measures are made using the reports submitted	**1**	**2**	**3**	**4**	**5**
6	Management supports in identifying policy, legal and administrative issues that hinder the implementation					
Section E: Managing Risk						
1	Possible Risks were identified at the early phase that can challenge the	**1**	**2**	**3**	**4**	**5**

	implementation of kidney transplant					
2	The identified risks occur during the implementation phase of kidney transplant service	**1**	**2**	**3**	**4**	**5**
3	New and unanticipated challenges occur during the actual implementation pahse of the kidney transplant project	**1**	**2**	**3**	**4**	**5**
4	The identified risks happed during the implementation phase were managed easily	**1**	**2**	**3**	**4**	**5**
5	Lessons from the management of the risks are used in knowledge transfer	**1**	**2**	**3**	**4**	**5**

G. what do you think were the major implementation challenges of Kidney transplant service a St. Paul's?

H. what do you think are the threats of implementation of Kidney transplant service a St. Paul's in providing sustainable future service ?

I. what do you think should have been done differently to improve the kidney transplant service implementation at St. Paul's?

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j. Anything you would like to add?

THANK YOU FOR YOUR PARTICIPATION!