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An Evaluation of Project Management Practices in the Healthcare Sector of Ghana:

A Case of Family Planning Unit in KNUST Hospital

By

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DECLARATION

I hereby declare that this submission is my own work towards the MSc Project Management and that, to the best of my knowledge, it contains no material previously published by another person, nor material which has been accepted for the award of any other degree of the University, except where due acknowledgement has been made in the text.

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ABSTRACT

Family planning projects deal with preventive health or screening services, as well as referrals to other health care providers. The study sought to identify challenges of project management practices regarding family planning projects in the health care sector of Ghana using University hospital, KNUST as a case study. Put forward as objectives were to identify project management practices used in the delivery of family planning projects, identify the challenges of project management practices regarding family planning projects at University hospital, KNUST and to identify the strategies to alleviate the challenges of project management practices on family planning projects at University hospital. The study adopted a survey research approach. The main source of data was primary. The population of the study included channel lead, regional director of Ghana Health Service (GHS), GHS accountant, donor accountant, project implementation agency, hospital accountant, head of maternal department, midwives, nurses, district director of nursing and donor lead, all staff of University hospital, KNUST in Kumasi. The study adopted a purposive sampling technique to select 50 respondents. The mean as well as RII scores were the analytical tools employed on this study. The results indicated that as many as 88% of respondents had knowledge of project management practices. Usage of Checklists was ranked as the major variable in terms of project management practice /methodology that is applicable in the delivery of health care projects as revealed from the study's analysis. Findings from the results showed that the highest challenge faced by project managers in applying theory to practice in the health sector is risk associated with project staffing even though other important factors such as technical illiteracy, contingency and uncertainty and poor adherence to proven processes also exist. Improvement in team communication proved to be the best means of fast tracking the application of project management theories /methodology into practice in the health care sector. As a recommendation for the study, the Concept of project management should be inculcated into the tertiary education curriculum for the health care sector.

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DEDICATION

This dissertation is dedicated first and foremost to Almighty God and then to my entire family especially to my parents, friends and all my loved ones.

CHAPTER ONE

GENERAL INTRODUCTION

1.1 Background of the Study

The understanding of project management is said to begin with the identification of a project (Kerzner, 2009). A project is defined as a sequence of tasks and activities that are to be completed within a specific objective and specifications. Any project has a predetermined beginning and an ending date, it is multifunctional, it uses both non-human and human resources such as equipment, people and money as well as funding limits (Kerzner, 2009). The outcome of a project is normally measure using the main qualities of a project which is the iron triangle that is the quality, cost and time. Kerzner (2009) also adds that, customer relation is one of the major things to look out when it comes to satisfying the client on a project. Culture, ethics, interpersonal communication, motivation, group dynamics and leadership are some of the soft and subjective factors which has now been the focus of project management as compared to the earlier hard perspective or traditional objective (Jónasson and Ingason, 2009).

Healthcare projects are unique because of the products and services they are meant to provide. The services included as deliverables in healthcare projects generally relate to improvement of the consumer's quality of life (Bernstein et al., 2007). Santos et al. (2014) stated that health projects are different from projects in software, engineering and technology development projects. They have different focus, are concerned on providing conditions where people can be healthy and are essential for people or population welfare. According to the EU health program engineering and information technologies, is different from that of public health projects. Types of projects associated with health have been distinguished according to EU as: Research projects, aimed to increase

knowledge; Development projects for developing and testing of intervention to address particular problem whiles implementation projects are used for dissemination and implementation of an intervention.

Health care providers are given referrals from family planning projects. This same project provides related screening as well as preventive health services (Sonenstein et al., 2004). This is very significant because of the role family planning plays, which is normally the point of entry by individuals into the health care system. Primary health care services such as the testing, counselling, HIV/STD education, cervical and breast cancer screening are important services provided to women when they enter the health care system such as clinics (Sonenstein et al., 2004).

Family planning comes with its own problems which are common in the health care system but it also provides some unique features in the delivery of health care. An example is the focus given to women in their prime reproductive years (Sonenstein et al., 2004). The admission of clients which are male is a recent addition which is an innovation to improve the system. Moreover, low-income earners are equitably treated by providing services through a legislative act. The private and intimate aspect of a person's life is what family planning deals with most importantly. The cultural values and contexts in the provision of health care needs to be treated very sensitively as well as the several stages of a person's reproductive life (Sonenstein, et al., 2004).

Project management techniques have been put forward as a partial solution, notwithstanding opinions that "project management remains a highly problematical endeavor" (White & Fortune, 2002), indicating that many of the problems of implementation using projects remain unresolved.

1.2 Problem Statement

For over a decade now, it has been suggested that use of project management tools and processes within the formulation and implementation process could improve the outcomes of a strategic implementation (Grundy, 1998; McElroy, 1996). Contemporary project management relies on team-based structures to accomplish collective work efforts. These structures emanate from the complexity of specialized and often distributed knowledge workers who are required to accomplish project goals across industries and global contexts. In addition, project work often exists in dynamic organizational and marketplace environments that place a premium on project teams who can adapt quickly and creatively to the uncertainty and ambiguity that affect the well-known triple constraints of time, resources, and outcome. The roles that team members take in managing projects are an important dimension for analyzing contextual factors in the management of projects and teams (Crawford & Pollack, 2004).

Project management is accepted as a: “young discipline” academically (Jugdev, 2004), especially compared with the traditional areas of economics, strategy, and organizational theory. It is, however, becoming increasingly accepted that more and more work within organizations is project-based, and skills in the management of projects have become a part of the accepted skills of the effective manager. There is evidence that interest in project-based research is moving from the tools and techniques of project management, to a more behavioral bias, linking with some of those more established academic areas. In addition, although the management of projects is a relatively under-researched area of management activity (Shenhar et al., 2005), there is considerable interest, both from academics and practitioners, as to how it can benefit the organization.

Family planning projects saves lives and can improve the health of women, children and society as a whole. The number of projects and the limited resources to address each

project has resulted in a need for improvements in the ability of healthcare providers to develop the systems and skills necessary for improved project selection, improved project definition, and improved project delivery (Badri et al., 2001). A key component of successful project delivery is the project manager and the skills the project manager possesses (El-Sabaa, 2001).

The complexity of many healthcare projects and the added complexity of the healthcare environment require skilled project managers in order to successfully implement projects that may influence life-and-death decisions, patient safety, and healthcare costs (Schwalbe, 2013). In order to assist project managers in maintaining or developing skills necessary to better achieve these goals requires the skills perceived necessary for success to be prioritized, studied, and better understood (Jiang, Klein, & Margulis, 1998).

Most family planning project are instituted and funded by private organisation in collaboration with Ghana Health Service and the healthcare facility, so this research sought to find why most family planning project tend not achieve its initial purpose. Also, family planning project practices have the tendency to influence health outcomes. However, studies conducted in this area are few and hard to come by and it is in view of this that this study is deemed necessary to be undertaken to assess the effects of family planning project practices in the healthcare sector in Ghana using University hospital, KNUST family planning unit as a case study.

1.3 Aim and Objectives of the Study

1.3.1 Research Questions

1. Which are the project management practices used in the delivery of family planning projects at University hospital, KNUST
2. What are the challenges of project management practices regarding family planning projects at University hospital, KNUST?
3. What are the effects of project management practices on family planning projects at University hospital, KNUST?

1.3.2 Research Aim

Generally, the study sought to improve on family planning project practices in the healthcare sector in Ghana using University hospital, KNUST as a case study.

1.3.3 Specific Objectives

The following objectives were put forward to realize the aim of the study:

- 1) To identify project management practices used in the delivery of family planning projects, at University hospital, KNUST.;
- 2) To identify the challenges of project management practices regarding family planning projects at University hospital, KNUST; and
- 3) To identify the strategies to alleviate the challenges of project management practices on family planning projects at University hospital, KNUST

1.4 Scope of Study

Contextually, the study was limited to three main areas. These are: effects of project management practices on family planning projects at University hospital; project management practices at University hospital; and the challenges of project management practices regarding family planning projects at University hospital.

In terms of geographical scope, the study was conducted in Kumasi at the University hospital, KNUST.as a case study.

1.5 Significance of the Study

In healthcare entities such as hospitals, clinics, or healthcare corporations, project success is required to meet regulations, provide effective, safe, and efficient services, and to ensure profitability. The study will bring to bear the the significance of project management practices in improving family planning projects. This is expected to provide current project managers the opportunity to re-assess their current practices. Also, the identification of the significance of project management within a health care institution will help businesses, HRM practitioners, and policy makers as to the areas that must be gotten right for effective project management practice.

1.6 Research Methodology

The study adopted survey research approach using case study. The main source of data were primary and secondary data. The primary data was collected through the administration of questionnaire whereas the secondary data through publications, articles, conference proceedings, journals and books. The population of the study includes channel lead, regional director of Ghana Health Service (GHS), GHS accountant, donor accountant, project implementation agency, hospital accountant, head of maternal

department, midwives, nurses, DDNS and donor lead on the project. The study adopted purposive sampling technique. The study further employed both descriptive and inferential statistical tools in analysing the data collected.

1.7 Organisation of the Study

The study consisted of five chapters. Chapter one was the introduction; and embodies the background of the study, problem statement, objective, research questions, significance of the study and organization of study. Chapter two presented on literature review; and it is made up of definition of key variables and evaluation of thematic areas. Chapter three was the research methodology. Chapter four comprised of data presentation, analysis and discussion of findings. Finally, chapter five provided a summary of findings, conclusions and recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter thoroughly studied important literature from previous works related to this topic. The review of literature was undertaken in the following form: concept of project, concept of project management, Project Management in the health care setting and other key concepts.

2.2 Overview

2.2.1 Project

Project as a term originated from the Latin word “Projectum”, meaning “to throw an idea forward” and further transforms to an offer (Ruuska, 2001). The simple contemporary understanding to it is that, a project is a temporary endeavor embarked to reach a specific goal (Heerkens, 2001). In addition it is noted that project tends to have a budget and schedule which is fixed (Ruuska, 1999). In Heerkens(2001),there is more emphasis on the functional motive of project starts by stating the response to a need and solution.

Any activity that can be examined is termed as a project according to Ruuska (2001). A pack of wolf, through a well-planned strategy by the leader can catch a prey (Ruuska, 1999). The probable reason for the vagueness of the word project, has culminated in views which are dissimilar to its nature. Project Management is now a field studied in almost all disciplines, this has been approved by economics and other effectual business management.

Project is defined as a temporary activity that one embarks on in an attempt to create a distinctive product or service. Temporary in this regards implies that, there is a definite

ending point to a project and distinctive on the other also means the product or service is unique from other similar products or services (PMI, 1996). When project encompasses a distinctive scope of work that is constrained by cost, time and purpose with the aim to create or vary a product or service so as to complete a favorable change defined by quantitative and qualitative objectives it is termed a human endeavor and may legitimately be regarded by its stakeholders as a project (Cooke-Davies, 2001). Project is also defined as a “value creation undertaking based on specifics, which is done or agreed timeframe and under constraints, including resources and external circumstances (Ohara, 2005).

A project is regarded as a business case that indicates the risk and benefits of the venture, demonstrating a distinctive set of deliverables, with a limited life-span, by exhausting identified resources with well-known responsibilities (Bradley, 2002).

The shared themes in these definitions is that projects are distinctive in their output, having a definite starting and ending point, are temporary in nature and are carried out to manifest the organization’s strategic objectives. These temporary structures are playing a vital role in today’s modern organizations and a growing interest is recorded in the significance of these temporary structures in organizations.

2.2.2 Types of Projects

Projects are carried out in a comprehensive range of situations and they differ from each other in size, scope, industry etc. This difference makes it difficult to create a single comprehensive taxonomy for the projects (Shenhar and Dvir, 2005). There are two well-known approaches for the classification of projects. These are:

- Goal-and-method matrix presented by Turner and Cochrane (1993) and

- The four-dimensional NCTP (novelty (N), complexity (C), technology (T) and pace (P)) framework presented by Shenhar et al (2005).

The goal and mixed method classifies the projects into four types. This classification is based on the principle of how well the goals and methods of the project is defined.

Turner and Cochrane (1993) defines that, the type 1 project in goals and methods matrix are the ones in which the goals and methods are well defined. Typical projects in this classification are the engineering projects. The Type 2 projects are those projects especially those with development of product, with vague methods but well defined goal. They perceive that the type 3 projects are those with which the methods are well-defined but the goals are not that clear. Software development project falls in this category. The type 4 projects in the goal and method matrix are those in which both the goals and methods are not well defined. Projects related to research and organizational change falls in this type of projects.

After a series of research studies Shenhar et al (2005) developed the NCTP framework. This framework involves four dimensions: novelty (N), complexity (C), technology (T) and pace (P). Each dimension includes at least three different types of projects.

The first dimension of novelty is defined as a product novelty: which means that how the new product is to its potential. It also means that how much the customers are familiar with this kind of product and how much they will use and benefit from it. In this dimension, there are three kinds of project types, which are: derivate product, platform product and breakthrough product. In first type of projects (that is: derivate products) the existing product is improved and extended. This kind of projects includes cost reduction, product improvement, product modification and additions to existing line of products. The second type of projects (that is: platform products) are the ones in which a new generation of an existing product is developed/created. This kind of projects includes the

development/creation of new families of product to form the basis for numerous derivatives. The third kind of projects in this dimension are the ones in which a new concept, idea or a new use of a product is introduced in the market (Shenhar et al 2005).

The second dimension is of technological uncertainty. The types of projects which fall in this dimension are the low-tech projects, medium-tech projects, high-tech projects and super high-tech projects. The higher the technological uncertainty at the time of project initiation requires longer development phase, more design cycles, more testing etc.

The third dimension is of complexity. The types of projects in this dimension are of assembly level, system level and array level projects. The assembly level projects involve in creating a collection of components which at later a stage combined into a single unit. This single unit is involved in performing a single function such as a standalone product or service. The system level projects involve a complex collection of interactive elements and subsystem. These jointly dedicated to a wide range of functions to meet a specific operational need. The array level projects in this dimension are the projects which deals with large, widely dispersed collection of system that works together to achieve a common purpose. The examples of this kind of projects are the city public transportation system, national air defense system, or interstate telecommunication infrastructure.

The fourth dimension is of pace. The types of projects in this dimension are the projects which differ by urgency, time and goals. This is identified in this framework as pace, fast-competitive and critical blitz (Shenhar et al, 2005).

Apart from these two well-known approaches, Khazanchi and Zigurs (2004) categorise the projects into three types based on their complexity. The complexity is defined in terms of attributes of team size, culture, language, gender composition, personal characteristics, resources and knowledge. The three main types of projects are as follows:

1. Lean Projects
2. Hybrid Project
3. Extreme Projects

Lean Projects:

Lean projects are defined as having low capacity, narrow scope and relatively low risks. Such projects tend to be easily subdivided into practicable parts due to comparatively clear and tangible requirements or results. The goals in these projects are usually unambiguous and therefore the outcome is achieved in short time using known methodologies.

Hybrid Projects:

Hybrid projects are defined as having varying level of complexity, scope and risks. These projects require a management approach that emphasises coordination between people and the activities. Therefore in hybrid projects a special emphasis should be given to the technologies that enhance coordination (Khazanchi and Zigurs, 2004).

Extreme Projects:

Extreme projects are defined as having high complexity, broad scope and high risk. Such projects are generally mission critical. Consequently, risky projects entail intense activity and participation by a number of teams and stakeholders. Therefore a risky project requires a management approach that emphasis on communication.

Communication is required not only to develop a shared understanding of the problem before any work can begin, but also at all stages of the project (Khazanchi and Zigurs, 2004).

There are three forms of projects postulated by Ruuska (1999) and they are:

Normal projects: Appropriate time set aside for this project. This takes into account the reusable resources and the intended value level by which to schedule the project.

Express projects: This type of projects that keeps shifting time. Adding more capital or lowering the value is a means of completing the project quickly.

Catastrophe projects: Practically anything goes to save time. Everything that ought to be “completed yesterday” . Quality flaws and working tirelessly is tolerated, as time is saved.

2.2.3 Project Development Stages or Life Cycle

Often times, at development stage, the division of project is into three or four phases. These phase however may also be referred to as project life cycle. Regardless of the methodology being used, these developmental stages remain the same. The stages are categorized as:

- Initial Phase
- Intermediate Phase
- Final Phase (PMI, 2004)

For reasons like complexity of certain specific project, the division of the phases can be further divided into sub phases. The project life cycle has been divided into six phases by Labuschagne and Brent (2004). However, under the broader three phases as described by PMI, these phases can be categorized.

2.2.4 Project Phases

Projects is divided into segments to elucidate essential indicators of the project each time. Even though terms and phases used varies marginally between sources, the basic elements which are the same according to Russka(1999) can be found. This research study will analyze a structured project, with division of the projects phases as below;

- Phase 1 – Initiation,QA
- Phase 2 – Planning,

- Phase 3 – Execution
- Phase 4 – Controlling and
- Phase 5 – Closing.

2.2.4.1 Initiation

Project initiation phase is the first stage of the cycle of any project management. It is the stage at which the project brief, development, selection and prioritisation through to the delivery of the results and back to business. A selection of a project manager to lead the execution of the project is the foremost objective in this phase. The accountability of the project rest with the project manager. The project manager who is in charge of the project is out doored to all stakeholders. (Frigenti, 2002).

The project manager who is briefed, takes the process and the project report organised during the project definition phase, entailed in the planned (Frigenti, 2002).

2.2.4.2 Planning

The next stage after the initiation phase is the planning phase, and the most important stage of a project cycle, as the project is positioned during this period. A successful project is grounded in this phase (Ruuska, 1999). When goals are not specific, it often leads to project failure and this causes dissatisfaction from stakeholders. The planning phase is the most central and important phase, according to Ruuska (2001).

According to Andersen, 2004, the planning phase is the phase at which decisions are taken and what needs to be delivered and how to achieve the desired results. It is apparent to concentrating on planning and how to achieve it, before discussing the desired results (Andersen, 2004).

The responsibility of the planning phase lies with the project manager (Ruuska, 2001). The definition of the project and planning takes time and should not be done hastily, with hasty promises. It is at this time that a coherent, broad, and strong thinking to produce a definition to a project must be applied. Predicting the future of the project at this phase is difficult. According to Ruuska, 2001, it is good to know that, there are few projects which goes according to schedule. This makes the planning phase important and prevents making good outcomes as purely unplanned (Ruuska, 2001). How goals are achieved is the most important function of the planning phase. The plan serves as a tool to monitor the project and the implementation of the designed project (Ruuska, 2001). According to Andersen (2004), the purpose of planning is in other to establish a mutual consent among team members tasked, in other to ensure that goals are achieved. The plan acts a summary of the entire work to be executed and estimates resources budgeted to meet the set goals (Andersen, 2004).

Further, the planning phase can be divided mainly into two fundamental levels. It is of much importance to draw plans that can be properly implemented, monitored as well as getting the involvement of each concern person. Provision of a level must be made to indicate where decisions are made and the other, the results delivered by the project and how to achieve it.

This phase should equip everyone to have an understanding of the project at hand. Motivation of project team members and platform of cooperation must be considered for the task ahead. The process must sort to encourage the participation of all stakeholders in both phases of planning and project execution (Andersen, 2004).

We strongly accentuate the motivational and inspiring aspects of the planning phase. This phase is often neglected which makes it a tedious chore for the project manager and

the project team members. This culminates into lack of ownership of the plan by all the stakeholders and results in project failure.

Planning at the two levels is a prerequisite for success as all major stakeholders have thoroughly discussed their limitations of the project in manner that can be comprehended.

Further, the stakeholders discuss and obtain information before change control is initiated at the level of the need. In planning, this level of difference enables the stakeholders to participate in the process. A typical example of planning inadequately is in hurriedness. Often times in this phase, detailed research, planning, analyses, specifications, and cost and price evaluations, documentation of contracts, among many other functional work required to fully develop the integrated project plan baseline, and to lay down the project deliverables are carried out (Frigenti et al 2002).

2.2.4.3 Budgeting

Funding is an important factor for any project to function properly. Funding and cash flow are essential for organization to function hence the need for monitoring and controlling. When a case for a business for a new project is presented, the investments, salaries and facilities, capital equipment and the estimated schedule is covered. Once the budget is approved, a detailed cash flow schedule is prepared by the project team during the planning stage of the project. The budget then serves as a benchmark of which the project team must follow, once the budget is approved. (Lewis & Wong, 2004). Spending during the work life of the project is the responsibility of the project team led by the project manager with a deviation allowable target of 10 percent. The project team have control over the budget and this system help reduce any unnecessary control in

terms of cash flow because of proper cash flow projection and financial system. (Lewis and Wong, 2004).

The project plan designed by the major stakeholders is the major deliverable from this phase. The project plan sets the foundation for the different components of the project. In order to obtain the approval for the project to continue with the detailed project planning phase, the project definition report is prepared by the project team. This involves an important control and support for the project cycle (Frigenti, 2002).

2.2.4.4 Team Structure

Team structure in project management is mainly divided into two groups depending on their formality. Formal Groups are constituted base on the organisational process assets of the firm, which is supported by the firm's organisational structure. The function of this group is clearly specified and resources limited, often in writing. The other group which is informal are usually loose, more erratic in behaviour and often much more fun (Hunt, 1992). In evaluating the behaviour of both groups we need to separate between the tasks done by both teams, that is in terms of its content and how they interact between themselves (the process)

2.2.4.5 Execution

Execution is the phase where the project plan is implemented. Much time should be used in monitoring the project by the Project Manager during the execution of the plan, whiles the project team concentrates on the project execution. The Project Manager should not keep the other team members in the dark but feed them with the right information, for a successful execution of the project plan. Upper management will be updated periodically ad on need basis of the project update, evaluate work done and provide support where

needed for the success of the project. The management normally focuses on key areas during the project execution stage, which includes;

1. Project progress against the committed milestone schedule: Is the project team progressing according to the approved plan? Any major obstacles ahead? Will the project team be able to complete the project on time and on budget?
2. Project human resources: Have adequate resources been allocated? Any additional resources required?
3. Project budget: Is the project team spending within the approved budget? Any new funds required? Would any additional project spending accelerate the project so that it can be completed ahead of its original schedule? Would this investment be worthwhile?
4. Recognize and celebrate even small successes: Do not forget to reward the team and recognize even their small success. Remember that “success breeds success.

A project plan is produced and agreed upon at the end of the project planning phase, and authority is given to proceed with the project execution phase.

2.2.4.6 Project Monitoring and Control

Sometimes monitoring as a project phase can be misleading as it has the tendency to be a function of management and as such runs mostly simultaneously with the execution phase of a project. A characteristic of a good project manager is the ability to monitor the progress of the project regularly. The planned project objectives must be achieved during this phase and that of the closing. The baseline of an integrated project encompasses the skills, techniques and methods to be used in the execution of the project. A plan that is poorly executed, will cause a delay in the project. The project monitoring and control which occurs during the execution phase, deals with the application of correct responses

needed when necessary. However, through a constant, reliable review, reporting and revision this can be until the completion of the project.

2.2.4.7 Project Closing

By definition a project is said to have a limited life – that implies that a project will at a point that has been planned. The mere fact of realizing the product, service or outcome makes the project recognized. A project comes to a close formally. Formal project closing is done during this phase. (Frigenti et al, 2002).

Often times when a project goes as planned, a review meeting is held to evaluate the project life. The meeting is held between all stakeholders. Evaluation at the end of the project is done by the stakeholders whether it is a new product or service. It is expedient to undertake a proper review meeting for all parties in order to establish ways of improving on the project span and other relevant matters.

2.2.4.8 Project Environment

PMI (2004) stated that the success of a project fundamentally depends on the environment of the project. Most projects are basically planned and executed within certain social, economic and environmental context. These variations can further affect the outcome of the project positively and negatively. Projects and its environments are series of overlapping circles all of which largely contain the immediate environment and signifies the local community, national government and its agencies. (Gilbert, 1983).

2.3 Importance of Projects in Organizations

According to Mintzberg (1983) who cited in Soderlund (2004b) Most of the progressive industries in the world are project intensive. The use of styles that proficiently manages the temporary endeavours, which can be critical to its objectives can be use for such

projects in an organization. This will lead to more efficiently design approaches on how to manage projects by many professionals and researches. This research is mainly focused on the implementation of single projects. Project research spans a variety of level analysis. Management of projects are clearly due to current devotion of project research. A suggestion of using management of projects in modern firm was proposed by most researches (Soderlund, 2004 a and b). The management of projects is discussed in the next section.

2.4 Project Management (PM)

. We must comprehend the discipline of business project management in order to appreciate how to make project work more effectively. Project management aims at organizing and managing human resources in order to complete project within stipulated time, quality, scope and budget. A set of ideas, systems, and approaches used by individuals to plan effectively, control and execute project work is referred to as project management. In other to effectively plan, resource, decide, control and reorganize, project management serves a sound basis (Richman, 2002). In a nutshell, project management can be described to be an efficient and logical management tool. Project management is a highly involving management concept. According to Richman (2002) and Ruuska (1999) project management has not been acknowledged as a formal management concept until operations research in the 1950's and 1960's. This operations developed strategies coupled with special tools in the management of expensive, major aerospace projects (Richman, 2002). It becomes unmanageable to deal with this type of projects without the use of formal project management processes and tools. Optimization of project cost, time and quality are the functions of project management in its modern sense (Richman, 2002).

Project management like any discipline stems out from a need, which determines various activity that are undertaken in an informal and incoherent manner (Springer, 2001). Many companies introduce products into the market faster than their competitors when they turn to adopt sound project management systems. Currently, the formal project management has become the best and most identified way of working as it allows for innovation and new product development (Springer, 2001).

The foundation of most management of projects can be traced back to the beginning of civilization, but modern project management has its roots in the Second World War. It was used in the development of construction and defense industry during the industrial revolution. The demand of project management has increased and out of it birthed a number of projects in broad range of industries (Cooke-Davies and Arzymanow, 2003)

2.4.1 Project Management Definition

Project management can be defined in many ways. Some of these definitions are as follows:

The collection of tools and techniques to direct the use diverse resources in achieving a successful project is defined as Project Management.

Project Management is the expressing of plans, organizational skills, monitoring and controlling of aspects of a particular project and the drive of all stakeholders involved to execute an objective safely and in an agreed time, cost and performance criteria (APM, 1995).

The applications of knowledge, skills, tools and techniques to a project activity to meet its stipulated requirement can be termed as Project Management. The integration and application of project management processes which includes the act to initiate, plan,

execute, monitor, control and close ensures the accomplishment of Project Management (PMI, 2004).

According to O'Hara, 2005, project management is a concept of capability, where activities are professionally delivered with due diligence. Where the end result of the project meets its demands.

According to Turner (1996), project management can be described as an art or science as it translates the unseen to seen whereas Atkinson (1999) views it as an evolving phenomenon. In the past years project management was applied to only single projects (Kartam et al. 2000). However, currently many more institutions have adopted this concept. This is due to its approach to managing project (Morgan, 1987). This provides consistency in results mostly when dealing with new initiatives. According to Artto et al., 2008 it has the ability to change the organizations ability to perform better. The organization can boost both personal and shared productivity when project management is used. In other to do so there is the need to put up a consistent system that enshrines best practices of management (Milosevic and Patanakul, 2005).

2.4.2 Evolution of Project Management

The beginning of what is referred as the modern organization in early 50s was marked by the industrial revolution. It was at this time that the western countries, had full swing of their economic activity, with a high impact of both engineering and construction project. The called on for a high demand for tools and technique which could be able to help organize and manage projects at different locations (Abbasi and Al-Mharmah, 2000). It was at this time that the concept of network analysis and planning techniques such as Program Evaluation and Review Technique (PERT) and Critical Path Method (CPM) became the light to the growth of project management. In 1960s, the use of these

techniques were given a massive boost and continued to prevail in the construction industry (Crawford et al 2005). Shenhar (1996) cited in Crawford et al (2006) observed in 1970 that a teamworks focus was an important characteristic of project management. While Stretton (1994) cited in Crawford et al (2006) notes 70's era as central project organizations were typified with project risk and external influences (Crawford et al. 2006). This led to the development of standards which were accepted international for project management.

Although project management grew in term of a profession until 1980, but still it was perceived as the sole domain of engineers, finding a niche specifically in the civil engineering industry (Van Der Merwe, 2002). Winter et al. (2006) conducted a research on the future direction in the field of project management and suggested five future directions for project management.

The evolution of project management from single to multi projects have been discussed by other prominent researchers (Kwak and Anbari, 2009; Soderlund, 2004; Cicmil et al, 2006; Artto et al, 2008).

2.5 The Nature of Healthcare Projects

Many healthcare organizations these days, have executed several projects. The individual entities are able to develop a project as compare to a whole organization or federal agency. However, some peculiar aspects of healthcare projects include the following:

Patient Quality: Most healthcare facilities are constructed to prevent, improve, or deal with health issues. People in healthcare delivery do their best for their patients but modern trends and technologies have changed that. For instance many doctors think it was best to sedate women during child delivery (Schwalbe, 2013).

The role of government: Government often sponsors healthcare projects, initiates laws or standards within which private healthcare projects (Schwalbe, 2013).

Financing in healthcare varies in many healthcare organizations: Many healthcare organizations faced difficulties in estimating their revenues due to complex insurance system in the country. For example, the emergency rooms unit cannot turn away patients who cannot afford, and most patients cannot predict how much their care will be paid for by their insurance companies (Schwalbe, 2013).

Donor funding: Most healthcare projects are funded by donations or through donor funds to complete abandoned projects of most healthcare facilities. In other words, flexibility of budgets of many healthcare organizations is not-for-profit: However, these organizations operate on missions to impact communities with their health facilities to fulfill their missions. These type of organizations often needs inputs and assessments from various communities (Schwalbe, 2013).

Healthcare is very personal: People have very different attitudes about healthcare, such as how private or open they are about discussing it, how much they are willing to spend on it, what types of services they will use, etc. (Schwalbe,2013).

Care quality, cost control, and external review are key characteristics: Unlike many other projects, healthcare projects normally include these three (Schwalbe, 2013).

Healthcare projects, are keen on providing conditions which helps improve the health of people and it is vital for population welfare (EU, 2011). Medlin et al. (2006) analyzed the elements that contribute to the development and execution of cost-effective interventions in healthcare and point the benefits of strong leadership, effective management, realistic financing arrangements, country ownership, openness and receptivity to learning by doing, constantly improving on strategies and processes by incorporating new research findings and technical innovation. Other study Tempfer and Nowak (2011) addressed organizational development in healthcare and acknowledged

the following success factors: sufficient financing; partnerships; advanced project logistics; small scale projects; and adequate internal and external communication.

The public health view on successful project is dependent on the product or services created at the end, the quality of its technical and methods used in achieving the project, and the means by which the project is managed. So then when a project is said to be successful then it is to a wide scope useful (EU, 2011). Identifying the factors that contribute to successful prevention of diseases and also health promotion projects developments and its implementation. First, this knowledge can be used as a tool for prediction and evaluating objectively the project. This gradually over time determines a project failure or assist in performance improvement. Secondly, the awareness of public health success factors will help reduce or eliminate the issues that results of going to through the wrong direction. This results in a high value placed on project planning, especially in the quest of finding risks and other advantages or benefits.

Thirdly, it may add to the definition of relationship between project success factors and project success criteria. Also, it helps in identifying, for example, significant relationships between project attributes and its success, and in providing project managers relevant information about success factors that are relevant to the completion of the project or project phase successfully.

2.6 Empirical Review

Frontline departments, care services, back office recordings, administration, cross-departmental projects and in broad hospital enhancements such as cost reduction, productivity improvement, bed availability and employee retention are some of the diverse ways in which projects have been carried out in healthcare situations (Taner et al., 2007).

Due to the zero tolerance for mistakes and potential for reducing medical errors project principles are well suited to the healthcare sector (Kwak and Anbari, 2004). Also lean tools in the healthcare sector, helps in the addressing of critical challenges such as medical errors, cost increases and inadequate staffing (Jimmerson et al., 2005). Project Management has the prospect to improve the healthcare industry as much as they have to the other industries (Schwalbe, 2013).

There has been large focuses on direct delivery of care, administrative support, facilities expansion and financial administration by projects management in healthcare (Anthony, 2006). According to Michel et al, 2013, the aim is to make better the clinical procedures, find and eliminate waste from pathways of patients, enable employee to examine their place of work, and to finally improve upon the quality, safety and efficiency of work.

Commonwealth Health Corporation in 1998 in the US state of Massachusetts was one of the first healthcare organizations to have implemented the concept of Project Management (Thomerson, 2001). With help from consultants from General Electric, the implementation gave good results with an increase of 33 per cent in radiology throughout and a decrease of 21.5 per cent in costs. Other healthcare organization such as; Mount Carmel Health System in Ohio, Charleston Area Medical Center in West Virginia and Thibodaux Regional Medical Center in Louisiana were other following after Commonwealth Health Corporation (Schwail and DeYong, 2003). Reported showed Mount Carmel savings gain of \$3.1 million from their Six Sigma program, whereas Charleston Area Medical Center using Six Sigma on supply chain management achieved \$841,000 in savings, while Thibodaux Regional Medical Center reported savings of more than \$475,000 per year in 2001 and 2002. The Six Sigma approach at the University of Texas MD Anderson Cancer Center was illustrated by Benedetto (2003) while Elsberry (2000) described how the same institution increased the number of

examinations conducted by 45 per cent with no increase in resources (i.e. machines and shifts).

The Red Cross Hospital in Beverwijk, in the Netherlands was one of the first healthcare organizations outside the US to implement Project Management with the assistance of the Institute for Business and Industrial Statistics at the University of Amsterdam. After three years of implementation, a total of \$1.2M of savings was reported (Van den Heuvel et al. 2004).

Both Six Sigma and lean were applied in the National Health Service (NHS) in the UK, (Proudlove et al., 2008). With many of its principles included into the 'Productive Ward' initiative, Lean is currently the focus of attention for the NHS. Having highlighted the problems in identifying customers and processes in healthcare settings and the importance of using clear and appropriate terminology, in their study of the NHS Lean Six Sigma implementation Proudlove et al. (2008), underlined the scope for a more unified presentation of process improvement approaches.

Project Management in healthcare has now spread since those first examples were used. Success stories include improving timely and accurate claims reimbursement (Lazarus and Butler, 2001), streamlining the process of healthcare delivery (Ettinger, 2001) and reducing the inventory of surgical equipment and related costs (Revere and Black, 2003) are some of the identified benefits.

Although healthcare meets similar barriers as for other industries while implementing projects management, two most specific challenges to healthcare are relevant. These challenges are measurement and workforce psychology. Considering measurement, it is often difficult to identify processes which can be measured in terms of defects in healthcare (Lanham and Maxson-Cooper, 2003). With regards to psychology of the

workforce there is a risk of rejection or acceptance tinged with cynicism as it becomes important to avoid the use of business jargon when dealing with healthcare professionals.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter explains the methodology for the study as it gives an overview of the procedures that were used and the reasons for using such procedures. The chapter includes the Research Design, Population and Sample, Description of Instrument, Data Collection Procedure, Data Analysis and Limitation of the Study.

3.2 Research Design

According to Mugenda and Mugenda (2003), research designs provide a framework that is used in the analysis and collection of data. The study used the survey research design. Survey research design, scientific samples and interviewing people to analyze and report what they said. Ohaja (2003) affirms that survey is usually employed in studies of attitudinal and behavioral trends with the researcher seeking to uncover their demographic psychological underpinnings. The study also adopted the quantitative approach in collecting primary data.

3.3 Population of Study

Any group of individuals that a researcher seeks or wants to generalise his/her findings or results is referred to as the study population. According to Creswell (2003) one has to be clear about the study population before data collection takes place. The population for this research were Administrators, management and staff of University hospital, KNUST in Kumasi. The choice of population sufficed for the purpose of this study because project management within a hospital involves all these people identified as the target for

the study. These mixtures therefore engendered and ensured a comprehensive and balance data from the hospital.

3.4 Sample and Sampling Techniques

According to Muijs (2004), the key aim of a study is undertaking to ascertain ideologies that have a universal submission; however, one cannot do that by studying the whole population before making any conclusion. Hence the need for sampling from the wide range of population. Sampling therefore is the process where smaller portion of a given population is taken for observation and analysis. For the study, fifty (50) was the sample size selected for study. A purposive sampling techniques was used in the selection because family planning is a specialized service and just a few people are involved.

3.5 Data Collection

3.5.1 Type of Data

Quantitative data was used for the survey. The nominal scale was used to ask question on the gender, the age, and the qualifications of respondents in the study.

3.5.2 Source of Data

Primary and Secondary data are distinct in any research. The sources of data used in a research work reveals whether the researcher reported assumptions based on first-hand information or something more reliable. The secondary source of data was used for the study. By the means of internet, published articles as well as journals, published articles and the internet secondary data were collected.

3.5.3 Instrument for Data Collection

A questionnaire was used for the data collection. Most of the questions in the questionnaire were designed using Likert scale strategy, which measures respondents' opinions by asking the extent to which they agree or disagree with the issues at stake.

3.5.3.1 Instrument Validity

Validity was assured by peers and supervisors who cross checked the instruments for data collection to ensure it was in line with the objectives. The test-retest technique was used to test the validity of the research instrument. The test involved administering the same instrument twice to the same group of subjects.

3.6 Ethical Consideration

In carrying out research, truthfulness and integrity are also required and not only on the basis of know-how and diligence. This is done with the sole aim of protecting and recognizing the human rights from being infringed upon. In the course of undertaking the research, factors such as ones right of self-determination, anonymity, confidentiality and informed consent were critically observed. Respondents for instance, assured that there were no potential risks or cost involvement on their side as they were told the purpose of the study, the procedure that would be used to collect the data. A very important ethical responsibility regarded when conducting research is the scientific sincerity. Hence the researcher considered it in the process of collecting of data for the study as respondents were allowed to participate voluntarily. It is believed that when respondents are forced to respond to information for a study, they may give false information that will not help arrive at the objectives of the study. The objectives of the study, the possible implication and effect of the research were made known to respondents of the study as well. With

respect to this, the information gathered was said to be based on an informed or mutual consent. The researcher again considered the confidentiality of the study as it was paramount. Proper management of the data collected was employed to ensure that respondent's identity, and as such information provided is not traced to them. In preventing plagiarism, all references were duly acknowledged. An introductory letter was also sent to the authorities of the facility before the study began.

3.7 Data Analysis

Descriptive statistics including tables and graphical presentations such as bars were simple statistical techniques used to analyze and summarize the data. Statistical Package for Social Sciences (SPSS) for windows was used to analyze primary data. A major advantage for using primary sources of data is as a result of its reliability. Since they come from original sources they suit the objectives of the study.

3.8 Profile of Study Area

University Hospital, KNUST, Kumasi was the study area in which the research was conducted. With a population of 1.5 million inhabitant, Kumasi is identified as the second largest city in Ghana, located in the rainforest zone of West Africa (GSS, 2002). In Kumasi, there is similarly to tropical regions which aid malaria transmission. The communities that surround KNUST which usually patronize the services of the University Hospital include; Ayigya, Bomso, Susuanso, Anloga, Oforikrom, Ahinsan, Atonsu, Ayeduase, Kotei, Kentinkrono, Boadi, Oduom, Anwomaso, Fumesua, Kwamo, and workers of the University. These communities have an average population of 12,601 inhabitants, with 8,200 being women (GSS, 2002).

CHAPTER FOUR

DATA ANALYSIS AND DISCUSSION

4.1 Introduction

This chapter discusses into detail the result of the analysis of the data collected from the field of analysis. The background of the respondent is analyzed using the descriptive statistics (specifically percentages, frequencies and cross-tabulation) whilst the dependent variables are analyzed using mean score analysis and Relative Importance Index. All these tools are incorporated in the statistical package for social sciences (SPSS).

4.2 Analysis of the Background Of Respondents

In order to make the data collected authentic and credible, it was deemed important to analyze critically the background of the respondent. This sections importance is to basically establish the trustworthiness or otherwise, and generate confidence in the data collected.

4.2.1 Category of Personnel

The purpose of the category of personnel is to show those were able to respond to the questionnaires sent out. This is illustrated in the **Table 4.1** below:

Table 4.1: Category of personnel

Category of personnel	Frequency	Percentage,%
Channel leader	2	4
Regional director of Ghana Health Service	1	2
GHS accountant	4	8
Donor accountant	1	2
Hospital accountant	3	6
Head of maternal department	5	10
DDNS	2	4
Midwives	9	18
Nurses	20	40
Other	3	6
Total	50	100

(Source: Field Survey, 2018)

The result indicated that, out of the 50 respondents, 4% were channel leaders, 2% were regional directors of GHS, 8% GHS accountant, 2% were Donor accountant, 6% were hospital accountant, 10% were head of material department, 4% were DDNS, 18% were midwives, 40% were nurses and 6% were other personnel apart from the listed above. According to the analysis, nurses responded to most of the questionnaires.

4.2.2 Educational Background

The educational background has a great impact on the results expected from this study.

This is shown on the table below:

Table 4.2: Educational background

Educational background	Frequency	Percentage,%
Diploma/professional certificate	15	30
Bachelor's degree	24	48
Masters/postgraduate degree	11	22
Total	50	100

(Source: Field Survey, 2018)

30% of the total respondents have an educational background of diploma/professional certificate, 48% have bachelor's degree and 22% have master's degree/postgraduate degree. The analysis further concluded that, the most of the respondent have an educational background of bachelor's degree.

4.2.3 Years of operating in the Health Sector

The table below shows the number of years in which respondents have been operating in the Health Sector. Information obtained on this will have a great impact on the authenticity and credibility of the information given out. This is shown below:

Table 4.3: Years of operating in the health sectors

Years of operating	Frequency	Percentage,%
Less than 5 years	27	54
5-10 years	10	20
11-20 years	9	18
Above 20 years	4	8
Total	50	100

(Source: Field Survey, 2018)

From the table above, the respondents who were less than 5 years of working in the health sectors had 54% of the total respondent, 5- 10 years had 20%, 11-20 years had 18% and 8% for those above 20 years. This then concluded that, most of the respondents having less than 5 years of operating in the health sector responded to the questionnaires for this study.

4.2.4 Number of Project undertaken within the last five years

The number of project undertaken by the respondent within the last 5 years has an influence on the result of the research outcome. This is shown below:

Table 4.4: Number of project undertaken within the last 5 years

Number of project	Frequency	Percentage,%
Less than 5	29	58
5-10	9	18
11-15	6	12
16 and above	6	12
Total	50	100

(Source: Field Survey, 2018)

From the Table 4.5, 58% of the total respondents had taken less than 5 number of projects within the last 5 years. 18% had taken 5-10 number of project, 12% had taken 11-15 number of projects and 12% had taken more than 15 number of projects with the last 5 years. This then concludes that greater of the respondents had taken less than 5 number of projects within the last 5 years.

4.2.5 Final project cost exceeded the initial budget.

This is an important background to get experience respondent in the health sector. This is shown below:

Table 4.5: How often a final project cost exceeded the initial budget?

	Frequency	Percentage,%
Very often	14	28
Often	19	38
Not often	12	24
Never	5	10
Total	50	100

(Source: Field Survey, 2018)

28% of the total respondents had their final project cost exceeding the initial budget very often, according to the table 4.5 above. 38% of the total respondents often had their final project cost exceeding the initial budget, 24% do not often experience such issue and 10% never had their final project cost exceeding the initial budget. This then concludes that greater percentage of the total respondents often had their final project cost exceeding the initial budget.

4.2.6 Knowledge of project management methodologies/practices.

This a very important factor that can help to know the type of respondent the research is dealing with in terms of issues involving project management. The outcome of the data analysis is represented on the table below:

Table 4.6: Knowledge of project management methodologies/practices

	Frequency	Percentage,%	Cumulative percentage,%
Yes	26	52	52
No	6	12	64
Somehow	18	36	100
Total	50	100	

(Source: Field Survey, 2018)

From Table 4.6, 52% of the total respondent had adequate knowledge of project management methodologies/practices and 12% do not have at all. 36% chose somehow because they had moderate knowledge or fair knowledge of project management practices. The analysis therefore portrays that, greater percentage of the respondents had adequate knowledge of project management practices.

4.3 Project Management Practices in Health Care

In order to explore project management practices that are applicable in the health care sector, a review of different research work related to the topic was done. The review provided most prominent factors of which a total of thirteen (13) variables were noted. According to the level of severity, respondents were asked to rank the thirteen (13) variables. This was done with the help of a Likert scale 1-5;[**1- Not at all; 2- Rarely; 3- Sometimes; 4- Frequently; 5-Every time.**]

The aim was to identify the factors that are dominant in terms of project management practice /methodology that are applicable in the health care sector in the delivery of their projects. The Relative Importance Index and mean score ranking used tool used for

analyzing the collected data. Of all the fifty (50) respondents, the mean as well as RII scores were calculated for each factor and is shown below;

Table 4.7: Project Management Practices/Methodology applicable in the Health care sector

N O.	PRACTICES/METHODOLOGY	FREQUENCY OF RANKING					TOTAL	Σ W	MEAN	RII	RANKING
		1	2	3	4	5					
1	Usage of Checklists	2	8	16	10	14	50	176	3.52	0.704	1 st
2	Plan Communications Management	1	10	8	25	6	50	175	3.5	0.7	2 nd
3	Project integrating Sustainable Methods	1	5	19	21	4	50	172	3.44	0.688	3 rd
4	Process-Based Project Management	2	8	16	15	9	50	171	3.42	0.684	4 th
5	Stakeholder's Identification	3	9	15	16	7	50	165	3.3	0.66	5 th
6	Usage of Works Breakdown Structure	5	9	13	17	6	50	160	3.2	0.64	6 th
7	Project in Controlled Environment	4	7	21	13	5	50	158	3.16	0.632	7 th
8	Scope Definition	2	10	22	11	5	50	157	3.14	0.628	8 th
9	Contingency plan	4	10	16	15	5	50	157	3.14	0.628	8 th
10	Estimate Activity Resources	5	10	16	12	7	50	156	3.12	0.624	10 th
11	Critical Chain Project Management (CCPM)	3	15	14	16	2	50	149	2.98	0.596	11 th
12	Critical Path Method (CPM)	6	12	16	12	4	50	146	2.92	0.584	12 th
13	Lean	7	15	12	12	4	50	141	2.82	0.564	13 th

(Source: Field Survey, 2018)

Usage of Checklists was ranked as the major variable in terms of project management practice /methodology that are applicable in the delivery of health care projects. This variable had an RII of 0.704 and a mean value of 3.52. The mean value is strongly skewed to 4 which stand for frequently used practice. This is to say that projects

executed by the health care sector made use of checklist in ensuring that all the necessary resources were at their disposal for effective project delivery.

Plan Communications Management according to respondents was ranked 2nd with a mean and RII values of 3.5 and 0.7 respectively. Communications management in the sense of having communication matrix or plan showing the various relationships was seen as a frequently utilized project management tool or practice that ensured high productivity when followed.

Ranked 3rd was project integrating sustainable methods with an RII and mean values of 0.688 and 3.44 respectively. Process-Based Project Management came 4th on the rankings by respondents. With a mean value of 3.42, Process-based management (PBM) according to Daly et al. (2005) is a management approach tool that controls the mind and actions of an organization. It turns to become the basis for decision making and taking action and thus process-based organization explicitly recognizes that it manages and operates all processes to balance and optimize the delivery of value to the customer in this case the health care sector.

“Critical Chain Project Management” was ranked eleventh (11th) with an RII and mean value of 0.596 and 2.98 respectively. Raz *et al.*, (2003) postulated that “Critical Chain Project Management (CCPM)” is a project management methodology that are applicable in various fields like the banking sector, construction as well as health sector. CCPM is designed specifically for project environment. Other practices as ranked by the respondents can be seen in table 4.7 above.

4.4 Discussion On The Challenges Of Project Management Practices Regarding Family Planning Projects At University Hospital

Similarly, the review on literature on this section allowed revealed the challenges of project management practices within the health care sector. The review provided most prominent factors of which a total of fifteen (13) variables were noted. According to the level of severity, respondents were asked to rank the fifteen (15) variables. This was done on a Likert scale 1-5. [**1- Not often; 2- Less often; 3- Neutral; 4- Often; 5-Very often.**].

The mean score ranking and Relative Importance Index were tool used to analyze the data. This outcome is shown below;

**Table 4.8: Challenges of Project Management Practices Regarding Family Planning
Projects at University Hospital (KNUST)**

NO.	CHALLENGES	FREQUENCY OF RANKING					TOTAL	ΣW	MEAN	RII	RANKING
		1	2	3	4	5					
1	Risk associated with project staffing	3	11	17	17	2	50	154	3.08	0.616	1st
2	Technical Illiteracy	5	12	16	11	6	50	151	3.02	0.604	2nd
3	Contingency and uncertainty	5	9	20	13	3	50	150	3	0.6	3rd
4	Inadequate project funding	4	12	17	15	2	50	149	2.98	0.596	4th
5	Poor adherence to proven processes	5	10	19	13	3	50	149	2.98	0.596	4th
6	Poor team communication	9	12	12	12	5	50	142	2.84	0.568	6th
7	Unrealistic schedules	8	11	16	11	4	50	142	2.84	0.568	6th
8	Presence of dispute	8	12	14	13	3	50	141	2.82	0.564	8th
9	Changing requirement and specifications	9	10	17	10	4	50	140	2.8	0.56	9th
10	Unrealistic expectations	8	11	17	11	3	50	140	2.8	0.56	9th
11	Lack of IT Management	7	16	11	13	3	50	139	2.78	0.556	11th
12	Management Instability	13	9	11	11	6	50	138	2.76	0.552	12th
13	Scope creep	6	12	23	9	0	50	135	2.7	0.54	13th
14	Failure to identify responsibilities of key team members	12	12	12	11	3	50	131	2.62	0.524	14th
15	Inadequate trained or inexperienced project manager	13	10	16	10	1	50	126	2.52	0.504	15th

(Source: Field Survey, 2018)

The above indicated that all the respondents served with a questionnaire answered it. The analysis revealed that the highest challenge faced by project managers in applying theory to practice in the health sector is risk associated with project staffing. Risk associated with project staffing had the highest RII of 61.6% with its mean value thus 3.08. Upon data retrieved and analyzed, the health sector respondents concluded that there existed risk in project staffing as most of the members on a project lacked the requisite project management knowledge with respect to the said project. This limited the extent of applicability of the tools/practices as expected in any project management organization.

Technical illiteracy was ranked 2nd with an RII and mean values of 60.4% and 3.02 respectively.

Technical illiteracy refers lack of technical know-how with regards to project management practices/methodologies. Most of the staff at the Health care sector lacked knowledge on project management methodologies and hence affected their progress in the delivery of health related projects.

Ranked third (3rd) was contingency and uncertainty which had a mean value of 3.00 as well as an RII of 60%. Most of the activities undertaken by the health sector encountered unknown events such as adverse weather condition which made progress slowed down until those uncertainties were dealt with. This posed as a big challenge in the application of project management practices in the health care sector.

Inadequate project funding and poor adherence to proven processes tied at the 4th position as a challenge of project management practices regarding the family planning Unit of the University hospital. They had a mean and RII values of 2.98 and 59.6% respectively.

Ranked sixth (6th) were Poor team communication and unrealistic schedules which had a mean value of 2.84 which is lopsided to 3 on the 5-point likert scale and an RII of 56.8%. This is consistent with Rohan and Megha (2013) study, which reiterated that vertical and horizontal communications can lead to impediments in the transformation of a business based on how the project manager handled it. Many operation control managers do not have appropriate staffing levels to schedulers. Not having these positions adequately filled affect schedule and productivity plans (Chan and Tse, 2003).

Surprisingly, inadequately trained or inexperienced project managers was ranked last thus 15th with an RII of 50.4%. After the analysis, the results also showed that, even though project management professionals agree to the statistics that inadequately trained

or inexperienced project managers such as inability to correctly estimate and monitor progress of work tends to be not a critical challenge in transferring project management methodologies in to practice. Its mean value 2.52 is also closely lopsided to 3 which stands for “neutral” on the 5- point Likert scale.

4.5 Discussions on strategies to alleviate the challenges of project management

practices on family planning projects at university hospital.

Research work was carried on strategies to alleviate the challenges of project management practices on family planning projects at the University Hospital (KNUST). Eleven (11) variables were noted. According to the level of severity, respondents were asked to rank the eleven (11) variables. This was done on a Likert scale 1-5; **[1- Not significant; 2- Less significant; 3= Moderately significant; 4= Significant; 5= Very significant.]**.

The aim of this was to identify the best means of fast tracking the application of project management practices/methodology into practice in the health care sector. The mean score ranking and Relative Importance Index were tool used to analyze the data. This outcome is shown below;

Table 4.9: Strategies to alleviate the challenges of project management practices

NO.	STRATEGIES	FREQUENCY OF RANKING					TOTAL	ΣW	MEAN	RII	RANKING
		1	2	3	4	5					
1	Improved team communication	4	3	11	17	15	50	186	3.72	0.744	1st
2	Proper project feasibility studies	3	4	11	19	13	50	185	3.7	0.74	2nd
3	Ascertaining assumptions	2	5	12	20	11	50	183	3.66	0.732	3rd
4	Proper project organization structure	4	5	12	13	16	50	182	3.64	0.728	4th
5	Minimization of time constraint	0	7	14	21	8	50	180	3.6	0.72	5th
6	Realistic expectation	1	6	14	23	6	50	177	3.54	0.708	6th
7	Clear definition of roles of key members	3	2	19	17	9	50	177	3.54	0.708	6th
8	Management stability	5	3	14	18	10	50	175	3.5	0.7	8th
9	Adequate adherence to proven processes	1	7	16	20	6	50	173	3.46	0.692	9th
10	Adequate training and experience of managers	4	7	12	18	9	50	171	3.42	0.684	10th
11	Realistic schedules for project completion	1	7	21	14	7	50	169	3.38	0.676	11th

(Source: Field Survey, 2018)

In an effort to determine the best means of alleviating the challenges of project management practice /methodology in the health care sector, eleven (11) variables were identified and included Realistic schedules for project completion, Proper project organization structure, Adequate training and experience of managers, Improved team

communication, Provision of significant rewards for project team, Management Stability, Proper project feasibility studies, Minimization of time constraint, Clear definition of roles of key members, Ascertaining assumptions and Adequate adherence to proven processes.

After the analysis, the results showed that the best means of fast tracking the application of project management theories /methodology into practice in the health care sector is improved team communication with a mean value of 3.72 and an RII of 74.4%. Respondents agreed that proper communication be it vertical or horizontal, is critical for a projects goal to be achieved as clear objectives need to be better communicated and understood for them to be properly implemented.

Proper project feasibility studies came second as a strategy with an RII of 74.0% and a mean value of 3.70. Proper feasibility studies of intended projects to be embarked on by health care sector should be paid much attention to in order avoid unplanned circumstances which tends to prolong the projects duration as well as increase the cost.

Ascertaining assumptions and Proper project organization structure were ranked 3rd and 4th respectively with a mean value of 3.66 and 3.64. Projects organized properly serves as a catalyst for putting the work on board to ensure project completion within budget, on time and of high quality.

The strategy that came 8th was management stability. This strategy had a mean value of 3.5 and an RII of 70.0%. Respondents had the notion that management depended on the knowledge and competence of workers in the development as well as execution of an intended work. Structured hierarchical arrangements informs a solid management grounding which in turn instills a sense of urgency on the part of team members to do their best for the betterment of the said project/course.

Adequate training and experience of managers came 10th as a strategy with an RII of 68.4% and a mean value of 3.42. As postulated, operations control managers (project managers) who are well educated and experienced will be in a better position to correct estimates and monitor works progress to avoid delays and cost overruns as have been seen in many projects that fail.

Surprisingly, realistic schedules for project completion had an RII of 67.6% with its associated mean value of 3.38. Respondents believed although project managers setting timelines for their various projects handled created a means of fast tracking the process of transferring their knowledge of project management methodologies to practice, it did not seem to be of any big deal.

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This research work sought to identify the challenges of project management practices regarding family planning projects embarked on in the healthcare sector in Ghana using University hospital, KNUST as a case study, hence the aim of the study seen in the first chapter. Chapter two which followed suit discussed into details the literature work of other similar works on project management practices/methodologies, its challenges and proposed strategies to alleviate the challenges. Offered in the third Chapter was the methodological approach for the study. Through survey questionnaires, data were retrieved. Chapter four analysed and discussed into details the data collected. This chapter presents an overview of the findings taking into consideration the achievement of the research aim as well as the objectives. The discussion on the limitations of the research is outlined with recommendations made for future studies in the format below:

- Summary of findings;
- Review of the research objectives;
- Contribution to knowledge and industry;
- Recommendations;
- Direction for future research; and
- Limitations of the research;

5.2 Summary of Findings

- Fifty (50) questionnaires were administered and retrieved from respondents such as channel leaders, regional directors of GHS, GHS accountant, Donor

accountant, hospital accountant, head of material department, DDNS, midwives, and nurses working at the University Hospital-KNUST Campus.

- From chapter 4, 30% of the total respondents had an educational background of diploma/professional certificate, 48% had bachelor's degree and 22% had master's degree/postgraduate degree. The analysis further concluded that, the most of the respondent have an educational background of bachelor's degree.
- From the Table 4.5, 58% of the total respondents had taken less than 5 number of projects within the last 5 years. 18% had taken 5-10 number of project, 12% had taken 11-15 number of projects and 12% had taken more than 15 number of projects with the last 5 years. This then concludes that greater of the respondents had taken less than 5 number of projects within the last 5 years.
- 28% of the total respondents had their final project cost exceeding the initial budget very often, according to the table 4.5 from Chapter 4. 38% of the total respondents often had their final project cost exceeding the initial budget, 24% do not often experience such issue and 10% never had their final project cost exceeding the initial budget. This then concludes that greater percentage of the total respondents often had their final project cost exceeding the initial budget;
- From Table 4.6 in Chapter 4, 52% of the total respondent had adequate knowledge of project management methodologies/practices whereas 12% do not have any knowledge at all. 36% chose somehow because they had moderate knowledge or fair knowledge of project management practices. The analysis therefore portrays that, greater percentage of the respondents had adequate knowledge of project management practices
- After the analysis from Chapter 4 on Project Management Practices, the results showed that the most popularly known Project Management Practice within the

health care sector is usage of checklists. Usage of Checklists was ranked as the major variable in terms of project management practice /methodology that are applicable in the delivery of health care projects. This variable had an RII of 0.704 and a mean value of 3.52. The mean value is strongly skewed to 4 which stand for frequently used practice. This is to say that projects executed by the health care sector made use of checklist in ensuring that all the necessary resources were at their disposal for effective project delivery;

- After the analysis, the results showed that the highest challenge faced by project managers in applying theory to practice in the health sector is risk associated with project staffing. Risk associated with project staffing had the highest RII of 61.6% with its mean value thus 3.08. Upon data retrieved and analyzed, the health sector respondents concluded that there existed risk in project staffing as most of the members on a project lacked the requisite project management knowledge with respect to the said project. This limited the extent of applicability of the tools/practices as expected in any project management organization; and
- With regards to the proposed strategies to alleviate the challenges of project management practices with regards to family planning projects at KNUST hospital, eleven (11) variables were identified. After the analysis, the results showed that the best means of fast tracking the application of project management theories /methodology into practice in the health care sector is improved team communication with a mean value of 3.72 and an RII of 74.4%. Respondents agreed that proper communication be it vertical or horizontal, is critical for a projects goal to be achieved as clear objectives need to be better communicated and understood for them to be properly implemented.

5.3 Review of Research Objectives

As indicated in Chapter One earlier in this report, the overall aim of the research is to identify the challenges of project management practices regarding family planning projects embarked on in the healthcare sector in Ghana. To achieve the stated aim above, 3 objectives were established. The achievement of each objective is presented in the subsequent subsections.

5.3.1 Review of Objective One

The first objective was *to identify project management practices used in the delivery of family planning projects, at University hospital, KNUST.*

To achieve this objective, respondents were asked of their level of awareness of project management methodologies/practices in the health care industry. 52% of the total respondent had adequate knowledge of project management methodologies/practices and 12% do not have at all. 36% chose somehow because they had moderate knowledge or fair knowledge of project management practices. The analysis therefore portrays that, greater percentage of the respondents had adequate knowledge of project management practices.

A review of literature was conducted in other to arrive at project management practices that are applicable in the health care sector. The review provided a total of thirteen (13) variables. To the level of severity through a survey, respondents were asked to rank the thirteen (13) variables according. The collected data was subjected to the mean score ranking and RII for analysis. Each of the fifteen variables to the fifty (50) respondents were each analysed.

After the analysis from Chapter 4 on Project Management Practices, the results showed that the most popularly known Project Management Practice within the health care sector

is usage of checklists. Usage of Checklists was ranked as the major variable in terms of project management practice /methodology that are applicable in the delivery of health care projects. This variable had an RII of 0.704 and a mean value of 3.52. The mean value is strongly skewed to 4 which stand for frequently used practice. This is to say that projects executed by the health care sector made use of checklist in ensuring that all the necessary resources were at their disposal for effective project delivery.

5.3.2 Review of Second Objective

The second objective was *to identify the challenges of project management practices regarding family planning projects at University hospital, KNUST.*

A review of literature was conducted in order to arrive at prominent factors that brings challenges of project management practice within the health care sector. The review provided a total of fifteen (15) variables. To the level of severity through a survey, respondents were asked to rank the fifteen (15) variables according. The collected data was subjected to the mean score ranking and RII for analysis. Each of the fifteen variables to the fifty (50) respondents were each analysed. After the analyzing, the results indicated that the highest challenge faced by project managers in applying theory to practice in the health sector is risk associated with project staffing. Risk associated with project staffing had the highest RII of 61.6% with its mean value thus 3.08. Upon data retrieved and analyzed, the health sector respondents concluded that there existed risk in project staffing as most of the members on a project lacked the requisite project management knowledge with respect to the said project. This limited the extent of applicability of the tools/practices as expected in any project management organization.

5.3.3 Review of Third Objective

The third objective was *to identify the strategies to alleviate the challenges of project management practices on family planning projects at University hospital, KNUST.*

The proposed strategies to alleviate the challenges of project management practices with regards to family planning projects at KNUST hospital were subjected to mean score and Relative Importance Index for analysing the data collected from the field. The RII scores as well as mean value of all the fifty (50) respondents were calculated for each strategy. With regards to the proposed strategies to alleviate the challenges of project management practices with regards to family planning projects at KNUST hospital, eleven (11) variables were identified. After the analysis, the results showed that the best means of fast tracking the application of project management theories /methodology into practice in the health care sector is improved team communication with a mean value of 3.72 and an RII of 74.4%. Respondents agreed that proper communication be it vertical or horizontal, is critical for a projects goal to be achieved as clear objectives need to be better communicated and understood for them to be properly implemented.

In conclusion, the research was able to identify project management practices within the health care sector using family planning projects at KNUST hospital as the case study.

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5.4 Recommendations

Based on the study findings, the researcher derived the following recommendations to help alleviate the challenges inhibiting the implementation of contract administration practices in the Ghanaian construction industry:

- Every health oriented organization should endeavour to improve upon team communication during a project life. This is the lifeline of most projects as

effective communication between team members accelerate the progression of the project.

- Before the project inception, staff with knowledge in project activity should be secured by the project manager before the commencement of the project.
- The professionals (Project managers, head of material department, and channel leaders) within the health sector need to be appropriately acquainted with project management practices through Continuous Professional Development (CPD) such as; seminars, refresher courses and workshops.

5.5 Recommendation to Future Research

For future research, these outlined recommendations have been proposed;

- The key skills needed in the transfer of project management methodologies in the Health sector, and
- The relationship/effect of family planning project on the general Health care performance;

5.6 Research Limitation

Although the report managed in the achievement of its objectives, some limitations were evident as:

- Obtaining data on the respondents used for the study due to the strict confidentiality attached to their database. However, the research provided assurance that such information was required for academic purpose and will be used with utmost confidentiality;

- Busy schedules among stakeholders has made it difficult in getting some participants to help provide the information needed and as well as time constraints which made the collecting of data a difficult task to deal with.

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QUESTIONNAIRE

TOPIC: AN EVALUATION OF PROJECT MANAGEMENT PRACTICES IN THE HEALTHCARE SECTOR OF GHANA: A CASE OF FAMILY PLANNING UNIT IN KNUST HOSPITAL

INTRODUCTION

I am a student of Kwame Nkrumah University of Science and Technology conducting a study on the topic “**An Evaluation of Project Management Practices in the Healthcare Sector of Ghana: A Case of Family Planning Unit in KNUST Hospital**” in partial fulfillment for a Master of Science degree in Project Management. The objectives of the study are:

- a. To identify project management practices used in the delivery of family planning projects, at University hospital, KNUST.
- b. To identify the challenges of project management practices regarding family planning projects at University hospital, KNUST
- c. To identify the strategies to alleviate the challenges of project management practices on family planning projects at university hospital.

I will be very grateful if you would complete the attached questionnaire as it will help in this study. The information you provide will be treated with strict confidence and respondents will not in any way be identified.

Yours faithfully,

SUPERVISOR

ABDUL LATIF ISSAKA

PROF. E. BADU

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Please kindly respond to the questions by ticking (✓) the appropriate box for each item.

Please note that all information provided will be strictly confidential.

SECTION A: RESPONDENT PROFILE

1. Which of the following category of personnel best describes you?

- a. Channel lead ()
- b. Regional director of Ghana Health Service (GHS) ()
- c. GHS accountant ()
- d. Donor accountant ()
- e. Hospital accountant ()
- f. Head of maternal department ()
- g. DDNS ()
- h. Midwives ()
- i. Nurses ()
- j. Other (specify).....

2. What is your highest educational background?

- a. Diploma / Professional Certificate ()
- b. Bachelor's Degree ()
- c. Masters / Postgraduate Degree ()

3. How long have you been operating in the health sector?

- a. Less than 5 years ()
- b. 5-10 years ()

- c. 11-20 years ()
 - d. Above 20 years ()
4. How many projects have you undertaken within the last five years?
- a. Less than 5 ()
 - b. 5 - 10 ()
 - c. 11 – 15 ()
 - d. 16 and Above ()
5. How often have your final project cost exceeded the initial budget?
- a. Very often ()
 - b. Often ()
 - c. Not often ()
 - d. Never ()
6. Do you have adequate knowledge of project management methodologies/practices?
- a. Yes ()
 - b. No ()
 - c. Somehow ()

SECTION B: PROJECT MANAGEMENT PRACTICES USED IN HEALTH CARE.

From available literature, several project management practices were identified. Please in your own opinion, indicate the degree of frequencies by ranking on a Likert scale how frequent the following project management practices are adopted in the health sector.

(Kindly tick (√) the appropriate cell for the practices) [1- Not at all; 2- Rarely; 3- Sometimes; 4- Frequently; 5-Every time.]

PRACTICES/METHODOLOGY	FREQUENCY				
	1	2	3	4	5
Critical Path Method (CPM)					
Scope definition					
Projects In Controlled Environments (PRINCE2)					
Lean					
Process-Based Project Management					
Stakeholders Identification					
Plan Communications Management					
Usage of Checklist					
Estimate Activity Resources					
Projects integrating Sustainable Methods (PRiSM)					
Critical Chain Project Management (CCPM)					
Contingency plan					
Usage of Works Breakdown Structure					
PLEASE STATE AND RANK ANY OTHERS					

SECTION C: CHALLENGES OF PROJECT MANAGEMENT PRACTICES REGARDING FAMILY PLANNING PROJECTS AT UNIVERSITY HOSPITAL.

Below are a number of challenges that are associated with the application of project management practices in the Health sector. Based on your experience, please rank how often these challenges are faced during the execution of family planning projects within the health sector.

(Please tick the (√) appropriate cell). [1- Not often; 2- Less often; 3- Neutral; 4- Often; 5-Very often.]

No.	CHALLENGES	RANKING				
		1	2	3	4	5
	Management Instability					
	Technical Illiteracy					
	Poor team communication					
	Unrealistic schedules					
	Failure to identify responsibilities of key team members					
	Changing Requirements & Specifications					
	Presence of disputes					
	Lack of IT management					
	Poor adherence to proven processes					
0.	Risk associated with project staffing					
1.	Inadequately trained or inexperienced project manager					
2.	Unrealistic Expectations					
3.	Contingency and uncertainty					
4.	Inadequate project funding					
5.	Scope creep					
PLEASE STATE AND RANK ANY OTHERS						
6.						
7.						
8.						

SECTION D: STRATEGIES TO ALLEVIATE THE CHALLENGES OF PROJECT MANAGEMENT PRACTICES ON FAMILY PLANNING PROJECTS AT UNIVERSITY HOSPITAL.

The following are strategies that can be adopted to improve the challenges of project management practices on family planning projects at University hospital.

Please use the key [1- Not significant; 2- Less significant; 3= Moderately significant; 4= Significant; 5= Very significant.] to rate their significance. Please tick (√) the appropriate cell.

No.	STRATEGIES TO ALLEVIATE THE CHALLENGES OF PROJECT MANAGEMENT PRACTICES ON FAMILY PLANNING PROJECTS AT UNIVERSITY HOSPITAL	DEGREE OF IMPORTANCE				
		1	2	3	4	5
	Proper project organization structure					
	Realistic expectation					
	Clear definition of roles of key members					
	Minimization of time constraint					
	Proper project feasibility studies					
	Management Stability					
	Adequate adherence to proven processes					
	Improved team communication					
	Realistic schedules for projects completion					
0.	Adequate training and experience of managers					
1.	Ascertaining assumptions					
PLEASE STATE AND RANK ANY OTHERS						
2.						
3.						
4.						

Any further comments can kindly be indicated below.

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THANK YOU.