THE ROLE OF MANAGEMENT IN IMPROVING WATER AND SANITATION SERVICES IN MPIGI DISTRICT

A CASE STUDY OF KYAKWANZI WATER PROJECT

A Dissertation Submitted to the Institute of Ethics and Development Studies in Partial Fulfillment of the Requirements for the Award of the Degree of Bachelors of Arts (Ethics and Development Studies) of Uganda Martyrs University

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Dedication

This dissertation is dedicated to all my family members, most especially Mr Ssempiri Tonny and Mrs Nassuna Christine for the financial support towards this study. Also friends, Bridget, Verah, Victor, whose tireless efforts and extensive contribution have really brought me this far during my entire academic struggle. Thanks to you all.

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May the Almighty God bless you abundantly!

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List of Abbreviations

BPD: Building Partnerships for Development

CEO: Chief Executive Officer

CVI: Content Validity Index

GDP: Gross Domestic Product

GIZ: German International Cooperation

GOU: Government of Uganda

KCCA: Kampala Capital City Authority

MDG: Millennium Development

NWSC: National Water and Sewerage Corporation

PEAP: Poverty Eradication Action Plan

SPSS: Statistical Package for the Social Sciences

UNDP: United Nations Development Program

UNICEF: United Nations Children's Emergency Fund

USAID: United States Agency for International Development

Abstract

The study was aimed at assessing the Role of Management in improving the water and Sanitation Services in Mpigi district. The study objectives were; to establish the role of management in improving water and sanitation services in Mpigi district; to examine the extent the role of management has played in water and sanitation services among the people in Mpigi district and to find out the possible management measures to improve water and sanitation services.

The study employed a quantitative and qualitative research paradigm in which a case study research design was employed to collect data from 57 (fifty seven) respondents using structured questionnaires, interviews and focus group discussion.

The study found out that management has an important role to play in improving water and sanitation Services through using mechanisms to track water resource consumption and availability. To a large extent management has played a big role towards improving water and sanitation services among the people by ensuring that the time factor manifests itself in the water and sanitation service, ensuring efficient and effective deployment of resources when they are needed. Additionally, Management can improve water and sanitation services through encouraging community participation since it is important in the project implementation processes.

The study recommended that the management as a group in conjunction with community leaders should ensure that community members are able to make decisions regarding resource use and allocation, capable of coordinating the implementation of planned activities, able to demand for both physical and financial accountabilities, capable of managing resources of the water and sanitation projects many others. It was also recommended that all stakeholders in the water and sanitation projects should be encouraged to participate during needs assessment activities, project implementation and completed water and sanitation water project management.

CHAPTER ONE

GENERAL INTRODUCTION

1.0 Introduction

Chapter one is an introduction to the study entitled, The Role of Management in improving Water and Sanitation Services in Mpigi District a case of Kyakwanzi Water Project. The chapter is made up of the Background of the study, Statement of the Problem, Objectives, Research questions, Scope of the study, Significance of the study, Justification of the study, the Conceptual frame work, the definition of key words as well as the Conclusion of the issues covered in the chapter.

1.1 Background of the Study

Management has been traditionally thought of as the process of accomplishing a task for instance in various sectors in many countries (Jeffery 1998). This view reflects management's origins in contract administration and task management but today it's changing and takes on set of interrelated tasks to be executed over a fixed period and within certain costs and other limitations. Looking at management as a metrological approach to planning and guiding project processes from start to the end, the processes are guided through five stages for instance initiation, planning, executing, controlling, and closing just as emphasized by (Dennis 2007).

According to Erias(2010), management can be applied to any type of project and is widely used to control the complex processes of software development projects despite the fact that Management is still as a temporary nature of projects that has a definite beginning and an end. This means that an end is reached when the projects, objects have been achieved or terminated because its objects will not be met thus most

of them are undertaken to create a lasting outcome (Gray 2008).

According to Tate (2008), in countries like Pakistan, and India, significant numbers of water and sanitation supply points and systems are out of action, the reason for the failures were originally being assumed to be due to use of inappropriate technology, inadequate services offered in improving water and sanitation services (Tate 2008). However, planners and technologists are now aware that many problems also arise because the consumers have not been sufficiently involved in the design, implementation, operation, Evaluation on what is in place as well as what they lack and their maintenance. According to Chatzoglou, Macaulay (1996), it is important to involve the consumers so as to ensure Quality and desired standard to be achieved with the available resources, time and expertise in the water and sanitation projects.

In the last 20years that is from 1995 to 2015, experience has shown that it is not easy to find sustainable solutions to portable water supply for people with low incomes, who live in rural areas of developing countries Uganda, Kenya since there was a Global Crisis Worldwide, 780 million people do not have reliable access to clean water, and a staggering 2.5 billion, do not have adequate sanitation facilities and in this the end results were severe to them hence leading to many Diseases from unsafe water and lack of basic sanitation facilities which kill more people every year than all forms of violence, including war in those countries(Maddison 2007). In contrast, some 3.6 million people - including 1.5 million children are estimated to die each year from water-related diseases, including diarrhoea, typhoid, cholera and dysentery (Duncan 2010).

According to Erias (2010), in several Sub-Saharan African countries such as Equatorial Guinea, Eritrea, and Zimbabwe, more than 25 percent of the population travel more than 30 minutes to the nearest water sources in the country which also implied that there is lost productivity and increased health care costs that take a heavy economic toll. Rahman and Feroze(2000), emphasized that Africa alone experiences economic losses of $28 billion year (or about 5 percent of GDP) due to lack of safe water and inadequate sanitation and hygiene facilities hence this will require the collective effort of governments, corporations; nonprofits organizations if it's to change to a reality as well as being improved upon such as BPD(Building Partnerships for Development in Water and Sanitation services) which is known as a nonprofit charity that improves the provision of water and sanitation services in both unserved and poorly served communities thus later ensuring that partnerships are effective in improving these services (Marks 2010).

Basing on the analysis of Feroze and Rahman (2000), Countries like Niger, all towns have elected water and sanitation management committees, which operate under the Town Councils, they have a number of kiosk holders, who sell water at fixed tariffs where this fund is being used in improving, maintenance and repairs of the water and sanitation services in these countries such as Niger. Similar water and sanitation systems exist in South Africa, Burkina Faso, Kenya and Central Africa which implies that even in Sub Saharan Africa, many countries have considered the importance of management in the project as key, if it is to be sustained in offering these services.

In Uganda, the population in 2005 was estimated having 26.8 million people of which 88% of about 24 million lived in rural areas and thus having low access to safe water and facilities,

80% in Urban areas as being for Sanitation (Tsinda, Abbott and Chenoweth 2015). It's one of the countries with high infant mortality rate 86 per 1000 Water borne diseases entirely, Uganda has formulated a Poverty Eradication Action Plan (PEAP) as the core Government strategies towards its goals of poverty alleviation and Poverty focused growth to improve the water supply and Sanitation services that were identified as a key to Poverty Eradication in the country, this article has last been updated on substance in July 2012 about the PEAP. Making the Water Supply and Sanitation sector a priority in the PEAP/PRSP process tripled the budgetary flow of resources for the sector, improving performance. Rural water supply coverage climbed from 55 percent in 2000 to 63 percent in 2008, which exceeds the Millennium Development Goal target of 62 percent. Urban water supply has followed course, surpassing the MDG target as coverage rose from 60 percent in 2002 to 71 percent in 2008.

There have been policy reforms for implementing and managing water and sanitation projects whereby decisions have shifted the focus to community demand for and decentralized implementation and management of services, with the private sector taking a lead role in delivery of goods and services while government facilitated the process and concentrated on developing an effective framework for regulation and quality assurance of such water and sanitation projects. Investments for rural water supply were also channeled through a system of conditional grants to sector institutions at the local government level on a rolling three-year basis (Kazooba 2015).

The Ugandan water supply and sanitation sector has made substantial progress in urban areas since the mid-1990s, with substantial increases in coverage as well as in operational and commercial performance. Sector reforms in the period 1998-2003 included the commercialization and modernization of the

National Water and Sewerage Corporation (NWSC) operating in cities and larger towns, as well as decentralization and private sector participation in small towns however 38% of the population still had no access to cleaned water in 2010. According to government figures approximately, it was 70% in rural areas and 81% in urban areas, while according to UN figures it was only 34% as those who get access to improved water and sanitation services in the country.

In Mpigi District, the Management in Water and Sanitation projects has been seen as critical problem to most households since the water supply of the village people are two ponds downhill in a distance of several kilometers that individuals have to travel. These water places are accessible only by walking through small paths they are unprotected and hygienically extremely insufficient for the majority. From there people carry the water for drinking, cooking and body care in 10 and 20 jerry cans which takes 2 to 3 hours per day in the long run reducing time for learning to students and work time for adults(Kazooba 2015).

In Mpigi District the government in partnership with other organizations such as Water Aid, Action for Behavioral Change (ABC), Action Line for Development (ALFORD) and Agency for Integrated Rural Development (AFIRD) among others, able to work towards capacity building by linking all important stakeholders to water and sanitation services. This could be done through fostering community ownership by honoring the expertise of the local population and having proper Management in improving the water and sanitation services. There is a far greater chance of long-time sustainability of water and sanitation services when there is proper management behind the design, implementation and maintenance of projects thus it is not clear how effective management has been which has brought about a research gap. Water and Sanitation services

are very important issues from several angles such as development of water sources for future, protection of available water sources from pollution and over exploitation. In this case a paramount issue is water its availability, quality and management (Tsinda, Abbott and Chenoweth, 2015). Thus the researcher has been prompted to investigate the role of management in improving the water and sanitation projects in Mpigi district.

1.2 Statement of the Problem

According to UNDP (2006), 1.1 billion people lack access to a clean source of drinking water; 2.6 billion lack access to basic sanitation facilities. It is important to note that management in water and sanitation services has been applied in developing countries such as Uganda over the last two decades using a variety of approaches while some success has been reported from the use of these approaches (UNICEF 2000, GOU 1990-2008), have detailed assessments of the effectiveness of the approaches used have been very few and scattered. Management of water supply and sanitation projects has been applied in Uganda using a variety of approaches.

While some success has been reported from the use of these approaches detailed assessments of the effectiveness of the management approaches used have been very few which has left behind research gaps (Furukawo and Mikami 2014). Despite considerable investment in the Management of these services, improving the level of operation and management of water and sanitation services in Mpigi remains low in some communities (Kazooba 2015). This poses a challenge to management of the water and sanitation services in the long run. Thus there was need for this study to be carried out in order to resolve and find out on the role of management in improving the Water and Sanitation services in Mpigi district.

1.3 Objectives of the Study

1.3.1 General Objective

To assess the role of Management in improving the water and sanitation services in Mpigi district.

1.3.2 Specific Objectives

i. To establish the role of management in improving water and sanitation services in Mpigi district.

ii. To examine the extent the role management has played in water and sanitation services among the people in Mpigi district.

iii. To find out the possible management measures to improve water and sanitation services in Mpigi district.

1.3.3 Research Questions

i. What are the roles of management in improving the Water and Sanitation in Mpigi district?

ii. To what extent has management played its role in Water and Sanitation services among the people in Mpigi district?

iii. What are the possible management measures to improve Water and Sanitation services in Mpigi district?

1.4 Scope of the Study

1.4.1 Content Scope

This study was focused on establishing the role of Management in Water and Sanitation Services among the people in Mpigi district. Management can be an organized venture for managing projects. Management involves scientific application of modern tools and techniques in planning, financing, implementing,

monitoring, controlling and coordinating unique activities or tasks to produce desirable outputs in accordance with the pre-determined objectives within the constraints of time and cost.

1.4.2 Geographical Scope

This Research was carried out in Mpigi district basically in Kyakwanzi Water and sanitation services. Mpigi District lies in the north and east, Kalangala District to the south, Kalungu District to the southwest, Butambala District to the west and Mityana District to the northwest. In the 1970s Mpigi District comprised the Buganda kingdom counties of Kyaddondo, Busiro, Mawokota, Butambala and Gomba. During the 1990s, Kyaddondo and Busiro dispatched to form Wakiso district. It is made up of 3 counties, 16 sub-counties and 3 town councils. The district lies on the shores of Lake Victoria and is traversed by the equator at Kayabwe in Nkozi Sub-County. The district has a population of 454,800 of which 81 % has access to safe water (UBOS 2012). The district is primarily a rural district, with only 8.4% of the population living in urban areas.

1.4.3 Time scope

The time scope of the study covers duration of 2010-2015. This period captures some previous and latest statistics and trends to ensure reliability and validity for the presented findings and establish the role of management in improving the Water and Sanitation services in Mpigi district.

1.5 Significance of the Study

To Policy makers; Information generated from the study will help them in the process of policy formulation, to go further to explain the importance of management in the development process, giving both political leaders and technocrats a

guiding tool if there is to be value for money in the water and sanitation services offered to the people.

To the communities and water users; the study will assist in the process of creating awareness especially for the communities to know that their involvement in the development process is a right rather than a privilege since they are all beneficiaries' entirely. They will further learn that ownership of these projects is theirs and not the government.

To Project managers; Management will ensure there is proper flexibility in carrying out all the project works. That is to say a good project manager sacrifices a lot of time ensuring that there is active participation of everyone, for instance each individual knows what to do in the project.

To the Civil organization; the study will provide a baseline for guiding the planning process. For instance, it will conclude on the importance of involving the local masses in decision making during the process of constructing water and sanitation sources. It will guide Planners on how to undertake an evidence-based planning process for proper operation and maintenance.

To Health workers, Management will ensure there is knowledge explosion in the project for instance the growth of more knowledge increases the complexity and fast work in developing up and improving a certain project so as to benefit the entire community as well as readily accessible.

To the NGOs, it will help in objective assessment of methods and approaches that they use mobilization and management of their water and sanitation projects and help to identify weaknesses and suggest ways of dealing with these weaknesses in such projects. This will help them to identify other factors that were previously ignored in management of water

and sanitation projects but are clearly vital to successful project implementation.

To the researcher, it will be of great importance because she will acquire research skills which can be applied to conduct research in other subjects.

1.6 Justification of the Study

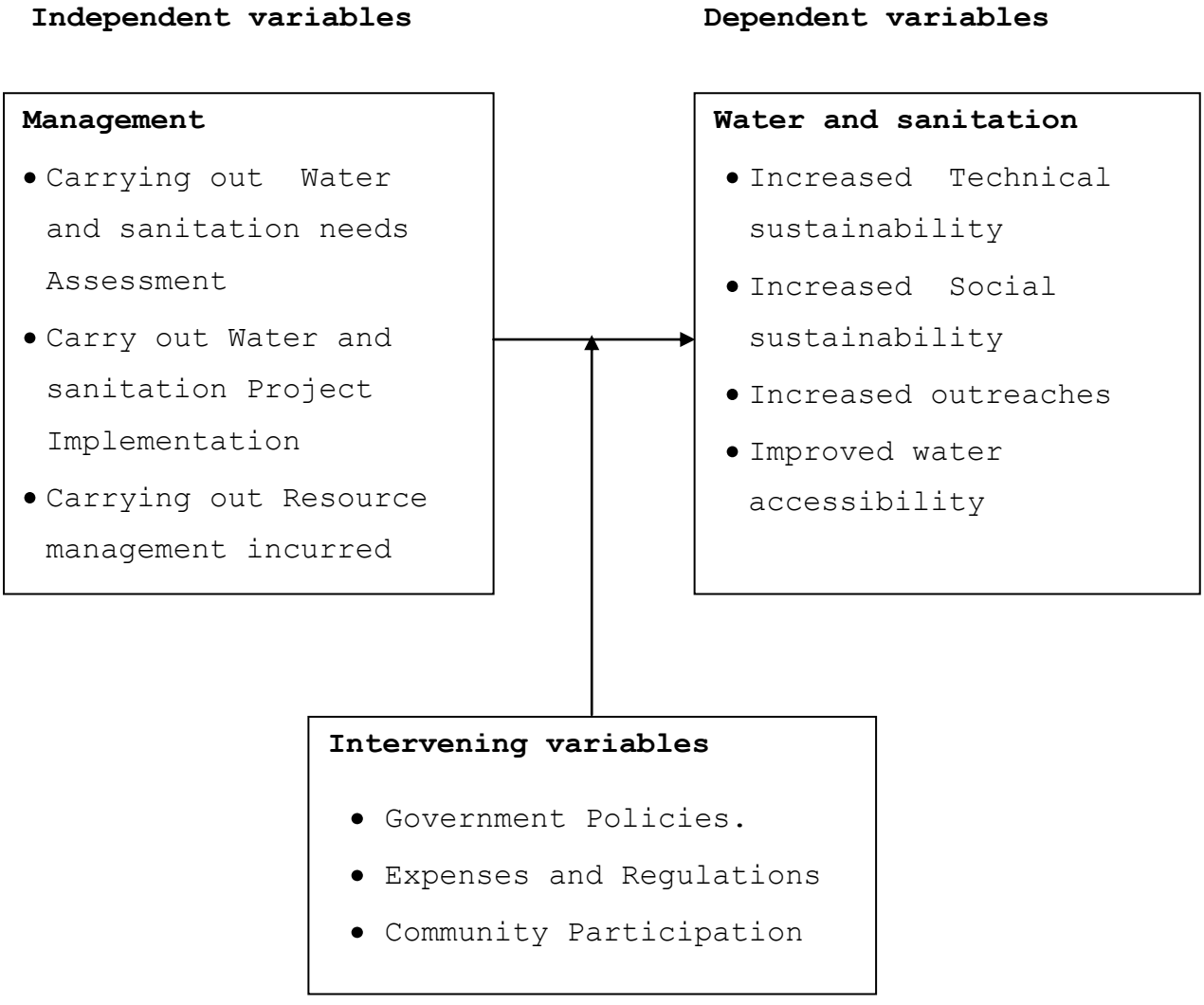
This Research led to the partial fulfillment of a Bachelor's Degree in Ethics and Development Studies.

However the role of management has not showed proper planning and managing risks to the Stake holders, managers for instance in case of a Water and Sanitation services but rather other factors have constituted to effective work as well in the projects.

1.7 Conceptual Framework

The conceptual framework illustrates how the management relates in the improving of Water and Sanitation services in Mpigi district. The independent variable is Management while the dependent variable is Water and Sanitation.

Figure 1.1: Conceptual framework showing the Role of Management in the Water and Sanitation projects in Mpigi district.



Source: Field

According to Camp (2001), a conceptual framework is a structure of what has been learned to best explain the natural progression of a phenomenon that is being studied. It's also seen as cognitive tool needed to make assertions and supporting knowledge claims, and guides the profession toward action (Rojewski 2002).

In the conceptual frame work, the independent variable management is operationalized into carrying out Water and Sanitation needs Assessment, Carrying out Water and Sanitation Project Implementation and carrying out resource management incurred. These affect the dependent variable that is sustainability of water and sanitation projects which is measured through increased technical sustainability, Increased Social sustainability, increased outreaches and improved water accessibility. However there are moderating variables that influence the improvement of the relationship. These include the Government Policies, Expenses and Regulations and also Community Participation.

In addition to this Management refers to the application of processes, methods, knowledge, skills and experience to achieve the project objectives. Generally Water and sanitation needs assessment refers to duty made to estimates and associated costs needed to support water and sanitation interventions. Water and sanitation Project Implementation simply means carrying out the activities described in your work plan with the coordination of a wide range of activities, the overseeing of a team, the management of budget, the communication to the public, among other issues (Dennis 2007).

1.8 Definition of Key Terms

According to Gray (2008), **Management** is the application of processes methods, skills and experiences in order to get the project object. Management refers to the act or skill of controlling and making decisions about a business, department, sports team, or the people who make decisions about a business, department, and sports team. It can also refer to the act or process of deciding how to use something.

Water is a colorless, transparent, odorless, tasteless liquid that forms the seas, lakes, rivers rain and is the basis of the fluids of all living organisms. It is seen as important to life since it's for various activities (Bamberger 2006). In other words, it is the liquid that descends from the clouds as rain, forms streams, lakes, and seas, and is a major constituent of all living matter.

Sanitation refers to the hygienic means of promoting health through the prevention of human contact with the hazards of wastes as well as the treatment and proper disposal of the sewage or waste water. It is a condition relating to public health, especially the provision of clean drinking water and adequate sewage disposal (Maddison 2007). Sanitation can also mean various measures necessary for improving and protecting health and the wellbeing of the people in different priorities.

1.9 Conclusion

In conclusion, the long-term benefits of the applicability of the management are linked to sustainability of water and sanitation projects. Therefore this study continued to investigate the roles of management in improving water and sanitation services; the extent management has towards improving the water and sanitation services among the people and the possible measures of the roles of management in improving water and sanitation services in Mpigi district.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

Chapter two reviews literature which is related to the variables under the study. The study considered the major themes of the study which were, to establish the role of management in improving water and sanitation services, To examine the extent the role management has played in water and sanitation services among the people and to find out the possible management measures to improve water and sanitation services.

2.1 Understanding Management

Management is the application of processes, methods, knowledge, skills and experience to achieve the project objectives. According to Olaf (2009), the main components of management includes defining the reason why a project is necessary, requirements needed, specifying quality of the deliverables, estimating resources and timescale, preparing a business case to justify the investment, securing corporate agreement and funding of these the way of developing and implementing a management plan services in for the project thus leading and motivating the delivery team (Clifford and Erik Larson 2008). Still it can also be noted that management also encompasses managing the risks, issues and changes on the given project, monitoring progress against plan, managing the project budget, maintaining communications with stakeholders.

Essentially, Management is aimed at producing an end product that will effect some change for the benefit of the people that instigated the project. Furthermore it is the initiation, planning and control as well during the provision of the

service. Because of this a manager needs a wide range of skills, often technical skills, certainly people who have management skills and good business awareness as to be in position to offer a service (Dennis 2007).

Management encompasses the organization and coordination of the activities of a business in order to achieve defined objectives. Management is often included as a factor of production along with, machines, materials, and money. According to Peter Drucker (1909-2005), the basic task of management includes both marketing and innovation. Practice of modern management originates from the 16th century study of low-efficiency and failures of certain enterprises, conducted by the English statesman Sir Thomas More (1478-1535).

Management consists of the interlocking functions of creating corporate policy and organizing, planning, controlling, and directing an organization's resources in order to achieve the objectives of that policy. The size of management can range from one person in a small organization to hundreds or thousands of managers in multinational companies. In large organizations, the board of directors defines the policy which is then carried out by the chief executive officer, or CEO (Chief Executive Officer). Some people agree that in order to evaluate a company's current and future worth, the most important factors are the quality and experience of the managers (Olaf 2009).

2.2 Water and Sanitation services

According to Vincent (2006), it is important to note that a sufficient quantity of water of an acceptable standard is a prerequisite to life itself. In this bringing supplies nearer to the home can save time for people, mainly women, who trek long distances to collect water but water needs to be properly

managed in order to provide the greatest benefit. Furthermore Water management tasks normally includes protection of sources, supplies, operation and maintenance of water and sanitation facilities, drainage, as well as waste water disposal among others, Increasing water quantity for people who have a good understanding of hygiene and put their knowledge into practice that will have a greater impact on general health than an improvement in water quality on its own (Clifford, Erik and Larson 2008).

Sanitation is a measure that is undertaken to protect health, Excreta disposal, refuse disposal and vector control are the three main categories of sanitation in that, a growing body of evidence indicates that access to safe drinking water, and sanitation services has an important positive impact on nutrition to the people hence this requires maximizing impact through smart and sustainable integrated actions that various individuals may use (Marks 2010).

Many governments aim at attaining access to drinking water and access to Sanitation facilities, since access to drinking water, measures the proportion of a country's total population with access to an "improved drinking water source" as a main source of water. Vincent, 2006 defines an improved drinking water source as a facility or delivery point that protects water from external contamination, particularly fecial contamination for example piped water into a dwelling plot, or yard, public tap or standpipe, tube well or borehole, protected spring, and rainwater collection. On the other hand, access to sanitation, measures the percentage of a country's population that has access to an improved facility of sanitation. In this "Improved" sanitation sources include connection to a public sewer, connection to a septic system, pour-flush latrine, simple pit latrine, or ventilated pit latrine. The system is considered "improved" if it

hygienically separates human excreta from human contact and is not public, meaning that it can neither be private or shared (Pinto and Slevin 1998).

Clean, accessible water for all is an essential part of the world we want to live in. There is sufficient fresh water on the planet to achieve this. But due to bad economics or poor infrastructure, every year millions of people, most of them children, die from diseases associated with inadequate water supply, sanitation and hygiene.

Water scarcity, poor water quality and inadequate sanitation negatively impact food security, livelihood choices and educational opportunities for poor families across the world. Drought afflicts some of the world's poorest countries, worsening hunger and malnutrition (Marks 2010).

According to the UNICEF report (2010), 2.6 billion people have gained access to improved drinking water sources since 1990, but 663 million people are still without. Between 1990 and 2015, the proportion of the global population using an improved drinking water source has increased from 76 percent to 91 percent. But water scarcity affects more than 40 per cent of the global population and is projected to rise. Over 1.7 billion people are currently living in river basins where water use exceeds recharge. It was also reported that 2.4 billion people lack access to basic sanitation services, such as toilets or latrines and that more than 80 per cent of wastewater resulting from human activities is discharged into rivers or sea without any pollution removal.

2.3 The role of Management in improving water and sanitation Services

Management involves carrying out Water and Sanitation Needs Assessment, Water and sanitation Project Implementation and Carrying out resource management incurred. Hockings (2006) stressed that a good needs assessment is the key to a successful emergency response with a water and sanitation management. A disaster needs assessment serves two primary purposes. First, it will inform the response priorities and plans. Second, it can support the flash appeal for outside assistance should the disaster be of such a magnitude that the humanitarian obligations cannot be met within the limits of budgeted resources.

Prokopy (2005) cited that needs assessment is important to analyse the capacity of communities to deal with the problem and to explore how any intervention can strengthen local capacity. This should address human capacity (skills, knowledge); social capacity (relationships between groups, strength of local organizations and structures), physical capacity (infrastructure) and economic capacity (money, savings, livestock, tools). Using participatory techniques it should be possible for the community or beneficiaries to identify which capacities need to be strengthened in order to ensure that the problem can be addressed in the long term.

It is also important to carry out Water and sanitation Project Implementation. Kerzner (2004) cited that implementation (or execution) is the phase where visions and plans become reality. This is the logical conclusion, after evaluating, deciding, visioning, planning, applying for funds and finding the financial resources of a water and sanitation service. The implementation in sustainable sanitation and water management is complex because it requires the coordination of a wide range of activities, diverse institutional arrangements, and

different time frames. In a water and sanitation, implementation helps to ensure transparency with regard to finances (Moriarty et al. 2007). Funds for sanitation and water projects can come from various sources. In a very schematic way, at the level of a given project, funds may come from four main sources. Funds for sanitation and water can come from various sources.

Carrying out Resource management involves the mechanisms in place to track water resource consumption and availability; measure access to Water and Sanitation services; analyzing project, outputs and outcomes.

According to Simpson (1997), the world's water resources are under increasing pressure due to intensive farming, increasing population, and political tensions. This situation is exacerbated by climate change and environmental degradation, Poor disposal of human, household waste that encourages vermin and insects to thrive, water as well as food becomes contaminated. Water related diseases caused the death of 3.5 million people every year, this mainly affected the children who even died before the age of five from diseases caused by drinking dirty water and living in unsanitary conditions.

Management integrates these functions progressively through the life cycle with the aim of satisfying the stakeholders and constituents according to the established requirements of improving the service (Newell et al., 2004). Stakeholders' are those who have a direct stake in the project while the project's constituents are those who may be impacted by the consequences of the project. A successful service can typically generate when the stakeholders and constituents express their collective satisfaction according to the degree of their involvement. Management also involves planning, organizing, directing and controlling activities in addition to motivating what are usually the most expensive resources on

the service delivered just as management is essentially about managing a the water and sanitation from its conception to its completion and needs to be discussed in terms of various stages of a project life cycle (Meredith and Mantel 2011).

Water has been identified as the likely cause of future wars in the next millennium to come since water shortage is seen as a catalytic factor pushing a poverty stricken community to disaster and conflict. Water is a fundamental basic need for sustaining human economic activities, more still the availability of water in the desired quantity and quality, at the right time and place, has been the key to the survival of all civilizations for instance as human activities also expand in scale and diversity, the demands for fresh water resources continue to grow. Fresh water lakes and rivers, springs, fountains, wetlands and many more, which are the main sources of water, contain an average of 90,000 m3, or just 0.26 percent of total global fresh water reserves.

It is worth noting that management is a team sport, and in today's modern society it relies on the principal players of the team taking responsibility and accountability for those aspects of the project they have been charged with (Simpson, 1997). Indeed, this ethos should be passed down to all team members irrespective of their level of involvement in the project.

According to Meredith and Mantel (2011), many organisations and project sponsors for water and sanitation set their schemes up to fail because they do not fully recognise how important the management role is, to successfully manage a project through its life cycle. It is still common that managers are appointed on a part-time basis, the assumption being they can manage the project on a part-time basis as a stretch to their other day to day duties and responsibilities.

Management can in most cases reduce the chance of a project failing, ensure a minimum level of quality and that results meet requirements and expectations, free up other staff members to get on with their area of work and increase efficiency both on the project and within the business, make things simpler and easier for staff with a single point of contact running the overall project, encourage consistent communications amongst staff and suppliers, keep costs, timeframes and resources to budget.

The main focus of management of water and sanitation services should be on ensuring that time, cost and resources are sensibly managed and available, and committed to the project. This enables in creation a plan and schedule, which is a key product of this stage of the process. Risk and resources for resolving unforeseen issues, as well as progress checkpoints, should also be factored into the plan (Newell et al., 2004).

The role of management of water and sanitation services are crucial as they lead their team and institute a strategy that sees a specific project reach fruition. The client benefits because he/she is allowed to provide feedback, while relishing in the knowledge that their input really means something.

Management enhances better efficiency in delivering Services: management provides a “roadmap” that is easily followed and leads to project completion. Once one knows where to avoid the bumps and potholes in the water and sanitation projects, it stands to reason that you’re going to be working smarter and not harder and longer (Meredith and Mantel 2011).

It is also worth noting that management improves and also enhances customer Satisfaction. This is because whenever water and sanitation is done on time and under budget, the end users walk away happy, in other wards this means that smart

management provides the tools that enable this client or manager relationship to continue (Simpson 1997).

It has also enhanced effectiveness and efficiency in delivering Services among the beneficiaries in most communities in terms of getting access to decision making in the resources they want, most especially when it comes to those who have no water sources and in the long run end up drinking dirty welly water. The same strategies that allowed the team to successfully complete one project will serve even many times over (Simpson 1997).

2.4 The extent the role management has played towards improving water and sanitation services among the people

Although planning does not guarantee project success, lack of planning will probably guarantee failure. However, there are many cases where projects are executed as planned, on time, on budget and achieve the planned performance goals, much as they turn out to be complete failures because they failed to produce actual benefits to the customer or adequate revenue and profit for the performing organization (Simpson 1997).

Managing Time; That is to say management ensures that the time factor manifests itself in a project in the form of deadlines for tasks and the amount of time that these tasks may take. Furthermore, Managing time involves ensuring that tasks are completed on time ensuring that all the water and sanitation activities reach out to the end users (Meredith and Mantel 2011).

According to Shenhar and Dvir (2007), it is always important to have a good resource management as a result of management because it is the efficient and effective deployment of resources when they are needed. Such resources may include financial resources, inventory, human skills, production

resources, or information technology. In the realm of management, processes, techniques and philosophies as to the best approach for allocating resources that have been developed for instance these include discussions on functional vs. cross-functional resource allocation as well as processes espoused by organizations.

Meredith and Mantel (2011) noted that Management involves a process whereby "project inputs are converted to project outputs as set out in the project framework "to insure out a service that various people may need. This process involves a series of activities, which need to be planned, operated and controlled, which will inevitably involve the utilization of resources. The management of these activities is fundamental to a supervisor or monitor so that the project can be completed on time and at cost consistent with the project plan.

Management of water and sanitation project money is one of the roles of management. The money factor manifests itself in the project budget. The management of money within a project involves ensuring that the costs remain within the budget. Given that the majority of the costs in most projects are comprised of labor costs, the factors of money and time (the number of labor hours) are closely intertwined.

According to Pinto and Slevin (1998), there is a Journal on critical success factors of project performance documents that the process of management, involves the successful development and introduction of projects in an organization, which presents an ongoing challenge for managers. The management and implementation process is complex, usually requiring simultaneous attention to a wide variety of human, budgetary, and technical variables. As a result, the organizational project manager is faced with a difficult job characterized by

role overload, frenetic activity, fragmentation, and superficiality.

McNiff and Whitehead (2009), argued that the management of water and sanitation projects ensures that there is a more efficient usage of resources (both human and monetary resources) as both the schedule and the budget are defined in the project plan. It also enhances reduced cost and improved quality of the end service delivered by implementing rigorous cost management and quality management processes in addition to a healthier, more solid relationship with the stakeholders which has further enhanced teamwork environment because of the adoption of a formal process to acknowledging or resolving conflicts that may resort in the service delivery (conflict management).

Management is carried out following the already laid down timetable or work plan. It leads to the realization of project outputs and immediate objectives. Project implementation is usually done by the organization that prepared the project and received funding for it. This organization is referred to as the implementing agency. The implementing agency sets up a project implementation unit, which carries out the implementation on behalf of the implementing agency (Ahuja, Dozzi, and Abourizk 2004).

McNiff and Whitehead (2009), further stressed that other organizations that participate in the implementation of the project by way of collaboration, say by according to good working relationship, extending some technical advice or seconding their staff to the project, are referred to as Co-operating agencies for example, if a given sub-county is to implement a sanitation service, the departments of water, community development and health will act as cooperating agencies.

It was worth noting that infectious diarrhea is mainly responsible for the burden caused by water-borne and water-washed diseases. From the health perspective, improving access to safe water supply and sanitation services is a preventive intervention, whose main outcome is a reduction in the number of episodes of diarrhea and accordingly a proportionate reduction in the number of deaths (Turner et al. 2008).

Based on published reviews, large surveys and multi-country studies, this analysis estimated the health benefits of improving access to safe water and sanitation at the global level and for several regions (Shenhar, Dvir and Levy 1997). Health impacts of such improvements will vary from one region to another as they depend on the existing levels of water supply and sanitation access and the region-specific levels of morbidity and mortality due to diarrhea diseases. Health impacts would be greater in regions where the number of un-served is high and where the diarrhea disease burden is significant

The central role of management of water and sanitation in sustainable development and the major contribution expanded access to safe drinking water and adequate sanitation which may lead to poverty alleviation. Poverty reduction strategies dominate the current development agenda. From this perspective, the health and socio-economic benefits of improved access to safe water and adequate sanitation are the most compelling arguments to support resource allocations towards this goal (Vincent 2006).

Improved water supply and sanitation refer to low technology improvements. 'Improved' water supply involves better access and protected water sources such as stand post, borehole, protected spring or well, or collected rain water (BAARS 2006).Furthermore the Improvement implies a significant increased probability that the water is safe, and that it is

more accessible, and some measures are taken to protect the water source from contamination. 'Improved' sanitation involves better access and safer disposal of excreta (septic tank, simple pit latrine or ventilated improved pit-latrine).

Micknsey (1990) also pointed out that evaluating the health and the socio-economic benefits of safe water and adequate sanitation results in a compelling argument in support of further resource allocations to improving access. Therefore, assessing the costs, the health benefits and the additional benefits of improving access to safe water supply and sanitation helps to support rational and informed decision-making, for resource allocation. Among the many possible and valid criteria, the ratio of economic costs and benefits of different intervention options is critically important.

Poverty reduction through improved water supply and sanitation can be achieved through proper management of water and sanitation projects. This is normally achieved in a number of ways, which include using enabling strategies such as promoting inclusive policy, dialogues and pro-poor policy frameworks, addressing inequities by using city-wide approaches; and also directing activities at areas where poor people live or are particularly affected by lack of safe and adequate water supply and sanitation (Bamberger 2006).

Over the last decade, Uganda has made enormous improvements to the water supply and sanitation provisions for its population. However, although more than 70% of urban residents now have access to water and sanitation services, the high rate of population growth and increasing urbanization mean that the access is still inadequate, especially in the poorer areas of towns and cities. This, combined with the growing pollution of the water resources, poses one of the biggest barriers to development in the country. The reform of the Ugandan water sector is aimed at strengthening independent regulation and

building efficient supply structures. It also focuses on the provision of sanitation services, and on waste water management, water resources management and climate adaptation. Germany is providing support in line with the priorities set by the Ugandan Government (Vision 2020, National Development Plan, pro-poor strategy), while building on earlier German water programs dating back to 2002.

Uganda's Ministry of Water and Environment is both the lead executing agency and the most important implementing partner. The parastatal utility, the National Water and Sewerage Corporation (NWSC), is the partner responsible for providing technical and vocational training for the skilled workers. The Kampala Capital City Authority (KCCA) acts as an interface for ensuring basic sanitation services in the city. he regulatory department in the Ministry of Water and Environment, which was formed with the support of GIZ,(German International Cooperation) and the introduction of basic regulatory instruments (tariffs, business plans, performance assessment) have resulted in greater cost coverage on the part of private water operators, as well as the demonstrable supply of water to an additional 150,000 people.

Successful models have been developed for the provision of sanitation in the capital city Kampala and in a number of smaller towns. These can now be introduced on a wider scale. USAID is also providing additional support for these measures through a combined financing arrangement. Furthermore, the program's support for the coordination of industrial wastewater has contributed to the increased efficiency of state supervision. In the long term, this should lead to a reduction in the pollution of Lake Victoria, Kampala's most important drinking water reservoir.

2.5 The possible measures of management in improving water and sanitation services

Government Policies and regulation are important since they are regulatory authority, which is crucial for sustainable, pro-poor provisions. In addition, they can have an influence in plans for a comprehensive restructuring of the urban supply areas in order to establish regional supply structures (clustering). The government can also help in dissemination of practically tested approaches to sanitation provision, which draws on urban sanitation plans that priorities town-wide coverage as well as sustainable operation of the infrastructure.

Community Participation is also important because it provides significant support for implementing or even drafting of national capacity development strategy for the water sector. In the urban context, this focuses on the provision of technical training for operations and maintenance, the development of the NWSC training centre, and the creation of partnerships with other companies, among others. At the same time, the proportion of women taking part in the training courses can be increased with the community members brought on board (Shenhar, Dvir and Levy 1997).

Although the results showed that stakeholders are involved in the daily running of the projects, it can be noted that when a stakeholder pulls out of the project there is less impact (Dulebohn and Martocchio 1998). The project managers should ensure that they utilize the stakeholders as a vital resource in the running of their services and also ensure that they keep the stakeholders satisfied at all times during the management and implementation of the projects (Bamberger 2006).

There is always a negative correlation between Monitoring and Evaluation and the persons who monitors and evaluates the projects, the project managers should ensure that they re-strategies on the persons or divisions will be responsible for this exercise in the future. Since there is a very high relationship between the government policies and regulations, project managers normally continue to work closely with the government officials and keep up the spirit of ensuring that the policies are followed as expected (Clifford and Erik, Larson 2008).

Micknsey (1990) stresses that participatory programs and projects require financial resources up stream in the project cycle. Research has shown that smooth negotiations, quick project uptake, and decreased operational costs make up for the extra time and resources, downstream the project cycle. The added cost required undertaking participatory work in policy and projects work can be partially financed through grants and other resources. Furthermore, such initiatives require additional resources-financial and in terms of staff time in the field. Experience has shown that such costs must be mainstreamed into an institution's project operating budget if the work on stakeholder participation is to be deepened and broadened (Mermin 2005).

In a bid to recognize these challenges, specific efforts have been taken to identify and understand the constraints faced by PLWHA in order to cater to their needs. Manuals have been published for promoting WASH facilities that are appropriately designed to allow easy access and use by the physically challenged (Jones and Reed 2005).

According to management theorists and conceptualists, financial resources influence implementation of project activities. For instance, some resources form an important variable in strategy implementation frameworks. Financial

resource management helps project implementers to ensure support for facilitation, coordination, financial management and reporting, financial auditing of the Program financial flows, and oversight of service contracts (Bamberger 2006).

It is important for the Rural Water Supply and Sanitation Projects to introduce professional management models involving local, professional water operators (OPs), which were selected and contracted by the community to operate, maintain and manage the water supply systems. It also promoted cost recovery, metering, and the use of water kiosks, as well as gravity-fed piped systems to minimize potential technical issues. Where pumping was necessary and cost-effective, the project preferred renewable energy, such as solar (Bankeret al., 1996).

Water and sanitation management can be improved by documenting project requirements. There is no better way to improving management than by improving the understanding of the projects objectives. By having a clear understanding of the project objectives and requirements and documenting what the project is trying to achieve is critical for success. This ensures that the Management and project team have clear boundaries of what is in scope and what is out of scope. Once there is a list of requirements that have been captured documented, it is important to rank them and focus on the critically important requirements first (Thamhain 2004).

It is also important to improve management with schedules and task lists. In order for a project to be completed, there are often thousands of steps that need to be completed, sometimes in a specific order. One of the best ways to improve management is to tightly control these tasks by creating a Gantt chart where by this can simply be a graphical horizontal bar chart representation of the project tasks set out along a timeline. It is not required for every project however, for

many projects; simply creating a task list will improve things greatly. In order for a task list or Gantt chart to be effective, it needs to show sufficient details, I generally aim for a detail level of daily tasks. The Gantt chart or task list does not need to be too scientific, but there does need to be enough detail for you to manage and control (Bamberger 2006).

Qualified Management Professionals are also important to note, It seems a simple solution: To improve management performance, hire project managers, but the biggest problem businesses face is that almost anyone can call themselves a "project manager" but very few people actually understand the principles and best practices of management to do it effectively, the result is that some reports suggest that over 70% of projects fail. That is a scary statistic. In order to give the water and sanitation project every chance of success then one really should be looking for certified management professionals.

As noted by Meredith and Mantel (2011), it is important to engage in Subject Matter Experts. This is because "We don't know what we don't know," that is the danger of trying to use the internal resources for the projects if they are not suitably qualified. It is important not to be tempted to put the best engineer as the project manager, he or she may be a great technical engineer, but may not make a great project manager. The best way to ensure success is (this is something every good project manager should do) to identify gaps in skills and knowledge areas and engage suitably qualified subject matter experts. In this case the Manager should also be the subject matter expert in management, not the subject matter expert in the technical project. Gaining this maturity in the organization means that one will be ready for more advanced techniques to improve management further to benefit the majority.

Partnership is also an important factor that has to be considered in improving the role of water and sanitation management. This can be done by embracing the political, governmental, and civil groups in society in relationships which are inclusive and dynamic is the driving force for developing sustainable water and sanitation projects. There is a wide range of stakeholders who can contribute to water and sanitation project development. Some may need to be motivated and equipped through capacity building programs if they are to contribute their full potential for instance, if training and credit facilities for private low cost drilling contractors can speed up implementation and reduce the costs of community borehole programs (BAARS 2006).

There should be an increased emphasis on selecting the appropriate management systems for operation and maintenance of the water and sanitation projects. Additionally water supply and sanitation programs should provide opportunities for private sector participation in service delivery, going beyond engineering and construction services to include maintenance contracting, financial management services, water service franchising, and outright privatization (Maddison 2007).

Institution Strengthening and Policy Development is also important for management to be able to achieve its roles. For sustainable water and sanitation programs to be implemented, capable governmental and other institutions must be in place. At the same time these agencies must have a clear policy framework within which to operate. Unfortunately these issues have received very little emphasis by donors in the past, and host country agencies and policies are weak. Such assistance can be made highly attractive by being linked to donor-supported infrastructure projects and packaged with training, system and facility design, unaccounted-for water education,

computer applications, and offers of hardware such as vehicles and computers (Bamberger 2006).

It is also important to ensure consistency in documentation of budget documents. For example KCCA uses the ministerial policy, statements to detail the budgeting and expenditures in Kampala City. Over the past three financial years, these budget documents are inconsistent in the way they are documented. The budget and expenditure contents are not the same in all the financial years, hence making it hard to follow up public funds through a trend analysis. Therefore, the government should ensure consistency in presentation of the budget documents as this will enable better resource allocation, better implementation of policies and creation of a corruption free environment.

According to Mehta and Knapp (2004), new innovations exist that may lead to greater success such as increases in public-private partnerships, investments by large corporations, and more community-based organizations and nongovernmental organizations that work on improving access to water and sanitation. A greater focus on micro financing and local initiatives, along with new discussion of ecological sanitation and culturally appropriate initiatives, is led by empowered community members (Manase, Nkuna, and Ngorima, 2009). Other trends include the consideration of global water scarcity in sustainable planning and a move from simple water quality monitoring to the development of a more holistic water safety plan approach by the World Health Organization (WHO) as well as greater use of various household water treatment approaches (Makutsa 2001).

Lule (2005), noted that with regard to standards for improved water and sanitation, it is important to recognize that improved water is not necessarily safe drinking water. Improved water access includes household connections, public

stand pipes, rain water collection, boreholes, and protected wells, but not water vendors, unprotected wells, unprotected springs, rivers or ponds, or tanker truck water (Katabira, 2010). Improved sanitation includes connections to public sewers, septic systems, pour-flush and improved pit latrines, but not shared, traditional, or open pit latrines. Results have been mixed—between 1990 and 2002, the number of people with improved water gradually increased (Killewo andSmet 2009).

According to Hsiehand Shannon (2005), there is need to understand, respond to, and promote consumer demand for water and sanitation services. Without identifying why and how users would like improved services and subsidizing improvements without user input, many projects risk being abandoned or misused. The new goal is to spur consumer demand and provide market-based approaches, such as micro-credits or loans instead of grants, in those areas where individuals and communities desire improvements (Grant, Djommand, and Cock 2011). Investment will then be more sustainable than a generic installation by an outside organization (Graneheim and Lundman 2004).

There must be a move away from implementation without evaluation. Water and sanitation projects must include monitoring and evaluation components from inception through implementation and follow-up, and the metrics should reflect the need, design, implementation, use, impact, efficiency, and sustainability of the project/program (Glasmacher 2003). Agencies often measure success by the number of wells or latrines installed, rather than the quantity used or the number still operational five years later. The metrics of successful water and sanitation projects need to reflect actual use as well as promote accountability for keeping the services operational. Furthermore, the results of the

monitoring and evaluation and lessons learned need to get back to the decision makers so that the findings can inform policy (Garbus 2003).

Curtis, and Biran (2011), documented that there needs to be an emphasis on sustainability. There is a need for additional longitudinal research to identify approaches that are sustainable technically, financially, and environmentally. Technical sustainability has been an ongoing problem in water and sanitation projects in developing countries (Cavanagh 2007). Too often, a pump or other piece of equipment breaks and cannot be repaired. This problem can occur all along the scale of services from a pump at a borehole to a pump in a modern water or wastewater treatment plant (Cronin and Taylor 2012).

As noted by Babbie (2010), financial sustainability depends on local capacity to recover the true costs of water and sanitation system operation and maintenance without reliance on long-term financial aid from external donors. This includes consideration of community management models, transparency, and good governance practices. However, there can be tension between the need to recover the costs of water supply and sanitation development, operation, and maintenance and the principle that safe water and sanitation are basic human rights that should be provided to all (Allard and Rosen 2003).

It is essential that these services be adequately valued since they are also linked to the protection of scarce natural resources (Allard 2004). Environmental sustainability includes consideration of the available water resources that can be developed for drinking water as well as for industry and agriculture needs and also weighing the long-term feasibility of waterborne sewerage and waste water treatment. In developing countries, most cities and towns that have a sewerage system do not have sewage treatment, and the

consequences of continued discharge of raw sewage into the environment are serious, irreversible damage to the aquatic environment as well as health risks from exposure to pathogens entering the environment (Duncan 2010).

2.6 Conclusion

According to the views of the scholars above it has been shown that there exists a relationship between the role of management in improving water and sanitation services and the literature also reveals the big gap between water sources that people get access to and the sanitation facilities are still of low standards since masses end up acquiring diseases from those poor facilities therefore Stake holders, Proper management officials should work together, put more emphasis on constructing proper water and sanitation facilities where customer's requirements are always met, and being located strategically, they should emphasize proper distribution channels to supply to all people in Mpigi district. Furthermore different stake holders should identify and provide technical assistance to clients and this can be done through training them on how to utilize these resources tentatively since they are the beneficiaries who get these services.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

Research methodology is a way to systematically solve the research problem. This chapter presents the methodology that was used in the study and a strategy that will be used to collect the data, analyze, and accomplish the study effectively. It therefore shows the research design, study population, area of study, sample size, data collection methods and data analysis, quality control that the researcher intends to use in conducting and completing the current study.

3.1 Research Design

According to Amin (2005), a research design is a plan used while conducting a research study. The study used a case study research design approach considering both quantitative and qualitative research approach. A case study was used because it provides an in depth study of the problem with limited time scale while the Quantitative research approach refers to the systematic empirical investigation of social phenomena via statistical, mathematical or numerical data or computational techniques. In this the researcher used qualitative approach to yield an unbiased result that can be generalized to some larger population.

3.2 Study Population

According to Erias (2010), a study population refers to the group of people chosen for purpose of research. The unit of analysis is the Kyakwanzi Water Project. The study population included local government officials; water service providers and community members. The local government officials

comprised of the Chief Administrative Officer, District Councilors in the Sub County. The water service providers comprised of National water and Sewerage Corporation officials, and Water Contractors. Community members comprised of houses hold in Kyakwanzi that are beneficiaries to the water and sanitation services.

3.3 Area of study

Research area of study encompasses a study of a political or geographical area including its history, geography, language, and general culture. In this case this Research operated in Mpigi district basically in Kyakwanzi. This area would be chosen because approximately 80% of all illnesses (in the area are caused by poor water and sanitation condition due to non-sustainable water and sanitation facilities (Kazooba 2015).

3.4 Sample size and Sampling Techniques

3.4.1 Sample Size

Amin (2005), noted that, a sample size can simply be defined as the subset of a given population. In other words, a sample size is the total number of sub elements or individuals randomly selected and assigned from a given population (Selecting an appropriate sample size is a critical aspect in research with particular reference to this study). A total of 50 respondents were selected based on Krejcie and Morgan (1970) sampling guidelines using the probability simple random sampling method, and non-probability methods of purposive sampling criteria. Table 3.1 below shows the different population categories targeted, sample and sampling methods that were used in the study.

Table 3.1: Sample size and selection

S/N	Category	Sample size	Sampling Technique
1	Project managers	4	Purposive
3	Local Government Officials	6	Purposive
4	Water service providers	5	Purposive
5	Community members/households	42	Convenient sampling
Total		**57**	

Source: Gray, 2008

3.4.2 Sampling Technique

Amin (2005), points out that sampling involves selecting research elements or items for a research study from a given research population. Since the population is heterogeneous, the study used purposive sampling and convenient sampling.

Purposive sampling, also known as judgmental, selective or subjective sampling, is a type of non-probability sampling techniques. Purposive sampling technique was used to select key respondents that are Project managers; local Government Officials and Water service providers because it is best suited for selecting information rich cases for in depth study (Barifaijo, Basheka and Oonyu 2010). The researcher chose the sample based on who they think would be appropriate for the study.

Convenience sampling is a non-probability sampling technique where subjects are selected because of their convenient accessibility and proximity to the researcher. The subjects are selected just because they are easiest to recruit for the study and the researcher did not consider selecting subjects that are representative of the entire population. Convenient

sampling technique was used because it is fast, inexpensive, easy and the subjects are readily available. It was used to sample the community households.

3.5 Sources of Data

3.5.1 Primary Data

Primary sources are original materials on which research is based. They are first and testimony or direct evidence concerning a topic under consideration. They present information in its original form, neither interpreted nor condensed nor evaluated by other writers (Amin 2015). Respondents were given questionnaires, interview guides which they filled and at the end the researcher aggregated the responses as data which hence was used as results of the study.

3.5.2 Secondary Data

Secondary sources offer interpretation or analysis based on primary sources. They may explain primary sources and often uses them to support a specific thesis or argument or to persuade the reader to accept a certain point of view (Amin 2015), other publications from secondary sources like dissertations, publications, journals and the internet were accessed to obtain relevant and supporting literature.

3.6 Methods of Data Collection

According to Sekaran (2003), data can be obtained from both primary and secondary data. Data collection refers to the systematic process of collecting research data on a given phenomenon (Amin 2005). The researcher used both primary and secondary sources of data collection for the study. In using primary sources, the researcher used a number of methods

namely interviews and, questionnaires. Secondary data collection was done by viewing the records of the businesses from internet books, journals. This helped the research to access all the relevant information.

Techniques of Data Collection

3.6.1 Questionnaire Guide

A questionnaire method was used because it helped to get the information and data concerning the topic of my study. The researcher set close ended structured questions on a sheet of paper arranged according to the study objectives to avoid biasness. These questionnaires were distributed among the members to fill in the possible answers. This enabled easy data collection since responses were attained there and then. This was conducted by issuing questionnaires to various respondents who filled them in. The researcher interpreted for those who do not know how to read and write. This technique was used because it is appropriate for investigation of researcher's needs, expectations, perspectives, priorities and preferences. It helped the researcher collected quantitative data. The researcher then used the information in relation to the study.

3.6.2 Interview Guide

Interviews are open questions often administered to key informants to give them wide latitude to talk about the subject. Personal interviews were also carried out for the Key Informants who include Project managers, Local Government Officials and Water service providers. This enabled in acquisition of first-hand information and probing since it involved a face to face interface with respondents, also leading to high response rate. This was used in a way that the researcher physically interacts with the different respondents asking them questions which require immediate response. The

researcher interviewed the respondents face to face to obtain in-depth information about the topic under investigation. The Interview Guide was carefully designed instrument for collecting data in accordance with the specifications of the research questions. The interview guide allowed getting on-the spot responses.

3.6.3 Focus Group Discussion

This method helped the researcher to equally gather primary qualitative data. In this regard, the community households were gathered on appointment of the researcher to discuss issues concerning management and sustainably of water and sanitation services in the study area. This will be done in 3 groups of 14 members. According to Marsh (2013), a focus group discussion enhances the attainment of deep information since it encourages free interaction and probing of the respondents on spot. It therefore helped the researcher in eliciting necessary information.

3.6.4 Observation

Observation is a way of gathering data by watching behavior, events, or noting physical characteristics in their natural setting. This study involved having a set of things to observe to consideration while in the field. The observation guide was used to collect qualitative data. This method was used by seeing and observing the way the water and sanitation projects are being run and carried on. This method was used to get the data relevant to the topic of study. This method was guided with an observation checklist because it helped the researcher to focus on the relevant situations that are in line with the study objectives.

3.7 Quality Control Methods

3.7.1 Validity

According to Mugenda (1999), Validity refers to the extent to which questions in an instrument accurately measure the variables there. In other words, Validity is the accuracy and meaningfulness of inferences, which are based on the research results therefore it was done by making sure that the questionnaire and interview guide is commended and guided by research experts to avoid ambiguity of the questions that need several answers.

3.7.2 Reliability

Reliability refers to the degree to which a set of variables are consistent with what they are intended to measure (Amin 2005). In other words, it is the ability of the research tools to collect data that can be replicated such as where different other people can go to the field to carry out the same research being carried out and get the same results that the researcher got. This was done by pre-testing method. It was also done by use of the questionnaire to see if it gave the researcher good results.

3.8 Data Analysis Techniques

The researcher used the Likert scale that ranges from one to five where the first represents strongly disagree, second represents disagree, third represents neutral, followed by agree, and finally strongly agree. This helped to evaluate the relationship between the independent variable and dependent variable. The data collected was coded, sorted and analyzed. This is the process of making meaning to the mass of collected data. Data analysis involved sorting, editing data, adjusting data into meaningful information, checking incomplete

questionnaires to minimize the errors in the research. After data collection, the data was used to obtain statistics and descriptive presentations in terms of graphs and charts. The data gathered was edited to minimize errors that may adversely affect the study. It was ensured that all the questionnaires are filled appropriately and none is left out. The data was coded so as to enable data entry and analysis using the bar graphs and pie charts.

3.9 Ethical Considerations

Ethical considerations refer to the research principles that were adhered to while conducting the research study. Amin (2005) points out that it is always prudent to conduct research studies in accordance with higher moral values. For that reason, the following was the ethical considerations that are adhered to while carrying out the study. The identity of individuals from whom information was obtained in the course of the research was strictly confidential.

No individual was a subject of the research without his or her freely given consent that would participate in the study. Therefore, this research was conducted with utmost level of integrity basing on information or data collected from respondents. The information collected did not have negative or bad impact on the company settings and the community as a whole.

The research had to seek authorization from the relevant authorities so as to access the data required easily and legally. The researcher also had to get a formal introduction from the university as authorization so as to get information from the target premises.

The research such as this may focused on topics that are sensitive and it would be difficult to illicit honest responses to some of the questions posed when a participant did not feel secure in knowing that their identity is protected. Privacy matters were addressed from the inception of the research to the publication of the results. There were safety nets put in place to guarantee confidentiality. The only amount of personal data that was collected for the research is the minimal amount needed to insure a proper sampling of the population.

3.10 Study Limitation and Solutions

Access to research data or information; during the study, most of the research respondents are busy on their daily routine office work. Therefore, did not give sufficient time to participate and take part in the research study.

Time; the researcher experienced a time constraint in data collection, analyzing of data and in final presentation of the report. However, the researcher overcame this problem by ensuring that the time element is put into consideration and that all appointments agreed upon with respondents are fully met.

Cost; the researcher experienced a problem of limited finances with respect to this study. Costs regarding this limitation include transport, printing and photocopying of relevant materials. However, the researcher had to borrow some money from relatives, friends and use the resources sparingly so as to overcome the cost constraint.

Non responses; the researcher also experienced a problem of non-response from respondents who were given the questionnaires to fill. However, the researcher assured the respondents that any information given would be treated with maximum confidentiality.

Limited trust availed to the researcher was another challenge experienced during the study. Some respondents are hesitant to reveal as well as avail the researcher with information they believe to be confidential. To this end, the researcher had to first assure the respondents of utmost confidentiality and secrecy of each one's details, and that the information they gave was held with utmost concealment and strictly for academic purposes.

There was a limitation of reliance on interview data. With the use of interviews, it is hard to control respondent behaviour because some of the interviewees maybe sensitive to minor changes in interview wording. There were elements of item-no response as the answering process will fail to proceed smoothly because the respondent lacks motivation or ability. Some respondents also give responses such as; the questions are too difficult, not interesting, among others which the researcher found somewhat unsatisfactory of the expected findings. However, the researcher conducted reliability and validity tests to ensure the consistence and accuracy of the tools that were used.

3.11 Conclusion

The chapter is basically the backbone of the research, because it seeks for information about management in improving water and sanitation services, by using different data collection methods, within the employees of Kyakwanzi Water and sanitation project and available documents about water and sanitation. To sum it up, various and useful techniques were used to make sure that information was collected, analyzed, processed and interpreted to yield meaningful information on the role of management in improving water and sanitation services in Mpigi district.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND DISCUSSION OF FINDINGS

4.0 Introduction

Chapter four presents the findings, which the researcher got from different respondents, and these were presented, discussed, and analyzed in this chapter four. Furthermore it results on the background information of respondents are analyzed and interpreted. In addition still, it presents, discusses and analyses the findings in the chronological order of the research objectives. Data collected from the questionnaires, interview guides, focus group discussion were analyzed.

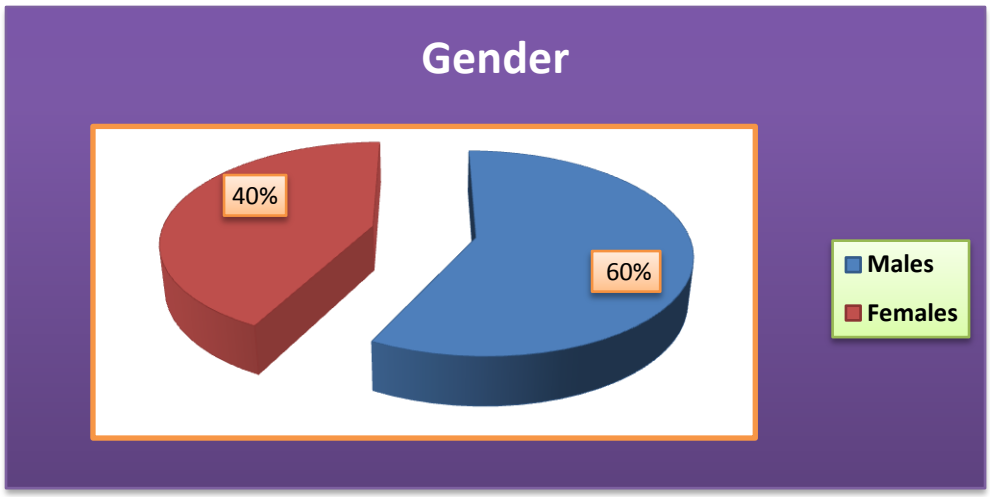
4.1 Background Information of Respondents

The background information of respondents was deemed necessary because the ability of the respondents to give satisfactory information on the study variables greatly depended on their background. The background information of respondents solicited data on the samples and this has been presented below and categorized into; gender, age, held, education and occupation, of the respondents.

4.1.1 Gender of the Respondents

The following figure presents findings about the gender of respondents and analysis follows. Data related to gender of the respondents is presented in the pie chart 1 below.

Pie-chart 1 Showing the Gender of Respondents



Source: Primary Data 2016

According to the statistics, pie chart one results from the questionnaire indicate that 60% were females and 40% males. Gender is an important variable in a given institution which is variably affected by any social or economic phenomenon and the relationship between Management and improving water and sanitation services is not an exception. Hence the variable gender was investigated for this study and details of their respective gender as presented in the pie chart above.

4.1.2 Age of Respondents

The following table presents findings about age group of respondents and analysis follows.

Table 4.1 Showing the Age of respondents

Age	Frequency	Percent
Below 18 years	0	0.0%
18 – 30 years	15	35.7%
31 – 40 years	12	28.6%
41 – 50 years	10	23.8%
Above 50 years	5	11.9%
Total	42	100.0%

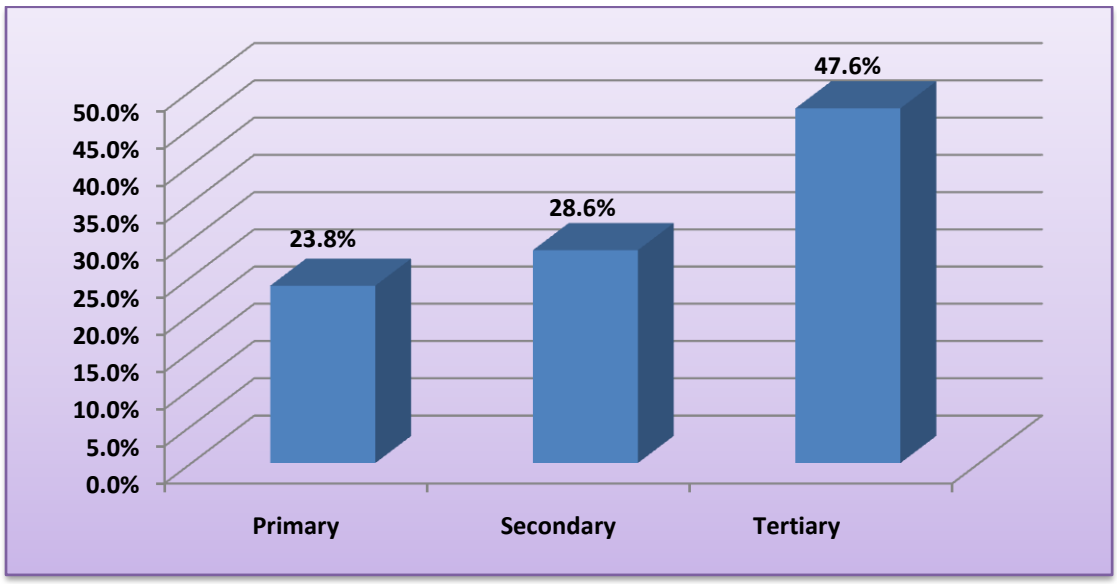
Source: Primary Data 2016

Using the questionnaire method, the results in table 4.1 showed that most respondents 35.7% were aged between 18-30 years compared to 28.6% aged 31 to 40 years, 23.8% aged 41-50 years, and the least age group 11.9% above 50 years and no one below 18 years, representing 0.0%.This showed that the respondents were mature enough to have the mental capacity and strength to familiarize, interpret the contents of the questionnaire and it was not very costly to use thus were able to complete them. The demographic results further indicated that the majority respondents were not very old and were considered using random sampling for their curiosity as well as knowledge of the facts about the role of management in improving water and sanitation services.

4.1.3 Education Level of Respondents

The study also established the education level of the respondents. The findings from the questionnaires were recorded and presented in the bar graph below. In this section, differences in educational attainment of the respondents were discussed.

Bar graph 1 Showing the Education Level of Respondents



Source: Primary Data 2016

Study findings from the questionnaires revealed that 47.6% of the respondents had gone through tertiary, 28.6% had through secondary and 23.8% the respondents primary. Education also enhances the ability of individuals to achieve desired demographic and performance goals. This was also relevant to the study because it helped the researcher in avoiding time wastage through answering of questionnaires since the employees could easily interpret questions. As noted by Olaf, (2009), the educational attainment of respondents is an important indicator of their knowledge and attitude about the relationship between management in improving water and sanitation services.

4.1.4 Occupation of the Respondents

The study also revealed the education level of the respondents in which findings were recorded as indicated in the table below.

Table 4.2 Showing the Occupation of respondents

Age	Frequency	Percent
Peasant Farmer	11	26.2%
Trader	25	59.5%
Teacher	6	14.3%
Total	**42**	**100.0%**

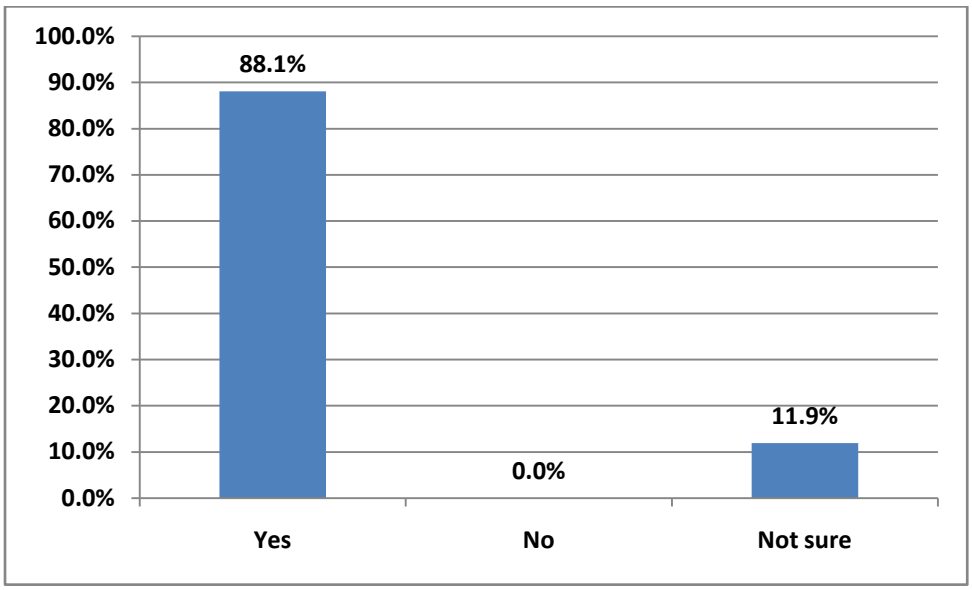
Source: Primary Data 2016

Using the findings from the questionnaires, 59.5% of the respondents were traders, 26.2% were peasant farmers, and the 14.3% of the respondents were teachers. This implied that the community has more traders and small scale industries. Quantitative data regarding occupation of the respondents was collected using questionnaire method.

4.1.5 Understanding Management and Sanitation

The following table presents findings about whether the respondents understand management and sanitation and analysis follows.

Bar graph 2 Showing the Understanding management and sanitation



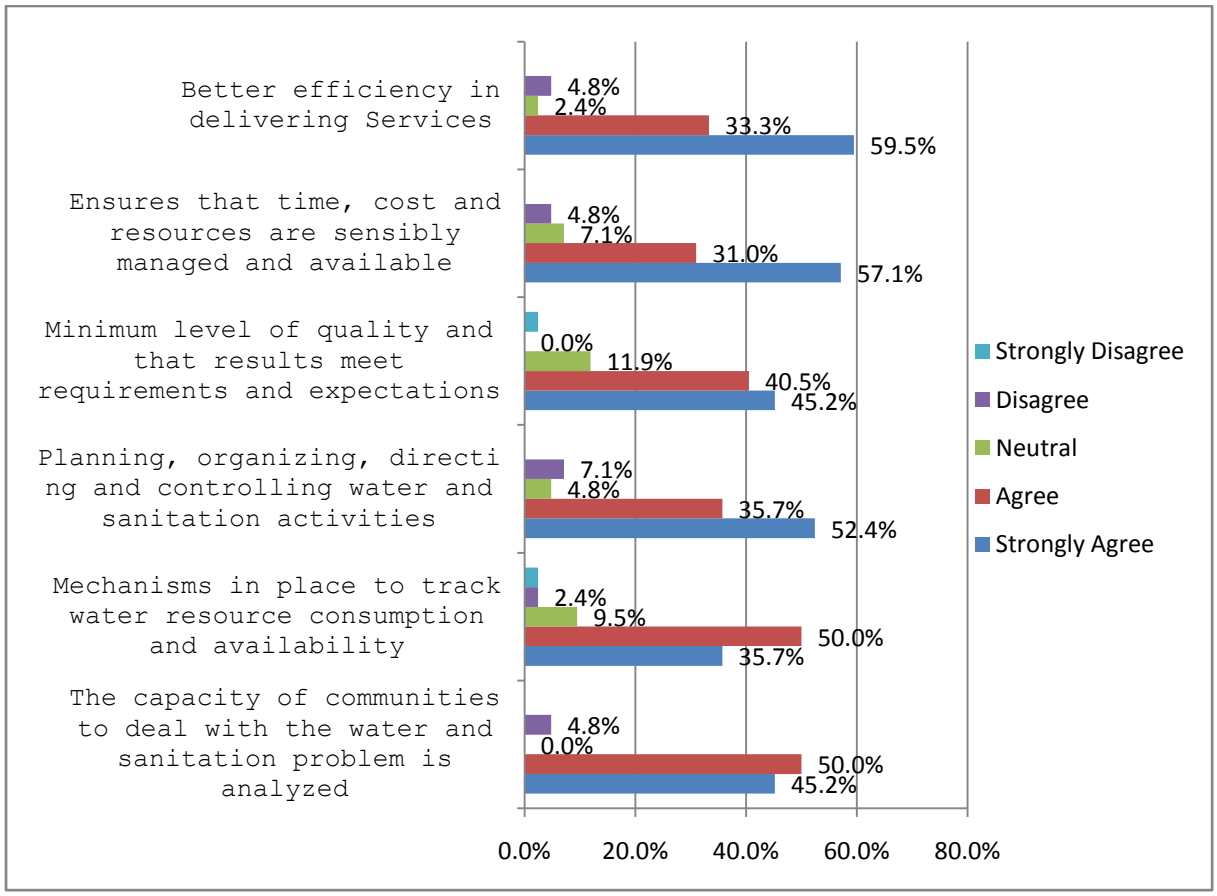
Source: Primary Data 2016

Findings from the questionnaires showed that 88.1% of the respondents understood management and sanitation as compared to the 11.9% who were not sure about water and sanitation. This quantitative data was collected using questionnaire method because most of respondents were able to easily familiarize and interpret its contents and thus were able to complete it.

4.2 Roles of Management in Improving Water and Sanitation Services

Bar graph below showed the findings about the roles of Management in improving water and sanitation Services. The findings were presented, analyzed and interpreted in percentages, frequencies as indicated below. They were categorized on how the respondents strongly agree, (SA), agree (A), neutral (N), disagree (D) and strongly disagree (SD).

Bar graph 3 Showing the respondents' understanding the roles of Management in improving water and sanitation Services



Source: Primary Source 2016

Using the questionnaire findings, 45.2% strongly agreed that the capacity of communities to deal with the water and sanitation problem were analyzed, 50.0% agreed while 4.8% disagreed. The mean of 3.44 and standard deviation of 0.594

presented the 45.2% of the respondents who agreed. This implied that the management is able to address human capacity (skills, knowledge), social capacity (relationships between groups; and also the economic capacity (money, savings, livestock, tools). This was in line with Prokopy (2005) who cited that needs assessment is important to analyze the capacity of communities to deal with the problem and to explore how any intervention can strengthen local capacity. This should address human capacity. These findings were in conformity with one of the respondents interviewed who said that;

> We normally carry out assessments of community or beneficiaries of water and sanitation programs to identify which need to be strengthened in order to ensure that the problem can be addressed in the long term *(Interview in Kamengo on 9th April 2016*)

This implied that a good needs assessment is the key to a successful water and sanitation management program whereby the capacities are strengthened as documented by Hockings (2006).

In consideration to the fact that Management has involved the mechanisms in place to track water resource consumption and availability, 50.0% of the respondents agreed, 37.5% strongly agreed, 9.5% were neutral whereas 2.4% both disagreed and strongly disagreed. This had a mean of 3.39 and a standard deviation 1.102. These findings were in line with Simpson, (1997) who argued that carrying out resource management involves the mechanisms in place to track water resource consumption, availability and the measure access to Water and Sanitation services, analyzing project outputs as well as outcomes.

It was revealed that the 52.4% of the respondents agreed that Management has also been involved in planning, organizing, directing and controlling water and sanitation activities, since 35.7% strongly agreed, 4.8% were not sure whether

Management has also been involves planning, organizing, directing and controlling water and sanitation activities while 7.1% disagreed. These findings were in agreement with Meredith and Mantel (2011) who agreed that management also involves planning, organizing, directing and controlling activities in addition to motivating what are usually the most expensive resources on the service delivered. In addition to the findings of the interview where one of the respondents mentioned that;

> Management of water and sanitation projects normally emphasizes planning, organizing, directing of the activities at all stages of the water and sanitation project cycles. (*Interview in Kamengo on 9th April 2016*)

As noted by Meredith and Mantel (2011) Management is essentially about managing the water and sanitation from its conception to its completion and needs to be discussed in terms of various stages of a project lifecycle.

The findings showed that the 45.2% strongly agreed that it has also ensured a minimum level of quality and that results meet requirements and expectations while 40.5% agreed, 11.9% were neutral as compared to the minority 2.4% who strongly disagreed with it. The mean of 3.34 and standard deviation of 0.598 indicated that generally most of the respondents agreed. This is in line with Newell *et al*., (2004) who argued that management of water and sanitation can in most cases reduce the chance of a project failing, ensure a minimum level of quality and that results meet requirements and expectations, free up other staff members to get on with their area of work and increase efficiency both on the project and within the business.

In relation to the fact that management of water and sanitation services has ensured that time, cost and resources are sensibly managed and available, most of the respondents

that is 57.1% strongly agreed, 31.0% agreed whereas the 7.1%were not sure and the minority 4.8% strongly disagreed. The mean of 4.69 and standard deviation of 1.133 presented the 57.1% of the respondents who strongly agreed. This was in line with the findings of the focus group discussion where it was concluded that;

> The main focus of management of water and sanitation services should be on ensuring that time, cost and resources are managed sensibly and available, and committed to the project. This is important because it enables in creation a plan and schedule, which is a key product of this stage of the process. (*Interview in Bulembo on 10th April 2016)*

This showed how important management of water and sanitation services which can help in controlling risk and resources for resolving unforeseen issues, as well as progress checkpoints, should also be factored into the plan as documented by Newell et al., (2004).

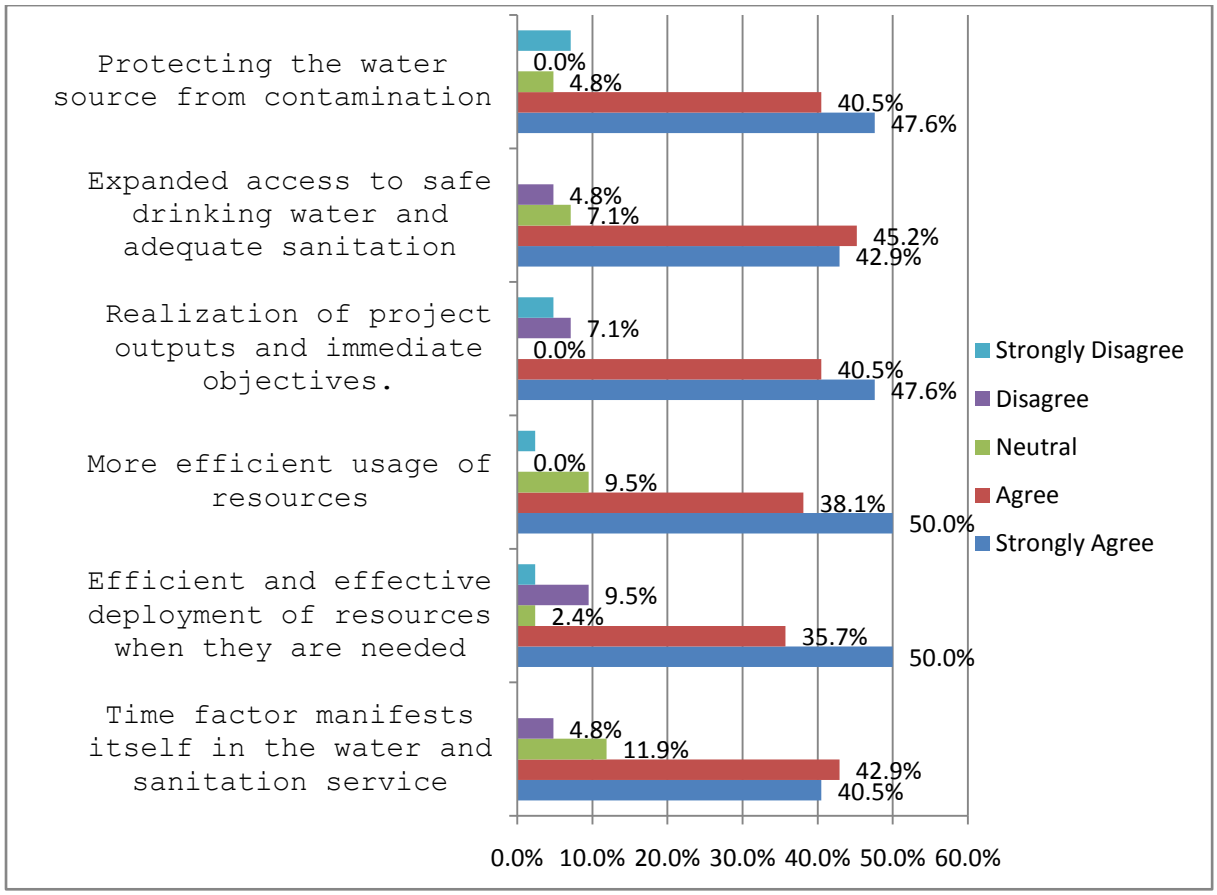
Findings also indicated that the 59.5% strongly agreed that Management enhances better efficiency in delivering Services, 33.3% agreed 2.4% were not sure about this while 4.8% disagreed. The mean of 4.12 and standard deviation of 0.796 presented the 59.5% of the respondents who strongly agreed. This was in agreement with Meredith and Mantel (2011) who pointed out that it is the duty of management to enhance better efficiency in delivering Services since it provides a "roadmap" that is easily followed and leads to project completion.

4.3 The extent the role management has played towards improving water and sanitation services among the people

The second objective of the study was to establish the extent the role management has played towards improving water and sanitation services among the people. The findings were

presented, analyzed and interpreted in percentages, frequencies as indicated below. They are categorized on how the respondents strongly agree, (SA), agree (A), neutral (N), disagree (D) and strongly disagree (SD)

Bar graph 4 Showing the extent the role management has played towards improving water and sanitation services among the people.



Source: Primary Data 2016

The findings of the study indicated that the 42.9% of the respondents agreed that management ensures that the time factor manifests itself in the water and sanitation service, those were followed by 40.5% who strongly agreed, 11.9% of them were not sure, while 4.8% and 0.0% disagreed and strongly disagreed respectively. The mean score of 4.03 and Standard Deviation of 0.891 implied that most of the respondents agreed.

In line with study findings, Meredith and Mantel (2011) documented that Managing time involves ensuring that tasks are completed on time ensuring that all the water and sanitation activities reach out to the end users. Additionally, management ensures that the time factor manifests itself in a project in the form of deadlines for tasks and the amount of time that these tasks may take.

This was also in agreement with Prokopy (2005) who stated that Managing time involves ensuring that tasks are completed on time ensuring that all the water and sanitation activities reach out to the end users.

According to the study findings, it was presented that the 50.0%of the respondents agreed that it has ensured efficient and effective deployment of resources when they are needed, those were followed by 35.7% who strongly agreed, 9.5% of them disagreed while 2.4% strongly disagreed. The mean score of 4.20 and Standard Deviation of 1.231 implied that most of the respondents agreed. This was in line with the findings of the focus group where it was revealed that in the realm of management, processes, techniques and philosophies as to the best approach for allocating resources that have been developed for instance these include discussions on functional vs. cross-functional resource allocation as well as processes espoused by organizations.

In relation to the study findings, it was shown that 50.0% of the respondents strongly agreed, 38.1% agreed, 9.5% of them were not sure whether mmanagement of water and sanitation ensures that there is a more efficient usage of resources whereas 2.4% strongly disagreed. The mean score of 4.20 and Standard Deviation of 1.231 implied that most of the respondents agreed. In line with the study findings, McNiff and Whitehead, (2009) argued that the management of water and sanitation projects ensures that there is a more efficient

usage of resources (both human and monetary resources) as both the schedule and the budget are defined in the project plan.

> *Good resource management as a result of management because it is the efficient and effective deployment of resources when they are needed. Project management ensures that there is a more efficient usage of resources (Interview in Kamengo on 9th April 2016).*

In relation to the study findings, it was shown that 47.6% of the respondents strongly agreed that it has also lead to the realization of project outputs and immediate objectives, 40.6% agreed, 7.1% of them disagreed while the minority 4.8% of the respondents strongly disagreed. The mean score of 3.61 and Standard Deviation of 1.302 implied that most of the respondents generally agreed. This was supported by the findings of the interview where one of the respondents noted out that;

> Management of water and sanitation projects ensures that there is a more efficient usage of resources (both human and monetary resources) as both the schedule and the budget are defined in the project plan *(Interview in Kamengo on 9th April 2016*).

In addition to the above, the study findings showed that the 45.9% of the respondents agreed that management has been a major contribution expanded access to safe drinking water and adequate sanitation, 42.9% strongly agreed, 7.1% of them were not sure 4.8% disagreed. The mean score of 3.65 and Standard Deviation of 0.871 implied that most of the respondents agreed. From this perspective, Vincent, (2006) agreed that the health and socio-economic benefits of improved access to safe water and adequate sanitation are the most compelling arguments to support resource allocations towards this goal.

The findings of the study indicated that 47.6% of the respondents strongly agreed that some measures have been taken to protect the water source from contamination, those were

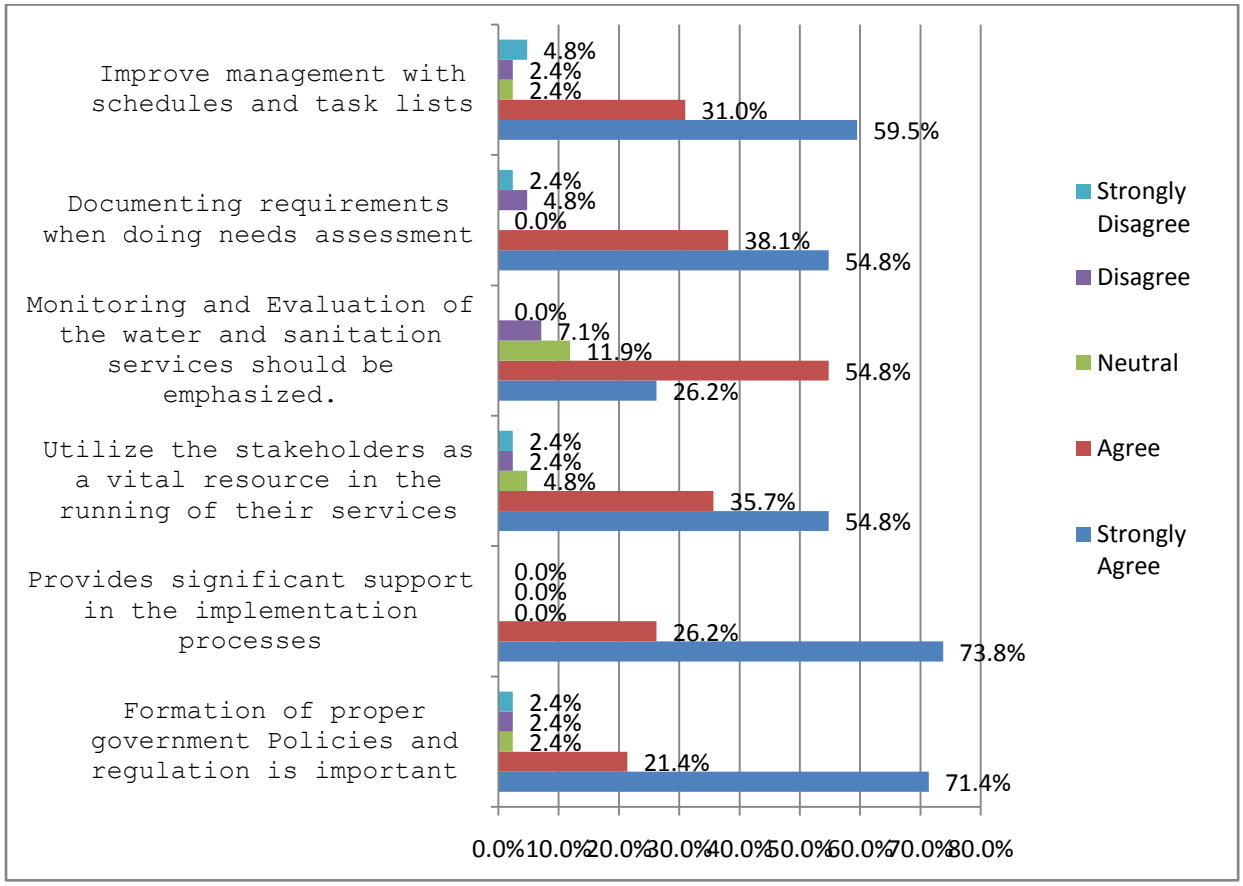
followed by 40.5% who agreed, 4.8% of them were not sure while 7.1% strongly disagreed. The mean score of 4.23 and Standard Deviation of 1.122 implied that most of the respondents agreed. This was in agreement with the findings of the interview where one of the respondents stressed that;

> Improvement implies a significant increased probability that the water is safe, and that it is more accessible, and 'Improved' sanitation involves better access and safer disposal of excreta (septic tank, simple pit latrine or ventilated improved pit-latrine)*(Interview in Kamengo Aon 9th April 2016*)

4.4 The possible measures of management in improving water and sanitation services

The third objective of the study was to establish the possible measures of management in improving water and sanitation services. The findings were presented, analyzed and interpreted in percentages, frequencies as indicated below. They are categorized on how the respondents strongly agree, (SA), agree (A), neutral (N), disagree (D) and strongly disagree (SD)

Bar graph 5 Showing the possible measures of management in improving water and sanitation services



Source: Primary data 2016

From the findings of the study, it was also presented that 71.4% of the respondents agreed that formation of proper government Policies and regulation is important since they are regulatory authority, those were followed by 21.4% who agreed, 2.4% of the respondents were both not sure, disagreed, and strongly disagreed that formation of proper government Policies and regulation is important since they are regulatory authority. The mean score of 4.28 and Standard Deviation of 0.970 represented the 71.0% who agreed. As argued by Bamberger, (2006), Government policies and regulations can have an influence in plans for a comprehensive restructuring of the urban supply areas in order to establish regional supply structures (clustering).

According to the findings of the study, it was presented that the majority 73.8% of the respondents agreed and 26.2% of them agreed that Community Participation is also important because it provides significant support in the implementation processes. The mean score of 4.02 and Standard Deviation of 0.579 implied that most of the respondents strongly agreed. This was in line with the findings of the interview where one of the respondents noted that;

> Community Participation is also important because it provides some good support which is very significant for implementing or even drafting of national capacity development strategy for the water sector (Interview in Kiswa Bon 9th April 2016).

In relation to the findings of the study, it was indicated that 54.8% and 35.7% of the respondents respectively strongly agreed and agreed that management should ensure that they utilize the stakeholders as a vital resource in the running of their services while 4.8% were not sure and 2.4% both disagreed and strongly disagreed the 2.4% of the respondents both disagreed and strongly disagreed. The statement had mean score of 3.82 and Standard Deviation of 0.579 depicted that most of the respondents had a positive thought that Management should ensure that they utilize the stakeholders as a vital resource in the running of their services. This was supported by Bamberger (2006), who also agreed that the project managers should ensure that they utilize the stakeholders as a vital resource in the running of their services and also ensure that they keep the stakeholders satisfied at all times during the management and implementation of the projects.

In regards to the findings of the study, it was showed that 54.8% of the respondents agreed that Monitoring and Evaluation of the water and sanitation services should be emphasized, 26.2% agreed, 11.9% of the respondents were not sure whether monitoring and Evaluation of the water and sanitation services

should be emphasized while 7.1% disagreed. The statement had mean score of 3.32 and Standard Deviation of 1.213 depicted that most of the respondents were favour of a fact that Monitoring and Evaluation of the water and sanitation services should be emphasized. This was in line with a study by Clifford and Erik, Larson, (2008) which revealed that there is always a positive correlation between Monitoring and Evaluation and the persons who monitors and evaluates the projects.

In addition to the above, the study findings presented that 54.8% of the respondents strongly agreed that Water and sanitation management can be improved by documenting requirements when doing needs assessment, 38.1% agreed, 4.8% of the respondents disagreed, while 2.4% of the respondents strongly disagreed. The statement had mean score of 4.11 and Standard Deviation of 0.864 depicted that most of the respondents agreed. This implies that Water and sanitation needs Assessment encompasses to duty made to estimates and associated costs needed to support water and sanitation interventions. In line with the study findings, Hockings, (2006) stressed that a good needs assessment is the key to a successful emergency response with a water and sanitation management.

From the study findings, it was also indicated that 59.5% of the respondents strongly agreed that it is also important to improve management with schedules and task lists, 31.0% of them agreed, 4.8% of the respondents strongly disagreed while the minority 2.4% of the respondents disagreed. The statement had mean score of 4.12 and Standard Deviation of 1.024 depicted that most of the respondents strongly agreed.

One of the interviewed respondents agreed that;

> In order for a project to be completed, there are often thousands of steps that need to be completed, sometimes in a specific order. One of the best ways to improve management is to tightly control these tasks by creating a Gantt chart (Interview in Kiswa Bon 9th April 2016).

In line with the study findings, Bamberger, (2006) argued that for many projects; simply creating a task list will improve things greatly.

4.5 Conclusion

The analysis of the primary data indicates that the independent variables through the predictor variables; carrying out Water and sanitation needs Assessment, Carrying out Water and sanitation Project Implementation and carrying out Resource management incurred all affect water and sanitation services as it has been seen in the findings of the study in this chapter.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The purpose of the study was to investigate the role of management in improving water and sanitation services. This chapter presents the summary of the study, conclusions and recommendations of the findings. They are presented objective by objective.

5.2 Summary of the Study

The findings also showed that 85.7% of respondents generally agreed that management has involved the mechanisms in place to track water resource consumption and availability. From the study, it was also revealed that management has also been involves planning, organizing, directing and controlling water and sanitation activities, that it has also ensured a minimum level of quality and that results meet requirements and expectations.

As revealed from the findings, majority of the respondents 83.4% generally agreed that management ensures that the time factor manifests itself in the water and sanitation services. It was also revealed by majority of the respondents 85.7% who generally agreed that management has ensured efficient and effective deployment of resources when they are needed.

The study showed that most of the respondents 92.9% agreed that formation of proper government Policies and regulation is important since they are regulatory authority and that community Participation is also important because it provides significant support in the implementation processes.

5.3 Conclusions

Conclusively, management has an important role to play in improving water and sanitation Services through using mechanisms to track water resource consumption and availability and it is also involved in planning, organizing, directing and controlling water and sanitation activities.

To a large extent management has played a big role towards improving water and sanitation services among the people by ensuring that the time factor manifests itself in the water and sanitation service, ensuring efficient and effective deployment of resources when they are needed. Additionally, management of water and sanitation ensures that there is a more efficient usage of resources.

Management can improving water and sanitation services through encouraging community Participation since it is important in the project implementation processes. Management should also ensure that they utilize the stakeholders as a vital resource in the running of their services and that monitoring and Evaluation of the water and sanitation services should be emphasized.

5.4 Recommendations

It is recommended that if needs assessment is to be improved community leaders should ensure that community members are able to gather and identify their needs or problems, involved in the process of prioritization, members are capable of developing action plans to enable finding solutions to their problems.

It is further recommended that the management in conjunction with community leaders should ensure that community members are able to make decisions regarding resource use and allocation, capable of coordinating the implementation of

planned activities, able to demand for both physical and financial accountabilities, capable of managing resources of the water and sanitation projects many others.

All stakeholders in the water and sanitation projects should be encouraged to participate during needs assessment activities, project implementation and completed water and sanitation water project management.

The processes of acquiring a water facility should be well explained such that the community can know what the processes are and what the requirements are. The areas of appropriate facility sitting and involving the community should be re-examined with a view of getting to the core of why some of the participants indicated the negative unless it is due to technical issues.

5.5 Suggestions for Further Research

Following from this study, there are several possible avenues for future research

- The role of management on sustainability of water and sanitation projects
- The impact of community participation in suitability of water and sanitation projects.

5.6 Conclusion

This chapter has showed the summaries, conclusions and recommendations from the study revealing how Management plays a big role in improving the water and sanitation services in Mpigi district. Management involves carrying out Water and sanitation needs Assessment, Water and sanitation Project Implementation and Carrying out resource management incurred which are aimed at improve the water and sanitation services.

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APPENDIX I: INSTRUMENTS (QUESTIONNAIRES) FOR COMMUNITY HOUSEHOLDS

Dear respondent,

I am called BRENDA NAMUTEBI, a student of Uganda Martyrs University. I am carrying out a research study on the topic of "THE ROLE OF MANAGEMENT IN IMPROVING WATER AND SANITATION SERVICES IN MPIGI DISTRICT USING A CASE STUDY OF KYAKWANZI". This questionnaire is therefore intended to seek information on the above subject matter. The information is purely for academic purposes and all the answers will be handled with utmost confidentiality. I therefore humbly request that you complete this questionnaire correctly in the spaces provided or options given (Please, tick the appropriate answers where options are given).

QUESTIONNAIRE FOR HOUSEHOLDS:

Section A: Background Information

1. Age Group

a) Below 18 years ☐ b) 18 – 30 years ☐

c) 31-40 years ☐ d) 41-50 years ☐ g) Above 50 years ☐

2. Sex a) Male ☐ b) Female ☐

3. Education Level

a) Primary ☐ b) Secondary ☐

c) Tertiary ☐ d) Other (Specify) ……

4. Occupation: a) Peasant Farmer ☐ b) Trader ☐

c) Teacher ☐ d) Other (Specify)……

Please use the scale above to tick under the appropriate box your view on the following statements below;

5	4	3	2	1
strongly agree	Agree	Not sure	disagree	strongly disagree

Section B: The roles of Management in improving water and sanitation Services

4. To what extent do you agree with the following statements with regards to the roles of Management in improving water and sanitation Services?

	The roles of Management in improving water and sanitation Services	**5**	**4**	**3**	**2**	**1**
a	The capacity of communities to deal with the water and sanitation problem is analyzed					
b	Management has involved the mechanisms in place to track water resource consumption and availability					
c	Management has also been involves planning, organizing, directing and controlling water and sanitation activities					
d	It has also ensured a minimum level of quality and that results meet requirements and expectations					

e	Management of water and sanitation services has ensured that time, cost and resources are sensibly managed and available					
f	Management enhances better efficiency in delivering Services					

SECTION C: The extent the role management has played towards improving water and sanitation services among the people

5. To what extent do you agree with the following statements with regards to the extent the role management has played towards improving water and sanitation services among the people?

	The extent the role management has played towards improving water and sanitation services among the people	**5**	**4**	**3**	**2**	**1**
a	Management ensures that the time factor manifests itself in the water and sanitation service					
b	it has ensured efficient and effective deployment of resources when they are needed					
c	Management of water and sanitation ensures that there is a more efficient usage of resources					
d	It has also lead to the realization of project outputs and immediate objectives.					
e	management has been a major contribution expanded access to safe drinking water and adequate sanitation					
f	Some measures have been taken to protect the water source from contamination					

SECTION C: The possible measures of management in improving water and sanitation services

6. To what extent do you agree with the following statements with regards to the possible measures of management in improving water and sanitation services?

	The possible measures of management in improving water and sanitation services	**SA**	**A**	**NS**	**D**	**SD**
a	Formation of proper government Policies and regulation is important since they are regulatory authority					
b	Community Participation is also important because it provides significant support in the implementation processes					
c	Management should ensure that they utilize the stakeholders as a vital resource in the running of their services					
d	Monitoring and Evaluation of the water and sanitation services should be emphasized.					
e	Water and sanitation management can be improved by documenting requirements when doing needs assessment					
f	It is also important to improve management with schedules and task lists					

8. Do you have any recommendations that you would like to give?

……

THANK YOU FOR YOUR TIME

APPENDIX II: INTERVIEW GUIDE FOR MANAGEMENT, LOCAL GOVERNMENT OFFICIALS AND WATER SERVICE PROVIDERS

Dear respondent,

I am called BRENDA NAMUTEBI, a student of Uganda Martyrs University. I am carrying out a research study on the topic of "THE ROLE OF MANAGEMENT IN IMPROVING WATER AND SANITATION SERVICES IN MPIGI DISTRICT USING A CASE STUDY OF KYAKWANZI". You have been selected to share with us your experience and make this study successful. The Interview I am conducting is basically aimed at obtaining qualitative information to compliment the quantitative information which I am also collecting. Information given will be treated with utmost confidentiality.

1. Which stakeholders are normally involved in management of water and sanitation services?
2. What are the roles of management in improving the Water and Sanitation in Mpigi district?
3. What is the extent management has played in Water and Sanitation services among the people in Mpigi district?
4. What are the possible management measures to improve Water and Sanitation services in Mpigi district?
5. What are the challenges faced in water and sanitation services?
6. What measures can be done to improve sustainability of water and sanitation projects?
7. What recommendations can you give with regards to this topic under investigation?

APPENDIX III: FOCUS GROUP DISCUSSION GUIDE FOR COMMUNITY HOUSEHOLDS

I am called BRENDA NAMUTEBI, a student of Uganda Martyrs University. I am here to conduct a focus group discussion. The focus group discussion I am conducting relates to"THE ROLE OF MANAGEMENT IN IMPROVING WATER AND SANITATION SERVICES IN MPIGI DISTRICT USING A CASE STUDY OF KYAKWANZI. You have been selected to share with us your experience and make this study successful. Information given will be treated with utmost confidentiality.

1. Are you involved in the planning process of water and sanitation services projects? If Yes, how?
2. Are you involved during the implementation of water and sanitation services?
3. What are the roles of management in improving the Water and Sanitation?
4. What is the extent management has played in Water and Sanitation services among the people?
5. What are the possible management measures to improve Water and Sanitation services?
6. Are community members involved during monitoring activities of water and sanitation services?
7. Do you find any limitations during the management process of water and sanitation services?
8. How would you want to participate during water project activities?
9. Are you (the beneficiaries) satisfied with the outcomes of the project?

END

THANK YOU FOR YOUR TIME AND COOPERATTION

APPENDIX IV: OBSERVATION CHECK LIST

Date and Time: ……

Observer: …….

Note the observations on:

1. State of water and sanitation sources
2. The way water and sanitation services are implemented
3. Community participation in water and sanitation services
4. State of water and sanitation equipment
5. Areas for improvement

APPENDIX V: INTRODUCTORY LETTER

Uganda Martyrs University

making a difference

Department of Development Studies
School of Arts and Social Sciences
Email: ieds@umu.ac.ug

Your ref:
Our ref: baft : field introduction letter 15-16

Nkozi, 4th March, 2016

Dear Sir/Madam,

Re: Letter of Introduction

This is to introduce to you **NAMUTEBI Brenda Reg. No. 2013-B031-10110** who is an undergraduate student in the Department of Development Studies at Uganda Martyrs University - Nkozi. She is required to carry out research on a topic:
"The Role of Management in Improving Water and Sanitation Services in Mpigi District. A Case of Kyakwanzi".
This is a requirement for the award of Bachelor of Arts - Ethics and Development Studies.

I would like to request you to render her assistance in collecting the necessary data for writing her dissertation.

Thank you in advance for your assistance.

Yours Sincerely,

Dr. LUSWATA Albert
Head of Department

UGANDA MARTYRS UNIVERSITY
07 MAR 2016
Dept. of Development Studies
School of Arts and Social Sciences