THE EFFECTS OF POVERTY ON CHILD HEALTH IN RELATION TO THE SOCIOECONOMIC STATUS OF MOTHERS

A CASE STUDY OF NAKAWA DIVISION, KAMPALA DISTRICT, UGANDA

VIOLA SEMYALO

This Master Thesis is carried out as a part of the education at the University of Agder and is therefore approved as a part of this education. However, this does not imply that the University answers for the methods that are used or the conclusions that are drawn.

Master Thesis in Development Management

University of Agder, 2010
Faculty of Economics and Social Sciences
Centre for Development Studies

MASTER THESIS

The effects of poverty on child health in relation to the socioeconomic status of mothers; a case study of Nakawa division, Kampala district, Uganda.

By Viola Bwanika Namazzi Susan Semyalo

Supervisor: Sven Åke Bjørke

This Master Thesis is carried out as a part of the education at the University of Agder and is therefore approved as a part of this education. However, this does not imply that the University answers for the methods that are used or the conclusions that are drawn.

Faculty of Economics and Social Sciences
Department of Development Studies.
University of Agder.

ABSTRACT

This study has its basis on the Millennium Development Goal 4 that has to do with reduction of the under five mortality rate by two thirds between 1990 and 2015 (United Nations 2009; 24). Children from developing countries are more likely to die within the first five years of life than children in industrialized countries. About half of the deaths of children in the developing world are in Sub-Saharan Africa; many of these deaths are caused by preventable diseases like diarrhea, pneumonia measles and HIV. Poverty has a negative effect on child health, it is no surprise that the highest numbers of infant deaths are in the "developing countries" (United Nations 2008; 21). Poverty goes hand in hand with low socio-economic status of mothers like unemployment, high illiteracy levels, inappropriate accommodation, high fertility rates, poor child spacing among others which all contribute to the vicious cycle of poverty and disease. Improving the socioeconomic status of women would go a long way in reducing child mortality. There are some immediate changes that can be made by governments in the third world to reduce the number of children's lives lost. Governments of countries in the developing world have a more urgent need to address the problems like the socioeconomic status of women, related to child health, however the amount of resources allocated to these sectors does not seem to reflect its importance.

This research was carried out in Nakawa division Kampala district Uganda and it examines to what extent poverty has an effect on child health in relation to the socio–economic status of the mothers in Nakawa division. In this study I investigate if there is a relationship between high rates of morbidity and socio economic status of the mothers. To achieve this objective both quantitative and qualitative methods were used to collect data. The data was presented in graphs and tables in the methodology chapter.

The results from the study showed that under five morbidity was high in Nakawa division. The mothers I interviewed had a low socio-economic status. Many of them had a minimum level of education and had their first children during their teenage years, many of them did not have secondary education, had no access to proper accommodation (which has a lot to do with health generally), just a hand full had employment and were able to save money to support their families. The mothers need to be provided with more information on how to improve the health of their children, in terms of nutrition, hygiene, sanitation and the way they live from day to day.

Breastfeeding and immunization as ways of improving their children's health seemed to be on track since all the respondents had breastfed and immunized their children at some point. But these have to be used hand in hand with other practices that contribute to improving the health of children. It is better to prevent diseases in the first place using cost-effective means than waiting for the children to get sick and then look for finances to treat them.

The government, Non-governmental organizations and other institutions still have a lot to do if the MDG 4 on child health is to be achieved by 2015. The study recommends that clinics need to be equipped better with staff, medicine and medical equipment because congestion was a very big problem in the health centers where the research was carried out. This is due to the fact that they are just a hand full of public health centers serving such a large population in the division. In addition mothers need to be helped at the community level and provided with basic information that enables them improve the livelihoods of their families and improve their health most especially that of their children.

ACKNOWLEDGEMENTS

I would like to thank God for enabling me to make it this far in my studies. Writing and collecting data and everything else in my life was not easy but by his strength alone I have been able to make it this far. Apart from you Lord am nothing.

I would like to thank the staff at Kiswa, Butabika and Luzira Murchison bay health centers for the willingness to provide me with the information I needed to collect data.

I would like to thank my supervisor Sven Åke Bjørke for all the encouragement and for your time to ensure that this work is a success, thank you very much and God bless you.

I would like to thank my two boys Nathan Mwebaza and Israel-Joshua Mulungi for being patient with me and allowing me to study even when I should have been spending more time with you, thank you and you are very precious to me.

Finally I would like to thank my husband and the love of my life, for all the support and guidance he has given me in my studies. Ronnie without your understanding nature and support. I wouldn't have been able to make it this far. Thank you.

TABLE OF CONTENTS

ABSTRACT	III
ACKNOWLEDGEMENTS	V
ACRONYMS AND ABBREVIATIONS	VIII
LIST OF FIGURES	IX
LIST OF PICTURES	X
LIST OF TABLES	XI
LIST OF MAPS	XII
CHAPTER 1	1
INTRODUCTION	1
1.1 BACKGROUND	1
1.2 CONTEXTUAL ISSUES	3
1.3 RESEARCH OBJECTIVES	7
1.4 METHODOLOGY IN BRIEF	7
1.5 THESIS OUTLINE	8
Chapter 1	8
CHAPTER 2	8
CHAPTER 3	8
CHAPTER 4	8
CHAPTER 5	8
1.6 AIM OF THE STUDY	8
CHAPTER 2	9
LITERATURE REVIEW	9
2.4 Introduction	9
2.4 RESEARCH AREA	9
2.4 POVERTY	12
2.4 MORTALITY AND MORBIDITY.	15
CHAPTER 3	25
METHODOLOGY	25
3.1 Introduction	25
3.2 STUDY AREA	30

3.3	LIMITATIONS	31
<u>CH</u> .	APTER 4	39
<u>PRI</u>	ESENTATION OF FINDINGS AND DISCUSSION	39
4.2	Introduction	39
4.2	CAUSES OF UNDER FIVE MORBIDITY	40
4.2	4.2 EXTENT OF RELATIONSHIP BETWEEN SOCIO-ECONOMIC STATUS OF MOTHERS AND CH	
HEALTH		47
HYPOTHESIS 1		49
HYI	POTHESIS 2	50
4.4	MOTHERS PERSPECTIVE ON CHILDREN'S' HEALTH	53
<u>CH</u>	APTER 5	57
CO	NCLUSION AND RECOMMENDATION	57
5.1	CONCLUSION	57
5.2	RECOMMENDATIONS	57
<u>REI</u>	FERENCES	59
A DI	PENDICES	63

ACRONYMS AND ABBREVIATIONS

AIDS ACQUIRED IMMUNE DEFICIENCY SYNDROME

ARI ACUTE RESPIRATORY INFECTION

FAO FOOD AGRICULTURAL ORGANISATION

GDP GROSS DOMESTIC PRODUCT

HIV HUMAN IMMUNODEFICIENCY VIRUS HSSP II HEALTH SECTOR STRATEGIC PLAN II

ITNs INSECTICIDE TREATED NETS

KCC KAMPALA CITY COUNCIL

MDG MILLENNIUM DEVELOPMENT GOAL

MOFPED MINISTRY OF FINANCE PLANNING AND ECONOMIC

DEVELOPMENT

MOH MINISTRY OF HEALTH

NEMA NATIONAL ENVIRONMENTAL MANAGEMENT ASSOCIATION

NGO NON GOVERNMENTAL ORGANIZATION

PEAP POVERTY ERADICATION ACTION PLAN.

PHP PRIVATE HEALTH PROVIDERS

UBOS UGANDA BUREAU OF STANDARDS

UDHS UGANDA DEMOGRAPHIC HEALTH SURVEY

UNICEF UNITED NATIONS CHILDREN'S FUND

UNFPA UNITED NATIONS POPULATION FUND

UNHS UGANDA NATIONAL HOUSEHOLD SURVEY

WHO WORLD HEALTH ORGANIZATION

LIST OF FIGURES

FIGURE 1: KISWA HE	EALTH CENTRE	43
Figure 2: Luzira M	IURCHISON BAY HEALTH CENTRE	44
Figure 3: Butabika	A HEALTH CENTRE	44
FIGURE 4: SHOWING	WHAT MOTHERS THOUGHT WAS CAUSING THEIR	CHILDREN'S DISEASES.
(BARS REPRESE	NT VALID PERCENTAGE VALUES WHICH INCORPO	RATE NO RESPONSES IN
THE VARIABLES)	45
FIGURE 5: SHOWING	WHAT DISEASE WAS RESPONSIBLE FOR THEIR CH	IILD'S SICKNESS IN THE
TWO MONTHS PR	RIOR TO THE STUDY	47
FIGURE 6: SHOWING	RELATIONSHIP BETWEEN MOTHER'S LEVEL OF EI	DUCATION AND INCOME. 49
FIGURE 7: SHOWING	MOTHER'S LEVEL OF INCOME AND IF THEIR CHIL	DREN HAVE BEEN SICK IN
THE LAST TWO M	MONTHS	50
FIGURE 8: SHOWING	MOTHER'S LEVEL OF EDUCATION AND AGE OF THE	HE MOTHER AT FIRST
BIRTH		51
FIGURE 9: SHOWING	THE NEGATIVE CORRELATION BETWEEN MOTHE	R'S AGE AT FIRST BIRTH
AND TOTAL NUM	MBER OF CHILDREN PER MOTHER ($R^2 = 0.31$, P<0.	01)53

LIST OF PICTURES

PICTURE 1;	ONE OF THE MOTHERS INTERVIEWED AT BUTABIKA HEALTH CENTER (PHOTE	O BY
	AUTHOR)	26
PICTURE 2:	SHOWING SOME OF THE MOTHERS INTERVIEWED AT BUTABIKA HEALTH CENT	ΓER
	(PHOTO BY AUTHOR)	28
PICTURE 3:	SHOWING A GROUP OF MOTHERS AT BUTABIKA HEALTH CENTER (PHOTO) BY
	AUTHOR	29
PICTURE 4:	SHOWING A HEALTH WORKER AT BUTABIKA HEALTH CENTER IN NAKAWA	
	DIVISION (PHOTO BY AUTHOR	36

LIST OF TABLES

TABLE 1: SAMPLE SIZE DISTRIBUTION IN NAKAWA DIVISION 37

LIST OF MAPS

MAP 1:	MAP OF UGANDA SHOWING ITS LOCATION IN AFRICA AND ITS ADMINISTRATIVE
	BOUNDARIES, KAMPALA DISTRICT IS SHOWN ON THE SHORES OF LAKE VICTORIA
	(SOURCE: FAO REPOSITORY)
MAP 2:	MAP OF KAMPALA SHOWING ADMINISTRATIVE DIVISIONS INCLUDING NAKAWA
	DIVISION (SOURCE: KAMPALA CITY COUNCIL)
MAP 3:	Map of Nakawa Division Showing major parishes (Source: Kampala City
	COUNCIL) 34

CHAPTER 1

INTRODUCTION

1.1 Background

A reduction of the under five mortality rate by two thirds between 1990 and 2015 is Goal 4 of the Millennium Development Goals (MDGs) (United Nations 2009; 24). "This Goal and Goal 5 on improving maternal health are the most neglected and impeded of all the MDGs" (World Health Organization, 2009). "Only 30% of the progress needed to reach the MDG 4 target of cutting child mortality by two thirds by 2015 has been achieved" (World Vision 2009; 7). Goal 4 and 5 are very important because they directly affect the lives and future of people and nations at large, and that is why particular emphasis is being placed on them.

Child health is an important factor if children are going to grow up to lead meaningful lives. The health of children determines the health of future populations. Child health as described by MedicineNet, is vitally concerned with all aspects of children's growth and development and with the unique opportunity that each child has to achieve their full potential as a healthy adult" (MedicineNet.com, 2010). It can also be looked at as focusing on the well-being of children from conception through adolescence. In order for children to grow up healthy, the mother of the child has to be in good health and because of this there is a linkage between child and maternal health that can not be ignored. The kind of environment children are raised in, the protection and security they receive from their parents most especially their mothers is very important. Aspects like accommodation for the family, level of education of mothers, access to water, sanitation and culture all contribute to child health and they were the main aspects put into consideration in this study.

Promoting child health helps not only advance healthy growth and development but also reduce child vulnerability to illness, disability and death (World Health Organization, 2004). "Healthy children become healthy adults: people who create better lives for themselves, their communities and their countries" (United Nations Children's Fund, 2008). Many of the

economies of the developing world do not allocate enough resources towards the health sector and yet improvements in this sector would mean improving the livelihood of their nations. If a bigger portion of these countries' budgets were allocated to health, it would greatly contribute to the development of their economies and lifting their citizens from chronic poverty. "A 5% improvement in child survival raises economic growth by 1% per year over the subsequent decade" (World Vision 2009; 17). Assuming that this is true, that means that all developing countries need to put their resources together to improve the percentage of the budget that is allocated to child health. Improving child survival would mean improving their economic growth and the lives of their citizens. Children represent the future, and ensuring their healthy growth and development ought to be a prime concern of all societies (World Health Organization, 2009).

A child born in a developing country is over 13 times more likely to die within the first five years of life than a child born in an industrialized country. About half of the deaths of children in the developing world are in sub-Saharan Africa (United Nations 2008; 21) Many of these deaths are unacceptable since they are caused by preventable diseases like diarrhea, pneumonia measles and HIV. In Uganda at least 45,000 new born deaths occur each year out of the 1.5 million babies born annually hence accounting for four out of ten deaths before one year of age. An equal number of babies are born dead or still born. Some of the common causes of neonatal deaths in Uganda include asphyxia, infections and complications of preterm birth and these are similar to the rest of Africa (Ministry of Health et al 2007; 3). There are a number of determinants that one would examine to find out what contributes positively to the health of children. Some of the determinants of child health are income levels of parents, education attainment, nutritional status, access to water, sanitation, safe and adequate housing, developing of appropriate agricultural policy, improving status of women and promoting social protection of vulnerable populations (World Health Organization 2007;43).

Child mortality and morbidity both have a great impact on the development of any society. Morbidity, which is the rate of incidence of a disease, or the number of times people suffer from a disease in a given locality, exerts a heavy price on families and communities. From birth to two years, morbidity can have a long term impact on a child's cognitive and physical development (World Vision 2009; 26). Morbidity is largely related to family size, socioeconomic status and birth interval. If a family is large, then there is a high possibility of

diseases like Acute Respiratory Infections (ARI's) spreading to each member of the family and most especially if the ventilation in the home is not sufficient. This will be exacerbated in cases where the socio- economic status of the home is not good. Difficulties would be encountered in providing early treatment for a sick child increasing the likelihood of disease spreading to another child. Low socio-economic status may lead to poor nutrition in the home. This greatly affects the immunity of the children consequently increasing their vulnerability to the same contagious diseases within the same period hence the high incidence of morbidity as a result of the family size. This is also mentioned in a study carried out by Habib et al (2009) in Pakistan, where birth spacing of less than 1-2 years showed an increase in infant morbidity. Vaccine-preventable diseases like measles, poliomyelitis, whooping cough, tetanus, tuberculosis, diphtheria as well as hepatitis Band (H) A and influenza contribute significantly to child mortality and morbidity in Uganda. The prevalence of these diseases has been reduced as a result of high immunization coverage in the past five years (Uganda Bureau Of Statistics et al 2001:72). In Uganda malaria is the leading cause of morbidity and mortality. It is responsible for 39% of all out-patient visits, 35% of hospital admissions and 14% of all hospital deaths. In general, malaria-specific mortality is estimated to be between 70,000-100,000 child deaths per year in Uganda; a death toll which far exceeds that of HIV/AIDS (Lynch Matt, Koek Irene et al 2005;1).

In this study I focus on child morbidity and some of its determinants including breastfeeding, age, child's sex, plurality, mode of delivery, gestational age, birth weight, parity of mother, vaccination, maternal education, birth spacing and socio-economic conditions. The study is conducted in Nakawa division, Kampala District in Uganda. Nakawa Division is the largest of the five divisions in Kampala (refer to figure 1).

1.2 Contextual issues

Uganda has an estimated population of about 31million people and a high population growth rate of 3.4% per year between 1991 and 2002. This is one of the highest growth rates in the world (Klasen Stephan 2004; 2). The nature of problems faced by the majority of people in Uganda is a result of high population growth hand in hand with unemployment, failure to access land to live on, high fertility rate, poverty, high levels of illiteracy, high dependency

culture and diseases like AIDS that greatly contribute to orphans that have to be looked after by the extended family. All these greatly contribute to a vicious cycle of poverty and to the kind of lives people lead day to day.

Due to a high population growth rate, people are not able to access work. Hence a big portion of the citizens are unemployed and because they are unemployed, they are neither able to provide decent health care for themselves nor for their children. If one does not have enough money to buy food, going to a clinic for treatment will not be a priority. If one doesn't have a good job then they will have to look for the cheapest land available which in most cases may be a wetland area to settle in. Wetlands have high incidence of diseases like malaria as a result of poor drainage. Poor drainage promotes water stagnation which provides a good breeding ground for mosquitoes. In addition to this they are prone to being infected by other diseases that could have been easily avoided like acute respiratory infections and diarrhea.

Considering the high fertility rate, it greatly contributes to the prevalence of diarrhea in the form of short birth intervals. If children are not well- spaced, then it will be difficult for the mother to attend to each of them at the right time. Children living in an environment that is not clean and with poor access to clean water will frequently eat what they find on the ground if they are not effectively monitored by their care-giver. They will then come into contact with the bacteria that carry diarrhea. In addition to improper disposal of feces in the home, diarrhea will easily be spread in such homes and put the children at a high risk of getting seriously sick when they contract diarrhea.

Poverty is also caused as a result of poor environmental management on the part of those in authority. For instance, manholes are left uncovered by the city council authorities and become dumping ground for refuse. As a result many of the drainage systems stop functioning as they should because they have been blocked and water can not easily flow through hence stagnation. This becomes another breeding ground for vector mosquitoes that cause malaria making people sick and stops them from being able to work, hence in turn causing poverty in the long run. Poverty has a strong part to play in the lives of people. Some of the causes of poverty in Uganda are unemployment, high population, growth rate, illiteracy, disease, and corruption to mention but a few. These causes hinder people in many ways when it comes to accessing food, water, education, shelter or even health care. The national poverty rate in Uganda according to the 2005-2006 Uganda National Household Survey (UNHS) it was

estimated to be at 31.1 % or 8.4 million Ugandans (Wetland Management Department 2009; 4).

About 60% of people in Uganda are poor and 30% are very poor. The majority of the poorest people are women (mapsofworld.com, 2008), lacking proper education or with no education at all. Especially for mothers, it has a negative contribution on their health as well as that of their children. If a mother is not educated, there is a high chance she will not have understanding of the importance of immunization, exclusive breast-feeding sanitation and proper hygiene which all play a crucial part in the health of her children. Once the children have not been able to access these pointers, there is a high risk of suffering from ill-health as a result of their mother's ignorance. Education therefore is crucial in achieving Goal 4 of the MDGS.

The management structure of the health system in Uganda encourages cost-sharing, where the government pays a certain portion of the medical cost and the individual is also supposed to pay a given portion. This would not have been a problem if people were able to get the finances to pay their part. Some people, especially those in the rural areas struggle to get even the basic necessities of life like food and shelter. They find it hard to afford even the little part they are supposed to pay at these health institutions. In addition to that, many of the hospitals that have come up are privatized and demand even more from the individual in order for one to access their services. The political structure of the government has allowed many private hospitals to infiltrate the economy and they are used by those in the middle and high classes of the country. They are expensive and people that can afford them are forced to access their services nonetheless since they give the patient his money's worth. The quality of service and the equipment used is of better quality. This disfavors those that can not afford these services. As mentioned earlier, it is a vicious cycle that needs to be broken in order to improve the health of the people most importantly the health of children who are the focus in this paper.

Health services in the public sector in Uganda are decentralized. This means that the Ministry of Health works in liaison with other national level institutions like ministries to set up policies and ways in which the health services are going to be delivered to the people. Under these ministries we find the National referral hospital which attends to about 27,000,000 people. Sorting under it there are the regional referrals that report back to the national referral and attend to about 2,000,000 people. Under the regional, we find the district health service

headquarters that attend to about 500,000 people. And under these we find the Health sub districts which comprise; a referral facility, a health centre III, a health centre II and Health centre I. The referral facility is composed of a general hospital at the district level attending to 500,000 people or a health centre IV that attends to 100,000 people. Health center III is found at the sub county level and attends to a population of 20,000. Under it is health center II which is at the parish level and attends to a population of 5,000 and finally there is health centre I which comprises village health teams that attend to about 1000 people.

The health structure in Uganda, the National Health System, is composed of institutions structures and actors whose actions are particularly concerned with achieving and sustaining good health. The national health system is inclusive of the public sector including the health services of the army police and prisons, the private health delivery system which includes private not for profit organizations, private health practitioners, the traditional and complementary medicine practitioners and the communities (Ministry of Health 2005; 13). The Government of Uganda through the Ministry of Health has the lead role and responsibility of delivering primary health care. The Ministry of Health partners with the District Health System to ensure effective linkages between the centre and the districts on the one hand and the public and private components on the other. The Ministry of Health and other National level institutions work together in the provision of health services to the citizens and below them there are the national referral hospitals that attend to 32 million people. Below these are the regional referral hospitals that handle a population of 2 million people and under these are the District Health Services (which are the district level) and attend to a population of 50,000 (Ministry of Health 2005; 14).

This is the structure for the public health centers. The private health providers (PHP) on the other hand which are used by the small rich class of people are organized differently. A number of private hospitals and clinics have sprung up in Uganda over the years. The estimated number of staff employed in the PHP sector in the country as a whole is 12,775; fifty four percent of the doctors working in the private sector also work in the government sector while more than 90 percent of nurses, midwives and nursing aides work only full-time in the private sector. This means the public sector is left hanging with not enough nurses. No wonder the capacity of patients is very high in the public health units with not enough nurses or doctors to attend to attend to them. 9,500 professionals are estimated to be working in the

private sector only and this is in addition to 1,500 doctors and 3,500 nurses. More than 80 percent of the doctors are employed in the central region (Mandelli Andrea, 2005). Many of the doctors that work in the public sector are the same that work in the private clinics though they charge exorbitant prices in the latter. Many of the people who can afford these services opt for the private hospitals since they have the necessary equipment that are in good condition required to run the hospitals or clinics and also the drugs needed to treat patients. Uganda is reported to have an estimated 4,639 health facilities and 2,154 (46 percent) of these are PHPs. The majority, 68 percent are located in the central region. Kampala on its own has 45percent of the PHPs (Mandelli Andrea, Kyomukangi B. Lennie et al 2005; xiii).

1.3 Research objectives

The main objective of the study is to investigate the correlation between high rates of morbidity and the socio economic status of the mothers in Nakawa division Kampala. To be able to address the research problem these are the research questions I used.

- 1. What are the causes of under five morbidity in Nakawa division?
- 2. To what extent is there a correlation between the socio-economic status of mothers and child health?
- 3. What are the mother's perspectives on the health of their children?

1.4 Methodology in brief

Random sampling was used to locate the respondents that were used in this study. Both quantitative and qualitative methods of data collection were used. Qualitative interviews were carried out with mothers at the health station and also with health personnel that attend to them. Participant observation and records analysis were also methods employed in this study. Records from January to December 2009 were used to find out which diseases were the most prevalent among children under five years old in Nakawa division.

1.5 Thesis outline

Chapter 1 gives an introduction to the thesis, contextual issues, mentions the objectives and research questions and the methodology in brief that was used in this research.

Chapter 2 presents the research area, the literature review used in this study, the theoretical basis for this research and what others have already written in this field.

Chapter 3 offers the methodology used in this study, the design, sample size, document analysis and limitations of this study.

Chapter 4 puts forward the presentation of the analysis and discussion of the findings.

Chapter 5 gives the conclusion and recommendations.

1.6 Aim of the study

This data is being collected in order to add on to the information that is available on child health in Uganda and also find ways of reducing morbidity and mortality. The statistics obtained from morbidity of diseases could help in the planning and evaluation of health services in Uganda. This study would also help NGOs that are particularly interested in improving child health in the country and also to improve on the researcher's knowledge about child health being a mother my self.

CHAPTER 2

LITERATURE REVIEW

2.4 Introduction

In this chapter I present the research area in which the study was carried out. I give some information about it regarding location, population, literacy levels, poverty and how the health system is structured to ensure that the ordinary people can access health services. Relevant literature on poverty, mortality and morbidity and how these three inter-relate is presented thereafter. Also included is information on notable observations made during the data collection process. This chapter includes an assessment of poverty and its role in the determination of morbidity and mortality. As indicated in the introduction chapter of this thesis, the poor are the ones with the highest mortality rates moreover from preventable diseases. If the patients are able to access the medical help they need, this would go a long way in reducing the number of deaths that are a result of malaria and diarrhea, which, are most morbid among children of five years and below. To be able to cut morbidity and mortality rates, medical facilities need to be more accessible and the ratio of health centers to the populations improved.

2.4 Research Area

Uganda is a landlocked country located in East Africa. It is bordered by Sudan in the North, Democratic Republic of Congo in the West, Kenya in the East, Tanzania in the South, Ethiopia in the North East and Rwanda in the South West. It covers an area of 236,040.km². It has 80 districts as of June 2008. It has a geographical position between 1°South of the equator and 4 °North, the climate is tropical in most parts with an average annual temperature between 16 °C in the South West, 25°C in the Centre, East and North West close to 30°C in the North East (Ministry of Health 2006; 6).

It has a population of approximately 31 million (Belgian Development Agency, 2010). It has an average birth rate of 7 children per woman, the highest fertility rate in Africa and the third highest in the world (United States Agency for International Development, 2010).

Around 78% of the population lives in rural areas. Uganda has a gross national per capita of \$880 and a total expenditure on health per capita of \$143 as of 2006, and a total expenditure on health at 7.2%. of GDP In 2006 the probability of dying under five years per 1000 live births was 134 (World Health Organization, 2010). The number of people living on less than a dollar a day was 9.5 million in 2003 which was the same as in 1992. The population living in poverty declined from 56% in 1992 to 38% in 2002 but with a high growth rate of 3.4 %, economic growth is being eroded, poverty is worsening and the achievements in the social sector are also at stake (United States Agency for International Development, 2010). With a growth rate this high, in the near future it will not be possible for the government to cater for all its citizens. It is already struggling at this point and yet more than half of its annual budget is supported by external donor countries and bodies.

Universal Primary Education exists in Uganda but the literacy rates are still as low as 69%. Education faces a number of barriers mostly related to costs. 20 % of the people above 15 years have formal education (Belgian Development Agency, 2010). Having low literacy rates has an impact on many sectors of a society. It contributes to high fertility rates, less use of contraceptives, hygiene and sanitation and health behavior.

A good majority of Ugandans attend school although many do not complete primary school. Among those that never attended school there were more women than men in the Uganda according to a demographic and health survey that was carried out in 2006 (Uganda Bureau Of Statistics 2007; 23). Uganda has an agricultural- based economy with over 70% of the population being employed by this sector. Coffee, tobacco and fish are the major exports from this sector. The GDP growth rate has been on average per annum 5% over the past few years. The percentage of Ugandans living below the poverty line has decreased over the past years form 56% in 1992 to 31% in 2006 (United Nations Development Programme Uganda, 2010).

The Poverty Eradication Action Plan (PEAP) was introduced in 1997 and was revised in 2000. It is to ensure that poverty is reduced and is very important in the formulation of government policy, allocation of sectoral expenditures and the design of sectoral strategies.

Uganda's health care system works on a referral basis in case a facility can't handle a patient; the patient is referred to the next level above it. The services in the health centers are supposed to be free but this is not the case sometimes. Health workers extort money from desperate patients for the services they may need. Many times these health units do not have necessary drugs so the patients have to buy them from pharmacies (Kavuma M Richard, 2009).

Kampala district is the capital city of Uganda; it is a city built on seven hills, its area in square kilometers is 197.0, the estimated population in 2009 was 1,533,600 (GeoHive, 2010). It has 5 divisions; Central, Nakawa, Makindye, Kawempe and Rubaga divisions (Map 2). Nakawa, which was my study area, is the biggest of the four, having the largest population and most easily accessible for me as a student. It gave me an idea of what the rest of the divisions in Kampala are like. Nakawa division has 23 parishes (see figure 2) which have a total of 12 health centers 5 of which serve institutions like colleges and universities. One was closed and moved to Kiswa Health center and the others are yet to be constructed and therefore were not considered in this study. This leaves 3 public health centers that were considered in this study. Kiswa Health Center, Butabika referral hospital and Luzira Murchison bay.

Nakawa division is located in the eastern part of Kampala district. It lies 1133.8 meters above sea level; it covers a total area of 47,450square kilometers with a land area of 39.4 square kilometers. It is located on about 22 hills of altitudes of 1120m above sea level, with flat summits, steeper upper sages, merging into undulating slopes ending into broad valleys dissected by perennial streams. The division has pleasant climate characterized by breezes from Lake Victoria. Rainfall is distributed throughout the year with 1750-2000 mm, with peaks in March-May and September –November and an average daily temperature of 21degrees centigrade. There are dry seasons in June-July and December –January; relative humidity ranges between 53 and 89%. According to the Kampala Citizen report Card (2005), 85% of the population in the Division has access to safe water (City Council 2008:40). Most households provide their own means of sewage disposal by use of septic tanks. A high population of about 30-35% report does not have proper disposal methods for their human excreta especially in slum areas (City Council of Kampala, June 2008).

In the 2002 population census Nakawa division's population was 240,624. Children below five years of age contribute to 20% of the total division population. Nakawa division has 23 parishes and 279 villages, 12 health centers. Of the 23 parishes I am going to consider 3 parishes namely Butabika, Luzira and Kiswa.

Out of the 12 health centers in the division I carried out research in three public health centers and these are Kiswa, Butabika and Luzira. All these health centers had Out Patient Departments except for a few admissions in Luzira Murchison bay hospital. I went into the field hoping to collect data on the status of child mortality in Nakawa division but ended up focusing more on morbidity since all the severe cases in these health centers were referred to Mulago the main referral hospital in Uganda. So the data that was provided to me was on the diseases that affect children of under five years but with no records of death.

2.4 Poverty

Poverty is the lack of income, inability to meet basic and social needs, the feeling of powerlessness to break out of the cycle of poverty, and insecurity of persons and property (United Nations Development Programme Uganda 2009). Poverty is also one of the biggest challenges faced by many developing countries; and is one of the most outstanding differences between the developing and industrialized countries. Even if Uganda has had a significant economic growth over the last decade, with a relative reduction of poverty, it still remains one of the poorest countries in the world (Farrell Glen 2007; 2).

One of the darkest characteristics of poverty is that is seems to prey on the vulnerable and defenseless. In low-income countries, one out of every 10 children dies before the age of five. In wealthier nations, this number is only one out of 143 (End Poverty 2015 Millennium Campaign 2009).

It is estimated that 320 to 443 million people live trapped in chronic poverty- meaning they will remain poor for much or all their lives and their children are likely to inherit that poverty (Chronic Poverty Research Centre, 2008).

Many of those that are chronically poor do not have the ability to get themselves out of this predicament. With lack of education, poor infrastructure, ill-health among other hindrances those that are faced with chronic poverty are trapped in a vicious cycle of what they do every day of their lives. In many cases they find themselves in this situation and accept it because that is how they know how to live and it is difficult to get out of that mentality.

The chronically poor lack access to safe drinking water, they experience hunger, under nutrition, illiteracy, social discrimination, inability to access health services, physical insecurity and political exclusion and a big number of them experience untimely death from easily preventable diseases (Chronic Poverty Research Centre, 2008)

According to the World Bank, 44 low-income countries do not have adequate resources to pay for effective adequate health care. This is common in many developing countries as a result of corruption, violence and conflict which are all closely linked to impoverishment (Moy R. 2000; 192).

Sub Saharan Africa has high levels of poverty and this could be one of the reasons that have hindered its progress as far as achieving MDG 4 is concerned. This region accounts for half of all the deaths among children under five. The under-five mortality rate dropped from 103 in 1990 to 74 in 2007. Nonetheless, many countries especially in sub Saharan Africa have made little or no progress at all. The highest levels of child deaths are found in Africa, in 2007 one in seven children died before their fifth birthday (United Nations Development Programme Uganda 2009).

There are a number of causes of poverty in Uganda, particularly since 2000. Firstly, Uganda being an agricultural-based economy needs to invest a lot in this sector if the economy is going to benefit from it. The main exports that earn Uganda the most foreign exchange are coffee, cotton, tobacco and tea (Uganda Export Promotion Board, 2010). These crops face hindrances that stop them from increasing in quantity and bringing in more foreign exchange. It is said that soil fertility has decreased widely and technology has not responded fast enough to improve the yields. This has led to slower growth in agriculture (Ministry of Finance Planning and Economic Development 2004; 16). Poverty has also been caused by a decline in farmers prices. Uganda's terms of trade have been falling. Between 2000 and 2003 the terms of trade declined by 10%. This decline brought about an increase in the price of tradeable

goods relative to the price of food. That means people had to pay more to be able to buy food and other tradeable goods they needed. Consequently they would spend less on other necessities they need for day to day running of their lives.

Because of the fall in the agricultural sector many people resorted to diversifying their incomes and opted for other means of business instead of relying on agriculture. This boom in other businesses means that there were many people dealing with the same goods hence leading to a fall in incomes per capita. This greatly contributed to poverty and it was important to raise agricultural incomes again so that people would improve their lives most especially those in the rural areas where agriculture is practiced most.

Insecurity especially in the eastern part of the country has also contributed to poverty. People from the north and the Internally Displaced Peoples camps are forced to move because of the war in the north that has been going on for such a long time. They move to the east because it is safer and the people in the east are forced to migrate to other parts of the country hence losing work or failing to continue with farm work they could have been doing prior to the movement.

High fertility rates and mortality also contribute to poverty. Poor households tend to have more children who need to be educated, given healthcare when they are sick and all the other amenities that contribute to their growing up healthy. If a household has many children then it will be difficult for the parents to save and invest money to improve their economic status.

On average a Ugandan woman who lives through her child-bearing years has 6.9 children and this is higher among poor families (Ministry of finance planning and Economic Development 2004; 17)

In addition to this, mortality also contributes to poverty when the bread winner dies from diseases like HIV/AIDS. Some studies have shown that there is a correlation between AIDS and poverty. When people do not have enough money to look after themselves, they may be forced to indulge in prostitution which is one way through which one may contract AIDS. The fact that AIDS is still a big problem in Uganda; a solution needs to be found for both it and poverty to be able to improve the economy of Uganda.

The government of Uganda has introduced programmes to help eradicate poverty and one of them is the PEAP. It was introduced in 1997 and it underwent revision in its implementation in 2000. Its aim is to eventually reduce absolute poverty to less than 28% by 2013/14 in addition to reaching most of the MDGs by then. The PEAP is divided into three investment plans; a 3 year education sector investment plan, the Plan for Modernization for Agriculture (PMA) and the medium term competitiveness strategy for the private sector (Chronic Poverty Research Centre, 2010).

2.4 Mortality and Morbidity.

One of the important indicators of a society's development is mortality rates among infants (Aber J Lawrence, Bennett G. Neil et al 1997; 470). Morbidity corresponds to the impairment caused by a disease in the patient's health. It can be expressed by several indicators, including the number of medical visits, hospitalizations, days absent from work. In this particular study looking at the morbidity of diseases that affect children of five years and below I will particularly consider malaria, diarrhea, and pneumonia since they have the highest rates of mortality for this particular age group.

Every year more than 10 million children under the age of five die, mainly from a short list of causes, and the majority of these children live in low income countries (Black E. Robert, Morris S. Saul et al 2003; 2226). Some of the determinants of child morbidity include breastfeeding, age, child's sex, plurality, mode of delivery, gestational age, birth weight, parity of mother, vaccination, maternal education, birth spacing and socio-economic conditions. Breast feeding is a key determinant that lowers the rate of infection related morbidities (Habib Hafsa Lohani Maheen et al 2009; 121).

This information is close to that presented in the World vision report which claims that every year about 9 million children under five years of age die. It goes on to say that 3.8 million die within the first 28 days and 6.3 million die within the first year of life making 9 million in total. According to this report the causes of death are neonatal which accounts for 40%, pneumonia, 19%, 18% diarrhea, 8% Malaria, 2% measles, 3% HIV/AIDS and 10% for others. Other indirect causes of death among children of five years and below are malnutrition, lack

of basic education and lack of access to clean water which promotes poor hygiene and sanitation (world vision 2009; 14).

Poverty and social conditions play an important role in the distribution and persistence of malaria. "Malaria is as a result of a complex interaction between parasite, the mosquito vector and its human host and the broader environment (Connor J. Stephen 2002; 397)".

Malaria, diarrhea, ARI, pneumonia and AIDS are the most morbid diseases among children in Uganda. Malaria, which is the most severe of the diseases, is understood to be a disease of poverty and a cause of poverty, an episode for an average income earner uses 25% of his/ her income to acquire treatment, therefore frequent episodes of malaria contraction imply high strain on incomes which could have possibly been invested in other gainful ventures. In addition to this, a lot of time will be spent in a bid to regain good health.

When people are poor they are neither able to develop economically nor socially, they will not be able to afford a good education hence fail to get well-paying jobs. Due to this, they will not be able to get connections to people higher up in the social hierarchy who could have helped them climb up the social ladder. It ends up as a vicious cycle of poverty, with the main cause as malaria since a lot of money has been spent on treating it initially. "Estimates from Ministry of Health indicate that the average expenditure on malaria related treatments are as high as US \$300 million annually" (United Nations Educational, Scientific and Cultural Organisation 2006; 513).

Poverty has been defined in different ways by various scholars. The World Bank Group defines it as hunger, lack of shelter, being sick and not being able to see a doctor, not having access to school and not knowing how to read, not having a job, fear for the future, living one day at a time, losing a child to illness as a result of unclean water, powerlessness and a lack of representation and freedom (The world Bank Group 2010). This definition continues to emphasize that there is a close link between poverty and child health. It also shows that poverty is a big contributor to the deaths of children including those under five since the majority of these deaths are in developing countries.

The Operational definition used in this study is: "poverty is the lack of basic necessities for one to lead a life free from disease. They include adequate shelter, proper sanitation, hygiene and access to clean water".

Poverty is also a big contributor to morbidity (the relative incidence of diseases), ninety-nine percent of under-five child deaths take place in developing countries and these deaths are from preventable situations like neonatal complications and infections in addition to malaria and pneumonia (World Vision 2009; 25). In the world as a whole, the number of people living in extreme poverty in 2009 was estimated to be between 55 and 90 million; a figure higher than was expected before the global financial crisis. Among the developing countries, Sub Saharan Africa is among the regions most affected by poverty. As observed by the United Nations, the people who are employed, do not earn enough to lift themselves above the \$1.25 a day poverty line and are not expected to progress in the near future even under the best-scenario (United Nations Development Programme, Uganda 2009).

Poverty the world over is caused by various reasons such as high fertility rate and high population growth rates, unemployment, high cultural dependency which impact on the social economic, political and cultural wellbeing of individuals among other components. This study will focus on the socio-economic status of women in particular in relation to poverty and how it affects child health.

High population growth rates as earlier mentioned as one of the causes of poverty, is responsible for eroding economic growth, deepening poverty and countering other achievements in the social and health sectors. This is in terms of unemployment, settlement in wetlands vis a vis indecent accommodation which encourages the spread of malaria, diarrhea, pneumonia and acute respiratory infections. These diseases are among the diseases that claim the biggest number of lives. "Malaria continues to be the most serious public health issue in Uganda. It accounts for 40% of all hospital out patient attendances, 20% of all hospital admissions and 14% of all hospital deaths" quoted from roll back malaria baseline assessment report 2001. Pregnant women and children under –five are the most vulnerable to the effects of malaria. The Uganda Demographic Health Survey (UDHS) 2000-2001 found that 44% of children less than 5 years of age had fever in the two weeks preceding the survey (Uganda Bureau Of Statistics 2001; 72).

Diarrhea remains a leading killer of children. The UDHS 2000-2001 found that 20% of children under-five years of age had diarrhea in the two weeks prior to the study. The prevalence of diarrhea is highest among children aged 6-11 months (38%) quoted from the

risk of diarrhea decreases as the child grows, thus the lowest level is found among children of 48-59 months (8%) (Uganda Bureau Of Statistics 2001; 72).

Acute respiratory infections (ARI); the UDHS 2000-2001 found that 23% of children underfive had acute respiratory infections in the two weeks preceding the survey. The highest prevalence was among children aged 6-11 months 33% and it decreases in prevalence with age to 14% for children aged 48-59 months quoted from (Uganda Bureau Of Statistics 2001;7)

In order to improve the status of child health in developing countries, solutions need to be found to improve child health through eradication of poverty. Some governments have come up to address this issue through sensitization of people on healthy home behaviors and better access to quality health care (Ministry of Health et al 2007:3). This is further supported by World Health Organization, In the Situation Analysis of Health in Uganda which notes that

Many new born deaths are preventable with appropriate knowledge and practices at the family and community levels, and with appropriate care-seeking when danger signs are recognized. However life-saving practices are not always followed due to poverty, cultural beliefs, lack of household food security and poor access to health care disseminate and implement such policies (Ministry of Health et al 2007:5).

Some governments have also come up to boost the education sector more so of the girl child as women are believed to be key players in a child's health. This is more emphasized by an observation made by the Uganda Bureau of Statistics during a national household survey carried out in 2005/2006 which states that; one in every four households was headed by women and they spent more time in activities to do with caring for the home like looking after the children and sick, collecting firewood, fetching water and cooking. This was the case in all regions in Uganda (Uganda Bureau of Statistics 2006; xiv).

As earlier discussed, there are a number of reasons for why children are not able to access the proper health they deserve. There is need to focus on Nakawa division in Kampala district which is the biggest of all the five divisions hence being chosen as the study area in this research. This research was carried out to establish what the situation of child health is in

relation to socio-economic and other factors limiting access to child health which include the level of education, income levels, and access to clean water.

Many of the children under five years of age are dying because of a lack of political will to prioritise child health (World vision 2009; 14). Many economies in third world countries do not spend a lot of money on health of their citizens for example in Uganda. According to the budget 2009/10, it was noted that malaria is still the most serious killer of people in Uganda and there is a plan to increase the number of households that own insecticide treated mosquito nets from 15% to 85%, improve the number of children under five years who receive correct treatment form malaria from 71% to 80% and increase the number of mothers receiving the second dose of intermittent preventive treatment to 85% for those attending antenatal care services. (Ministry Of Finance Planning and Economic Development 2009; 26). The money allocated to health sector is steadily going up from Shs 139.23 billion in 2006/7 to Shs 734 billion in 2009/10. Regardless of that officials at the ministry of health say this is not enough to cater for the minimum health care package and hire health workers to deliver these services (Lirri Evelyn, 2010). That not withstanding, these may be the plans of the government for those years but when the money comes in from the donors, these figures change depending on what the donors are interested in.

The donors determine what percentage of the money is used for what health section. Donors are interested in fighting the spread of AIDS and give more money towards that cause and this is a good thing, however they need to follow up on the money they have given. Monitoring and evaluation is important to ensure that the money donated is put to its rightful use and not misappropriated like the case was in Uganda with The Global Alliance for Vaccine Initiative (GAVI) funds.

Another reason as to why children under five years old are dying is because of the financial gap between funds needed and those received (World Vision 2009;14). Uganda receives more than half of its budget from donors. Regardless of this, this money is not distributed well enough to be used by the different sectors in the country. Depending on what the people in authority decide to spend the money on that is what will take priority hence failure to reduce the gap between the money that comes into the country as financial aid and the actual funds that are received. Dr. Francis Runumi the chief planner at the Ministry of Health says at least shs1.5trillion is required every year to deliver the ideal health services Ugandans would

require which is roughly twice the amount available now (Lirri Evelyn, 2010). As already mentioned, developing countries spend as small percentage of their GDP on health and as a result, this brings about death of those that are not able to access health services.

The lack of a formal political voice for children and women does not help matters at all when it comes to failure to access health services thus leading to death. The most vulnerable people in society are often women and children;, most societies are dominated by men and they are the ones that make the decisions most of the time. In Uganda for example, men have been the ones holding positions of authority for a long time. It is very recent that women have been able to hold positions of authority. Women most of the time are not as educated as men. Some families think it is wastage of time to educate a girl because she will grow up and get married and then she will be part of her husband's family and not the family where she was born. This, along with stereotyping, makes women and children barely recognizable in society. That means when they fall sick they have to fend for themselves and ensure that they get the medical help they need or else they will die. This lack of a political voice has changed over the years in Uganda but a lot of work still has to be done to improve the life of the girl-child and build her esteem to know that she can be as good as boys and even better.

Failures to address other social determinants of health has also made children of five years and below lose their lives yet this could have been prevented. Some of these social determinants are unsafe water which causes 1.5 million deaths every year from diarrhea, lack of parental education and discrimination against girls and women. These social determinants may not directly lead to the death of children under five years of age but if they are tackled, they would go a long way in reducing the 9 million deaths faced every year, by children in this age group.

Finally, decisions about health exclude families in real need. This acts as a hindrance to many of the policies that are set by governments because the people who really need these services are excluded. Many times when decisions are made and are going to be able to work, they need to involve the people the decisions are being made about. In this particular situation, more attention needs to be given to administer interventions that promote prevention and reduce costs. Practices like these are improved nutrition, hand washing, breastfeeding and early identification of pneumonia (World Vision 2009:38).

The leading causes of childhood deaths in Sub-Saharan Africa are pneumonia, diarrhea, malaria and measles and yet all these can easily be prevented through improvement of basic health services like use of oral rehydration salts, insecticide-treated mosquito nets and immunization (United Nations 2008). "Lack of proper nutrition, safe water and sanitation are factors in over half of all these deaths" (World Vision 2009; 43). The environment has a big part to play in the morbidity of these diseases. If the environment a child is living in is unhygienic and unsafe, then the child is put at risk of contracting disease. In estimation, 3.1% of deaths and 1.7 million deaths worldwide annually are caused by unsafe water, sanitation and hygiene "Ingestion of unsafe water, inadequate availability of water for hygiene and lack of access to sanitation contribute to 1.7 million child deaths from infectious diarrhea" (World Health Organization 2002). Provision of safe clean water to citizens and by the government and international bodies will go a long way in reducing the number of deaths caused by diarrhea. "Improved water, sanitation and hygiene could reduce diarrheal disease by 65%" (World Vision 2009; 23).

Climate change has a big impact on health. When the temperatures increase, there is a high risk of communicable diseases especially malaria. Flooding as a result of climate-related water insecurity also causes waterborne diseases like diarrhea. "Climate change is already believed to account for over 150,000 deaths and 5 million incidences of disease annually" (World Vision 2009; 23).

Education also plays a major part in informing people about what they can do to reduce the morbidity of diarrhea. If the mothers are educated then they will be able to look after their children better since they will be informed about proper disposal of excreta and the need to wash hands after they have used the toilet.

In the research I carried out I discovered that health educators also had a major role to play in improving the health of the mothers and their children. These health educators are sent out in the field to interact with the families in their home settings and help them out on what should be done to prevent the spread of malaria. Such methods can be emptying all empty cans that may hold water which are a good breeding ground for mosquitoes and slashing long grass that may also harbor mosquitoes. They also encourage families to use insecticide-treated mosquito nets, most especially for pregnant mothers and children to reduce the spread of malaria.

Preventive treatment against malaria is also recommended by the educators to pregnant women.

Hygiene education is also one of the services provided by the health workers; they teach families about the need to wash hands with soap after using the toilet and also promote safe sanitation.

A number of key child-survival interventions are expected to yield further declines in underfive mortality over the next few years like vitamin A supplementation, use of insecticide treated mosquito nets, exclusive breastfeeding and immunization in addition to providing antiretroviral treatment to HIV positive mothers to prevent transmission of the virus to babies (United Nations Development Programme Uganda 2009).

Malaria is the leading cause of deaths in Uganda, world wide it claims the lives of one million people a year most of them young children (Uganda Bureau Of Statistics 2006). According to information from the Ministry of Health, malaria is the leading cause of child morbidity (United Nations Educational Scientific and Cultural Organisation 2006; 513) this has proven to be true even from the data I collected in the field for the period of January to December 2009. Looking at the diseases that affect children under five in Nakawa division, malaria was the most morbid in comparison to the rest. High child morbidity leads to high infant mortality rates from the diseases that cause the most morbidity. Malaria is the cause of the highest number of deaths among infants in Uganda. The diseases that are most morbid among children in Uganda are malaria, diarrhea, ARI, pneumonia, HIV and AIDS, malnutrition and these are the same diseases that cause the highest mortality rates to children of under five years. Malaria is caused by a parasite called *Plasmodium falciparum* which is carried by the female Anopheles mosquito (Kiwanuka Gertrude 2003).

Currently one in every 14 Ugandan children dies before reaching one year, while one in every seven does not survive to the fifth birthday (Uganda Bureau of Statistics (UBOS) and Macro International Inc 2007).

Survival of children and infants is influenced by the gender of the child, mother's age at birth, order and birth interval. There is higher mortality among many children especially for neonatal mortality; children born to mothers below 20 and above 40 have higher cases of

under five mortality rates. First births and births of order seven and higher also have higher rates of under five mortality than births of order two to six. Children born within two years of a proceeding birth are twice as much likely to die within the first year of life than those born three or more years after an older sibling (Uganda Bureau of Statistics (UBOS) and Macro international Inc 2007). In this study I was investigating whether poor child health and an inability to reduce child mortality rates was due to poverty.

Kampala district, in which Nakawa division is located, has the lowest childhood mortality rates among the regions in Uganda. This could be explained by the fact that Kampala is urban and has higher socio-economic environment in regard to nutrition and sanitation. The under five mortality rate for Kampala is 94 deaths per 1000 live births (UBOS and Macro international inc 2007; 112) This is low compared to other parts of the country, where the under-five mortality rate of Uganda was 137 deaths per 1000 live births in 2005 (Uganda Bureau of Statistics (UBOS) and Macro international Inc 2007; xxvii). Nakawa division has an under-five years' mortality rate of 97/1000. (City Council 2008:56) Failure to survive up to 5 years of age for children is referred to by Save the Children as "a preventable tragedy".

The World Health Organization (WHO) and UNICEF came up with a strategy to address the challenge of improving quality care to sick children. It is the Integrated Management of Childhood Illnesses (IMCI). It aims to reduce death, illness and disability and to promote improved growth and development among children under five years of age (World Health Organization 2009).

Malawi for example is one of the countries in Africa that has been commended for doing a good job as far as reduction of child mortality is concerned. This has taken place since 2000 when the MDGs were set in place. It has halved its under-five mortality from 210 per thousand in 1990 to 111 per thousand in 2007. This has been done by proven low-cost measures like increasing the number of children delivered by a skilled attendant to 60%, increasing immunization cover to 99% and increasing coverage of Vitamin A supplements from zero to 86%, community management of pneumonia, promotion of exclusive breast feeding which is now practiced by 57% of the women have all played an important role (World Vision 2009; 56).

Poverty has a great impact on diseases that are prevalent among children of five years and below and this leads to an increase in child mortality. In order for this situation to be redeemed, people need to be made aware of what they can do to get out of the poverty-infested lives. This will enable them improve their own health thus leading to a decrease in ill health and bring down the mortality rates eventually.

All in all, poverty has a big role to play as far as morbidity and mortality of diseases is concerned. Many solutions have been tried out over the years to ensure that poverty is eradicated in the third world and more things are still being done to meet the MDGs. Much of the money that is meant to improve child health among the poor is misused. A solution needs to be found to this problem so that the third world countries can also be able to enjoy better lives that are not stagnated by poverty and those that are poor will also remain in the same position they are in for decades to come. Immediate interventions that may be related to poverty can be done in the mean time as more money is expected to be used in the developing world. If money is properly monitored then it can be used in the communities at the grass roots to educate women, provide water to improve sanitation and hygiene and this way diseases will be prevented even before the children are attacked by them.

CHAPTER 3

METHODOLOGY

3.1 Introduction

In this chapter, I present the methods of data collection that were used. Mixed methods were used meaning both qualitative and quantitative methods. In this study, interviews were carried out with mothers (45) of children > 5 years and (3) health personnel (Table 1) at the health centers, in the study area. The qualitative methods used in the collection of data were in the interviews that were carried out both with the mothers and the health personnel. They included semi-structured questionnaires that were filled out by the researcher during the interactive interviews that were carried out with the respondents. Participant observation was another method that was used.

The quantitative methods were used in gathering information from the records at the health centers in order to find out which diseases were most prevalent among children > 5 years. This is the best way to collect this kind of data since it is numerically presented. Methods like document analysis were employed when collecting data from the health centers. Graphs, pie charts and tables were used to display this information in the discussions and findings section.



Picture 1; One of the mothers interviewed at Butabika Health Center (*Photo by author*).

The biggest part of this study was done using qualitative methods. Qualitative research is a research strategy that usually "emphasizes words and not numbers" (Bryman Alan 2008; 22). Through the interaction and conversations with the respondents, this was the most appropriate method to use to collect data. The researcher was able to obtain important information from the mothers through interaction and listening to their day to day experiences about motherhood. This research strategy is in line with the epistemological orientation called interpretivism. "Epistemology is what should be regarded as acceptable knowledge in a discipline" (Bryman Alan 2008; 13). One's decision on the research strategy is determined by the epistemological orientation. It is divided into interpretivism and positivism.

In this particular study interpretivism, which has more to do with social research, was very present since interpretivism is about understanding human behavior. "It is more concerned with human action rather than the forces that are deemed to act on it" (Bryman Alan 2008;

15). The mothers interviewed in this research interpret their world in a particular way and that is what determines their behavior. For instance, the majority of them had only primary education and had their first child before they turned 18 years old on average. When there is no money to pay school fees, young girls tend to get married and start families early since their parents can't afford to send them to school anymore.

Ontological orientations also have an influence on one's research strategy. Of interest is whether entities are influenced by external forces or whether they should be considered social constructions built up from the actions of social actors (Bryman Alan 2008; 18). This is divided into two positions, objectivism and constructionism. Objectivism says that social phenomena are beyond our influence: they impose themselves on us (Bryman Alan 2008; 18). On the other hand constructionism believes that social actors are the determinants of what happens in society and not external forces. Organization and culture in society are not pre-given (Bryman Alan 2008; 19).

When research is carried out based on a hypothesis that needs empirical scrutiny, this type of research is called deductive theory. If the researcher has a theory and then collects empirical findings to prove it then this will be inductive theory.

Information from Nakawa division offices was obtained before the data collection started and this information was vital in helping the researcher to find out more about the division and what to expect before going into the field. Information on the size of the division, population, number of public health centers and their distribution was all obtained from the division offices.



Picture 2: Showing some of the mothers interviewed at Butabika health center (*Photo by author*



Picture 3: Showing a group of mothers at Butabika health center (*Photo by author*)

3.2 Study Area

Of the 235,036 km2 that Uganda occupies, 500,000 km2 is taken up by open water and swamps. Lake Victoria in the south stands at an altitude of 1,200meters, the land gradually slopes downward to the Northwest reaching about 600m altitude where the White Nile leaves the country to Sudan. UBOS estimated the population of Uganda in 2009 to be at 30.7 million and by the end of the HSSP III in 2014/5, the population of Uganda is estimated to be at 37.9 million. That means that an extra 7 million people will be expected to be provided for by the health sector. Unfortunately the budgetary allocation to the health sector has been the same in terms of percentage for the last five years. It has been at a stagnant 9% despite the high population growth rate. It has however increased from Shs 242.62 billion in 2006/7 to Shs 375.38 in 2008/9 (Ministry of Health 2008;30).

The research design in this study was a case study. "A research design provides a framework for the collection and analysis of data" (Bryman Alan 2008; 31). A case study was chosen for this research because a case study enables one to get detailed and intensive analysis of a single case. Nakawa division being the largest division in Kampala district was the best choice to give a broader picture of what happens in other divisions of Kampala.

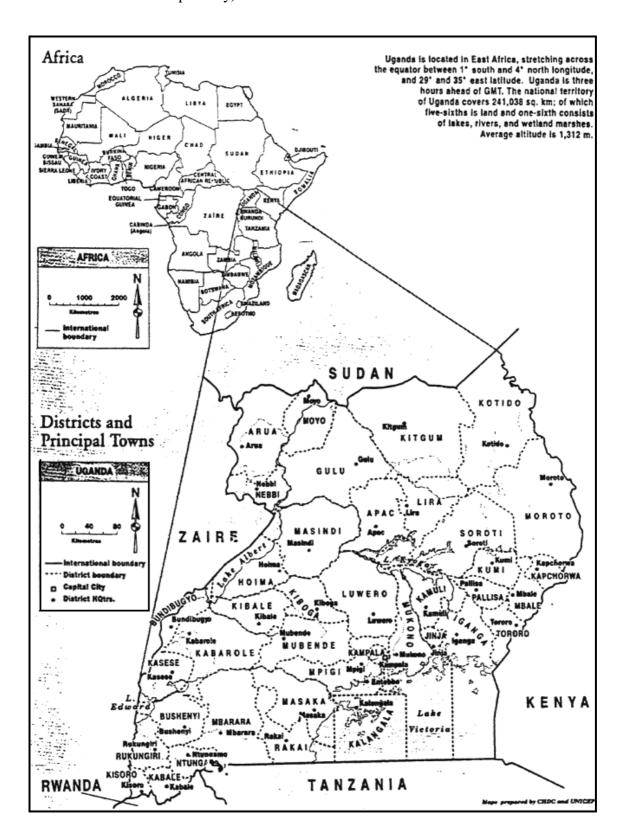
The health centers in Nakawa division are 12 in total serving 23 parishes. 5 of the health centers serve institutions and therefore were not considered in this study. This leaves 3 public health centers that qualified to be used in this study. They were Kiswa, Butabika and Luzira. As Bryman suggests, "In order to be able to generalize one's findings from a sample to the population from which it is selected, the sample must be representative" (Bryman Alan, 2008). The mothers of children >5 years, that were respondents in this research were considered representative of many mothers in the same situation in Uganda.

Kiswa, Butabika and Luzira health centers are all located in the same area as shown in the figure below (figure 2). All three health centers are located in the lower part of the division. Mothers and other patients have to travel long distances to be able to access health services at these public health centers. There are a number of private clinics in the division but those can only be accessed by those patients that have the finances to pay for their bills. The fact that the number of parishes is 23 and there are 3 public health centers serving all 23 parishes it means that the health centers are overwhelmed with numbers. There are not enough

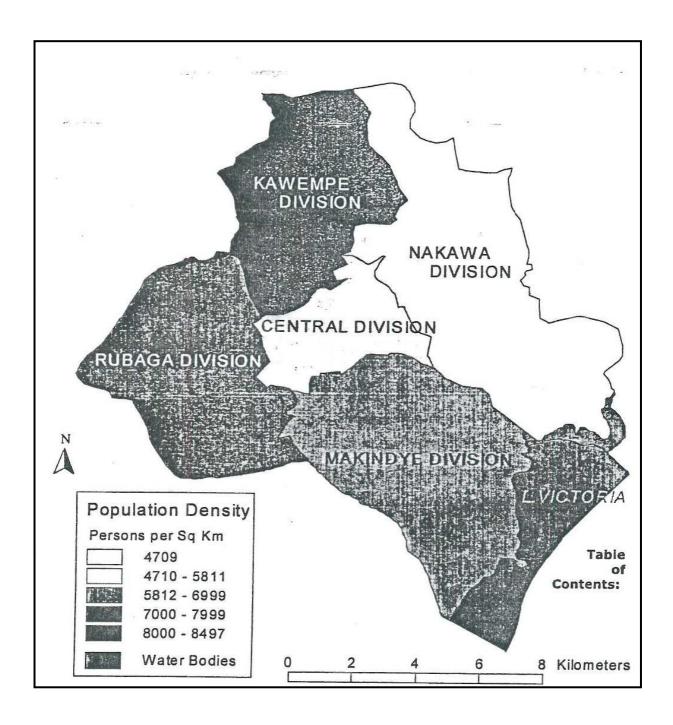
nurses to cover all the patients, the health equipment is over used because of the large numbers of patients to attend to, the equipment depreciates at a fast rate and it takes a while for it to be replaced. To make matters worse, there are not enough drugs for the patients in the health centers.

Kiswa Health center is a health center that carries out immunization of children and also provides ante-natal care to expecting mothers among other primary health care services. Butabika hospital is the mental referral hospital in Uganda and the majority of patients that go to this hospital have cases that have to do with mental disability. The capacity for mothers and children that are handled at this hospital is not as big as that at Kiswa. It could be because most people think of it in terms of it being a mental hospital. Luzira Murchison bay hospital is located inside the Luzira prison and the majority of the ordinary citizens are biased about it for this reason. Its capacity is also not that big, and it is mainly people who live near the prison or in the prison quarters who come for the health services at this hospital.

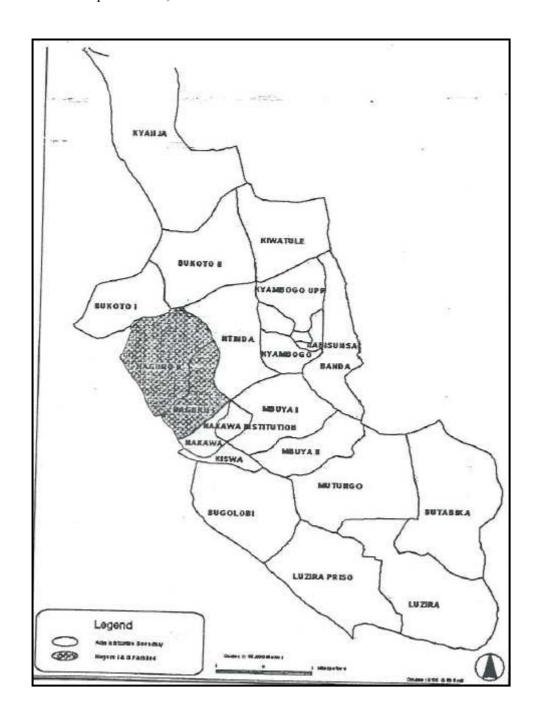
Map of Uganda showing its location in Africa and its administrative boundaries, Kampala district is shown on the shores of Lake Victoria (*Source:* FAO Repository)



Map 2: Map of Kampala showing administrative divisions including Nakawa Division (Source: City Council of Kampala 2008)



Map 3: Map of Nakawa Division Showing major parishes (Source: City Council of Kampala 2008)



All these health centers had mainly outpatient departments except for Luzira which also had an in-patient department. To be able to collect information for this study I interviewed mothers and health Personnel. Using purposive sampling, I interviewed both health workers and mothers of children > 5 years because these are believed to be the key and knowledgeable persons in the areas of their children's health. As also observed by the Uganda Bureau of Statistics from a national household survey that was carried out in 2005/2006, one in every four household was headed by women and they spent more time in activities to do with caring for the home like looking after the children and sick, collecting firewood, fetching water and cooking. This was the case in all regions in Uganda Bureau Of Statistics (2006). There is a strong linkage between the well-being of the mothers and that of their children (Save the Children, 2009). That was the basis for interviewing mothers to get information about their socio-economic status, questions to do with their age, level of education, at what age they had their first children and questions that would enable me to collect some more information about these women's daily lives.



Picture 4: Showing a health worker at Butabika health center in Nakawa Division (*Photo by author*)

I interviewed 48 respondents in total, 15 mothers and 3 health workers (Table 1) from each health center whom I selected randomly using random sampling.

I interviewed 3 health personnel, one from each health center to get a better picture of what they go through day to day in terms of what diseases are most morbid particularly for children > 5 years and what they are doing to ensure that these cases are reduced to improve the health of these children. I used open-ended questionnaires that allowed the health personnel to be able to talk in detail about the diseases that children of five years and below suffer from. I used open ended questionnaires because they enable the respondents to talk about other things that I may not have asked them but are very informative when carrying out research.

From my own observation 48 respondents were sufficient to enable me see what exactly was going on in the lives of these mothers, the health of their children and the feedback from the health personnel who deal with these patients from day to day. The more I carried out interviews with the mothers, there was an increasingly clearer repetitive pattern in the way they answered the questions. After talking to about 7 of the mothers that had been randomly selected for instance at Kiswa health centers, there wasn't much of a difference in the answers of the next 8 mothers I interviewed.

Table 1: Sample size distribution in Nakawa Division

HEALTH CENTER	RESPONDENTS				
	Health Personnel	Mothers			
Butabika	1	15			
Kiswa	1	15			
Luzira Murchison bay	1	15			
Total	3	45			

3.3 Limitations

One of the limitations of this study is the failure to access the mortality records in Nakawa division. This study would have been enriched if I had been able to collect data on child

mortality in Nakawa division, but when I got into the field, the information that was available in the health centers was on the diseases that were most prevalent when it came to children of under five so I then opted to focus on Morbidity instead of Mortality in order to have a good analysis of my data. Since this study was based on Goal 4 of the MDGs it would have been best if I had records of the mortality rates in Nakawa division. But this was not possible.

All health centers in Nakawa division refer all serious cases to the main referral hospital in Uganda Mulago Hospital and they have no records of deaths since they mainly deal with outpatients except for Luzira Murchison Bay hospital which deals with in patients. However, they had no records of deaths from January to December 2009 (which were the records I used for this study).

Another limitation of this study was that all the health centers that were used were located in the same area; they were all located on the same highway. This does not give a clear picture of the division as a whole. Since there were just three health centers that were supposed to cater for 23 parishes, it was easier for those people that live close to them that were able to access their health services. This doesn't give an objective projection of Nakawa division as a whole since patients will most likely go to the nearest health center to cut transport costs. In this case all the mothers I interviewed at the health centers were all from the same area in the Division.

Finally another limit to this study is the fact that I didn't use focus group discussions as a tool in collecting data. Focus group discussions are recommended in qualitative research since they give the researcher a more in depth assessment of the situation they are collecting data from. Focus group discussions would have provided more in-depth information about the different situations these mothers are in but because of a number of constraints this was not possible.

In conclusion, different methods of social research were used to collect data from the three health centers in Nakawa division and interviews carried out with the mothers. To find out the diseases that are most morbid in this division. Rich information was obtained but could have been deeper had focus group discussions been used as a means of engaging with the respondents.

CHAPTER 4

PRESENTATION OF FINDINGS AND DISCUSSION

4.2 Introduction

This chapter will present findings and analysis of the study carried out in Nakawa on the socio-economic status of mothers and its effect on child health. The chapter is divided into three sections. The first part answers the first research question in chapter 1 which has to do with the causes of under-five morbidity. From the interviews carried out with the mothers it was discovered that many of the mothers said that the diseases that affected children of five years and below were caused by mosquitoes and further information showed that malaria was the most morbid disease in this division.

The second part answers the second research question which investigates the extent of the relationship between a mother's socio-economic status and the health of the children. From the data collected it was noticed that this relationship was strong. Those mothers that had a high socio-economic status had children with better health in comparison to those mothers that had a lower socio-economic status. This was determined by looking at their level of education, employment, accommodation and access to clean water among other factors.

Finally the third research question investigates the issues concerning the mother's perspective on their children's health. Data is presented in tables and graphs where appropriate, comparisons are also drawn between different variables to identify significant relationships.

In cases where the relationship between a dependent and an independent variable needed to be tested, statistical tests in Statistical Packages for the Social Sciences (SPSS) version 15 were used to determine the significance of these relationships.

4.2 Causes of under five morbidity

According to the information collected from the health centers (Figures 1, 2 & 3), the most morbid diseases for children of five years and below in Nakawa division were malaria, which accounted for an annual average of 45.2%,49.1% and 65.2% in Luzira, Butabika and Kiswa respectively followed by acute respiratory infection which accounted for an annual average of 45%, 33.2% and 47.5%, in Luzira, Butabika and Kiswa then diarrhea which had an annual average of 6.4%, 0% and 1.2% in Luzira, Butabika and Kiswa respectively. Pneumonia was accounting for an annual average of 3.4%, 0.4% and 3.3% in Luzira Butabika and Kiswa of the cases reported in Nakawa division. Part of Nakawa division is a swampy area; many wetlands have had buildings constructed on them. The National Environmental Management Association (NEMA) is the one in charge of ensuring that wetlands are conserved. The Kampala City Council (KCC) is the one responsible for land allocation in the city. Many times these two bodies do not reconcile their files. KCC allocates land to an investor and then later on NEMA says it is not okay for the investor to reclaim the land and construct buildings in wetlands because they act as catchment areas and are also habitat for aquatic life. KCC looks at the investor as someone who is going to bring in taxes and provide job opportunities while NEMA is more interested in the environment. This causes confusion and has brought many parts of the city being inhabited even if they are hazardous to the health of those living and working there.

There were other diseases that were mentioned by the respondents in Nakawa division that are not as morbid among children of five years and below that were mentioned earlier. They include AIDS, Tuberculosis, skin diseases, intestinal worms, typhoid, and sleeping sickness among others.

According to literature malaria is caused by the plasmodium parasite and is transmitted by mosquitoes from an infected person. The mosquitoes transmit malaria by biting a person infected by the disease and then biting another person who is not infected and this is how it is transmitted from one individual to another (World Health Organisation, 2010). According to a study that was carried out by Joint Clinical Research Centre among other organizations, pointed out that malaria is the leading cause of morbidity and mortality in Uganda (Ssewanyana Isaac, Pietras Christopher et al 2007; 6) it was found in that study that deaths from malaria occur among children and infants and after children turn five years old there is a

reduction in the number of clinical cases. This agrees with my findings which also found that children of five years and below were most affected by malaria more than any other disease in Nakawa division.

From the interviews carried out with the mothers and health personnel, 20% of the mothers (fig 4) blamed mosquitoes for their children's health problems. However since the greatest majority (48.9% fig 5) reported that malaria was the most common health problem their children had within the last two months, this study is able to show that people are aware of what is causing malaria and even the health educators that are sent out in the field to reach those mothers that may not be able to go to the health centers interact with people in their communities to increase their awareness of ways to improve their livelihoods. Of the mothers interviewed the majority reported that their children use mosquito nets. Many of the respondents said their children used mosquito nets when sleeping at night. In 2005 October, the Ministry of Health announced that it was going to distribute 4.5 million free insecticidetreated mosquito nets in a bid to protect children and pregnant mothers (Madamonbe Itai, 2005). Current records of the number of households that use Insecticide Treated Nets (ITNs) mosquito nets in Uganda are not documented but according to records form the UDHS, there was a national increase in households that used mosquito nets from 13.2% in 2001 to 25.9% in 2004/2005 rural (10.5% to 20.5% urban 35.6% to 60.1%). A number of surveys carried out at the district level showed that the proportion of children of five years and below and pregnant women sleeping under ITNs reached 15-17% by the end of 2004, going up from 0.3 and 0.5% respectively in 2000/01 quoted from (Ministry of Health 2006;17).

Having this in mind, every year about 250 million people in the world are affected by malaria and nearly 1 million people die from it (World Health Organisation, 2010). The use of treated mosquito nets helps in the reduction of malaria cases but more needs to be done if malaria is going to be totally wiped out from the onset. The government of Uganda in the HSSP11 has the following core interventions in the eradication of malaria; effective case management, selective vector control like indoor residual insecticide spraying, ITNs and environmental management, intermittent preventive treatment to pregnant women, malaria, epidemic preparedness and response and Information Education and Communication (IEC) or Behavior Change Communication (BCC), (Ministry of Health 2005; 40).

Acute respiratory infections refer to diseases like common cold and flu. They are caused by viruses and sometimes by bacteria (Bellos Anna, 2010). According to the mothers and information collected from the health personnel, many of their children contracted these infections from their siblings. Those children that go to school caught the infections from their classmates and when they came home then the infections would be spread to the rest of the family members most especially the younger members of the family. Literature shows that all severe cases of acute respiratory infections are among children of five years and below, the elderly and immunocompromised individuals like HIV patients (Bellos Anna et al. 2010; 2).

Diarrhea which is another disease that is highly morbid in Nakawa division is caused by viral, bacterial or parasitic organisms (World Health Organisation, 2010). Diarrhea is spread through contaminated drinking water or food or from one individual to another through poor hygiene. 73.3% of the mothers that were interviewed shared compounds with other families. They lived in semi-detached houses where a number of families share the same compound. It is very hard to ensure the hygiene of ones home when their children interact with children in the same compound who may come from families that are not hygienic. Sharing the same compound as other families also implies that children will interact and share a number of things including food and water. Through this interaction the parasites are easily transmitted from one child to another hence affecting families as a whole.

According to literature 1.5 million children under five years die from diarrhea globally. It is the second leading cause of deaths among children in this age group (World Health Organization 2010). However from the data collected, Acute Respiratory Infections (ARI) were more prevalent than diarrhea (see figures 1-3) in all the three health centers. According to the Population Secretariat, "the highest cause of morbidity has been malaria since 2000 with 59% and 50% in 2005/2006, followed by respiratory infections 14% in 2005/2006" (Population Secretariat Ministry of Finance Planning and Economic Development, 2010). This information concurs with the data I collected from the field.

In order to tackle the problem of diarrhea, the government of Uganda according to the Health Sector Strategic Plan (HSSP III) plans to increase community access to child survival commodities like (Oral Rehydration Salts)ORS/zinc and antibiotics to treat diarrheal cases among children, improve food fortification in infant foods, avail buffer stocks for child survival commodities at community level and ensure that there is a continuous availability of

medicines and supplies in public and private health facilities and communities for control of diarrheal and other child hood illnesses like acute respiratory infections (Ministry of Health 2008; 88).

In Butabika there were only 2 cases of diarrhea throughout the year of 2009 see (figure 3). This was quite puzzling since all the mothers interviewed did not differ a lot in their profiles, that is to say, in terms of their level of education, access to clean water, shared compounds with other families and all the rest of the different questions that were posed to them. Some more information needs to be obtained from this health centre which could be of help to the other two health centers in reducing the number of diarrheal cases they have.

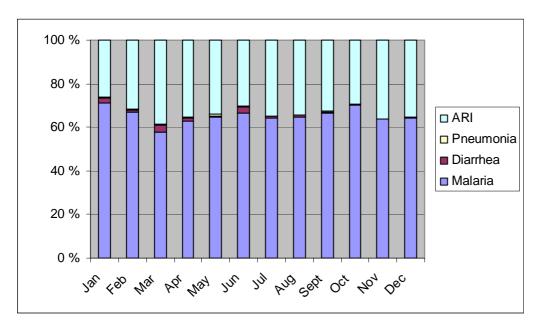


Figure 1: Kiswa Health centre

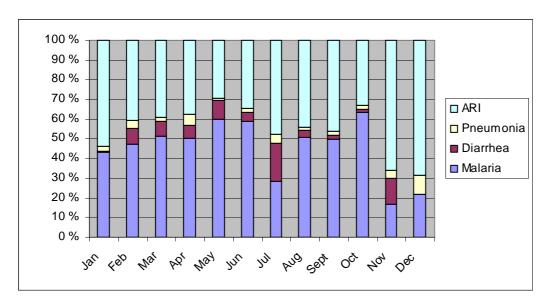


Figure 2: Luzira Murchison bay health centre

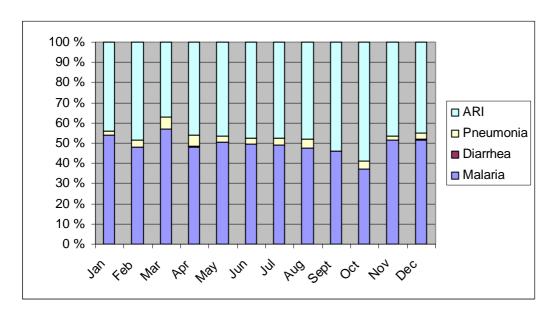


Figure 3: Butabika Health Centre

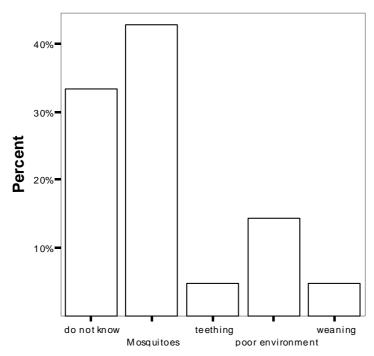


Figure 4: Showing what mothers thought was causing their children's diseases.

(Bars represent valid percentage values which incorporate no responses in the variables)

Clean water, exclusive breastfeeding for the first 6 months, improved sanitation, good personal and food hygiene and health education about how the infections are spread would all come a long way in reducing diarrhea infections (World Health Organization 2010). From the interviews carried out, 64.4% of the mothers had access to piped water which was from a tap outside the homes they live in or from a tap where the water was bought. Water having to be bought causes a high risk of spreading disease. If a mother doesn't have access to enough water, then she will use the little she has access to sparingly, meaning that hygiene and sanitation may be greatly hindered if she needs to pay money to access water.

The majority of the mothers had a positive attitude towards breast feeding and many of them, especially those that were unemployed exclusively breastfed their children for the first six months. The few who had to go back to work were not able to breastfeed their children for long due to the need to provide for their families. In this study it was noted that on average the mothers breastfed their children for 17.8 months and the average number of diseases affecting children per family was 0.9778.

The personnel at the health centers have a programme where they send health educators into the field to educate mothers on how to improve the health of their children and give the children a better future. The education enables the mothers to ensure that their homes are not breeding grounds for mosquitoes or other parasites that could cause harm to their children. This enables the mothers to make changes in their daily lives to improve the environment their children are growing in and also provide them with a better future health wise.

Pneumonia was the least prevalent disease as shown in figures 1-3. Pneumonia is an infection of the lungs caused by virus and bacteria (World Health Organisation, 2010). It is the leading cause of death in children world wide according to the World Health Organization, claiming an estimated 1.8 million lives every year- more than AIDS, malaria and measles combined (World Health Organization 2010).

The most effective way of preventing pneumonia is immunization against Haemophillus influenzae type B vaccine (Hib), pneumococcus, measles and whooping cough (World Health Organization 2010). Pneumococcal vaccine was recently introduced to Uganda in the early 2000s. It was part of the vaccines that were given to children in the developed world for many years but has just been recently introduced to the developing world.

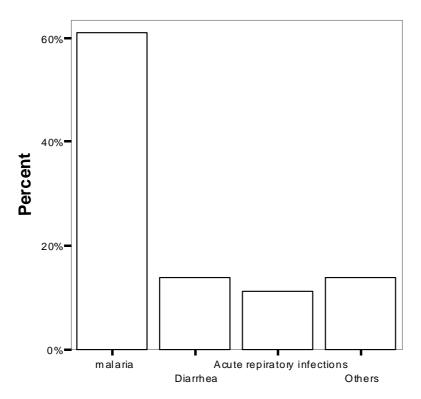


Figure 5: Showing what disease was responsible for their child's sickness in the two months prior to the study

4.2 Extent of relationship between socio-economic status of mothers and child health

Looking at the socio-economic status of mothers in Nakawa division, a number of aspects were put into consideration; Level of education, employment, civil status, accommodation, access to clean water and whether they were household heads or not. One of the comparisons that will be made in this section is the relationship between a mother's level of income and her education level. When a mother is well educated there is a high chance she will be able to look after her children better using both the finances she has and also the knowledge she gained from school. This contributes positively to the health of her children.

If mothers are able to access education, family planning services and legal reform where they are able to get justice for example when girls are married off before they become adults. This will help a lot in bringing down the fertility rate in Uganda which currently stands at 6.9 children.

Another comparison I will make in this section will be between a mother's level of income and if their children have been sick in the last two months prior to the study. This could be an indication that if a mother is able to provide proper nutrition and accommodation for her children among other factors, this could prevent them from falling sick often. Proper nutrition contributes to the immunity of the children hence improving their health.

A comparison between a mother's level of education and age of the mother at first birth will also be made. In this case, when a girl stays longer in school she is better equipped on how to look after her family and staying in school longer also enables not to rush into starting a family she may not be able to look after adequately. This comparison shows that those respondents who didn't get to a certain level of education, had children earlier compared to those respondents who studied as far as the tertiary institutions.

Considering the relationship between the level of education of the mothers and the income they earn, of the 45 mothers that were interviewed, 16 gave a no response as far as their income was concerned. Overall 29 of the respondents were either unemployed or employed. The majority of the 45 mothers attained secondary education (44.8%); those that attained educations until the tertiary level were (13.7%) primary level of education were (31%) and those that did not have any education at all were (10.3%). From the data collected it was noted that those mothers who had tertiary education earned more compared to those mothers with lower levels of education. This is shown in the figure below.

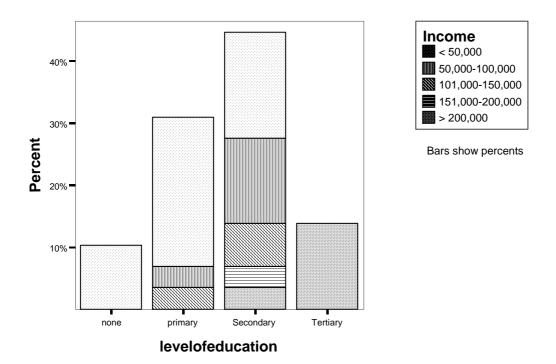


Figure 6: Showing relationship between Mother's level of education and income

The overall female literacy rate in Uganda is 57.7% while that of the male is 76.8%. This difference in literacy rates has been created over a long period of time where it was more profitable for boys to study than girls. Women's literacy rates are normally lower than those of men especially in the developing world. Along the way the government of Uganda has decided to support the girl child and many NGOs have come into the country to support women's rights and advocate for more opportunities or them to study and be able to contribute to the economy.

Hypothesis 1

The hypothesis being used in this study is; when a woman has less than 9 years of education and her family access to less than USD 5 a day, the health situation for her children is significantly worse than for a family where the woman has higher education and access to more money.

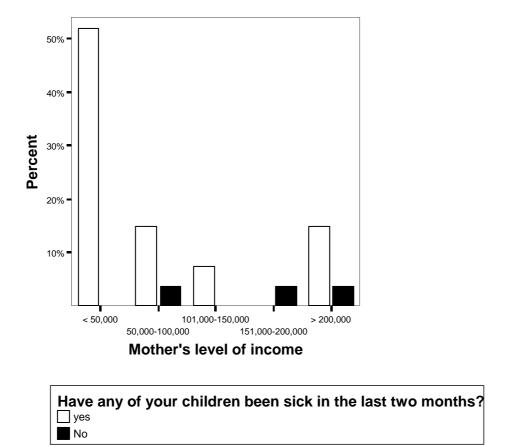


Figure 7: Showing Mother's level of income and if their children have been sick in the last two months

From the information displayed in the graph above, those mothers that had a salary of more than 200,000 UG shs per month responded "No" to the question "have your children been sick in the last two months?", while those mothers who earned 50,000 UG shs and less responded Yes to the above question. Drawing from the graph and responses, I would say that a mother's socio-economic status affects her child's health greatly.

Hypothesis 2

When a woman has her first child during her teenage years and her family access to less than 5 USD a day, the health situation for her children is significantly worse than for a family

where the woman has had her first child in her twenties or later and has access to more money.

Mothers with higher levels of education were most likely to have their children later. This was discovered after a comparison between the mother's level of education and when they had their first child. According to the data collected, those mothers with tertiary level of education had their first children later then those who had lower levels of education. This goes to show that when girls stay longer in school then there is a less likely chance that they will have children early. Refer to figure 8

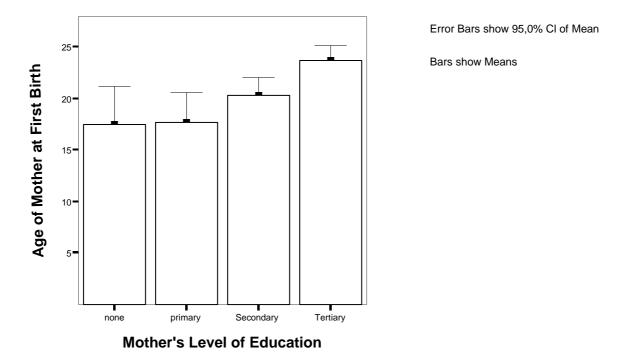


Figure 8: Showing mother's level of education and age of the mother at first birth.

This is further proven by a study that was made in 152 countries where literacy rates among females and poverty were identified as the two biggest determinants in child mortality. This study is obtained from a report written by the World Vision which states that;

"Women with an education, especially to the secondary level are more likely to seek health care for themselves and their children and to ensure that treatment is administered effectively" quoted by (World Vision 2009; 43) from Mc Nay et al 2003.

In the graph below, a correlation was made between the age of mother at first birth and the total number of children per mother and it was discovered there was a negative relationship between these two variables the $(r^2 = 0.31, p \text{ is } < 0.01)$. The mean age of the mother at first birth is 19.4 in this study and the total number of children is 2.29. These are children of five years and below, they could have heard more but since the study was focusing on children of five years and below, not enough data was collected on how big the families were. The birth rate of Uganda is 6.9 children per woman and this is even higher in the rural areas. In this study the birth rate is far much lower for a number of reasons. The sample size only covers Nakawa which is in Kampala an urban area and is more likely to have women who have a higher socioeconomic status than those that live in the rural areas. There are a number of factors that contribute to fertility. For example women in rural areas have many children to improve their social standing in society. It makes them more prestigious. In addition labor is needed in a home since many rural families depend on agriculture for survival, so the bigger the size of the family the more hands to help.



Figure 9: Showing the negative correlation between Mother's age at first birth and total number of children per mother ($R^2 = 0.31$, p<0.01)

4.4 Mothers perspective on children's' health

In order to find out the mothers perspective on their children's health, mothers were asked questions regarding the health of their children. Questions on immunization, breastfeeding, what they thought made their children fall sick, what they did when their children fell sick; all enabled the researcher to find out how the mothers felt about their children's health.

In this study we interviewed a total of 45 mothers at three different health centers (Kiswa – 15, Butabika – 15 and Luzira – 15). Our findings show that the majority of mothers interviewed were in the age class 24-29 years (37%), followed by 18-23 years age class (35%), then 30–35 year age class (20%) with the 36-41 and <18 years age classes each contributing less than 10% of those interviewed (Figure 11).

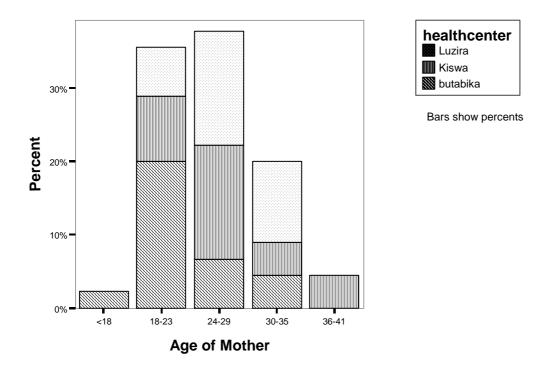


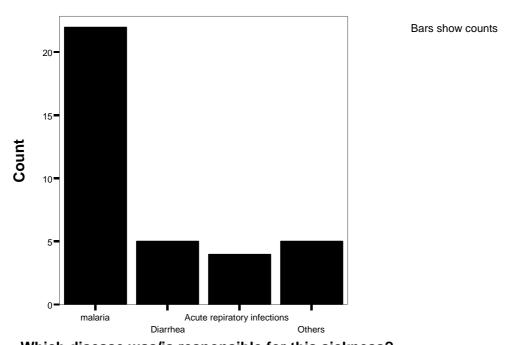
Figure 11: Showing Age classes of mothers at Health centers in Nakawa Division

On breastfeeding, this study was not able to show that there was a relationship between length of breastfeeding and the diseases that affected the children. Despite the fact that breastfeeding, especially exclusive breastfeeding for the first six months is recommended by WHO (World Health Organization, 2010). It is also expected that those that breastfeed their children longer give them a better chance of not falling sick. This has been showed in many studies over the years. It is possible that a bigger sample size would have proved otherwise or even collecting data over a longer period of time. For instance studying the same group of mothers over a period of a year. Breast feeding would have to work in coordination with other practices to be a success in a child's health and life. About new borns this what WHO recommends;

In a addition to healthy prenatal and delivery practices, important aspects of prevention include immediate attention to breathing and warmth, hygienic cord and skin care, exclusive breastfeeding and the appropriate introduction of complementary foods, and caring behaviors that contribute to their healthy development (World Health Organization, 2010).

About immunization, 100% of the mothers interviewed reported that they immunized their children. All the mothers said they get their children immunized on schedule and they also breastfed their children for a period of a year on average. Regarding what they thought made their children sick, many of the mothers said they thought it was mosquitoes 20%, others said teething 2.2%, some mentioned unfavorable environment 6.7%, others thought that it was because of weaning 2.2% and those that didn't know were 15.6%.

Of the 45 respondents in the study 35 (77.7%) said their children had been sick in the last two months prior to the research, 7 (15.5%) said their children had not been sick and no response was obtained from 3 (6.6%) of the respondents. Of those that said their children had been sick, malaria was the most prevalent disease, at (48.9%), diarrhea and other diseases were at (13.9%), while acute respiratory infections were (11.1%) This is shown below in figure 12



Which disease was/is responsible for this sickness?

Figure 12: Showing main diseases responsible for sickness of children in the last two months (prior to the study)

In regard to what they do when their children feel sick, the majority of the mothers visit health clinics when their children fall sick, a small percentage give their children medication before

having the child diagnosed. Among those that visit the health centers, a number of challenges are before them in order for them to seek health services for their children. The majority were faced by financial constraints since the majority of the respondents were unemployed. The distance from their homes to the clinics was also very long and this discouraged some of the mothers from taking their sick children for treatment, especially when they did not have the money for transport.

Another challenge they faced was unavailability of drugs in the health centers. In some cases the mothers would go to the health centers only to be told that the drugs they need have run out and no assistance can be given to their children on that particular day.

All in all the mother's perception on their children's health was positive and many of them showed interest in doing what they could in their means to improve the livelihood of their children.

In conclusion, looking at all the data collected from the field, there are a number of factors that contribute to a child's health. The mother of the child has a big role to play to ensure this. That is why it is important for the mother to have access to certain things in order to positively contribute to the health of her children. As shown in the graphs and presentation, education has a very vital role to play if mothers are going to be able to raise health children. Young girls need to stay in school in order for them to be able to learn and prepare themselves for the role of motherhood in the future.

CHAPTER 5

CONCLUSION AND RECOMMENDATION

In this chapter I present the conclusion and recommendations. In the first section I deal with the conclusions from the research and section two deals with recommendations.

5.1 Conclusion

Altogether this study initially set out to examine the effects of poverty on child health in relation to the socio-economic factors of the mothers. However during the proposal witting and data collection processes, the well being of the mother was increasingly seen as having a great effect on the well being of the child. If the mother has a high socio-economic status, then her children are most likely to be healthy. From the data collected it showed that if the mother has access to proper education, there is s high chance she will be able to earn a living and take good care of her children. With a good education, she will be able to access a lot of information that will be very helpful in her keeping her children healthy. She will also know about different practices in the home to promote the health of her children.

5.2 Recommendations

From the information presented in this study, there is a lot that can be done to improve Child health. The government of Uganda needs to do more in conjunction with NGOs and the mothers themselves too ensure that child health is brought to an acceptable standard. It is not acceptable for children to die from diseases that could have otherwise been treated. Mothers need to be given more exposure on what they need to do in their home-settings in order to improve their health and that of their families.

Many of these mothers said they breastfed their children and knew that breastfeeding was good for their children so one wonders why there is still high infant morbidity despite the breastfeeding. Breastfeeding goes hand in hand with other things that a mother needs to do to improve children's health. Is it possible the mothers are not having the right nutritional value from food that they can pass on to their children? The mothers need to be educated about eating a balanced diet so that they pass on the right nutrients to their children when breast feeding.

Through a mix of high—level political commitment and focused policies countries like Malawi and Liberia have been able to make significant cuts on child deaths which prove that progress is possible even in the Low Development Countries (World Vision 2009;7). Effort needs to be made to support family and community level care if child and maternal health are going to be improved in Uganda. Decentralized national health plans would be one way of achieving this. If changes are made in families and at community level, there will be a possibility to achieve sustainable progress which can bring about changes in child health in the long run. Providing health services to poor households will go a long way in reducing the morbidity of diseases that claim the lives of children under five years.

A 2010 World Bank study noted that Uganda should be achieving much more in terms of health for the money it is receiving from donors. A comparison was made with other countries like Madagascar which receives less money and yet is doing much better even with the donor funding that they are receiving. Madagascar spends far less on health than Uganda: \$13 per capita compared to \$25 and yet its child mortality rate is almost half that of Uganda. It is recommended that Uganda manages the finances from donors better to be able to improve the health services provided for children.

REFERENCES

- Aber J. Lawrence, Bennett G. Neil, et al. (1997). "The Effects of Poverty on Child Health and Development." Annual Review Public Health (18): 463-483.
- Belgian Development Agency. (2010). "Uganda." Retrieved 19.05.10.
- Bellos Anna, M. K., O'Brien L. Katherine, (2010). "The burden of acute respiratory infections in crisis-affected populations: a systematic review." BioMed central ltd: 1-12.
- Black E. Robert, Morris S. Saul, et al. (2003). "Where and why are 10 million children dying every year?" Lancet **361**: 2226-2234.
- Bryman Alan (2008). Social Research Methods, Oxford University Press.
- Chronic Poverty Research Centre. (2010). "Attention and action on Chronic poverty in Uganda." Retrieved 21.05.10, from http://www.chronicpoverty.org/page/uganda-policy
- City Council of Kampala (June 2008). Five Year Rolling division Development Plan FY 2008/09-FY 2012/13 Nakawa Division. Kampala.
- Connor J. Stephen (2002). *Managing Health and Disease in Developing Countries*. The Companion to Development Studies. Desai Vandana and P. B. Robert, Hodder Arnold.
- End Poverty 2015 Millennium Campaign. (2009). "Goal 4 Child Health." Retrieved 8.03.10, from http://www.endpoverty2015.org/en/goals/child-health.
- Farrell Glen (2007). *Survey of ICT and Education in Africa;* Uganda country Report, ICT Education in Uganda. **Volume 1**.
- GeoHive. (2010). "Uganda Administrative Units." Retrieved 23.05.10, from http://www.geohive.com/cntry/uganda.aspx.
- Habib Hafsa, Lohani Maheen, et al. (2009). "Infant Morbidity leading to Infant Mortality." Goma journal of Medical sciences Vol. 7(No. 2).
- Kavuma M Richard. (2009). "Katine it starts with a village project goals; Health." Retrieved 03-03-10, from http://www.guardian.co.uk/katine/2009/apr/01/uganda-healthcare-system-explained.
- Kiwanuka Gertrude (2003). "Malaria Morbidity and Mortality in Uganda." <u>Journal of Vector</u> <u>Borne Diseases</u> **40**: 16-19.
- Klasen Stephan (2004). Population Growth (per Capita) Economic Growth and Poverty Reduction in Uganda: A Brief Summary of Theory and Evidence.
- Lirri Evelyn (2010). *Uganda's health; Budget little money poorly spent*. <u>Daily monitor Uganda</u>. Kampala.

- Lynch Matt, Koek Irene, et al. (2005). *Rapid Assessment Report -Uganda*. <u>President's Malaria Initiative</u>
- Mandelli Andrea, Kyomuhangi .B. Lennie, et al. (2005). *Survey of Private Health Facilities in Uganda*, Abt Associates Inc. Partners for Health Reform plus.
- Mapsofworld.com. (2008). "Poverty in Uganda." Retrieved 18.03.10, from http://finance.mapsofworld.com/economy/uganda/poverty.html.
- MedicineNet.com. (2010). "Children's Health." Retrieved 16.03.10, from http://www.medicinenet.com/childrens health/article.htm.
- Ministry of Finance Planning and Economic Development (2009). *Budget Speech financial year 2009/10*. Kampala: 1-44.
- .Ministry of Health, Save the Children, et al. (2007). Situation Analysis of Newborn Health in Uganda, Current status and opportunities to improve care and survival; Executive Summary Ministry of Health Uganda.
- Ministry of Health (2005). *Health Sector Strategic Plan II 2005/6-2009/10*. Kampala, Ministry of Health Uganda. **Volume 1**.
- Ministry of Health (2006). *Uganda Malaria Control Strategic Plan 2005/6-2009/10*. Malaria Control Programme.
- Ministry of Health (2008). *Health Sector Strategic Plan III 2010/11-2014/15*. Kampala, MOH Uganda.
- Moy R (2000). "Poverty and Child Health" Journal of Tropical Pediatrics 46(4): 192-193.
- Population Secretariat Ministry of Finance Planning and Economic Development. (2010). "Key facts on Uganda's population." Retrieved 19.05.10.
- Save the Children. (2009). "Survive to 5, The Campaign to Save Lives of Under 5."

 Retrieved 09-03-10, from http://www.savethechildren.org/programs/health/child-survival/survive-to-5/Survive_to_5_Resources.html
- Ssewanyana Isaac, Pietras Christopher, et al. (2007). "Pattern of Malaria-Specific T-cell responses in cohort Ugandan children." Journal of Tropical Pediatrics: 6-8.
- The World Bank (2010) *Poverty Reduction and Equity; poverty and inequality analysis* retrieved 28.05.10 from http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTPOVERTY/0,,content-MDK:22569747~pagePK:148956~piPK:216618~theSitePK:336992,00.html
- Uganda Bureau Of Statistics (2006). *Uganda National Household Survey 2005/2006 Report on the Socio-Economic Module*, Uganda Bureau of Statistics.
- Uganda Bureau of Statistics (2001). *Uganda Demographic Health Survey 2000-2001 Key Findings*.

- Uganda Bureau of Statistics (UBOS) and Macro International Inc (2007). *Uganda Demographic and Health Survey 2006*. Calverton Maryland.
- Uganda Export Promotion Board. (2010). "Uganda exports; Introduction" Retrieved 20.05.10, from http://www.ugandaexportsonline.com/exports.htm.
- United Nations Educational Scientific and Cultural Organisation (2006). Water A shared Responsibility; The United Nations World Water Report 2. Paris, New York.
- United Nations Children's Fund. (2008). "Health Introduction." Retrieved 14.09.09, from http://www.unicef.org/health/index.htm.
- United Nations Development Programme Uganda. (2010). "About Uganda." Retrieved 20.05.10, from http://www.undp.or.ug/aboutus/7.
- United Nations (2008). The Millennium Development Goals Report 2008; Goal 4 Reduce child Mortality. New York.
- United Nations (2009). The Millennium Development Goals Report 2009, Goal 4 Reduce Child Mortality. New York.
- United Nations Development Programme Uganda. (2009). "Poverty Reduction." Retrieved 15.09.09, from http://www.undp.or.ug/focusarea/3.
- United Nations Development Programme Uganda. (2010). "About Uganda." Retrieved 20.05.10, from http://www.undp.or.ug/aboutus/7.
- United States Agency for International Development. (2010). "Budget Uganda." Retrieved 22.05.10, from http://www.usaid.gov/policy/budget/cbj2005/afr/ug.html.
- Wetlands Management Department, Ministry of Water and Environment Uganda, et al. (2009). *Mapping a Better Future: How Spatial Analysis Can Benefit Wetlands and Reduce Poverty in Uganda*. Washington DC and Kampala.
- World Health Organization (2002). *The World Health Report; Reducing Risks, Promoting Healthy life.* Geneva: 1-230.
- World Health Organization. (2004). "Child and Adolescent Health Development" Retrieved 29.10.09, from http://www.emro.who.int/cah/IMCI-HealthyChild.htm.
- World Health Organization (2007). Barriers to Access to Child Health Care. Reaching the Poor, Challenges for Child Health in the Western Pacific Region, WHO.
- World Vision (2009). Child Health Now Report, Together we can end Preventable deaths...
- World Health Organization. (2009). "Child Health" Retrieved 14.09, 2009, from http://www.who.int/topics/child_health/en/.

- World Health Organization (2009). *Leading by Example; Protecting the Most Vulnerable during the Financial Crisis.* 2009 Report on the Global Campaign on Health MDGs Office of the Prime Minister of Norway Oslo
- World Health Organization. (2009). "Child and Adolescent Health and Development, Integrated Management of Childhood Illnesses." Retrieved 28.10.09, from http://www.who.int/child_adolescent_health/topics/prevention_care/child/imci/en/index.htm.
- World Health Organization. (2010). "*Uganda*." Retrieved 03-03-10, from http://www.who.int/countries/uga/en/
- World Health Organisation. (2010). "Diarrhea." Retrieved 15.05.10, from http://www.who.int/topics/diarrhoea/en/.
- World Health Organisation. (2010). "Malaria." Retrieved 14.05.10, from http://www.who.int/topics/malaria/en/.
- World Health Organisation. (2010). "Pneumonia." Retrieved 16/05/10, from http://www.who.int/topics/pneumococcal_infections/en/.

APPENDICES

Questionnaire I

Mothers with children of five years and below

1. How old are you?				
<18				
18-23				
24-29				
30-35				
36-41				
42>				
2. What is your level of education?				
Primary				
Secondary				
Tertiary				
None				
3. When did you have your first child?				
b) How many children do you have?				
1 2 3 4				
c). How many of them are five years and below?				
1 2 3 4				
4. Have you ever lost a child?				
Yes no				

b) At what age did they die?					
c) What disease did they die from?					
Malaria					
Diarrhea					
Pneumonia					
Acute respiratory infections					
Others					
5. Has your child been sick in the last two months?					
Yes no					
b) From what?					
Malaria					
Diarrhea					
Pneumonia					
Acute respiratory infections					
Others					
c) What do you think makes your child sick?					
d) What did you do when they fell sick?					
e) What challenges do you face when you are seeking treatment?					
6. Do you think immunization is good for your children?					
7. Do you immunize your children when you should?					
8. What are your thoughts on breastfeeding?					
9. Do you think it is important to breastfeed your children?					

c) Did you breastfeed your child when they where young?				
d) How long did you breastfeed them for?				
e) If you did not breastfeed your children, why not?				
10. What kind of health related problems do your children face?				
b) What do you think causes them?				
c) What do you think are the solutions to these problems?				
d) What do you think the Government can do to help you find solutions to these problems?				
11. Where do you live?				
12. How many rooms does your house have?1 2 3 4				
13. Does your house stand on its own or is it semi detached?				
Single Semi detached				
14 How many people live in your house?				
15. How many people or families live in the same compound as you?				
16. Do you have access to clean water?				
Piped borehole spring/well				
17. What is your civil status?				
Married single widowed				

18. Who is the head of	of your household?	
Mother	father	
19. What kind of wor	k do you do?	
b) Where do you wor	k?	
Self employed		Employed in formal sector
Employed in informa	l sector	House wives
20. How much do you <50,000 50,000-100,000 101,000-150,000 151,000-200,000 >200,000	u earn?	
a) Is it possible for yo	ou to save and put money asid	e for your children?

Questionnaire II

Health personnel

1. What diseases cause under five deaths in Nakawa?

Malaria

Diarrhea

Pneumonia

Acute respiratory infections

Others

- 2. What do you think is the most common disease responsible for under five deaths in Nakawa?
- b) Give reasons why.
- c) Please provide the information to complete the table below on the prevalence of the diseases that cause deaths for children under five from January to December 2009

MONTH	DISEASES				
	Malaria	Diarrhea	Pneumonia	ARI	Others
Jan					
Feb					
Mar					
Apr					
May					
Jun					
Jul					
Aug					
Sept					
Oct					

Nov			
Dec			

- 3. What solutions can be got to address these diseases mentioned in the table in question 2 above?
- 4. What challenges do you face when treating children of five years and below as well as dealing with their mothers?
- b) How do you think these challenges can be addressed?
- 5. What do you think the Government can do to help you find solutions to the problems related to child health?