AN ASSESSMENT OF CHILD HEALTH PROGRAMMES IN THE TAMALE METROPOLIS AND NANUMBA NORTH DISTRICT

BY

FUSEINI RAHINATU

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DECLARATION

I hereby declare that this submission is my own work towards the MSc and that to the best of my knowledge it contains neither materials previously published by another person or materials that have been accepted for the award of any other degree by the university or any other university except where due acknowledgement has been made in the text.

Fuseini Rahinatu (PG3001309) …….. ……

(Name of Student) (Signature) (Date)

Certified By:

Mrs. Dina Adei …….. ……

(Supervisor) (Signature) (Date)

Certified By:

(Dr. Daniel K. B. Inkoom) …….. ……

(Head of Department) (Signature) (Date)

DEDICATION

I dedicate this piece of work to my parents who educated me from basic school to the tertiary level.

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ABSTRACT

The purpose of this study was to review the performance of child health programmes implemented in the Tamale Metropolis and the Nanumba North District. The case study research design was adopted to undertake this research. Respondents were drawn from the Ghana Health Service (GHS) (2), Non Governmental Organisations (NGOs) (2) and women (201) within the child bearing age in the study areas. It was found that five different child health programmes have been carried out in the study area over the years. These were malaria prevention/treatment programmes, nutrition supplement and immunisation programmes to protect children against childhood killer diseases and breastfeeding awareness creation.
Institutions found operating most of these child health programmes in the study area included GHS, United Nations Education and Children fund (UNICEF) and Youth Advocacy on Rights and Opportunities (YARO) (a non-governmental organization). The study further showed that, physical accessibility/distance barrier affected the coverage of many child health programmes taking place in the study area. It was also realised that the greater segment of women (60 percent) harboured the perception that most diseases are spiritual and were therefore inclined to traditional medicine. This largely stems from the low levels of education attainment in the study area, for instance, about 31 percent and 22.7 percent of the respondents in the Nanumba North District and Tamale Metropolis never attended school.

However, successful treatments of diseases such as convulsion, malaria and other ailments among the six childhood killer diseases (previously perceived to be spiritually-caused) has helped significantly in changing such superstitious perceptions, which has led to the general acceptance of child health programmes in the study area. It came to light in the study that; the cultural beliefs, low level of cooperation among health stakeholders, and inadequate health workers are among the major challenges encountered in the implementation of child health programmes in the Nanumba North District and Tamale Metropolis.

The study recommends among other things, the need for Ghana Health Service to partner with other stakeholders especially the Information Department of the District Assembly, to embark on rigorous sensitization in order to diffuse the misconceptions of the people about child health programmes. As a way of tackling the distance barrier, the study suggested that the relevant authorities like the GHS and the District Assembly should construct additional health facilities especially Community Health Based Planning Services (CHPS Compound) at vantage points to enhance easy access to health services.

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LIST OF ACRONYMS

AJVDM	Association of Young Volunteers of Mandiana
ARI	Acute Respiratory Infection
CBNFSC	Community-based Nutrition and Food Security Component
CHO	Community Health Officers
CHPW	Child Health Promotion Weeks
CHN	Community Health Nurses
CHR	Child Health Record
CHPS	Community based Health Planning and Services
CIC	Community Implementation Committees
CSSA	Child Survival Sustainability Assessment
DFID	Danish Federation for International Development
DPS	Directorate Prefectoral de Sante
DP	Development Partners
GAAPE	Group for the Self Promotion of the Land and the Protection of the Environment
GHS	Ghana Health Service
GDHS	Ghana Demographic and Health Survey
GDP	Gross Domestic Products
HIRD	High Impact Rapid Delivery
HiB	Haemophilus influenza type B
ICPD	Cairo International Conference on Population and Development Goal
IDA	International Development Association
IMCI	Integrated Management of Childhood Illness
ITN	Insecticide-Treated Nets
LLIN	long-lasting insecticide treated nets
MDG	Millennium Development Goals
MTE	Midterm Evaluation
MoH	Ministry of Health
MNCH	Maternal, Newborn and Child Health

NGO	Non-Governmental Organization
NID	National Immunization Days
PoW	Program of Work
RBM	Roll Back Malaria
QHP	Quality Health Partners
UNICEF	United Nations Children and Education Fund
USAID	United States Agency for International Development
VHC	Village Health Committees
WHO	World Health Organization
YARO	Youth Advocacy on Rights and Opportunities

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

The children population represent the future leadership and workforce of every nation and as a result, it is important that serious commitment from the adult population, especially state institutions to ensure their proper growth and development into adulthood (Ministry of Women and Children Affairs, 2009). Evidence around the world suggests that, children by nature are fragile and thus; they are susceptible to diseases more than any other age cohort. For instance, the World Health Organization (WHO, 2012) reported that about 7.6 million children under five years of age died in 2010, nearly 21,000 children each day and almost 900 every hour. These statistics are extremely worrying and hence, child health should remain one of the pillars of every country‟s national development.

Though significant progress has been achieved in the past few decades, it‟s disproportionately distributed across regions and countries, and within countries. Important challenges remain for the global goal to be achieved. About 70 percent of the world‟s underfive deaths in 2010 happened in only fifteen (15) countries, and about half in only five countries: India, Nigeria, Democratic Republic of Congo, Pakistan and China, India (22 percent) and Nigeria (11 percent) together account for a third of under-five deaths worldwide. The development of children especially children under five years are impeded by a number of challenges. For instance, Reither et al., (2007) posited that diarrhoea and malaria are major causes of childhood morbidity and mortality in developing countries.

The WHO estimates in 2012 reported that 16 percent of deaths in African children younger than five years are directly attributable to diarrhoea diseases. Generally in developing countries, infant and child morbidity and mortality are relatively high. In Ghana, most infant and child deaths are orchestrated by infectious illnesses. After declining successively from 122 deaths per 1,000 live births in 1990 to 98 deaths per 1,000 live births in 1998, the underfive mortality rate seems to have stagnated at 111 deaths per 1,000 live births during the period of 2004 and 2006 (GSS, GHS and ICF Macro, 2008). Furthermore, the Ghana Demographic and Health Survey (GDHS) carried out by the Ghana Statistical Service in
2008, which provides data on this indicator, reported an appreciable decline in under-five mortality rate to 80 per 1,000 live births, representing about 28 percent decline from the figure

of 111 per 1000 live births in the 2004 GDHS and 2006 Multiple Indicator Cluster Survey. This according to the GDHS puts Ghana back on track in reducing childhood mortality rates after experiencing a worsening situation in infant mortality rate and stagnation of the under-five mortality rate over the past eight years (GSS, 2008).

A number of programmes have been implemented in Ghana by the government, NonGovernmental Organizations and international agencies towards improvement in child health. Though some improvements have been made in child health care in the country, this cannot be said about all regions in Ghana. Nanumba North District and Tamale Metropolitan areas are among the districts in Ghana which still have challenges and problems with child health care. There is the need to devote resources to look into the child health situation and programmes implemented in the district to assess the potentials and challenges these programmes are faced with to promote child health in the district.

1.2 Problem Statement

In the developing world, parasitic and infectious ailments continue to be the main killers of children, partly because of the prevalence of HIV/AIDS epidemic. Even though significant success has been made in certain areas (for example, polio), communicable diseases still represent seven out of the top ten causes of child deaths, and account for about 60 percent of all child deaths. Overall, the ten leading causes represent 86 percent of all child deaths. There has also been a modest decline in deaths from measles, although more than half a million children under 5 years of age still succumb to the disease every year (WHO, 2012). Again, WHO (2013) estimated that, 207 million cases of malaria occurred globally in 2012 (uncertainty range 135-287 million) and 627 000 deaths (uncertainty range 473 000- 789 000). Most cases (80 percent) and deaths (90 percent) occurred in Africa, and most deaths (77 percent) were in children under 5 years of age. WHO (2012) cites under-nutrition as the largest single contributor to premature deaths, as infants weighing less than 2,500 grams or 5.5 pounds at birth are at greater risk of death and disease than those with normal birth weight (2,500 – 4,000 grams, or up to about 8.5 pounds). Two key interventions for low birth weight infants are breastfeeding and management of the new born‟s temperature (Global Health Council, 2011).

The Millennium Development Goal one aims at eradicating extreme poverty and hunger, and this is inextricably linked to achieving MDGs four and five. One of the major aims of the

Millennium Development Goal one is “to halve the proportion of people who suffer from hunger by 2015”. This is now monitored through an indicator of underweight prevalence among children under age five. Underweight can reflect either wasting (low weight-forheight, indicating acute weight loss), or much more commonly, stunting; low height-for-age, indicating chronic restriction of a child‟s potential growth (UNICEF, 2008)

The commitment of the global community towards enhancing child health with special emphasis on developing countries was deepened by the Millennium Development Goals. This include a call to reduce child mortality by 41 percent, from 87 (85, 89) deaths per 1,000 live births in 1990 to 51 (51, 55) in 2011 (Bustreo et al, 2003). Notwithstanding, this achievement is deemed insufficient, and the target risks being missed at the global level. The global underfive mortality rate needs to be further reduced to 29 deaths per 1,000 live births- which implies an annual rate of reduction of 14.2 percent for 2011-2015, much higher than the 2.5 percent achieved over 1990-2011 (UNICEF, 2012).

The reasons for the mixed success of efforts to achieve improvements in child health outcomes in developing countries are still subject to debate. A review of the last 20 years of experience in child health programmes has shown that; there has been a traditional focus on public sector health service delivery alone, and there‟s the need for an approach that focuses on people and households, in addition to providers and single-disease programmes (Claeson and Waldman, 2008).

For the past 35 years, the steep decline in deaths among infants and children has provided evidence of an important success story in international development. Mortality has declined steadily at an average of about one percent per year. The absolute number of children under the age of five years dying has fallen from an estimated 15 million in 1980 to about 11 million at the end of the 1990s (Claeson and Waldman, 2008). Better access to basic health services including vaccinations, oral rehydration therapy and antibiotics for pneumonia together with improvements in social conditions including higher standards of living and smaller families living on larger incomes have been important factors in improving the survival rate of children. Though there have been some improvements in child health programmes, there are still many challenges that needs to be overcome especially in developing countries and Ghana is not an exception.

The challenges with child health programmes in developing countries are not different in Ghana especially the Tamale Metropolis and Nanumba North District. There are many challenges with various aspects of child health in the study area. For instance about 39 percent of children in the Northern Region are stunted compared to the national average of 32.4 percent. The prevalence of underweight children (25.5 percent) is almost the same as the national average (25.8 percent) (Ghana Health Service, 2011). Stunting among children is high in the study districts about 49.45 percent. The prevalence of underweight among children under five years of age is high with about one in four children being underweight in the District. Nanumba North and Tamale Metropolitan area are among the districts which record the highest levels of underweight children (34.6 percent) (Ghana Health Service, 2011).

The Nanumba North District and the Tamale Metropolis have seen a number of programmes and projects implemented to promote child health care. Statistics from Ghana Health Services stated above prove that despite all the efforts put into child health care, the districts are among few ones which have worse records in terms of child health care in Ghana. The causes of the phenomenon are yet to be discovered in the research. In terms of children with diarrhoea, the Northern Region has the highest number of children (33 percent) affected (Ghana Statistical Service, 2008). The effects of low child health care has affected the quality of life and contributed to paint a bad picture of poverty in the northern regions. The purpose of this study is therefore to assess child health care programmes in the Tamale Metropolis and the Nanumba North District in the Northern Region to know child health care programmes that have been introduced in these areas, their effectiveness, coverage and the challenges in implementing these programmes.

1.3 Research Questions

Based on the problem statement, the research seeks to find answers to the following questions:

1. What child health programmes have been implemented in the Nanumba North District and Tamale Metropolis?
2. How effective have the implementation of child health care programmes been in the study communities?
3. How has communities‟ perceptions influenced access to child health care programmes?
4. What are the challenges associated with the implementation of child health care programmes in the study communities?

1.4 Research Objectives

The main objectives of the research are to review the performance of child health care programmes in the Tamale Metropolis and Nanumba North District and to make recommendations for further research and policy formulation.

The specific objectives of the study include to:

1. Find out the types of child health programmes that have been implemented in the study area;
2. Assess the effectiveness of the child health programmes that have been implemented;
3. Assess how communities‟ perceptions have influenced access to child health care programmes;
4. Examine the challenges in the implementation of child health care programmes in the study areas**;** and
5. Make recommendations to inform policy.

1.5 Scope of the Study

Geographically, the focus of this research is the Nanumba North District and the Tamale Metropolis. These areas were selected due to the number of child health programmes that have been implemented in the area and the corresponding level of child health status in these areas.

Contextually, the study discussed issues that affect the health of children in the study area. It looked at the types of child health programmes that have been implemented in the Nanumba North District and Tamale Metropolis, the implementing agencies and their achievements. The time scope of the study is all child health programmes which have been implemented in the last ten years. This is because it will offer the researcher ample opportunity to assess the strengths and weaknesses of these programmes.

1.6 Justification of the Study

Child health care is one indicator that can be used to assess the level of development of a country. It is therefore a step in the right direction as Ghana, like many other developing countries consider infant mortality as one of the pressing health issues, especially due to its prevalence and the fact that developing countries are measuring their levels of development along the Millennium Development Goals, which the fourth goal aims at reducing infant

mortality by 2015. In working towards the achievement of this goal, developing countries and for that matter Ghana and its agencies are implementing programmes to this effect. The interest now lies with looking at the extent to which Ghana has been successful in implementing these programmes. Nanumba North District is a shinning case for enquiry as far as child health care is concerned, since it has one of the worse records in Ghana.

This study is therefore crucial as it"s directed at assessing the performance of child health programmes providing the driving wheels for Ghana toward achieving the fourth millennium development goal. Thus, findings from the study will provide useful lessons that would inform policy measures geared towards improving child health care in Ghana and the sub region as a whole. Additionally, the findings of the research will add to existing knowledge and to the body of literature on child health care. This will help further open up new areas for further researches to be carried out.

1.7 Organization of the Research Report

The report is organized into five chapters. The First Chapter of the report is the general introduction. The general introduction comprises the background to the study which gives a general overview about the research topic. The problem statement is detailed out in the chapter. Out of the problem statement is derived the research questions and research objectives. The scope of the exercise as well as the justification for the topic is discussed in the first chapter of the report. Under the scope are the contextual scope, time scope and the geographical scope. The Chapter concludes with the organization of the research report.

The Second Chapter of the report contains the literature review of the topic. The literature review looks at the works people have done which is related to the topic. Different materials from different sources are reviewed and lessons learnt informed the build-up of other chapters.

Chapter Three of the report looks at the profile of the study area and research methodology. The profile details out the geophysical, social-cultural and economic characteristics. The methodology on the other hand, looks at the research design, data needs, sources and collection methods, sampling techniques and method for data analysis.

The Fourth Chapter concentrates on empirical analysis of data obtained from the field and other secondary sources about the Programmes of Child Health Care in Nanumba North district and

Tamale Metropolitan area. The Fifth chapter focuses on the findings and policy recommendations that were derived from the analysis in Chapter Four. The Chapter ends with the general conclusion of the report.

CHAPTER TWO

REVIEW OF LITERATURE ON PROGRAMMES OF CHILD HEALTH CARE

2.1 Introduction

The aim of this chapter is to provide an analytical framework for the study. The chapter therefore provides explanation on relevant concepts and also reviews relevant literature on

child health care programmes. It discusses child health care programmes in developing countries, Ghana and that of the study area. The chapter ends with a conceptual framework to guide the entire work, especially in terms of how the analysis must proceed.

2.2 Definition of Relevant Concepts

2.2.1 Child Health

Child health has been defined by various authors and institutions. According to the WHO Health Workgroup (2007), "Child health is a state of physical, mental, intellectual, social and emotional well-being and not merely the absence of disease or infirmity. Healthy children live in families, environments, and communities that provide them with the opportunity to reach their fullest developmental potential". Again, Child health is defined as the extent to which an individual child or groups of children are able or enabled to: a) develop and realize their potential; b) satisfy their needs; and c) develop the capacities that allow them to interact successfully with their biological, physical, and social environments (Institute of Medicine Report, 2004).

For the purpose of this study, child health is viewed as the extent through which children are able to develop their physical, mental, emotional and social well-being in order to develop their in-born talent to be able to participate in the affairs of their communities as adults.

2.2.2 Child Health Programmes

Child health programmes are the treatments, technologies and key family practices that prevent or treat childhood illness and reduce deaths in children under age five years (WHO, 2009). Currently, the factors that present threats to healthy childhood arise from complex interactions of influences in the biological, behavioural, social and physical environments of children. In contrast to simple cause-and-effect disease models, future models of health must look at a complex chain of interactions that persistently affect the child's health trajectory in both positive and negative directions throughout the lifespan.

With reference to the above discussion, the working definition of child health programmes for this study is any treatment, practices and mechanism that aims to improve the well-being of children.

2.3 Approaches of Child Health Care Programmes

Actions by the global world including international organizations to foster child health, particularly in developing countries have received considerable momentum over the past decade. Presently, the health of mothers and their newborns have been discovered as a vital priority in the quest for better health. Global spending on maternal, newborn, and child health (MNCH) went up by 64 percent, from $2.1 billion in 2003 to almost $3.5 billion in 2006, with child health accounting for more than two-thirds of total aid to MNCH. In 2006, the two leading contributors supporting MNCH were the United States government and the World Bank, which collectively contributed $1.4 billion. In 2009, the Consensus for Maternal, Newborn and Child Health set out key action steps to save the lives of more than 10 million women and children between 2009 and 2015 (Partnership for Maternal, Newborn and Child Health, 2009).

Broadly, there are two basic strategies used at the global level for combating childhood mortality. The first group are ambitious disease-specific, technologically dependent strategies aimed at achieving dramatic, albeit narrow, successes in a relatively short time. The notable failure of the most ambitious programme of this type; the malaria eradication programme (not exclusively a child health programme, but one that was expected to make a major contribution to reducing child mortality) launched in the 1950s and abandoned in the 1970s contributed strongly to shift in thinking. The World Health Assembly in 1977 adopted a primary healthcare that was more people-centred and community-based with the goal of promoting the health of all by the year 2000. This primary health care aimed at broadening the focus of health services by stressing on programmatic areas instead of specific diseases. In line with that, the universal services‟ provision for maternal and child health, family planning, improved water supplies, and environmental sanitation became the targets. These were to be realised through an equitable distribution of resources, community involvement, an emphasis on prevention instead of clinic-based curative interventions, and a multi sectoral approach, (World Health Organization, 2000).

The two approaches are at different ends of the intervention spectrum, however, they have been able to co-exist reasonably, but have never merged. For instance, the multi-agency Roll Back Malaria programme includes components aimed at health systems and at the community. Decline in the rates of malaria-induced morbidity and death are indicators that suggests improved health systems. Similarly, the Integrated Management of Childhood Illness initiative clearly incorporates a component of community development; this programme evolved from

carefully selected primary health care programmes that sought to control diarrhoeal diseases and acute respiratory infections in childhood by working with health workers and strengthening health systems. Both of these efforts, and many others currently being implemented (including the poliomyelitis and dracunculiasis eradication programmes) emphasize the need for community participation, for strong and effective partnerships between public and private sectors, for inter-sectoral links and the need to combine medical technology (WHO, 2012).

This mirrors contemporary thinking on the mode and forms that programmes aimed at child health promotion should be implemented, not necessarily the quantum of resources being invested. Nevertheless, emphasis on community-level interventions is generally recognized to be a desirable and effective approach to implementing successful programmes, activities still tend to focus on improving the delivery of services through an organized health system, rather than on effecting behavioural change (Claeson and Waldman, 2008).

2.4 New Initiatives and Programmatic Approaches of Child Health Care Programmes

Mostly in the past few decades, the international health agenda has been dominated by strategies and programmes targeted at combating mortality in childhood globally (Reich 1999). The significance of child health concerns has been challenged, even though most advocates of adolescent and adult health programmes agree that it is not useful to promote competition between initiatives that target other age groups and those aimed at child health problems (Feachem, 1992). However, unless proper attention is given to solidifying the gains made to date and to reversing emerging adverse trends in some parts of the world, the gap in life expectancy between richer and poorer nations, and between rich and poor within nations, may continue to grow. Preventing this situation will require continued emphasis on controlling communicable diseases, especially those diseases that affect children disproportionately (Gwatkin and Guilot, 2000). Some of the new approaches that are being adopted in child health care include health sector reforms, vaccination strategies, integrated and packaging child healthcare programmes and among several others.

2.4.1 Health Sector Reforms

The WHO (2000) indicates that even if resources for child health are maintained at current levels or increased, strategies will still have to be adapted to meet current trends. To date, many health activities in a large number of developing countries are unfolding in an environment of

health sector reforms. Donor support seems to have shifted from specific programmes to the development of leaner and potentially more efficient administrative and managerial structures. Typical features of most health reform efforts are the decentralization of budgetary and, sometimes, programmatic authority to provincial or district levels and the administrative integration of centralized programmes. These reform processes and sector wide approaches can provide opportunities to identify priority problems and more costeffective and affordable interventions. Additionally, they may aid the development of sustainable health systems that are capable of devising local solutions for local problems (World Health Organization, 2000).

However, less emphasis has been put on maintaining the quality of traditional technicallydependent programmes such as those relating to childhood diseases, including the Expanded Programme on Immunization, the control of diarrhoeal diseases programme, the programme on acute respiratory infections, and nutrition. For instance, decentralization has usually been associated with a decline in support for key programme activities including monitoring, supervision, training and supplying drugs/vaccines. It has been discovered that without proper technical and programmatic support a the provincial/district level especially in developing countries, child health services stand the risk of declining in both quantity and quality (World Health Organization, 2000).

2.4.2 Vaccination Strategies

Concurrently, child health programmes especially vaccination programmes, have benefited from major new funding from non-traditional sources. It appears that some of the activities being pursued are conflicting, yet the potential for each activity to help reduce childhood mortality is in no doubt (World Health Organization, 2000).

The most vital public health programme is the initiative to eradicate the six killer diseases that affect children. By the resolution of the World Health Assembly in 1988 and supported by major coalition of international agencies and private organizations, the impetus to eliminate the six killer diseases is an immediate follow-up of previous eradication programmes. Based on a strategy of multiple national mass immunization days accompanied by intensified surveillance, most of the six killer diseases such as measles, tuberculosis and poliomyelitis have been eradicated from industrialized countries and is on the verge of being eradicated worldwide (World Health Organization, 2000).

The idea to completely eradicate the six childhood killer diseases is commendable. If this succeeds, it will rid the world of diseases which causes permanent disability and death to children. This will allow for the cessation of the production, distribution, and administration of child killer vaccines. It will provide public health workers around the globe about the success made and will serve as a strong motivation for achieving comparable success in other health programmes. However, despite the heroic mobilization efforts that have been carried out for mass immunization days to be successful, eradication is ultimately dependent upon the ability of a health system to organize special campaigns for the delivery of services. A strong partnership between communities and the health system is a fundamental requirement but, unless it is made an explicit goal, there is little transfer of responsibility to parents and communities. Additionally, it is apparent that those countries with the weakest health systems will be the last to achieve eradication. As a result, as the deadline for eradication approaches, there will be increased pressure on these countries to focus only on the narrow goal of eradicating the six killer child diseases and to abandon the accompanying objectives related to strengthening their health systems. Accordingly, there is a real potential that the gap in the ability of countries to carry out other programmes that are dependent on their health systems, including those directed toward improving child health, will continue to grow (World Health Organization, 2000).

2.4.3 Integrated Packaging of Child Health Care Programmes

In conforming to the changing characteristics of health ministries, which have gone through significant re-organization and reforms, including a reduction in the emphasis on technical programmes, efforts have been made to incorporate disease-control programmes in more integrated and manageable packages of basic services. The Integrated Management of Childhood Illness programme is one example of this approach. Developed jointly by WHO and UNICEF, this programme has been embraced by more than 60 countries and has attracted support from a large number of donor agencies, including more than 25 projects supported by the World Bank. The conditions in the package include major communicable diseases (pneumonia, diarrhoea, malaria, and measles) (Tullock, 2005 in Claeson and Waldman, 2008).

The package also looks at addressing malnutrition, which has been shown to contribute to more than half of all childhood deaths (Pelletier, 2002). Compared to many earlier strategies, this package is seen as more comprehensive as it includes both treatment and preventive

interventions. Aside training health workers in standard case-management protocols for treating all five diseases, the package promotes breastfeeding, improvements in feeding practices, the use of micronutrient supplements, and vaccines. More importantly, the package calls attention to the need not only to train health professionals but also to strengthen existing health systems to ensure the availability of drugs and supplies and widespread access to them. Supervision, monitoring, and evaluation activities are also emphasized (Pelletier, 2002; Claeson and Waldman, 2008).

The third and most crucial component of the package is the promotion of improved prevention and care-seeking behaviours in the community and the family. Diseases that contribute directly to childhood mortality are not the only subjects of these new initiatives. Increased attention is being paid to early childhood development, emphasizing the psychological and intellectual growth of the child. Interventions in childhood development are traditionally focused on the family and community and are not delivered through the health system. Nevertheless, certain aspects of the care of young children have recently been added as an option in adapting the Integrated Management of Childhood Illness package for countries that want early childhood development to be incorporated as an integral part of recovery from childhood illness. Similarly, just as early childhood development programmes combine interventions in nutrition, health, and psychology to achieve improved outcomes overall, recent interagency efforts (between WHO, UNICEF, and the World Bank) combine the teaching of life skills with the provision of appropriate health services at schools, including adequate water and sanitation facilities (Tullock, 2005; Claeson and Waldman, 2008).

2.4.4 Innovation and Scientific Advances

New technological advances on maternal and newborn health have shown great potential. Equally important are operational innovations which are focused on the delivery of lifesaving interventions to mothers, newborns, and children in countries where health systems are weak. Key innovations to improve maternal and newborn health include the following: Postpartum hemorrhage

Severe bleeding after delivery, a leading cause of maternal deaths can now be treated with oxytocin. It can be administered by community health workers to women in rural settings using Oxytocin Uniject, a pre-filled, single-use syringe which is being piloted in several countries such as Bangladesh and Pakistan (Bhat et al, 2006).

- Infections of the umbilical cord

This is more prevalent among infants in countries in the developing world. This can be prevented by cleaning the umbilical cord with a solution called chlorhexidine. Trials suggest that chlorhexidine could reduce newborn deaths by one-third (Bhat et al, 2006).

- Topical emollient therapy

This is the application of sunflower seed oil to improve the function of the skin and prevent infections decreased hospital-acquired infections in very preterm infants by 40–50 percent, and newborn deaths by 24 percent in one trial in Bangladesh (Bhat et al, 2006).

2.4.5 Results of Child Health Programmes

According to WHO (2000), significant progress has been made in reducing child deaths: the global under-5 death rate dropped from approximately 180 deaths per 1000 live births in 1960 to 90 per 1000 in 1990.

Since then, the global under-5 death rate has been further reduced (by 28 percent) to 65 deaths per 1000 live births in 2008. The total number of child deaths declined from 12.5 million in 1990 to 8.8 million in 2008. One key reason for the global progress in child health is that many preventive child health interventions can be routinely scheduled, and many treatment interventions can be carried out at the community level.

The following preventive interventions have been increased substantially:

- Dramatic increase in immunization coverage

Global coverage with key child immunizations has increased from less than 5 percent in 1974 to approximately 80 percent today. More than 2.5 million deaths are avoided each year just through immunization against diphtheria, tetanus, pertussis, and measles. New vaccines have been added to the original schedule of vaccines, including the hepatitis B and Hib vaccines.17 WHO estimates that, with GAVI support, a cumulative 213 million additional children had been reached with these new and underused vaccines by 2008, preventing 3.4 million deaths (Rahman, 2007).

- Scale-up of bed net distribution to prevent malaria:

The Global Fund alone has financed the distribution of 70 million insecticide-treated nets in malaria-endemic countries between 2002 and 2008.19 The number of African children

protected by an insecticide-treated bed net increased from 1.7 million in 2000 to 20.3 million in 2007 (Rahman, 2007).

- Increased vitamin A supplementation:

Providing children with supplementation is an effective strategy for eliminating vitamin A deficiency, which makes children much more susceptible to serious diseases. Coverage with two doses per year increased from 16 percent in 1999 to 62 percent in 2007 (WHO, 2009).

2.5 Child Health in Ghana

According to the GHS (2012), about 80,000 children do not survive to celebrate their fifth birthday in Ghana every year. Most of these children die from preventable causes. Malaria is hyper-endemic in Ghana and claims one-quarter of all under-five deaths every year, 20,000 young lives. Acute respiratory infection is responsible for 18 percent of under-five deaths, and diarrhoea for another 18 percent. Malnutrition is a major underlying cause of death in half of all under-five deaths. Data from the 2008 Demographic and Health Survey (DHS) estimates the infant mortality rate to be 50 per 1000 live births and under-five mortality rate to be 80 per 1000 live births. On the other hand, the institutional infant mortality which is measured as the number of institutional deaths of children less than one year divided by the number of institutional live births shows consistent decline from 2008 to 2011. The same survey estimates the proportion of children malnourished (underweight) as 13.19 per cent. This represents a decline from 18 per cent recorded in 2006 under the Multiple Indicators Cluster Survey (NDPC, 2011).

A further significant health determining factor in the north is lack of access to water, nutrition and sanitation (in the rural regions less than 20 percent of the population have access to pipeborne drinking water). Due to the deep geographical disparities, figures for most of the health indicators are higher in the three northern regions than in the south. Over 30 percent of the children in the north are not fully immunized before their first birthday. The 31 percent incidence of diarrhoea in the north is very high compared to the national average of 18 percent. In 2008 World Health Organization (WHO) estimated the prevalence of stunting in Ghana as; the urban rate 22 percent while the rural rate was 33 percent; the Region with the lowest rate was Greater Accra with 17 per cent while the Eastern Region had the highest rate of 39 per cent, more than two-fold difference. Data available point out that the regional patterns observed

in Ghana reflect ecological constraints, worse general living conditions, and poorer access to public facilities in the Northern regions. There is also an intergenerational aspect, with Northern women who suffered from malnutrition when they were children being more likely to give birth to children with low birth weight placing such children at risk of being malnourished (Amugsi et al, 2013)

2.5.1 Child Morbidity

It has been discovered that majority of the childhood deaths are caused by preventable or treatable health conditions. The main causes of childhood deaths are malaria (26 percent); pneumonia (18 percent), diarrhoea (18 percent), and neonatal factors (38 percent). Recent analyses based on high-rated epidemiological evidence indicate that in Ghana, 40 percent of all deaths that occur before the age of five are due directly and indirectly to under nutrition, making it the single most important cause of child mortality. A recent study suggested that the high prevalence of under nutrition coupled with inadequate maternal and child care behaviour (e.g. low rate of iron supplementation among pregnant women, early or late initiation of complementary feeding among children), might be reasons for the stagnated child mortality levels in Ghana. While there was a steady improvement of the nutritional situation in recent years, the prevalence of under nutrition is still unacceptably high (GHS, 2012).

To significantly improve the child survival indicators which for the longest period showed stagnation and had not responded to the many interventions, Ghana launched a new Child Health Policy and Child Health Strategy which outlines the key interventions to be scaled-up along the continuum of care and focuses on improving access to, quality of, and demand for essential services. The strategy also includes new technologies such as low osmolarity ORS and zinc for the management of diarrhoea, and introduction of new vaccines such as second dose measles vaccine, pneumococcal vaccine and rotavirus vaccine through the national EPI programme, (NDPC, 2011).

2.5.2 Child Malnutrition

Poor nutrition at young ages increases the vulnerability of children to childhood illnesses such as diarrhoea and respiratory infections. According to the 2008 GDHS, about 14 percent of Ghanaian children are underweight or too thin for their age. This represents four percent decline from an earlier survey result of 18 percent in the 2006 MICS (NDPC, 2011).

2.5.3 Maternal Mortality

Overall, the health and nutritional status of children in Ghana has improved over the past two decades, and Ghana stands out among West African countries in terms of child health. Still, major challenges remain. Both infant and under-five mortality have declined over the past two decades. However, one in every 20 children in Ghana dies in the first year after birth. Also, deaths in the first month after birth, which account for about 60 percent of all infant mortality have not reduced. Almost three in ten Ghanaian children suffer from chronic malnutrition or stunting. Chronic malnutrition varies greatly by region, showing disparities in the quality and quantity of food children receive. For example, 38 percent of children in the Eastern region are stunted, compared to 14 percent in the Greater Accra region. A lack of adequate micronutrient intake is also a major cause for concern. More than three-quarters of children (78 percent) suffer from anaemia, which can slow a child‟s development dramatically. In addition, only 56 percent of children received a vitamin A supplement in the last six months (World Bank, 2009).

Timely and appropriate treatment during childhood illnesses can determine the long term health of a child. About half of children with symptoms of acute respiratory infection (ARI) and fever and 41 percent of children with diarrhoea were taken to a health facility or treated by a health provider. Among children with diarrhoea, only half received oral rehydration therapy. Diarrhoea, ARI, and fever are not always preventable, but effective, affordable, and accessible treatment options are necessary in order to maintain children‟s health. Prevention and prompt treatment of malaria is essential for reducing childhood mortality. While ownership of insecticide-treated nets (ITNs) has risen dramatically since 2003, Ghana still lags when compared to other West African countries, such as Senegal where 60 percent of households own an ITN while 33 percent of households in Ghana own an ITN; use of these nets is still low. Only 28 percent of children and 20 percent of pregnant women, the two most vulnerable groups, slept under an ITN the night before the survey. In addition, only onequarter of children who were diagnosed with fever in the two weeks before the survey received prompt treatment with antimalarial for their fever. Until prevention and treatment of malaria are expanded, children will continue to suffer from this disease, and its impact on children‟s mortality will be significant (Ghana Health Service, 2012).

A study conducted by the Ghana Health Service in 2012 in northern Ghana reported that underweight children are significantly more likely to have clinical malaria and anaemia (odds ratio=1.67 and 1.68 respectively). At the same time, the incidence of malaria has a significant effect on the prevalence of anaemia, underweight and stunting, especially among children under two. A meta analysis of community based studies of insecticide-treated bed nets (ITN), anti-malarial chemoprophylaxis and insecticide residual spraying shows that malaria control interventions increased haemoglobin among children by, on average, 0.76 g/dl, and thereby substantially reducing both mild and severe anaemia (relative risk= 0.73 for haemoglobin <11g/dl; 0.4 for haemoglobin <8 g/dl). Therefore, malaria control programmes alone may not have the desired impact on childhood morbidity on a large scale without concomitant nutrition programs and vice versa (Ibid).

2.6 **Policy Framework**

Rationale for the Child Health Policy

This child health policy gives a framework for the planning and implementation of programmes. The policy is a follow up that builds on the previous policy developed in 1999 and complements the Health Sector Programme of Work 2007-2011. Policies are organised along the continuum of care for the mother and child (pregnancy, birth and immediate newborn period, neonatal period, infants and children). Policies are also presented for crosscutting areas that are important for delivering effective programs: planning and management; community, health communication (IEC/BCC), health systems, human resources, monitoring, evaluation and research and finance. Interventions to improve child health cut across a number of different technical areas. For this reason, child health interventions may be delivered by different programmes, many of which have existing policy documents available.

This document references existing policies rather than repeat these policies in detail.

The policy framework employed here proposes a “child-centred” rather than a “programmecentred” approach. In order to improve child survival, different programme areas need to collaborate and link activities more effectively. The aim is for a single integrated child health plan that is regularly reviewed and funded by all stakeholders.

Guiding principles for the child health policy

The focus of the child health programme is to improve population coverage with effective child health interventions. Child health interventions are defined as treatments, technologies, or key health behaviours that prevent or treat child illness and reduce deaths in children under 5 years.

- The continuum of care is a guiding principle for planning and implementing the child health programme.

- The continuum of care for the mother and child are the life stages of the child from pregnancy, through birth, the new-born period, infancy and older childhood. Interventions should be targeted at all of these stages in order to maximize impact. This is because action at all of these stages is necessary to reduce new-born, infant and child mortality.

- The continuum of care for the health system is the levels at which interventions are delivered: home and community, first level facility or referral level facility. Implementation must occur at each of these levels in order for interventions to be most effective. Facilitybased interventions should be carried out alongside those at the home and community level, since the prevention and management of child illness and mortality begins in the home.

- The minimum essential package of medicines for the management of sick neonates and children at all levels of the health system will be regularly reviewed. The minimum package of neonatal and paediatric drugs are incorporated in the current Ministry of Health‟s National Medicines Policy. Reviews or updates to the essential medicines list will be coordinated with the National Drug Programme.

- Child health activities will be implemented collaboratively where possible with: a) other health units and divisions; b) development partners; c) NGOs; d) non-government workers and volunteers including - community-based volunteers (of several different categories), private providers (of clinical and preventive care), mission or faith based providers (such as CHAG), community groups or organizations such as faith based organisations, traditional healers, civil society organisations, NGOs e) other sectors including - the Ministry of Food and Agriculture (MoFA), Ministry of Women and Children‟s Affairs (MOWAC), Department of Social Welfare and other MDAs, Ghana Education Service, and District Assemblies.

Policy Goal

The child health programme will promote the survival, growth and development of all children in Ghana.

The goal of the child health programme is to reduce child mortality to 40/1000 live births by 2015. This is in line with Millennium Development Goal 4 (MDG4) which is a 2/3 reduction of child mortality between 1990 and 2015, and consistent with the goals and principles outlined in the National Health Policy III, the Health Sector Program of work (2007-2011) and the Ghana Poverty Reduction Strategy.

Technical interventions along the continuum of care:

- Pregnancy
- Interventions that will be delivered during pregnancy are:
- At least 2 doses of tetanus toxoid vaccine (TT 2+);
- Prenatal nutrition including iron and foliate supplementation;
- At least 2 doses of intermittent preventive treatment for malaria;
- Promotion of ITNs use for pregnant women;
- Detection and treatment of problems complicating pregnancy (e.g. hypertensive disorders, bleeding, mal-presentations, multiple pregnancy, anaemia, de-worming); ITNs
- Birth and post-birth preparedness (post-birth includes post-natal care, recognition of danger signs and family planning);
- PMTCT of HIV.

Intervention packages that will be implemented to deliver pregnancy interventions will be Focused Antenatal Care (FANC) and promotion of key household and community practices. These include:

- A minimum of 4 ANC visits is recommended. The first visit should take place as soon as pregnancy is suspected. Three visits should take place after quickening (first noted movement of the foetus).
- The Tetanus Toxoid (TT) vaccination status of all pregnant women will be reviewed at the first ANC visit. If the TT vaccination status is unknown, then 2 doses of TT shall

be given during the pregnancy. The first dose of TT should be given at the first ANC visit.

Infants and children

Children include all infants and older children between 1 and 59 months of age.
Interventions that will be delivered to infants and children include:

PREVENTIVE:

- Exclusive Breast Feeding to 6 months; ITNs
- Continued breastfeeding to 2 years and beyond; ITNs
- Appropriate complementary feeding from 6 months; ITNs
- Appropriate feeding of infants of HIV + mothers;
- Use of ITNs s; ITNs
- Complete vaccination by 12 months of age (polio, diphtheria, pertussis, tetanus, Hib, hepatitis B, measles, yellow fever and new vaccines as per EPI policy)
- Vitamin A supplementation; ITNs
- Access to clean water, sanitation and promotion of hygiene;
- Consumption of iodated salt • Anti-malarial for malaria;
- ORT and zinc for diarrhoea;
- Anti-biotics, ORT and zinc for dysentery;
- Anti-biotics for pneumonia;
- Vitamin A for measles;
- Management of malnutrition;
- Management of HIV infected/exposed children.

TREATMENT:

- Anti-malarial for malaria;
- ORT and zinc for diarrhoea;
- Anti-biotics, ORT and zinc for dysentery;
- Anti-biotics for pneumonia;
- Vitamin A for measles;
- Management of malnutrition;
- Management of HIV infected/exposed children.

Intervention packages that will be implemented to deliver infant and child interventions will Include:

- Promotion of key household and community practices
- Child health record cards will be made available to all children, for use at every well and sick child consultation.
- Nutrition
- Breastfeeding
- Exclusive breastfeeding will be promoted from birth to 6 months (children less than 180 days)
- Exclusive breastfeeding means that the infant is breastfed and given no other solids or liquids, including water (drops of vitamins, minerals or medicines, are allowed, when medically indicated).
- 16 PMTCT+ Prevention of mother to child transmission

All mothers shall be supported to give the right feeding to their infants. Health facilities with maternity services shall be encouraged to be accredited as „Baby Friendly" and monitored to retain their status.

Key Family Practices for Child Health, Ghana

Pregnancy, delivery and new-born care:

○ Pregnant women make at least 4 antenatal care visits ○ Pregnant women receive at least 2 doses of tetanus toxoid vaccine ○ Pregnant women receive at least 2 doses of IPT during pregnancy ○ Women are delivered by a skilled birth attendant

○ Breastfeeding is initiated within 30 minutes of birth ○ Women and new-borns are seen within 2 days of delivery by a trained provider ○ Infant Feeding ○ Children under 6 months of age are exclusively breastfed ○ Children aged 6 – 24months receive appropriate breastfeeding and complementary feeding

○ Prevention of illness ○ Children 6-59 months receive a dose of vitamin A every 6 months ○ Children receive all vaccines before 12 months of age ○ Children sleep under an insecticide treated net ○ Households use improved sources of drinking water and store water safely ○ Households use adequate sanitary means

of waste disposal ○ Management of illness ○ Sick children are offered increased fluids and continued feeding ○ Children with fever receive appropriate anti-malarial treatment ○ Children with diarrhoea receive ORT (ORS and/or appropriate home fluid) and zinc

○ Children with pneumonia receive antibiotic from a trained provider ○ Caretakers know at least two signs for seeking care immediately (GHS, 2012)

Malaria Treatment

Under malaria treatment, GHS (2012) provides that; ACTs as per the malaria treatment guidelines shall be used for treatment of uncomplicated malaria at all levels including the community. If treatment failure is confirmed oral Quinine will be used. Medicine policy will be based on regular monitoring of anti-malarial resistance patterns of parasites in different areas of the country. Quinine shall be the drug of choice for treating severe and complicated malaria. Quinine shall be given intramuscularly until patient can swallow, then treatment shall be continued orally. Early provision of effective anti-malarial to children with suspected malaria will be the focus of the programme. This will be done by improving early recognition of illness and care seeking from an appropriate provider. An appropriate provider is any provider who has been trained in IMNCI case-management for malaria, including doctors, registered nurses, medical assistants, midwives, CHOs, and appropriately trained community volunteers. Community-based management of malaria shall complement facility based management. Community-based workers who have received training in standard casemanagement of malaria can give anti-malarial to treat malaria (Ibid).

Prevention

The use of insecticide treated nets (ITNs) shall be promoted for all children under 5 years, in line with the National Malaria Control Policy. Distribution and re-treatment of ITNs will be conducted at the community level by trained community volunteers. ITNs for use by children shall be subsidized. Long lasting ITNs shall be procured by the MOH (GHS, 2012)

Water, sanitation and hygiene

The Child Health Programme will advocate: a) adequate access to reliable supply of safe water for all communities, households and schools; b) access to sanitary facilities for human excreta disposal; c) storage and use of water under hygienic conditions; d) safe disposal of all solid and liquid wastes for communities, households and schools (GHS, 2012).

2.7 Interventions for Child Health Care Promotion in Ghana

A USAID report (2006) shows that in recent years the GHS has introduced a number of new child health strategies and interventions, including:

- Integrated Management of Childhood Illness (IMCI)
- Two new vaccines: Hepatitis B and Haemophilus influenza type B (HiB)
- Vitamin A supplementation
- Roll Back Malaria Campaign

As a way of integrating these interventions into the routine health system, the GHS found it necessary to revise the previous child health record, which was called the "Road-to-Health" card. The new card was called the "Child Health Record" (CHR) and was introduced into the country‟s health institutions between 2002 and 2004. Since the introduction of the CHR, it has been widely used. Still, Ghana‟s health workers have offered numerous suggestions for how the card could be improved. Moreover, the change in the malaria treatment policy in early 2005 necessitated a revision of the CHR. (USAID, 2006)

Thus, a task force composed of health experts from GHS and bi-lateral assistance organizations was formed. Quality Health Partners (QHP) took responsibility for the review and engaged a lead consultant to carry out the review, which included implementation of the survey, analysis, and pre-testing (USAID, 2006).

Since 1998 Ghana has committed itself to the Roll Back Malaria (RBM) Initiative of WHO, which builds on the Global Malaria Strategy with a focus on Africa. The goal of the Roll Back Malaria initiative was to halve the world's malaria burden by 2010. Consequently the country drew up a 'Medium Term Strategic Plan for Malaria Control in Ghana' (1998-2002), which sought to improve the coverage of malaria control activity by adopting an intersectoral approach involving other government sectors and partnership with the private sector and the community. It has also committed itself to the Abuja Declaration on Roll Back Malaria in

Africa, which similarly seeks to achieve specific targets on malaria prevention and control with time limits (Ayaga et al, 2005; GHS, 2011).

Strategies in enhancing multiple prevention strategies include; promoting the use of insecticide treated bed nets, especially by children and pregnant women; encourage drainage, mosquito proofing and general sanitation; promote limited application of indoor and outdoor residual spraying; and promote chemoprophylaxis for pregnant women. The strategy to achieve improved partnership revolves around creating and sustaining partnerships for malaria control through close collaboration between departments and programmes in the health sector, partnerships between government sectors and partnerships with NGOs, private sector, informal sector, communities and traditional healer (Ghana Health Service, 2012).

Wide availability and utilization of long-lasting insecticide treated nets (LLINs) is very crucial to prevent malaria morbidity and mortality particularly in children under five. Substantive ITN distribution commenced only in 2003 and gradually increased from about 150,000 nets annually to half a million in 2005. Importantly in late 2006, assisted by DFID and UNICEF, the first large scale distribution of LLINs took place: over 2.1 million LLINs were distributed free of charge as part of the measles vaccination campaign. ITN coverage and usage is still limited and uneven across the country, but recent progress is encouraging. The reported number of children under five sleeping under a bed net has increased from 3.8 percent in 2003 to 32 percent in 2006 (GHS, 2012).

The target, based on international operational experience, is a minimum of two nets per household for 80 percent of households. Funding for the purchase and mass distribution of additional ITNs to reach the minimum coverage is a major concern. The ITN program relies exclusively on external financing, the major sources of funding being the Global Fund (Round Two: US $7.2 million disbursed out of $8.8 million; Round Four, US $ 18.6 million disbursed out of US $35.9 million), UNICEF, United States Agency for International Development, and the Government of Japan (Ayaga et al, 2005).

The government, in close partnership with development partners (DPs), has implemented a number of priority interventions. Under the overall child survival framework of High Impact Rapid Delivery (HIRD) approach, the growing commitment for nutrition by the MOH enabled the GHS to increase the annual coverage of two doses of vitamin A supplements to more than 80 percent of Ghanaian children.

According to the Ghana Health Service (2012) the Community-based Nutrition and Food Security Component (CBNFSC, US$1.8 million) of the recently closed Community-based Poverty Reduction Project (CPRP; US$5.0 million), supported by the International Development Association (IDA), produced good outcomes with an integrated communitybased approach for basic health and nutrition service delivery (e.g. higher rate of exclusive breastfeeding and iodized salt consumption, lower prevalence of underweight among children under five).

This project tested various innovative ways to improve the nutritional status of children in the beneficiary communities including; (i) use of volunteers as community growth promoters to undertake growth monitoring and counselling sessions reaching all families with small children in the community; (ii) involvement of community leaders and creation of Community Implementation Committees (CIC) to increase ownership and ensure support at the community level; (iii) fighting malnutrition using preventive measures including BCC and household food production through establishment of backyard gardens. This project reached approximately 10,000 children in 40 communities. All 40 communities continue the child growth monitoring and promotion activities despite the lack of support beyond infrequent supervision by the Community Health Nurses (CHN) and/or Community Health Officers (CHO). The current policy and program/project environment is favourable for prioritizing, strengthening, and coordinating nutrition and child survival programs at all levels (Ibid).

2.8 Policy and Programme Environment (Nutrition)

The Ghana Health Service recognises the significance of high prevalence of under nutrition and its effects on other human development outcomes including the Millennium Development Goals (MDGs) and economic growth, the government, especially the Ministry of Health (MoH) and the Ghana Health Service (GHS) spearheaded the launch of „Imagine Ghana Free of Malnutrition", a multi-sectoral strategy that addresses malnutrition as a developmental problem in the context of the Ghana Poverty Reduction Strategy and the second Five Year Program of Work (5YPoW) of the MoH (GHS, 2012).

The government adopted a new National Health Policy in 2006, which emphasizes child as well as adult nutrition. The importance of nutrition, including regenerative health, is underscored even more in the 2007 Program of Work (PoW) and the draft 5YPoW III (20072011). Table 2.1 gives more information about the link between nutrition and achieving MDGs.

Table 2.1: How investing in nutrition is critical to achieving the MDGs

Goal	Nutrition effect
Goal 1: Eradicate extreme poverty and hunger.	Malnutrition erodes human capital through irreversible and intergenerational effects on cognitive and physical development.
Goal 2: Achieve universal primary education.	Malnutrition affects the chances that a child will go to school, stay in school, and perform well.
Goal 3: Promote gender equality and empower women.	Anti-female biases in access to food, health, and care resources may result in malnutrition, possibly reducing women's access to assets. Addressing malnutrition empowers women more than men.
Goal 4: Reduce child mortality.	Malnutrition is directly or indirectly associated with most child deaths and it is the main contributor to the burden of disease in the developing world.
Goal 5: Improve maternal health.	Maternal health is compromised by malnutrition which is associated with most major risk factors for maternal mortality. Maternal stunting and iron and iodine deficiencies particularly pose serious problems for mothers and children.
Goal 6: Combat HIV/AIDS, malaria, and other diseases.	Malnutrition may increase risk of HIV transmission, compromise antiretroviral therapy, and hasten the onset of full-blown AIDS and premature death. It increases the chances of tuberculosis infection resulting in disease, and it also reduces malarial survival rates.

Source: Gillespie and Haddad (2003).

2.9 Challenges of the Programmes' Implementation

The Ghana Health Service (2012) outlined a number of challenges that confront implementation of child health programmes in Ghana. These include:

- Lack of sufficient cross-sector coordination and collaboration: nutrition is the outcome of many factors and is affected by policies/strategies and activities of numerous sectors including health, water and sanitation, education, agriculture, and finance. Therefore, improving nutrition requires a comprehensive and integrated approach. However, the coordination and collaboration of these actors have been suboptimal as there is no formal institutional arrangement to discuss and commit to achieve good nutrition.

- Low coverage of comprehensive health and nutrition services: the MOH and GHS, with the support of development partners, have expanded over the last several years core health and nutrition services (i.e. immunization, vitamin A supplementation, deworming) that affect nutritional and health status of children, mainly through the rapid delivery approach. However, other essential health services including intensive

health and nutrition education with necessary inputs (e.g. LLINs) have not been delivered at a scale large enough to bring desirable outcomes at the regional or national level. A preliminary assessment shows that many programs/project supported by DPs cover just a few communities in each district, if any. In addition, these services focus more on interventions that require one or few contacts (e.g. vitamin A supplementation) than the more intensive and longer-term interventions.

- Insufficient and irregular health budget for effective nutrition and other preventive care programs: while effective and efficient interventions are partly covered by the government, most of them are covered by external funding. Until recently, the twiceyearly dose of vitamin A supplements has been administered during the annual National Immunization Days (NID) for the eradication of polio, and the yearly Child Health Promotion Weeks (CHPW), the combination of which produced an annual coverage of 80 percent or higher. NIDs are being phased out as eradication of polio is virtually achieved, but the MOH and GHS have not yet put in place an effective postNID strategy with a reliable financing source identified. Another example is distribution of LLINs, which have proven to effectively reduce not only malaria attack rate and incidence of clinical malaria, but also the subsequent effects due to malaria, namely the prevalence of anaemia as well as stunting and underweight. Mass distribution of LLINs targeting children under the age of two was carried out, but not enough funding has been identified for the next several years to cover all newborn children who are most vulnerable to clinical malaria.

- Mismatch between causes of under nutrition and nutrition actions: food insecurity is certainly a factor that contributes to a high prevalence of under nutrition. Many researchers including Ghanaian researchers have shown that food insecurity is not the most important factor. Instead, inappropriate feeding and caring practices of children and mothers, poor environment (e.g. poor sanitation and hygiene), and limited utilization of basic health care services are among the most important determining factors. In Ghana, many nutrition-relevant actions have failed to address these major causes of under nutrition in a comprehensive manner at the household level. Instead, single component interventions were more common due to limited understanding of the causes of under nutrition, capacity and/or resources.

- Weak targeting: while it is well known that the window of opportunity to prevent under nutrition is during pregnancy and the first two years of life. However, many programs in Ghana have targeted a much wider group (e.g. school age children), thereby spreading even thinner the already limited resources that could have been used for effective nutrition programs targeted to those in the window of opportunity.

2.10 Poverty-Health Nexus

As noted by Muhammed (2014), the connection between poverty and health is well recognised worldwide, but the link is both direct (lack of access to health services) and indirect (lack of awareness about health-related issues). He further argues that poverty helps produce ailments and ill-health pushes people towards poverty. It is a vicious cycle. Socioeconomic conditions create situations that can lead to ill-health. Besides, health emergencies can cost individuals and families, dearly aggravating poverty. For instance, according to the World Bank (2009), 25 percent of hospitalized people in India fall below the poverty line. Several health researches based on empirical data have been found to understand the link between health and poverty (Muhammed, 2014; WHO, 2009). This is further affirmed by a World Bank study, which found out that approximately four percent of the world‟s population, especially in developing countries falls into poverty due to health shocks each year. Thus, distribution of income is important for equitable access to healthcare.

The reverse situation is that people with higher incomes tend to enjoy better health than those with lower incomes. In the context of this study, it can similarly be argued that poverty influences the health of children as well as access to child health care. Ample studies exist to show that poverty influences the health of children even before they are born. According to the WHO (2009) as cited in Muhammed (2014), the growth of the foetus is affected by the nutritional status of mothers. This is understandable in the context of competing expenses between food and healthcare. Accordingly, the health of mothers has a strong bearing on the health of human populations. Again, poverty has a strong relationship with mental health. For instance, stress, anxiety, and depression are frequently reported ailments that are linked to poverty (Muhammed, 2014) and the number of people that seek psychological care globally has increased during the last several years (WHO, 2009; Muhammed, 2014). From the foregoing, it can be concluded that; in order to improve access to child health care programmes and health care in general requires consideration and integration of poverty reduction

interventions in health care provision. This is premised on the backdrop that, poor people have less access to health care compared to people with higher incomes.

2.11 Conceptual Framework of the Study

The conceptual model shows the factors that cause and/ or influence diseases, the effects and impacts. It also shows the policies, strategies and programmes that should be implemented to reduce the agents or causative factors of diseases, effects and impacts. The Figure 2.1 representing the model summarises the issues discussed under the literature review.

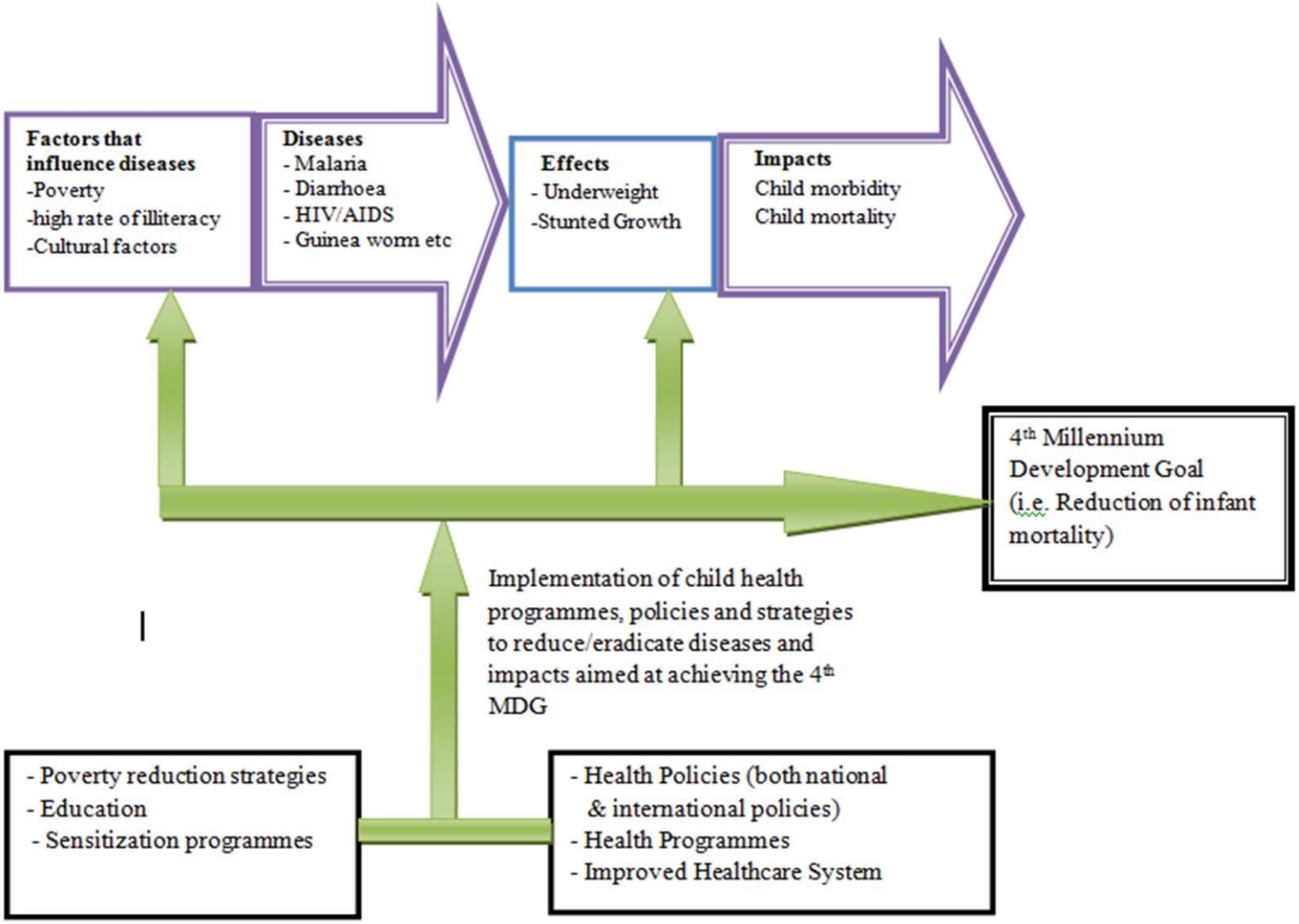
Factors that influence diseases
-Poverty
-high rate of illiteracy
-Cultural factors
Diseases
- Malaria
- Diarrhoea
- HIV/AIDS
- Guinea worm etc
Effects
- Underweight
-Stunted Growth
Impacts
Child morbidity
Child mortality
4th Millennium Development Goal (i.e. Reduction of infant mortality)
Implementation of child health programmes, policies and strategies to reduce/eradicate diseases and impacts aimed at achieving the 4th MDG
- Poverty reduction strategies
- Education
- Sensitization programmes
- Health Policies (both national & international policies)
- Health Programmes
- Improved Healthcare System

Figure 2.1: Conceptual Model of Achieving MDG 4 through Child Health Programmes and Other Initiatives

Source: Author's Construct, 2013

From the conceptual model shown in the Figure 2.1, the top chain of issues show the causes of child health diseases among these include poverty, high illiteracy rate, socio-cultural factors that influence the practices and understanding of child care. The prevailing conditions lead to diseases such as malaria, diarrhoea, HIV/AIDS, guinea worm infections and other diseases. The effects of the diseases are underweight in children, malnutrition, wasting in children among others. These have net effects or impacts on morbidity and mortality in children which affect attempts to achieve the Millennium Development Goals. The above situation can be intervened by proper health policies put in place. Systems view of health policies will have an introduction of poverty reduction strategies which will help reduce poverty, illiteracy and modernize the cultural framework of societies especially in Nanumba North district and Tamale Metropolitan area. This will facilitate easy implementation of child health programmes in the districts and Ghana as a whole.

National health policies will come out with specific health programmes designed to mitigate the negative effects and impacts of diseases of children under five years in Ghana. To be able to achieve the fourth Millennium Development Goal which aims at reducing infant mortality by two-thirds, international view of child health should be taken into consideration. Cooperative efforts should be put together to ensure that the infectious diseases are eradicated from the sub region. It is therefore important to also look at implementation of international health policies which will also augment the achievement the Millennium Development Goals in Ghana.

In conclusion, the literature review has helped in understanding issues involved in child health programmes. This informs the kind of questions asked in order to collect the required empirical data on child health programmes implemented in the Nanumba North district and Tamale metropolitan area necessary for addressing the research objectives. The next chapter looks at the profile of study area and the methodology adopted for the study.

CHAPTER THREE

PROFILE OF STUDY AREA AND RESEARCH METHODOLOGY

3.1 Introduction

This chapter of the study provides the profile of the Nanumba North District and Tamale Metropolitan Area, which both constitute the study area. Under the profile, it looks at the location and size, demography, economy and health situations of both districts. Additionally, the Chapter discusses the methodology employed in undertaking the study including the research design, data types, sources and data collection methods as well as the sampling techniques used in carrying out the study.

Both primary and secondary data were used in the study. Data collection tools such as interview guides, observation and questionnaires were used to obtain the needed data on child health care programmes.

3.2 Profile of Nanumba North District

3.2.1 Location and Size

The Nanumba North District is situated in the eastern part of the Northern Region and lies between latitudes 8.5˚ N and 9.25˚ N and longitude 0.57˚ E and 0.5˚ E. It covers an estimated total landmass of 1986 square kilometers. The district is bounded to the West and South-west by East Gonja District, Yendi Municipal to the North. It also shares boundaries to the East with Zabzugu District, to the south with Kpandai District and to the South-east with the Nanumba South. The capital of the district is Bimbilla (Nanumba North District Assembly, 2009) (See Figure 3.1).

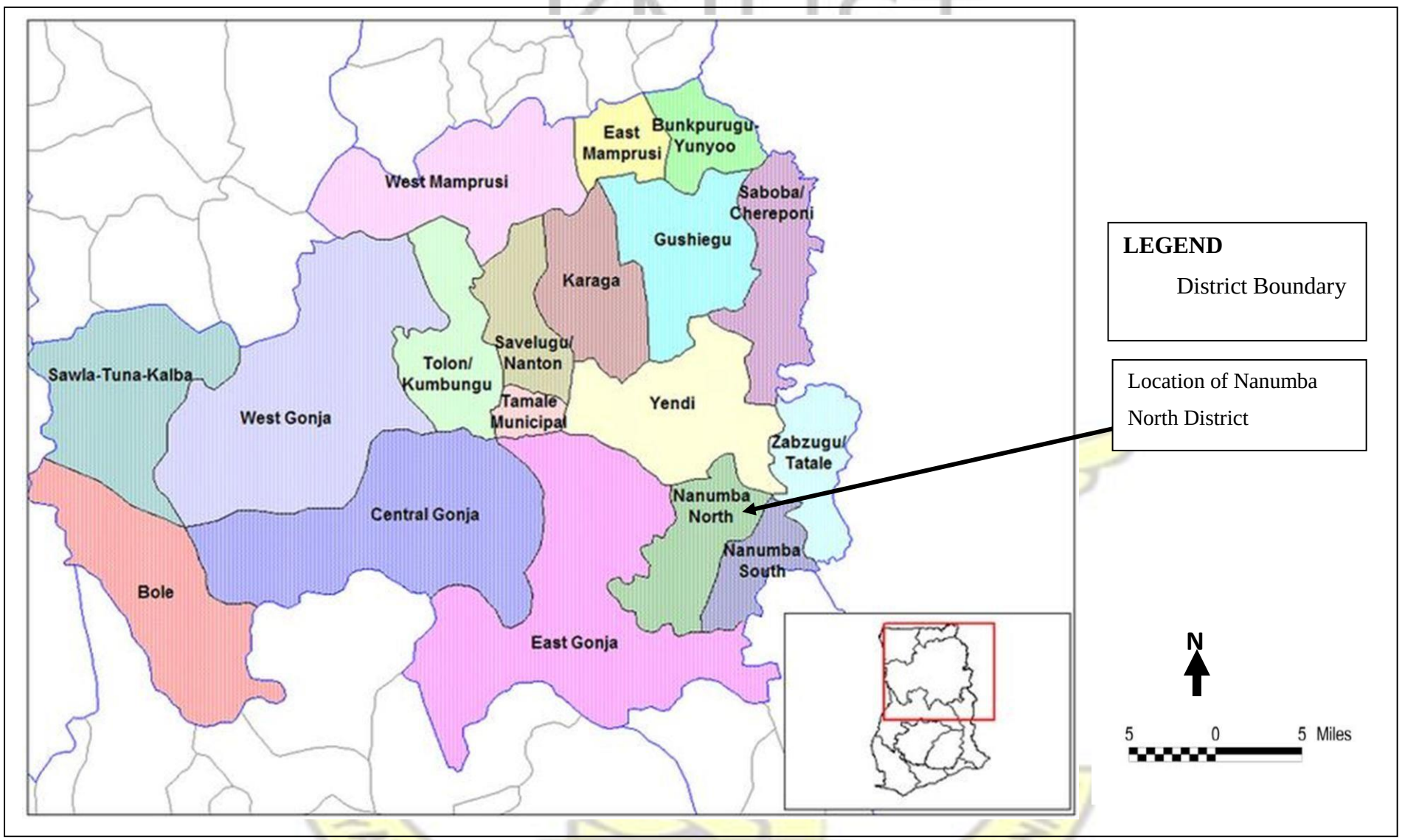

Figure 3.1 Geographical Location of Nanumba North District

Source: Nanumba North District Assembly, 2009

3.2.2 Physical Characteristics (Climate and vegetation)

The district is found in the Tropical Continental Climatic Zone, which is typified by high temperature throughout the year. Temperatures range from 29°C to 41°C. Like certain parts in other West African countries, the influence of the wet South-West monsoon and the dry North-East trade winds is significant in the district. During the Harmattan season, temperatures can fall as low as 16°C during the night and mornings. Annual rainfall averages 1,268mm with most of it falling within six months – April to September. During this period, farmers in the district become busy. Also, during this period, streams overflow their banks and causes wide spread flooding that affects a lot of settlements and farmlands. This has usually left hardships to some of the people. The rest of the year remains virtually dry and serve as fallow period for a lot of the farmers. During the dry season, there is rampant wild bushfires, sometimes set usually by the youth to flush out animals from their habitat. The vegetation type of the district is the Guinea Savannah with tall grass interspersed with drought and fire-resistant trees. Tree species found are the dawadawa, sheanuts, baobab and other fire- resistant trees (Nanumba North District Assembly, 2009).

3.2.3 Demographic Characteristics

The district is largely rural in nature with population between 200–500 people in small settlements dispersed all over the area. The total population of the district is 141, 584 comprising 69,997 males and 71,587 females (Ghana Statistical Service, 2012). The population of Nanumba North District forms 5.7 percent of the entire population of the Northern region with an annual growth rate of 2.7 which is slightly lower compared to its region of 2.9 percent but higher than the national growth rate of 2.5 percent (GSS, 2012).

3.2.4 Migration and implications for development

The Nanumba North District has fertile soils serving as a magnet that is pulling a lot of people into the area especially in the Konkomba. A lot of the people come into the district to embark on yam farming during the rainy season. Usually, a lot of the settlements in the district developed indiscriminately without recourse to any laid-down plan. Internal migration is also very common in the district because of predominant shifting cultivation system of farming practiced, which makes many people move from one place to the other. This trend of movement

of people tends to put a lot of pressure on facilities provided in communities, which receive people whilst some facilities are abandoned when people move away from that community (Nanumba North District Assembly, 2009).

3.2.5 Social Characteristics

The district has one hundred and ninety (190) communities. However, only Bimbilla, with a population of 24,013 people can be classified as a town. As the district capital, Bimbilla also serve as the seat of the Paramouncy of the Nanumba Traditional Council. The main language spoken is Nanugli and most of the people are farmers with some few government workers, self employed and traders. Bimbilla also provides administrative, banking, educational, marketing and health services to the periphery.

Chamba, the second largest locality in the district is about 28.8km west of the district capital. It has a population of 4,826 who speak mostly Likpalkpa and Nanungli. Chamba provides health, marketing and educational services to its surrounding communities. Other larger settlements are Bincheratanga, MakayilI, Nakpa, Gbeini, Lepusi, Bakpaba, Pusuga, Dakpam, Sabonjida and Taali. The settlements are quite scattered in their distribution (Nanumba North District Assembly, 2009).

3.2.6 Socio-Economic Infrastructure

Health Sector

The district has one district hospital, which is located in Bimbilla, four clinics, and one CHIPS zone. Besides, there are a number of private pharmacies/drug stores and licensed chemical operators that are patronized by many patients in the district (Nanumba North District Assembly, 2009).

Priority Areas of intervention

1. Guinea Worm Disease Eradication
2. Increase Accessibility
3. Improvement in RCH Activities
4. Increase in Surveillance activities
5. Increase in Clinical Services
6. Improve Staffing Situation
7. Improvement in the poor Transport situation

8. Improve quality of care and efficiency

Factors leading to the high infant mortality rate

1. Limited accessibility to health care
2. Inadequate staff i.e. midwives
3. Bad breastfeeding practices
4. High malnutrition situation

Child Mortality Rate

The under five (5) deaths in the district has seen a significant decline in recent times. Underfive deaths reduced from 95 in 2005 to 29 in 2006 and decreased further to 20 in 2007. The reductions in under-five deaths being experienced in the district is commendable considering the stagnating trend being experienced at the national level. Factors that can be attributed for this is the improvements on preventive healthcare among households such as children sleeping under insecticide treated bed nets, and improvements in immunization programmes within the district. Compared to child mortality, infant mortality rate is very high and also fluctuates significantly. Infant mortality rate in 2003 was 52 per 1000 live births but this reduced drastically to 11 per 1000 live births in 2004 before increasing significantly to 222 per 1000 live births in 2006. Compared to the national rate of 71 per 1000 live births, according to the 2006 Maternal and Infant Care (MIC) survey, infant mortality rate is very high in Nanumba District. Some of the leading factors contributing to the high infant mortality rate in the district include the limited accessibility to health care especially within the rural areas of the community, inadequate health personnel, bad breastfeeding and weaning practices and high malnutrition situation in the district (UNDP, 2010).

One of the cardinal goals of the MDGs is to combat HIV/AIDS, malaria and other major diseases. The target in this regard is to halt and reverse the spread of HIV/AIDS and incidence of malaria and other major diseases. The leading cause of morbidity in the Nanumba North district is malaria followed by diarrhoea, skin diseases and respiratory tract infection Malaria accounted for 77.9, 82.4 and 84.8 per cent of all OPD cases in 2005, 2006 and 2007 respectively. This contributes to low productivity and consequent poverty in the district. From 2005, all the major causes of morbidity experienced a reduction in cases in 2006, but increased dramatically in 2007 (UNDP, 2010).

According to the Nanumba North District Health Directorate (2014), the sharp decline in the number of Guinea Worm cases in the District from 2002 to 2006 was due to the following interventions:

- Establishment of case containment shelters
- Distribution of filters and usage
- Health Eradication and Promotional activities e.g. Film shows, Dramas, Durbars
- Active Surveillance
- Abating of Dams
- Fencing of selected dams etc
- Guards to protect water bodies
- Guinea Worm Week Celebration
- Provision of potable water in endemic communities

 HIV/AIDS

The district does not take part in the national sentinel survey and this has made it difficult to know the HIV/AID prevalence rate in the district. However, in 2008 out of 597 people who replaced blood at the Bimbilla Hospital, 10 were HIV positive. In the same hospital in 2008, out of 205 clinical patients, 39 were HIV positive and of the 818 blood bank donors, 49 were positive. The district is now concentrating on VCT education and work place policies on HIV/AIDS. A total of 325 cases were screened from blood donors and pregnant women attending antenatal care as well as people who came for voluntary testing and counselling by the half year count of 2006. Out of this, 87 people were found to be positive. However, these figures could be grossly underestimated as there are a lot of people in the district who do not donate blood or go for voluntary testing. Also, not all pregnant women in the district attend antenatal clinics and this is particular among women in the rural areas. According to the ISSER 2008 Survey, 17 per cent of pregnant women do not receive prenatal care and 96.4 per cent of these pregnant women are located in the rural areas of the district. For VCT education and work place policies to be effective, there has to be a clear strategic approach as majority of the district inhabitants are employed or operate within the informal sector (UNDP, 2010).

3.2.7 Economy

The economic potential of the district rests in its huge tracts of arable land with a vast agricultural investment potential. The district is predominantly agricultural with about 85.65 percent of the people engaged in the agriculture and forestry sector (GSS, 2012; Nanumba District Assembly, 2014). Out of the total land area of 173,459 hectares in the District, about 130,094 hectares representing 75 percent are agricultural lands. However, only 46,566 hectares representing 28 percent is under cultivation. The District also has numerous productive valleys: the Kaleogu. Sabonjida, Juo, Jua and Salnayili for commercial rice production, but all these are underutilized. Crops grown are roots and tubers, cereals, legumes and tree crops such as teak and cashew nuts. Animal rearing including poultry keeping is an integral part of every household (Nanumba District Assembly, 2009). The remaining 14.4 percent of the population are engaged in non-agricultural enterprises and are found mainly in the large settlements doing trading, self employed artisans and in the formal or government employment (Nanumba District Assembly, 2009).

3.3 Profile of Tamale Metropolitan Area

3.3.1 Location and Size

The Tamale Metropolis can be located at the centre of the Northern Region. It can be found between latitude 9.16 and 9.34 North and longitude 00.36 and 00.57 . The metropolis is bounded by Savelugu-Nanton District to the North, Tolon-Kumbungu District to the West, Central Gonja District to the South West, East Gonja District to the South and Yendi District to the East. The Metropolis occupies approximately 750 sq. km, which is 13 per cent of the total land area of the Northern Region. The capital of the Metropolis is Tamale, which is also the capital of the Northern Region (Tamale Municipal Assembly, 2009). Figure 3.2 shows the location of the Tamale Municipality.

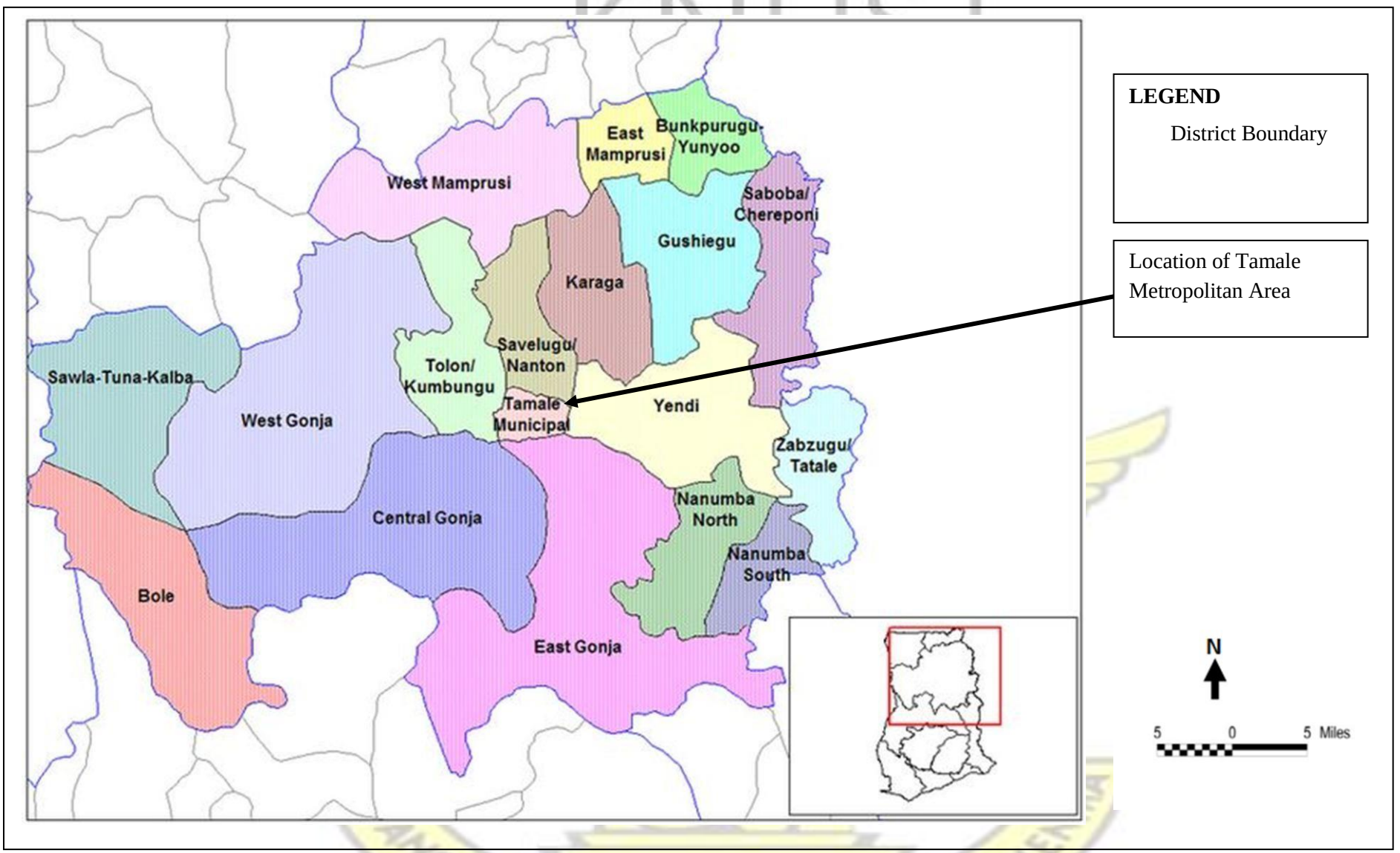

Figure 3.2 Geographical Location of Tamale Metropolitan Area

Source: Tamale Metropolitan Assembly, 2009

3.3.2 Demographic Characteristics

The Tamale Metropolis has a population of 371,351 comprising 185,995 males and 185,356 females (GSS, 2012). Per the census report, the population of the metropolis is made up of 222,095 males and 221,979 females. It has an urban population of 67.1 percent and the Metropolis is the only district in the region which is predominantly urban. The population density of 318.6 persons per square kilometres for the Metropolis shows a higher figure compared to the Regional average density of 25.9 persons per square kilometres. There exists vast difference between the densities of the urban and rural areas. This is an indication of influx of people into the urban areas, particularly Tamale, giving credence to the fact that facilities and opportunities for modern employment are concentrated in few central places (Tamale Municipal Assembly, 2012).

The age structure of the population of a high fertility country such as Ghana is basically shaped by the effect of mortality. As it is the case with the Metropolis, the structure of the population indicates a broad base that gradually tapers off with increasing age due to death. The fact that the population aged nine to five years is slightly below that of 6 – 12 years is an indication of this trend. The youthfulness of the population implies that it has the most important human resource potential that this tremendous potential will determine its strength and resilience in pursuing its social, economic and political development goals (MLGRD, 2007).

With gross Primary and Junior High School (JHS) enrolment rates at 85.3 percent and 52.6 percent respectively much more need to be done for the realisation of the Free Compulsory Universal Basic Education (FCUBE) program in the Metropolis. There is huge gender disparity among JHS boys (60.7 percent) and girls (44.1 percent) and in view of this, much more need to be done to encourage parents in the Metropolis to embrace the girl child education programme.

3.3.3 Health sector of Tamale Metropolitan Area

Health services provided in the Metropolis are both curative and preventive. The methods used are mainly orthodox and traditional

- Health Facilities and Staffing

With the exception of the Tamale Teaching Hospital and the West End Hospitals which are well equipped, most of the health facilities in the metropolis are poorly equipped. Even though

efforts have been made to improve access to health service delivery, patronage of these facilities has been low particularly in the rural areas due to poverty, illiteracy and ignorance (Ministry of Local Government and Rural Development, 2007). Apart from these health institutions, there are also a number of pharmacy shops that are highly patronized. The availability of these pharmacy shops complements the health delivery in the metropolis. One major factor that also affects effective health delivery is the availability of health personnel. The staff strength of the health sector in the metropolis is 156 (TMA, 2009). This includes doctors. The staff-client ratio is 1:5901, 12 times higher than the national figure of 1:500. The distribution of medical staff is skewed in favour of urban Tamale. The number of doctors in the metropolis remained stable at 4 from 2003 to 2006. However, the number of nurses increased from 76 in 2003 to 89 in 2004, which also remained stable up to 2006 (UNDP, 2010). Apart from the doctors and nurses, there are also other health personnel. This includes laboratory technicians, dispensary technicians and trained traditional birth attendants.

- Water and sanitation

A good number of households (14.9 percent) in the Metropolis still use unsafe sources of drinking water (TMA, 2009). However, it is worth noting that 78.8 percent of households have access to pipe borne water. Households in the Metropolis that do not have access to any kind of toilet facility constitute 35.6 percent whereas 41.6 percent use public toilet facilities, 78.6 percent of the over 45,000 households in the Metropolis do not have toilet in the houses they live in (Ibid). This situation has a serious health implication and therefore needs an urgent solution.

- Disease Situation

Life expectancy in the Metropolis is about 50 years compared to the national figure of 55 years (TMA, 2009). The high level of illiteracy and poverty as well as limited access to safe drinking water and poor sanitation have combined to expose many people to health hazards which accounts for the low standard of living of the people. The prevalence of diseases such as malaria, diarrhoea, anaemia, acute respiratory infections and gynaecological disorders as well as outbreak of epidemics such as cholera, anthrax, CSM can be traced to the above factors. These common diseases observed in the Metropolis have severe effect on the lives of the people. Malaria, diarrhoea and anaemia are said to have contributed greatly to most deaths in the Tamale Metropolis especially among infants. Malaria alone accounts for nearly 25 percent of all deaths in the Metropolis (Ministry of Local Government and Rural Development, 2007).

- HIV and AIDS

The Tamale Metropolis is as vulnerable to the HIV/AIDS pandemic as any other district in the country. The main contributory factor to the spread of the virus in the Metropolis is the high prevalence of poverty that compel people especially females into behavioural patterns which expose them unduly to infection. The long dry season when traditional farming is at its lowest ebb also encourages a greater proportion of the youth, particularly young women, to move down south in search of non- existing jobs "kayaye" phenomenon (Ministry of Local Government and Rural Development, 2007).

3.4 Research Methodology

The research design, data requirement, sources and collection methods, sampling techniques and method of data analysis are all covered under the research methodology.

3.4 .1 Research Design

The choice of a method to apply in a particular research is dependent upon the nature of the research problem. A case study approach has been adopted for this study. A case study is based on an in-depth investigation of a single individual, group, or event to explore causation in order to find underlying principles. This case study provides a systematic way of looking at events, collecting data, analyzing information, and reporting the results (Yin, 1994). The case study design adopted for this study is due to the limited time and detailed outcome expected from the research at the end of the exercise.

3.4.2 Data Requirements and Sources

Data was gathered from primary and secondary sources for the study. Primary data was obtained through questionnaire administration, interview guides, and observation. The questionnaires consisted of open-ended and close-ended questions. The data from the institutions was mainly collected using interview guides which enabled the researcher to ask probing questions that further enhanced the researcher‟s understanding of the phenomenon. Direct observation was also done to validate responses that were received from the respondents. The data was collected from the management of the Ghana Health Services, district health directorate, private health providers in the districts, district assembly selected health facilities and household.

Data was collected on issues such as the types of child health programmes that have been implemented in the area, how effective these programmes have been, the perception of the inhabitants in the study area, about these programmes and the challenges and prospects of the programmes. Secondary data on the other hand was obtained from relevant publications and magazines, institutional reports, journals, national documents, internet and other relevant documents. The Table 3.1 provides information on the data requirements, sources and collection methods.

Table 3.1: Data Required, Sources and Collection Method

Study Objective	Data Required	Data Sources	Collection Method
Identify the child health programmes that have been implemented in the study area.	What are the child health programmes that have been implemented in the area? (Goals, objectives, strategies)	GHS, DHD, Private Health Providers, Household	Institutional Questionnaire and Interview Guide
Evaluate the effectiveness of the child health programmes that has been implemented in the Nanumba North District and Tamale Metropolis, their targets, coverage and achievements.	Target groups, Coverage of the programmes, The extent of achievement of objectives etc.	GHS, DHD, Private Health Providers, Household	Institutional Questionnaire and Interview Guide
Assess how communities" perceptions have influenced access to child health care programmes in Nanumba North District and Tamale Metropolitan areas	Do the people know of these programmes, How did they know about the programmes?, How did they view the programme, Accessibility ; physical, financial, Evaluation of the programmes	GHS, DHD, Private Health Providers, Household	Institutional Questionnaire and Interview Guide
Reveal the challenges of implementation and prospects of the child health care programmes in the study areas.	What are the challenges associated with the programmes?, How are these problems being addressed?, What are the prospects of the child health programmes implemented.	GHS, DHD, Private Health Providers, Household	Institutional Questionnaire and Interview Guide

Source: Author"s Construct, 2013

3.4.3 Study Population and Sampling Size Determination

The target population of the study was women in their reproductive years between the ages of 18 and 45 years. Thus, women between 18-45 age brackets that have had children within the

last ten years formed the unit of analysis. The target population in Tamale and Nanumba North District as at 2010 were 130,812 and 49,748 respectively (GSS, 2012). Projecting these figures into 2014 with the region"s inter-censal growth rate of 2.9 percent gives a population of 146,902 and 55,868 for Tamale Metropolis and Nanumba North District respectively (see Table in Appendix 1). The mathematical formula of Miller and Brewer (2003) was applied to determine the sample size for the study. The mathematical formula is given below:

$$n = \frac{N}{1 + N(\alpha)^2}$$

Where: N = the Total number of women in their reproductive years

α = the margin of error (in this study, 10% was used).

n= sample size

By applying the above formula using the projected populations with a margin of error of 10 percent gives sample sizes of 101 and 100 for Tamale and Nanumba North District respectively (See Appendix 1 for the sample size calculations).

In effect, a total of 201 questionnaires were administered consisting of 100 for the Nanumba North District and 101 for the Tamale Metropolis. Due to resource and time constraints, the researcher randomly selected four communities each from the study area to administer the questionnaires. The distribution of the sample population among the selected communities is provided in Table 3.2.

Table 3.2: Distribution of Sample Sizes [Communities and number of questionnaires administered]

Study area	Sample size distribution among selected communities	Total no. of women/ questionnaires administered
Nanumba North District	Bimbilla	25
	Pusuga	25
	Chamba	25
	Nakpa	25
Total		**100**
Tamale Metropolitan	Sagnarigu	25
	Lamashegu	25
	Kalpohini	25
	Shishegu	26`
Total		**101**

Source: Author's Construct, 2013

3.4.4 Sampling Techniques

The purposive sampling method was used in selecting institutions relevant to the study including Ghana Health Services, Tamale Metropolitan Health Directorate, Nanumba District Health Directorate, UNICEF and YAROs. On the other hand, the convenience sampling technique was used in selecting the women between the age cohort of 18 and 45 years from the four communities in each of the two districts randomly selected (see Table 3.2). The method was operationalised by interviewing women within the specified age bracket who were conveniently available and willing to participate in the study. Although the convenience sampling method is criticised for being highly vulnerable to selection bias, it was deemed expedient in this context as there was no available sampling frame to probabilistically choose from. Besides, it offered the advantages of availability, easy access and quickness in the data collection exercise.

The following steps were used in gathering the required data:

1. A reconnaissance survey was carried out in the District to familiarize with the institutions and the households. This informed preparations for the data collection in the Districts.

2. First phase of questionnaires and interview guides were designed and printed out to collect the relevant data for the study.
3. Selection and training of field enumerators. This was to equip them with an understanding of requirements for the study. The field enumerators were selected from the area to limit communication problems.
4. Another visit to the communities was organised to conduct a pilot survey. The enumerators accompanied the researcher to the field to test the respondent rate of the responding to questions and get a fair knowledge about the entire exercise.
5. The weakness found in the administration of the piloted questionnaire was corrected to improve the questionnaires and interview guides in order to achieve its set objectives.
6. Final Preparation of questionnaires and interview guides for data gathering. The materials included 210 questionnaires for the sampled women and 5 interview guides for the relevant institutions selected. The questionnaires were then administered in the study communities and interviews held with officials from relevant institutions as scheduled.
7. Four major suburbs (communities) were selected from each district where the data was gathered. For the Nanumba North District, the communities selected include: Bimbilla, Pusuga, Chamba and Nakpa while the communities selected in Tamale were Sagnarigu, Lamashegu, Kalpohini and Shishegu.
8. The data collectors contacted the opinion leaders and the community women leaders (Magazias) in the area who through their assistance guided them to know the number of women that fall within the targeted age bracket and thereafter, the respondents were drawn using the simple random sampling

3.4.5 Data Analysis

Processing of data collected was carried out by editing, coding and tabulation for analysis. The detection and elimination of errors was undertaken through the data editing. Variables were crossed tabulated where necessary in order to make relevant deductions and to ascertain the linkages that exist between the various variables of the research. Tables were used to show summary of issues and information in order to communicate in simple and more concise manner.

Both qualitative and quantitative techniques were employed in the analysis of the data. The qualitative technique involved descriptive analysis of data. Also, data analysis tools including

Statistical Package for Social Sciences and Excel were employed in analysing the quantitative data collected from the field.

3.4.6 Ethical Considerations

One important consideration a researcher must not overlook is the issue of ethics in research. The researcher in accordance with this principle took necessary steps to gain the informed consent of the respondents and institutions involved in the research and also, made sure that they were not harmed in any way. In that, permission was first sought from the respondents and the researcher explained the aims and objectives of the study to them before soliciting the needed research data. Accordingly, the respondents were assured that the data they provide would be kept and treated with confidentiality as the study was only for academic purposes and not for any other use.

CHAPTER FOUR CHILD HEALTH PROGRAMMES IN TAMALE METROPOLIS AND NANUMBA NORTH DISTRICT

4.1 Introduction

This Chapter presents the analysis of findings from the field survey conducted in the Tamale Metropolis and the Nanumba North district. The Chapter discusses the background of the respondents, and the child health programmes that have been implemented in the study area. It also looks at the challenges in the implementation of child health care programmes in the study areas.

4.2 Background of Respondents

This section discusses the ages of respondents, educational background, marital status, ages of their first children, number of children and employment status.

4.2.1 Ages of Respondents

The survey revealed that the respondents within the age brackets of 18-25, 26-30, 31-35, 3640 and 41-45 constituted 34.83 percent, 50.75 percent, 6.47 percent, 5.47 percent and 2.48 respectively. These respondents were identified to be matured and abreast with most of the current issues concerning child bearing such as childhood diseases and the type of help they have been receiving for their children. The disaggregated data on the ages of the respondents in the two districts are provided in Table 4.1

Table 4.1: Ages of Respondents

Age	**Nanumba North**		**Tamale**		**'otal**	
	F	%	F	%	F	%
18-25	34	34	36	35.6	70	34.83
26-30	48	48	54	53.5	102	50.75
31-35	8	8	5	4.9	13	6.47
36-40	7	7	4	4.0	11	5.47
41-45	3	3	2	2.0	5	2.48
Total	**100**	**100**	**101**	**100**	**201**	**100.0**

Source: Field Survey, April 2013.

4.2.2 Educational Level of Respondents

Educational level helps determine the extent to which people understand the issues affecting them and their children. Table 4.2 shows the educational levels of respondents. In Tamale 22.7 percent never attended school, 57.5 percent attained basic education (i.e. primary and JHS combined), 12.9 percent attained SHS and 6.9 percent attained tertiary education as against 31 percent, 54 percent, 10 percent and 5 percent respectively in the Nanumba district. It is apparent that the educational levels in Tamale are better compared to the Nanumba district. The Table 4.2 provides data on the educational levels of respondents.

Table 4.2: Educational Level of Respondents

Educational Attainment	**Nanumba North**		**Tamale**		**'otal**	
	Freq	%	Freq	%	Freq.	%
Never	31	31	23	22.7	54	26.9
Primary	38	38	40	39.7	78	38.8
JSS/JHS	16	16	18	17.8	34	16.9
SHS/Voc/Tech.	10	10	13	12.9	23	11.3
Tertiary	5	5	7	6.9	12	6.1
Total	**100**	**100**	**101**	**100.0**	**201**	**100.0**

Source: Field Survey, April 2013

According to Ghana Statistical Service (2012), the percent of females in the country who have never attended school is 14.3 percent whilst that of males stands at 9.1 percent. Among the regions, there are variations in the levels of school attendance. The proportions of the population who have never been to school in the three northern regions range between 44.5 percent in Upper East and 54.9 percent in the Northern region while in the other regions, it ranges between 10.1 percent in Greater Accra to 26.4 percent in Brong Ahafo. Comparatively, these two study areas in the Northern Region are doing better than their respective region but are both below the national levels. Clearly, it could be deduced that the educational levels of the respondents are very low and this to a larger extent explains the low literacy levels in the three Northern regions, especially among females when compared to other regions of Ghana. This compares favourably with the findings of Aryeetey and Kwakye (2005) that suggest that

about 42 percent of the adult population are illiterate and about 50 percent of Ghanaian women are illiterate, compared with 33 percent of men.

The survey revealed that many factors account for the low level of education especially among women in the study area. Educational level of both sexes in the study area is low but it is particularly worse among females. Poverty is one of the major factors the respondents attributed to as the major reason why they cannot send their children to school. Again, in the study area females are culturally viewed as being trained for marriage and as a result, their educational attainment is not of much importance. Moreover, females in their adolescent age in the study area are burdened with a lot of household chores with some serving as de facto mothers of their family to the detriment of their education. Lastly, most girls in the study area are forced into early marriages which affect their education. Undoubtedly, the high illiteracy in the study area had partly contributed to the perception among the respondents that, the main cause of diseases is spiritual which makes quite a significant number of them (60 percent) prefer traditional medicines to orthodox medicine. This finding of high illiteracy among respondents implies the need for rigorous sensitization on child health care programmes in the study area.

4.2.3 Employment Status of Respondents

The employment status of a group of people in an area is very important because it determines all things being equal the purchasing power of the people. This is because aside gifts, the people rely on what they earn from their labour. The survey showed unemployment rates of 46.5 percent and 56 percent among women in the Tamale and Nanumba North districts respectively. The Table 4.3 therefore reveals an average rate of 48.8 percent employment of the respondents in any form of employment with the rest constituting 51.2 percent not in any form of employment compared to national women unemployment rate of about 27.5 percent (GSS, 2012)

This means more than half of the women interviewed are not employed and as a result depends on their husbands and relatives for their livelihood. It was learnt that aside the difficulties in finding job in the study area, culturally men in the study area do not subscribe to their wives working. They prefer their wives being housewives and taking care of their children and their parents who may be old and need constant attention. This explains why many women (46.5

percent and 56 percent in the Tamale and Nanumba North respectively) surveyed in the study areas are not working

Table 4.3: Employment status of Respondents

Employment Status	**Nanumba North**		**Tamale**		**'otal**	
	Freq	%	Freq	%	Freq.	%
Employed	44	44	54	53.5	98	48.8
Unemployed	56	56	47	46.5	103	51.2
Total	**100**	**100**	**101**	**100.0**	**201**	**100.0**

Source: Field Survey, April 2013

Table 4.4 shows the sectors of employment of the respondents in the study area. Of those who are employed, they are employed in the agricultural, industrial and service sectors. The survey revealed that, more people (52.3 percent) in the Nanumba North District engage in Agric than those in Tamale (35.2 percent). Majority of those in the agricultural sector are peasant farmers who undertake farming activities on subsistence basis to support their family. This is attributed to the fact that Tamale as the capital of the Northern Region is more urbanized compared to the Nanumba North District. Again, 53.7 percent in Tamale as against 45.4 percent in the Nanumba North are engaged in the service sector. The remaining respondents are in the industrial sector with major activities like pito brewery and shea butter making. Given these findings, there is the need to provide economic interventions e.g. microfinance loans, training support etc that seek to improve the above-found employment sectors and the women engaged in them in order to help improve their incomes and living standards as ample studies exist to show the unfavourable link between poverty and healthcare accessibility. Table 4.4 shows the sectors of employment in the study areas.

Table 4.4: Sectors of Employment

Sector	Nanumba North		Tamale		'otal	
	Freq	%	Freq	%	Freq.	%
Agric	23	52.3	19	35.2	42	42.9
Industrial	1	2.3	6	11.1	7	7.1
Service	20	45.4	29	53.7	49	50.0
Total	**44**	**100**	**54**	**100.0**	**98**	**100.0**

Source: Field Survey, April 2013

4.2.4 Income levels

Knowing the income levels of the respondents was extremely important as it gives a clue as to the state of their standard of living and more specifically to this study, whether they are able to afford child health care programmes. As shown in Table 4.5, those who earn the least income in the study area; that is, below GH¢50 constitute 41 percent and 19.8 percent in Nanumba and Tamale respectively whereas those who earn above GH¢300 forms 13.9 percent in Tamale and one percent in Nanumba. Additionally, the average income is GH¢98.6 in Nanumba and GH¢132.11 for Tamale, and the overall average income for the two districts is GH¢115.36. Income levels in Tamale are relatively higher and thus, compare better to that in Nanumba. All things being equal, women in Tamale should access/afford child health programmes more easily than women in Nanumba subject to income constraint.

Again, comparing with average household income of GH¢1217 per annum (which translates into GH¢101.42 per month) in Ghana (GSS, 2012), average income level in the Nanumba North is below the national figure whereas average income in Tamale is slightly (i.e. GH¢30+) above the national figure. However, the data shows that; 77 percent and 45.5 percent of women in the Nanumba North and Tamale correspondingly live below the poverty line of $1 per day (which translates into about GH¢3.2 per day and GH¢96 per month). Since economic accessibility to healthcare is dependent on income (i.e. affordability measure), promoting poverty reduction strategies such as livelihood empowerment and income redistribution policies and strategies are critical to improving not only child health but the general health and

wellbeing of the people in the study areas. Table 4.5 provides the income levels of the respondents.

Table 4.5: Income levels of respondents (Monthly incomes)

Income Level (GH¢)	**Nanumba North**		**Tamale**		**'otal**	
	Freq	%	Freq	%	Freq.	%
Below 50	41	41	20	19.8	61	30.3
50 - 100	36	36	26	25.7	62	30.8
101 - 200	13	13	10	9.9	23	11.4
201 - 300	9	9	31	30.7	40	19.9
Above 300	1	1	14	13.9	15	7.6
Total	**100**	**100**	**101**	**100.0**	**201**	**100.0**

Source: Field Survey, April 2013.

4.3 Affordability Issues (Cost of Health Care and National Health Insurance)

This section discusses the cost of accessing health care and matters pertaining to subscribers of the national health insurance in the two areas. These two variables have a bearing on economic accessibility of health care. This is so because, when cost of health care is relatively high, economically those especially within the low income bracket and without NHIS access will be greatly limited.

4.3.1 The Use of National Health Insurance Card

On the aggregate, the study found out that about 53.2 percent of the respondents are active NHIS members whilst the rest constituting 46.8 percent are not. The use of NHIS in Tamale (61.4 percent) is however higher compared to the Nanumba North of 45 percent. It was revealed during the survey that, the respondents who are not subscribed to the NHIS card attributed it to poverty. On the other hand, comparing it with regional and national figures of 39.7 percent and 43.9 percent respectively (IFPRI, 2013), the two districts are performing better in terms of active membership on the NHIS. Notwithstanding, close to half of the respondents (46.8 percent) are not actively subscribed to the NHIS (Table 4.6). This implies that they can only access orthodox health care through the cash and carry system where they are uncovered by any other health insurance. This situation conveniently gives room for the use of traditional medicine or treatment as it was found to be relatively cheaper. The

implication of this finding is that; the GHS together with the relevant health stakeholders should indulge in awareness creation to increase the patronage of the NHIS in order to make access to child healthcare programmes affordable to the people in Tamale and the Nanumba North. Table 4.6 provides data on active NHIS subscribers in the study areas.

Table 4.6: Percentage of National Health Insurance Holders (Active Membership)

Response	**Tamale**		**Nanumba North**		**Total**	
	Frequency	%	Frequency	%	Frequency	%
Yes	62	61.4	45	45	107	53.2
No	39	38.6	55	55	94	46.8
Total	101	100	100	100	201	100

Source: Field Survey, April 2013.

4.3.2 The Cost of Health Care (Those without NHIS Card)

Of the 46.8 percent of respondents who have not actively subscribed to the NHIS, 49.5 percent pay below GH¢50, 28 percent pay between GH¢50-100, 12 percent pay between Ghc101-200 with the rest constituting 10.5 percent paying GH¢201+ whenever they accessed child healthcare (see Figure 4.1). In the Nanumba North District on the other hand, 64 percent spend below GH¢50, 26 percent spend between GH¢50-100, eight percent pay between GH¢101-200 and the remaining two percent spend more than GH¢200. Comparatively, people without NHIS spend more in Tamale than those in the Nanumba North District. During the survey, various reasons were adduced by those who do not have the NHIS card. About 80 percent of the respondents who did not have NHIS card asserted that they do not have the means of paying for the NHIS premium and as a result they find it difficult sending their children to hospital when they are sick. In fact, they added that they prefer the traditional medicine to hospital and clinic treatment because the former is more affordable. They only send their children to the clinic when they cannot do anything about the disease and when all the available options have been exhausted.

Thus, given the cost of health care and the low income levels in the study area especially in Nanumba, affordability of health care is likely to be a major problem. This situation is further

aggravated by the fact that, almost half of the respondents are not subscribed to the NHIS- a social protection scheme meant to provide some degree of health relief to the poor. This implies that; the NHIS should be further encouraged, especially in the Nanumba North District in order to make the cost of child health care cheaper and more affordable in the study areas. Figure 4.1 shows the cost incurred by respondents for child healthcare per visit.

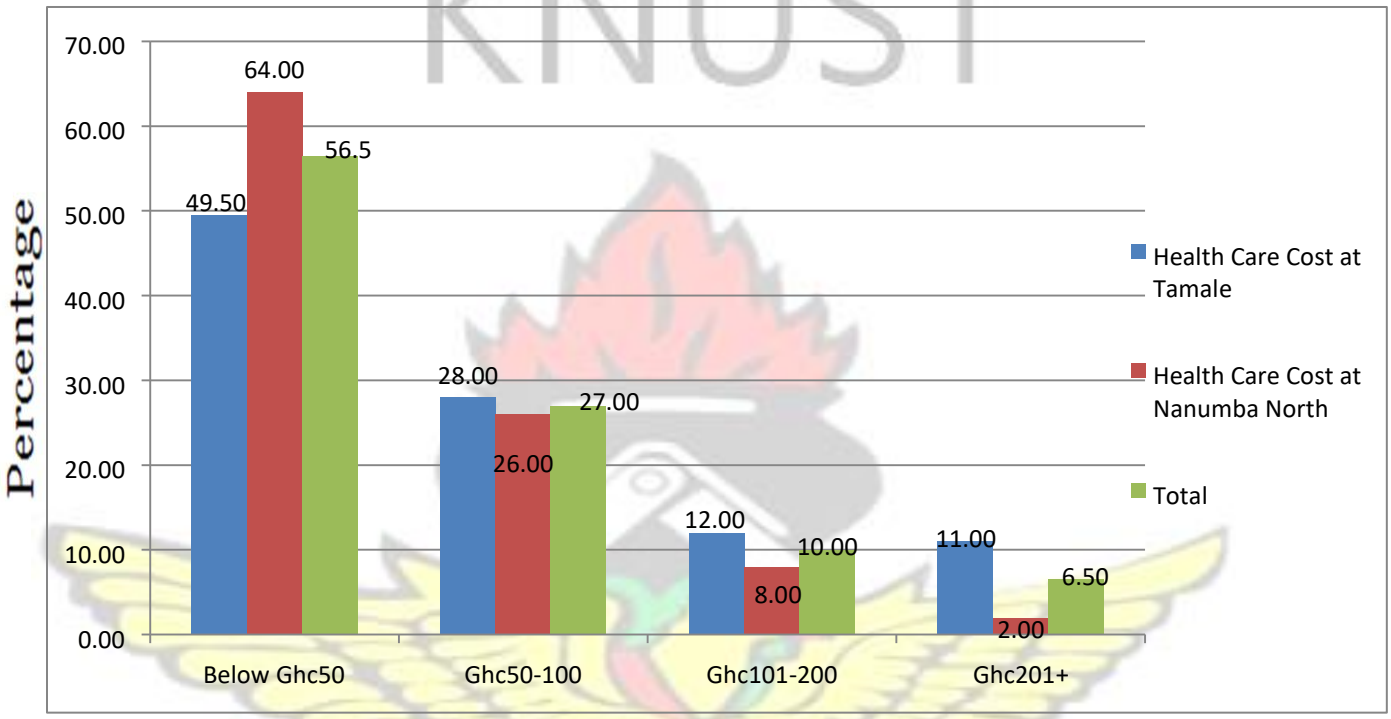

Figure 4.1: The Cost of Health Care per visit (Non-Active NHIS members)

Source: Field Survey, April 2013

4.4 Type of Healthcare Services Accessed

The type of healthcare services accessed by the women determines the quality of medical care they access for their children. From Table 4.8, those who access orthodox health service are 46 percent in the Nanumba North whilst it is 58.4 percent in Tamale and the combined percentage is 52.2 percent. Again, those who patronize traditional health care constitute 42 percent and 30.7 percent in the Nanumba North and Tamale respectively. On the aggregate, 11.5 percent of the respondents access a combination of orthodox and traditional health care services.

From the interactions with the women, it was found that Traditional Medical Practitioners (TMPs) such as herbalist and circumcisers (wasams) perform enormous role in the health care delivery in the study area. This includes circumcision and protecting the children against

childhood diseases such as convulsion. Table 4.7 shows the health care services the respondents access for their children

Table 4.7: Health Care Service Respondents Access for their Children

Type of health Care Services	Nanumba North		Tamale		Total	
	F	%	F	%	F	%
Orthodox health service	46	46.0	59	58.4	105	52.2
Traditional health care services	42	42.0	31	30.7	73	36.3
Combination of both traditional and orthodox hospital	12	12.0	11	10.9	23	11.5
Total	**100**	**100.0**	**101**	**100.0**	**201**	**100.0**

Source: Field Survey, April 2013.

4.4.1 Reasons for Accessing Traditional Health Care Services

The sampled responses on the reasons for patronage of traditional health care services include cultural, accessibility (both physical and economic) and reliability. About 28.9 percent of the respondents who access traditional health care services are based on cultural grounds. They mostly believed that; some types of diseases such as convulsion are transferred spiritually to children when they are young and as a result, there is the need to seek protection from TMPs against such diseases. TMPs are the only ones who can provide this kind of protection against such ailments. As a result, children are taken to herbalist and traditionalist to apply the necessary herbs to protect the children. Again, it was made known by the respondents that traditional health care services are reliable (31.8 percent), readily available (21.4 percent) and are relatively cheaper (17.9 percent) (see Table 4.8). For instance, some of the respondents opined that; until the introduction of orthodox medicine in the shape of clinics in the study area, the TMPs have been with them since the inception of the communities. These TMPs perform services such as circumcision and protection of children against diseases. Some households did not understand why they should take their children for orthodox healthcare whilst the TMPs are available. It is under peculiar circumstances that children are taken to health centers and CHPS compounds to access healthcare.

However, it must be emphasized that these beliefs are predominant and more entrenched in the Nanumba North District than the Tamale Metropolis which is more urban in nature. It is also important to note that, there were multiple responses, but emphasis was on principal reason. The implication of this finding is that; the MoH, GHS and all bodies that matter in the health sector in the country should fashion ways of regulating the TMPs e.g. through licensing to safeguard public health and safety given the fact that their services are still significant and are likely to be patronized by the people in the foreseeable future taking into account their beliefs and cultural norms. Table 4.8 shows reasons for accessing traditional health care services by the respondents.

Table 4.8: Reasons for Accessing Traditional Health Care Services

Reasons	**Tamale Metropolis**		**Nanumba North**		**Total**	
	F	**(%)**	**F**	**(%)**	**F**	**(%)**
Cultural	27	26.7	31	31	58	28.9
Reliable	34	33.7	30	30	64	31.8
Easy Physical Accessibility	21	20.8	22	22	43	21.4
Relatively Cheaper than others	19	18.8	17	17	36	17.9
Total	**101**	**100.0**	**100**	**100.0**	**201**	**100**

Source: Field Survey, April 2013.

4.4.2 Reasons for Accessing Orthodox Medicine for their Children

Although traditionally the people believe that the main cause of diseases is spiritual, in areas such as the Tamale Metropolis and Bimbilla which is the Capital of the Nanumba North District, the women have come to accept orthodox medicine as an integral avenue for seeking solution to health related problems for their children. The study revealed that the reasons for accessing orthodox health care services for their children are: lack of trust of other health care service, reliability, physical accessibility, cultural reasons and affordability relative to health care services. Respondents access orthodox medicine to fight against childhood killer diseases such as polio, tetanus, and measles among others. Due to the process involved where children

are taken through scientific diagnostic tests, many respondents deemed it to be reliable and more trusted.

The survey revealed that, 30 percent of the respondents accessed orthodox medicine because they do not trust other health care services and this comprise 31.7 percent from Tamale and 28 percent from the Nanumba North District. Additionally, 42.3 percent of the respondents accessed orthodox medicine due to their reliability. Again, 14.4 percent and 13.4 percent of the respondents access orthodox medicine due to their easy physical accessibility and affordability respectively. It is also important to note that, there were multiple responses, but emphasis was on principal reason. This implies that, in planning for health services in the study areas (e.g. in providing CHPS in the area), it should reflect the reasons for which people access orthodox medicine in order to further strengthen the confidence of the people in orthodox medicine, especially because traditional medicine practices are rife in the study areas. Table 4.9 provides a comparative analysis of the two districts on reasons for accessing orthodox medicine.

Table 4.9: Reasons for Accessing Orthodox Medicine for their Children

Reasons	**Tamale Metropolis**		**Nanumba North**		**'otal**	
	F	**(%)**	**F**	**(%)**	**F**	**(%)**
Do not Trust other Types of Health Services	32	31.7	28	28	60	29.9
Reliable	43	42.6	42	42	85	42.3
Easy Physical Accessibility	16	15.8	13	13	29	14.4
Relatively Cheaper than others	10	9.9	17	17	27	13.4
Total	**101**	**100.0**	**100**	**100.0**	**201**	**100.0**

Source: Field Survey, April 2013.

4.4.3 Type of Health Facility Accessed (Orthodox) for their Children

The survey revealed that the women access various types of health facilities. This included hospitals (47.8 percent), clinic (22.0 percent), CHPS Compound (14.4 percent) and Drug Stores/Pharmacies (15.8 percent) (Table 4.10). It was revealed that those in the urban centres" rely on hospitals and one popular hospital where the respondents seek medical attention for

their children is the Tamale Teaching hospital. However, those in the towns and villages rely on clinics and CHPS Compounds in accessing health care for their children. About 15.8 percent of the respondents rely on pharmacies/drug stores to buy drugs for their children and the danger with relying on these drug store/pharmacies could be that, the attendants may not be properly trained and might give prescription which may harm the children. Table 4.10 provides the types of health facilities accessed by the women **Table 4.10: Types of Health Facilities Accessed by the Women**

Type of facility	**Nanu ıba North**		**Ta nale**		**T ɔtal**	
	F	%	F	%	F	%
Hospital	34	34	62	61.4	96	47.8
Clinic	28	28	16	15.8	44	22.0
CHPS	21	21	8	7.9	29	14.4
Pharmacy/Drug Store	17	17	15	14.9	32	15.8
Total	**100**	**100**	**101**	**100.0**	**201**	**100**

Source: Field Survey, April 2013.

4.5 Physical Accessibility

One of the qualities of any good health care system is physical accessibility. That is how close the facility is to the beneficiaries of the health facility. The study found out that, 47 percent of the respondents commute between 1-3km to access the nearest health facility. Moreover, 33 percent travel 4-6km, 18 percent travel 7-10km and 2 percent commute beyond 10km to access the nearest health facility. The travel modes used by the respondents include walking, lorry, bicycle and motor-bike. The study found out that, 17 percent of the respondents walk about 1km to 3km to access health care. This was seen more in the Nanumba North as 22 percent travel by foot as against 12 percent in Tamale. Again, 27.5 percent and 43 percent of the respondents travel by bicycle and motorbike to access health facility. This method of accessing health care by foot is prevalent in the Nanumba District because of the rural nature of the area and the difficulty involved in accessing the area by car as the survey revealed. It is a common feature to see women in labour being transported on bicycles for longer periods to health centers to deliver. This situation discourages many pregnant women from going to the health centers to deliver and prefer to deliver with their inlaws and Traditional Birth Attendants

leading sometimes to fatalities. This implies that, the Health Directorates of the study areas should make frantic efforts to improve physical accessibility to health facilities by providing more CHPS Compounds at vantage points (i.e. at reasonable distances), providing mobile health services and also, increasing ambulance services.

Notwithstanding, comparing it with planning standards, a health center or clinic is supposed to provide services within a radius of 10 miles approximately 16 kilometers (Maple Consult and CersGis, 2010). The distance gets higher for facilities like hospital (district, teaching hospital etc) due to their large sphere of influence (Ibid). This means that, physical accessibility to health care in the Tamale and Nanumba North is quite acceptable, however, the bad nature of roads impede accessibility to health facilities especially in the Nanumba North. Table 4.11 provides information on the travel modes used and distances covered by respondents to access health facilities.

Table 4.11: Mode of travel and Distance travelled to access nearest Health Facility in Percentage (%)

Travel Mode	Tamale Metropolis				Nanumba North District				Total				
	1-3km	4-6km	7-10km	10km +	1-3km	4-6km	7-10km	10km +	1-3km	4-6km	7-10km	10km +	Total
Lorry		10	`6	3		3	2	1	0	6.5	4	2	12.5
Foot	12	0	0	0	22	0	0	0	17	0	0	0	17
Bicycle	14	8	0	0	18	15	0	0	16	11.5	0	0	27.5
Motor Bike	23	13	11	0	5	17	17	0	14	15	14	0	43
Total	**49**	**31**	**17**	**3**	**45**	**35**	**19**	**1**	**47**	**33**	**18**	**2**	**100**

Source: Field Survey, April 2013.

4.6 Institutional Framework and Types of Child Health Programmes Implemented in the Study Area

This section discusses institutions which have implemented child health programmes in the study area. This includes the types of programmes, objectives, coverage, challenges, among others

4.6.1 Metropolitan/District Health Directorate in the Study Area

The Metropolitan Health Directorate (MHD) of Tamale and the District Health Directorate (DHD) of Nanumba North District are the main bodies responsible for design, implementation and evaluation of health programmes including child health programmes within their jurisdictions. The Health Directorate embraced reduction in child mortality and morbidity to achieving the MDG 4.

4.6.2 Types of Child Health Programmes and strategies implemented by the Metropolitan/District Health Directorate

In concerted attempts by the Metropolitan/District Health Directorate in the study areas to achieve its health goals, many child health programmes and strategies have been implemented in the study area. The programmes included malaria prevention/treatment, nutrition, immunization, excessive breastfeeding and healthy child promotion week. The strategies also adopted included training of midwives in live saving skills. Again the volunteers of the programme were trained on identification of illness in children and reporting them to the health facilities within the study area for attention. Lastly, the institution engaged in public sensitization and education of the public about the importance of the programme and the need to take part in the activities of the programme. The target of the programmes is all communities within the study area. Table 4.12 gives information about the child health programmes implemented from 2000 to 2013.

Table 4.12: Child Health Programmes Undertaken by District/Metropolitan Health Office

No	Programme	Tamale Metropolis			Nanumba North		
		Coverage	Period (Duration)		Coverage	Period (Duration)	
			From	To		From	To
1	Malaria Prevention/Treatment	All communities	2000	2013	All communities	2000	2013
2	Nutrition	All communities	2000	2013	All communities	2000	2013
3	Immunization	All communities	2000	2013	All communities	2000	2013
4	Excessive Breastfeeding	All communities	2000	2013	All communities	2000	2013
5	Healthy Child Promotion Week	All communities	2000	2013	All communities	2000	2013

Source: Field Survey, April 2013.

4.6.3 Achievements of Programmes Implemented

Generally, the child health programmes implemented in the study areas were largely successful albeit, there were funding challenges. Comparatively, implementation of the programmes in the Tamale Metropolis achieved better results than in the Nanumba North district. For instance, the distribution of Insecticide Treated Nets (ITNs) achieved 70 percent coverage in Tamale but only achieved 62 percent in the Nanumba North; Immunization achieved 96 percent coverage in Tamale but achieved 94 percent in the Nanumba North (see Table 4.13). The achievements of the two areas under study compare favourably to the average national immunization coverage of 94 percent (UNICEF and WHO, 2012). This implies that the study areas are doing well in terms of malaria control and immunization programmes but there"s still the need to improve their coverage.

Moreover, as presented in Table 4.13, with the malaria prevention programme, the main strategy used was the distribution of mosquito nets to various households in the two districts. Though the programme was supposed to cover every household, it however achieved 70 percent and 62 percent coverage in Tamale and the Nanumba North District respectively due

to financial constraints. Again, the strategy for the nutrition programme was introduction of food supplements and sensitization of households on the dangers of malnutrition. This programme failed to achieve its intended target as the achievement was 10 percent and 5 percent in Tamale and the Nanumba North. From the study, it was discovered that the main factor that stifled the programme was religion. The study area is dominated by Muslims and their religion prevents them from engaging in certain practices such as receiving food supplements. As a result, about 80 percent of the respondents indicated that they rejected the food supplements despite the various sensitizations that were carried out. This implies that, new and rigorous education and awareness creation strategies should be employed in the study areas with the help of the religious leaders to help detach religion from vital health issues in order to improve the patronage of important child health programmes such as food supplements and other programmes that are poorly patronised. Table 4.13 provides data on the coverage and achievement of child health programmes implemented in the study area.

Table 4.13: Achievement of Child Health Programmes in the Study Area

Programme	**Target**	**Tamale Municipal**		**Nanumba District**	
		Targeted Coverage (%)	Achievement (%)	Targeted Coverage %	Achievement %
Malaria Prevention/Treatment	Universal distribution of ITNs	100	70	100	62
Nutrition	Reduce child malnutrition	100	10	100	5
Immunization	To vaccinate all children below 5 years.	100	96	100	94
Healthy Child Promotion Week	To educate mothers on the effective ways of caring for babies	100	20	100	12

Source: Tamale Municipal and Nanumba District Health Directorate, 2013.

4.6.4 Child Health Programmes implemented in the Study Area by United Nations Children and Education Fund (UNICEF)

UNICEF is mandated by the United Nations General Assembly to advocate for the protection of children rights, to help meet their basic needs and to expand their opportunities to reach their

full potential (UNICEF, 2008). The UNICEF has funded various child health programmes in the study area towards reducing child morbidity and mortality which is in line with the Millennium Development Goal (MDG) 4. Table 4.14 presents the programmes that have been implemented in the study area. The strategies put in place to achieve these goals were training, sensitization, planning, scale up to all communities and monitoring to inform quality improvement. The scope of the programme is all communities in the study area.

Table 4.14: Coverage of Child Health Programmes Undertaken by UNICEF

No.	Name of programmes	Period (Duration)		Target Districts
		From	To	
1	Malaria Prevention/Treatment	2000	2015	Tamale and Nanumba North (District-wide)
2	Nutrition	2000	2015	Tamale and Nanumba North (District-wide)
3	Immunization	2000	2015	Tamale and Nanumba North (District-wide)
4	Excessive Breastfeeding	2000	2015	Tamale and Nanumba North (District-wide)
5	Healthy Child Promotion Week	2000	2015	Tamale and Nanumba North (District-wide)

Source: UNICEF, 2013.

4.6.5 Child Health Programme(s) implemented by the Youth Advocacy on Rights and Opportunities (YARO)

YARO is one of the frontline NGOs in the study area dedicated to protecting the rights of children. Its main objective is to contribute to the reduction of the prevalence rate of HIV. Again it aims to undertaking sensitization of school children on sanitation and hygiene and again educating communities about malaria control and prevention. Table 4.15 shows the child health programmes introduced by YARO in the study areas.

Table 4.15: Child Health Programmes Introduced by YARO

No.	Name of programmes	Period (Duration)		Target communities
		From	To	

1	Reproductive Health	2000	2013	Tamale Metro
2	Malaria Prevention	2010	2011	Tolon Kumbungu
3	Water, Sanitation and Hygiene (WASH)	2012	2013	Bimbilla
4	Maternal and Child Health	2013	2013	Bole, Sawla

Source: Field Survey, April 2013.

Table 4.15 shows that the YARO (an NGO) contributes to child health care in the study area. The coverage of the various programmes implemented was however limited to selected communities. The health needs of the other communities uncovered by the YARO health programmes have been supported by the district/metropolitan health directorate and UNICEF.

4.6.6 Funding of Child Health Programmes in the Study Area

The main sources of funds for the implementation of child health programmes include Ghana Health Service (GHS), bilateral and multi-national organizations such as United Nation Children and Education Fund (UNICEF) and the World Bank. The problem with the sources of funds is that they are rigid in its application and they are not delivered on time. Another problem is that, the amount budgeted is not realized.

Consistently, budgets for the Metropolitan/District Health Directorate from 2010 to 2012 to run health programmes on malaria prevention, ITNs provision, immunization and food supplement were unmet (Table 4.16). Thus, for all the programmes carried out by the Metropolitan/District Health Directorate in the study area, funds budgeted for were not realized. In all cases, only a small amount of the budget was received. For instance, in 2010 an amount of GH¢10,000 and GH¢25,000 were budgeted for malaria prevention programme in Nanumba North and Tamale respectively. However, only GH¢5,000 and GH¢6,000 were realised for the Nanumba North and Tamale respectively representing 50 percent and 30 percent of the budgeted amounts (Table 4.16). This applies to all the programmes and the years. The highest amount received for a programme amounted to 62.5 percent for Nanumba North and 50 percent for Tamale of the budgeted amount. The amount received for most of the programmes‟ budgeted amounts were less than 50 percent of the expected inflows. This presents many challenges for the implementation of the programme. The implication is that, implementation and coverage of child health programmes by the Health Directorates in the

study areas are stifled to a significant extent, given the huge budget cuts, and there‟s therefore the need to improve the budget allocations for health care provision in both study areas by the government through the MoH. Table 4.16 provides data on the budget and actual inflows of child health programmes implemented in the study area by the Metropolitan/District Health Directorate between 2010 and 2012.

Table 4.16: Budget for Child Health Programmes in the Study Area (2010 - 2012)

Year	Programme	Nanumba North			Tamale		
		Amount Budgeted(GH¢)	Amount Received (GH¢)	(%)	Amount Budgeted (GH¢)	Amount Received (GH¢)	(%)
2010	Malaria Prevention/Treatment	10,000	5,000	**50.0**	20,000	6,000	**30.0**
	Provision of ITNs	5,000	1,500	**30.0**	25,000	5,500	**22.0**
	Food Supplement	5,000	2,500	**50.0**	20,000	4,000	**20.0**
	Immunization	8,000	5,000	**62.5**	20,000	10,000	**50.0**
2011	Malaria Prevention/Treatment	15,000	5,000	**33.3**	25,000	10,000	**40.0**
	Provision of ITNs	10,000	3,000	**30.0**	25,000	7,000	**28.0**
	Food Supplement	10,000	2,000	**20.0**	20,000	6,000	**30.0**
	Immunization	12,000	6,000	**50.0**	20,000	8,000	**40.0**
2012	Malaria Prevention/Treatment	15,000	5,000	**33.3**	30,000	15,000	**50.0**
	Provision of ITNs	10,000	3,000	**30.0**	30,000	10,000	**33.3**
	Food Supplement	10,000	2,000	**20.0**	10,000	4,000	**40.0**
	Immunization	12,000	6,000	**50.0**	15,000	6,000	**40.0**

Source: Tamale Metropolitan and Nanumba North District Health Directorate, 2013.

 Budget of UNICEF programmes in the Study Area

Unlike the Metropolitan and District Health Directorates which are unable to realise their budgets, UNICEF on the other hand is able to realise greater part of its budgets. For instance, the budget estimate for malaria prevention programme in 2012 was GH¢ 20,000 but the amount realised was GH¢ 16,000 showing 80 percent of the budgeted amount. This enables the organization to carry out most of its planned programmes and achieve its set goals and objectives. This shows the significant contribution of the non-governmental sector to child health care delivery in both study areas and by extension, the Northern Region and therefore, the governmental health institutions should collaborate with such NGOs in the provision of healthcare rather than regarding them as competitors. Table 4.17 provides data on the budget of UNICEF in 2012.

Table 4.17: Budget for UNICEF Programmes in the Study Area in 2012

No	Programmes	Amount Budgeted GH¢	Amount Received GH¢	Percentage
1.	Malaria Prevention/Treatment	20,000	16,000	80
2.	Nutrition	20,000	15,000	75
3.	Immunization	12,000	8,000	66.7
4.	Healthy Child Promotion Week	1, 000,000	1,000,000	100

Source: Tamale Metropolitan and Nanumba North District Health Directorate, 2013.

4.7 Assessment of the Child Health Programmes Introduced in the Study Area This section discusses the institutions that introduced the child health programmes in the area and their effectiveness.

4.7.1 Types of Health Programme/Assistance Provided for the Communities

The study revealed that the type of child health programmes that have been implemented included malaria control, immunization and combat against malnutrition through food supplements. The respondents have benefited from at least one of these aforementioned programmes provided by institutions such as the Ghana Health Service (GHS), Multilateral Agencies such as UNICEF and NGOs. On the whole, 26.9 percent and 16.9 percent of the women confirmed benefitting from free malaria drugs and distribution of ITNs respectively in

the malaria control programme while 38.8 percent and 11.3 percent respectively confirmed benefitting from the Immunization and Food Supplement programmes.

Notwithstanding, close to 70 percent of the women indicated that they have benefitted in more than one of the programmes. This means the implementation of the child health programmes is going down well with the respondents as they have all benefitted in at least one of the child health programmes. This corroborates the high percentage of coverage put forward by organisations such as UNICEF. Efforts should be made to at least, sustain (if not to improve) the degree of success in the implementation of child health care programmes (i.e. malaria control and immunization) while factors that accounted for the failure of other programmes like provision of food supplements should be reviewed to help improve child health care delivery in the future. Table 4.18 shows the types of health programmes provided to respondents.

Table 4.18: Type of Health Programmes/Assistance provided to Respondents

No	**Programme/Assistance**	**Nanumba North**		**Tamale**		**'otal**	
		Freq	%	Freq	%	Freq.	%
1.	Free Malaria drugs	34	34.0	28	27.7	62	26.9
2.	Immunisation	46	46.0	51	50.6	97	38.8
3.	Distribution of ITNs	13	13.0	18	17.8	31	16.9
4.	Food Supplements e.g. Vitamin A	7	7.0	4	3.9	11	11.3
	Total	**100**	**100.0**	**101**	**100.0**	**201**	**100.0**

Source: Field Survey, April 2013.

4.7.2 Period within which child health care programmes were accessed

The researcher wanted to determine the years the respondents had accessed child health programmes for their children. About 47.8 percent of the respondents said they have benefited from child health programmes for less than a year, 22 percent acknowledged benefitting from child health programmes between 1-3 years. Again 14.4 percent of the respondents confirmed receiving child health programmes between 4-6 years and 15.8

percent confirmed having received child health programmes from 6 years above (Table 4.19). All the respondents confirmed benefitting from child health programmes. Table 4.19 gives information about the periods respondents have benefited from child health programmes.

The study revealed that; although child health programmes have been introduced in the study area since the year 2000, virtually all the households confirmed benefitting from child health programmes although this is not the first time of giving birth. This is because they were initially skeptical about the efficacy and efficiency of these drugs (immunisation and oral drugs for children) that were being administered under the various child health programmes. It was revealed that a child was immunised against polio and became paralysed immediately after being vaccinated. This discouraged other nursing mothers from vaccinating their children. However as a result of education and sensitization by the institution involved in the child health programmes, the fears of the women were allayed and they have now allowed their children to benefit. Table 4.19 shows the periods that households have benefited from child health programmes

Table 4.19: Periods Respondents have benefited from Child Health Programmes

Period	**Nanu ıba North**		**Ta nale**		**T ɔtal**	
	F	%	F	%	F	%
Less than a year	34	34	62	61.4	96	47.8
1-3	28	28	16	15.8	44	22.0
4-6	21	21	8	7.9	29	14.4
Above 6yrs	17	17	15	14.9	32	15.8
Total	**100**	**100**	**101**	**100.0**	**201**	**100**

Source: Field Survey, April 2013.

4.7.3 Effectiveness of Child Health Programmes Implemented

This section discusses the effectiveness of child health programmes carried out in the study area. The criteria used in assessing the effectiveness of the programmes included:

- The views of respondents on the effectiveness of the programmes,
- The coverage of the programmes; and

- A trend analysis of morbidity and mortality rates in the study area.

Views of Respondents on the effectiveness of the Child Health programmes

Though this variable used for assessing the effectiveness of the programmes is very subjective, however, it is important to note that the outlooks of beneficiaries on the effectiveness of the programmes cannot be completely discounted. Hence from the survey, households were asked about the effectiveness of child health programmes on their children. About 58.5 percent of the households said that child health programmes have helped protect their children against childhood killer diseases such as tetanus, cholera, polio, etc whilst 29 percent (Figure 4.2) affirmed that child health programmes have protected their children against malaria through the use of ITNs with the rest affirming that the sensitization carried out by the institutions have helped to demystify the superstitions that they previously held that diseases were spiritually caused.

The survey revealed that before the introduction of child health programmes in the study area about 13 years ago, the people attributed childhood diseases such as polio to supernatural causes. However, through sensitization this notion has been reduced and households have come to accept that these diseases are normal, and as a result, an antidote can be found for these diseases. Thus, 12.5 percent of the respondents agreed that, child health programmes have helped reduced their superstition on certain kind of diseases (See Figure 4.2).

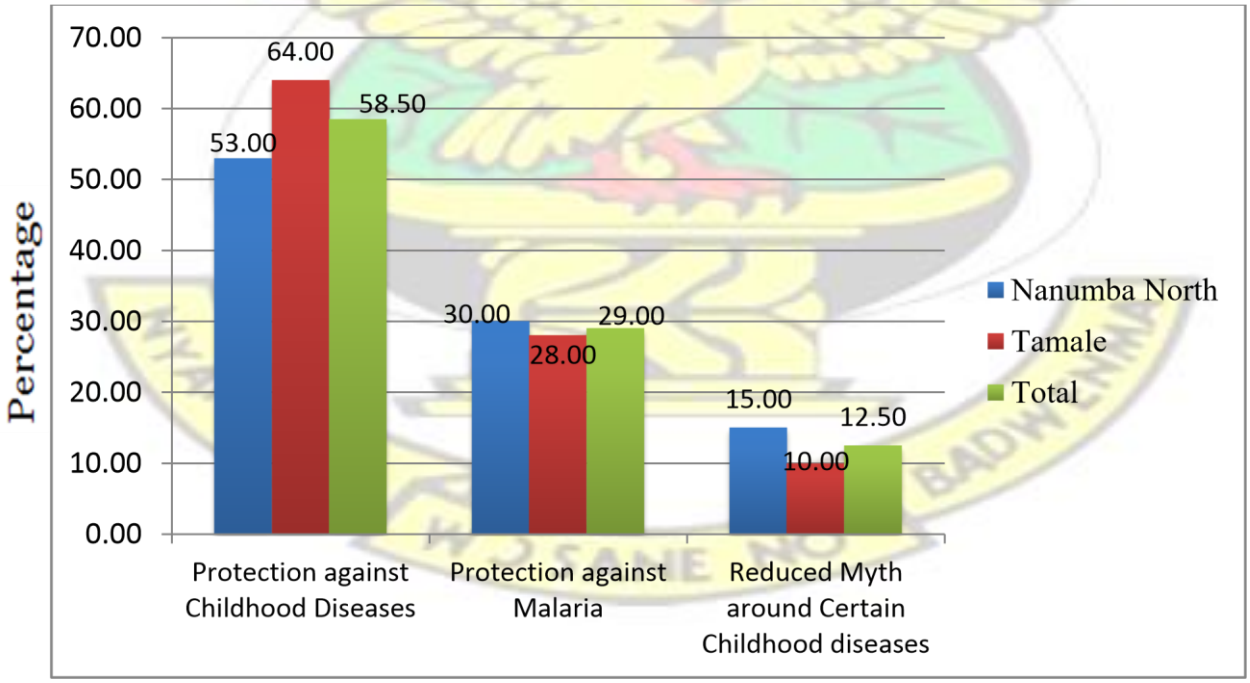

Figure 4.2: Views of Respondents on Effectiveness of Child Health Programmes in percentage

Source: Field Survey, April 2013.

- **Coverage of the Child Health Programmes in the Study Area**

From the survey, it was shown that most of the programmes were implemented to cover all the communities in the study area, particularly those carried out by the Metropolitan/District Health Service and UNICEF. For instance, the target for malaria prevention/treatment was 100 percent coverage in the form of distribution of Insecticide Treated Nets (ITNs) and distribution of drugs. It was only those programmes undertaken by YARO that targeted some few selected communities.

Moreover, the child health programmes covered all communities within the two districts, however, due to funding challenges some of the programmes could not be implemented to full scale. Again, the study area is dominated by Muslims, and their religion prevents them from engaging in certain habits such as receiving food supplements. As a result, about 80 percent of the respondents rejected the food supplements they were given despite the intense sensitization that was carried out. This calls for further education of the people in the study areas to diffuse the religious misconceptions held about the food supplement programme and other future programmes that are likely to be kicked against on purely religious grounds but without scientific basis.

- A trend analysis of morbidity and mortality rates over the programmes‟ implementation period in the study area

Another useful approach in determining the effectiveness of the programme is to conduct a trend analysis of the mortality and morbidity rates to see whether there has been a decline or not after the inception of these child health programmes.

From Table 4.20, it is evident that there has been a constant decline in under five mortality rate per 1000 live births in both study areas. For instance in Tamale, the under 5 mortality rate per thousand live births declined from 49 in 2009 to 45 in 2010 and further saw a decline to 38 in 2011, and finally dropped to 19 in 2013. A similar decline also occurred in Nanumba over the same period even though under 5 mortality rate is worse in Nanumba compared to Tamale. Additionally, reported malaria cases in Tamale have over five years dropped from 43,218 to 8,346 between 2009 and 2013. Similarly in Nanumba North, there has been a sharp decline of reported malaria cases of 19,307 to 7,418 between the same period of 2009 and 2013. These two districts compare favourably to some of the districts like Bole, Zabzugu Tatale, Central

and West Gonja, all in the Northern region. Notwithstanding, the declining trend in under five mortality rates and malaria cases in the two districts which to a larger extent shows the performance of the programmes is also manifested in the Northern Region as the region has also seen improvement in terms of reduction of malaria and under five mortality cases. This was revealed by the Tamale Metropolitan Health Directorate (2013) that the region though saw an increase in under five mortality from 221 in 2009 to 237 in 2010, but dropped to 171 in 2011, then dropped again to 154 in 2011 and finally to 137 in 2013 (See Table 4.20). This implies the need for continuous and concerted efforts by all the relevant health bodies to ensure the steady decline in the prevalence of under-five mortality and malaria to the barest minimum in the study areas.

Table 4.20: Reported Malaria Cases and Under 5 Mortality rate per 1,000 live births between 2009 and 2013

District	Under 5 mortality rate per 1,000 live births					Reported Malaria cases				
	2009	2010	2011	2012	2013	2009	2010	2011	2012	2013
Tamale	49	45	38	26	19	43,218	40,608	37,114	12,413	8,346
Nanumba North	56	51	43	34	22	19,307	16,911	26,406	10,211	7,418
Total	105	96	81	60	41	62,525	57,519	63,520	22,624	15,764

Source: Adapted from NDPC APR (2013) and Tamale Metropolitan and Nanumba North Districts (Health Directorate, 2013).

Conclusion on the effectiveness of the child health programmes in the study area

By and large, it could be seen from the trend analysis that there has been a decline in underfive mortality rate per 1000 live births and reported malaria cases in the study area. That is; within five years, the aggregate of under-five mortality for the two districts reduced from 105 to 41 representing a decline of 61 percent and malaria prevalence dropped from 62,525 to 15,764 representing a decline of 74.8 percent. This implies that, the child health programmes implemented in the study area have yielded positive results. This fact could be further established by the views of the women on the effectiveness of the programmes. Thus, as shown in Figure 4.2, 58.5 percent and 29 percent of the women believed that the child health care

programmes implemented in the study areas have helped to protect their children from childhood diseases and malaria respectively. Again, 12.5 percent intimated that, the programmes have helped demystify the belief which they previously had that most of the childhood diseases were spiritually caused.

4.8 Challenges of Child Health Programme in the Study Area

Child health programmes implemented in the study area faces many challenges and these include:

4.8.1 Low Level of Cooperation among Stakeholders

The survey showed that several institution/organisations are involved in the implementation of child health programmes in the study area. As mentioned earlier, the institutions include: the GHS, multi-lateral bodies such as UNICEF and NGOs. According to the District Health Directorates of both study areas, one major challenge that hinders the success of healthcare delivery in the areas understudy is the lack of or low level of collaboration among the various health stakeholders although they have similar goals and objectives. While co-operation can be in the form of information sharing, and combination of resources and efforts to combat ailments, each institution prefers to work individually and this sometimes leads to duplication of efforts and tasks.

4.8.2 Funding

One major challenge that affects child healthcare programmes in the study area is funding. In most cases, actual funds allocated for such programmes are far below their budgeted amounts which seriously stifle the full-scale implementation of child healthcare programmes, particularly those carried out by the Metropolitan/District Health Directorate.

4.8.3 Physical Accessibility to Health Facilities

The nature of the settlement is dispersed and with the exception of Tamale Metropolis and Bimbilla, all the other settlements are dispersed. Notwithstanding, the existing health facilities are within acceptable range of 16km radius as provided by planning standards (Maple Consult and CersGis, 2010). Meanwhile, due to the poor nature of roads in the study areas, particularly in Nanumba North, the people have physical accessibility challenges. In particular, pregnant and nursing mothers are the hardest hit, as they find it very difficult to walk or travel by bicycles or motorcycles, which are the commonest travel modes in the study areas. It was therefore found that, accessing healthcare by the women was a challenge.

4.8.4 Acceptability and Participation of Community Members

Socio-cultural factors also impedes the administration of health care especially child health programmes. The area is predominantly Muslim and or traditionalists who by their faith do not believe in the efficacy of western orthodox type of medicine. As a result, the achievement of some of the child health programmes, for example giving of food supplement to combat child malnutrition achieved only 10 percent and 5 percent successes in the Tamale and Nanumba North Districts respectively. Hence, religion and belief system tend to affect the implementation of some of the child health programmes, which ultimately makes it very difficult to achieve set targets and goals of child health programmes.

CHAPTER FIVE SUMMARY OF FINDINGS, RECOMMENDATION AND CONCLUSION

5.1 Introduction

This Chapter presents the summary of the research findings, recommendations and conclusion of the study.

5.2 Summary of Findings

This section discusses the summary of findings from the study based on the objectives of the study.

5.2.1 Acceptability and Participation in Child Health Programmes

The study showed that, though child health programmes in the study area have been accepted by some of the people, others have been repugnant to them due to low educational level and socio-cultural beliefs and practices. The low educational background of the respondents for instance, has partly kept some entrenched belief that, the main cause of diseases is spiritual which makes quite a number of them resort to traditional health service or combine both traditional and orthodox medicines. Related to this low educational level is high unemployment status of the respondents. The study revealed that, about 51.2 per cent of the women are not in any form of employment. In a typical Muslim community as the study area is, women are not allowed to work as it‟s culturally deemed irresponsible for a man to allow his wife to work. Though, factors such as education and modernity have generally eradicated some of these perceptions yet, the perception is still alive in some parts of the study area especially in the rural areas. This accounts for the high unemployment rate among women in the study area.

Additionally, it was found that some of the child health care programmes such as food supplements were to a larger extent not accepted basically due to religious reasons. For instance, some of the Muslim husbands expressed their resentment towards these programmes by restraining their wives and children from partaking in immunization and food supplement. The study therefore identifies cultural and religious factors as among the many challenges that make it difficult to achieve the set targets, goals and objectives of child health programmes in the study areas.

5.2.2 Types of Child Health Care Programmes Introduced in the Study Area

Many child health programmes have been introduced in the study area. These programmes were introduced by Ghana Health Service as well as UNICEF and YARO, a non- governmental organisation. The child health programmes introduced were immunisation, nutrition/food supplement provision, malaria treatment and prevention. Though these programmes covered all the communities within the two districts, the nutrition and food supplement programme was not successful as it only achieved 10 percent and 5 percent success in the Tamale and Nanumba North respectively due partly to cultural factors. The challenge of funding also affected the implementation of the programmes.

5.2.3 Low Level of Cooperation among Stakeholders

There are many institution/organisations that are involved in the implementation of child health programmes in the study area. Some of these stakeholders are the GHS, International NGOs such as UNICEF and NGOs. However, there is little co-operation among these stakeholders although they have similar goals and objectives. Co-operation, in the form of information sharing and combination of resources was absent. This sometimes leads to duplication of efforts and tasks.

5.2.4 Access to Health Facilities and Services (Physical and economic accessibility)

Generally, the nature of the settlements in the study area is dispersed. However, the existing health facilities were found to be within acceptable ranges of 16km radius as provided by planning standards (Maple Consult and CersGis, 2010). Meanwhile, due to the poor nature of roads in the study areas, particularly in the Nanumba North, the people have physical accessibility challenges. As a result, accessing healthcare by the women was a challenge.

Also, the study revealed that income levels in the study area are relatively low. Thus, a social intervention programme like NHIS could have provided enormous health care assistance to the people. However, 46.8 percent have not subscribed to the scheme. Consequently, the cash-and-carry system which is rather expensive is widely used in the study area even though they are poor.

5.2.5 Challenges of Child Health Care Programmes‟ Implementation

The major challenge that was identified to impede the implementation of child health care programmes in the study areas was funding. In that, budgeted amounts needed to carry out child health care programmes in the study areas always fell short and as a result, the responsible health directorates were unable to meet their targeted coverage. In other words, the regular shortfalls in the budget of the Metropolitan/District Health Directorate seriously stifled the full-scale implementation of child healthcare programmes in the Tamale Metropolis and the Nanumba North District.

5.3 Recommendations

The focus of this section is to make policy recommendations that would enhance the effectiveness of child health care programmes in the study area. Some possible policy interventions that could help improve child health care in the study area include the following:

5.3.1 Partner with District Assemblies to construct more CHPS compounds to scale up Health Facilities and services in the Study Area.

CHPS Compounds in the study area have been one of the major pillars of health delivery in the study area. About 53 percent of the respondents travel 4-10km in order to access healthcare for their children. CHPS compounds are very basic health facilities and should therefore not go beyond 4km range unlike higher order services like hospitals. It is recommended that the GHS lobby with the stakeholders such as DA and UNICEF to liaise with the communities to construct more CHPS Compound to augment the existing ones, especially in the Nanumba North District. This will greatly help in reducing the long distances that people commute in order to access child health care.

5.3.2 Strengthening collaborative links with all stakeholders

There is a weak collaboration between the various stakeholders in the provision of child health care in the district. It is therefore important that the various child health care stakeholders including the GHS, District Assemblies, Hospitals, and NGOs among others work closely in delivering child healthcare in the study areas. The respective Health Directorates in the study areas should play the lead role in fostering the suggested collaboration. This will help in information sharing, monitoring and evaluation of health cases. This will go a long way in improving health care delivery in the study areas.

5.3.3 Intensify Education and Sensitisation of the Households

All the various institutions involved in the delivery of child health care programmes in the study areas, especially the GHS and District Health Directorates should frequently embark on rigorous sensitization programmes with focus on the rural areas about the importance of child health programmes. Although many households have come to accept child health programmes, some of the households still view the programmes with scepticism. This makes it very difficult for them to accept child health programmes in the study area. With frequent interactions with the people, the health professionals involved will help in addressing the fears and worries that the people have about such child health programmes. This will help increase the acceptance level of the programmes.

5.4 Conclusion

The study has shown that, various child health programmes including malaria prevention, immunization and food supplement have been implemented within the Nanumba North District and Tamale Metropolis. These programmes have helped in providing health care to the children of the people in the two areas. It was realised that, both Government and NonGovernmental Organisations were involved in the delivery of child health programmes in the study areas. These institutions included the District/Metropolitan Health Directorate, UNICEF and YARO. These programmes, especially immunization and malaria prevention achieved higher coverage. Notwithstanding, the programmes were faced with funding challenges, especially programmes carried out by the Health Directorate of the study areas. Moreover, low education and cultural beliefs affected the way some households received the programmes. Also, physical accessibility to the health facilities was found to be a challenge. It was recommended that more CHPS compounds should be constructed at strategic points to augment the existing health facilities; and continuous sensitization of households to readily accept the programmes.

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A. Appendix I Sample Size Computation

Population	Population (2000)	Population (2012) projected	Women
Tamale	224,075	447,256	146,902
Nanumba North District	88,910	122,925	55,868
Total	312,985	570,208	202,770

Source: Author"s Construct from Population and Housing Census, (2000).

Nanumba North District

N=55,868

$$n = \frac{55868}{1+55868(0.1)^2}$$

n= 100

Tamale Municipal

N=146,902

$$n = \frac{146902}{1+146075(0.1)^2}$$

n=101

DEPARTMENT OF PLANNING

COLLEGE OF ARCHITECTURE AND PLANNING

KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY

This research is to solicit for relevant empirical data for the completion of an academic exercise on the subject "Child health programmes in Nanumba North district and Tamale Metropolitan area, Achievements' for the award of a Masters' of Science degree in Development Policy and Planning from the Department of Planning, KNUST. Your cooperation is very much anticipated since data collected will be treated with complete confidentiality.

Ghana Health Services SECTION A

1. **Position of respondent**.....
2. **Level of Education**……..
3. **Name of institution**.....
4. **Name of Metropolis/District** .....
5. **Vision of the institution**

i. …… ii.

…… iii.

…… iv.

……

6. **Mission of the institution**

i. …….. ii.

……. iii.

……

iv. ……

8. What child health care programmes have been implemented in the District/Metropolis since the year 2000?

A. Roll Back Malaria B. Vitamin A Supplement C. Use of SP D. Health Education

Week E. Other please specify……

SECTION B

9. What are the incidences of childhood diseases in the Metropolis/District?

……

……

……

10. What is the childhood morbidity and mortality rate in the Metropolis/District?

……

……

11. What strategies are being instituted to achieve MDG4 (reducing child and infant mortality)

……

……

……..

12. Mention the child health care programmes your institution has supported or implemented since the year 2000 to date

No.	**Name of programmes**	**Period (Duration)**		**Target communities**	**Level of Patronage**	**Community perception (remarks)**
		From	**To**			
1	Malaria Prevention/Treatment					
2	Nutrition					
3	Immunization					
4	Excessive Breastfeeding					
5	Healthy Child Promotion Week					
6	Other(s) Specify…….					

13. What are the goals of these programmes in the District/Metropolis?

.....

.

.....

.....

14. What are the objectives of these programmes in the District/Metropolis?

.....

.....

.....

15. What strategies were put in place to ensure that it is implemented successfully?

.....

.....

.....

16. Which part of the District/Metropolis does the programme(s) cover? A. The whole area B. Selected communities

17. If some communities were selected, why?

18. Why did your outfit select these communities?

A. Piloting the programme B. Inadequate funds C. Difficulty assessing the area D. Others, please specify.....

19. Does your outfit have any plans put in place to cover the areas which are not covered?

A. Yes ☐ B. No

20. Programme Targets/Achievement

Programme	Target Set	Coverage	Achievement	Challenges
Malaria Prevention/Treatment				
Nutrition				
Immunization				
Excessive Breastfeeding				
Healthy Child Promotion Week				
Other(s) Specify…….				

21. What is the cost of service for treatment of childhood diseases in your area of jurisdiction?

……

……

……

22. Which institutions do you collaborate with in the implementation of child health programmes?

……

……

……

23. Please provide an inventory of staff/ logistics of this outfit in the tables below. Table 10A: Staff Strength

Staff Type	Number Available	Number Required	Remarks

Table 10B: Logistics

Logistics Type	Number Available	Number Required	Remarks

24. Budgeting

Programme	Amount Budgeted	Amount Received	Percentage	Remarks

Malaria Prevention/Treatment				
Nutrition				
Immunization				
Excessive Breastfeeding				
Healthy Child Promotion Week				
Other(s) please specify…….				

25. What are the sources of funds for these programme(s)

Programme	Source of Funding IGF, GHS, DACF, Donor support, Other (s) specify..... Pls tick appropriately	Percentage of each of the source of funds received for each programme.	Cost of Services	Gaps
Malaria Prevention/Treatment				
Nutrition				
Immunization				
Excessive Breastfeeding				
Healthy Child Promotion Week				
Other(s) please specify…….				

26. In what ways did communities participate in the programmes stated above?

No.	Programme	How did the community participate	Level of impact of participation on the programme

1	Malaria Prevention/Treatment		
2	Nutrition		
3	Immunization		
4	Excessive Breastfeeding		
5	Healthy Child Promotion Week		
6	Other(s) please specify…….		

27. Please, in your opinion how will you describe the perception of the people at the programmes.

No.	**Programmes**	**Remarks on communities perception of the programmes**
1	Malaria Prevention/Treatment	
2	Nutrition	
3	Immunization	
4	Excessive Breastfeeding	
5	Healthy Child Promotion Week	
6	Other(s) please specify…….	

28. The challenges of implementation and management of the child health care programmes**.**

No.	**Programmes**	**Challenges of implementation of programmes**

Malaria Prevention/Treatment		
Nutrition		
Immunization		
Excessive Breastfeeding		
Healthy Child Promotion Week		
Other(s) please specify…….		

Please recommend policy directions to promote each of child health care programmes

1).....
i.....
ii.....
iii.....
iv.....
v.....

2).....
i.....
ii.....
iii.....
iv.....
v.....

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Thank you

DEPARTMENT OF PLANNING

COLLEGE OF ARCHITECTURE AND PLANNING

KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY

This research is to solicit for relevant empirical data for the completion of an academic exercise on the subject "Child health programmes in Nanumba North district and Tamale Metropolitan area, Achievements' for the award of a Masters' of Science degree in Development Policy and Planning from the Department of Planning, KNUST. Your cooperation is very much anticipated since data collected will be treated with complete confidentiality.

Name of Community ……

SECTION A: SOCIO DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS

1. Age of respondent.....
2. Sex of respondent a) Male b) Female
3. Educational level attained by respondent a) Primary b) JHS c) SHS d) Voc/Tech e) Tertiary f) Never
4. Marital status

A. married B. single C. Consensual union D. Widowed E. Divorced E. others specify……

5. Number of children of the respondents

A. 1-2 B. 3-4 C. 5-6 D. 7-10 E. Others specify

6. Age of the first child

A. under 1 year B. 1-5yrs C. 6-10yrs D. Others specify

7. Employment status

A. Employed B. Unemployed

8. Sector of employment

A. Agriculture specify……..
B. Industrial specify……..

C. Service specify …….

E. Public service specify…….

F. others specify……..

SECTION B

A. Programmes that have been implemented;

1. Have you taken your child (ren) to any health facility since they were born?

[ ] YES

[ ] NO

2. What type of health care service do you access to your children?

[ ] orthodox health service

[ ] traditional health service

[ ] combination of orthodox and traditional health care services

3. Are the services available when you want to access health care?

A Yes, B No

4. What is the distance between your residence and the health facility?

A. 1-3km B. 4-6km C. 7-10km D. 11-14km 5. Others please specify…….

5. How do you travel to the health facility when you want to access health care?

A. lorry B. foot C. bicycle D. Others specify……..

5. How do you consider the health services you receive from the health facility where you visited?

A. very satisfied B. Satisfied C. Not satisfied

6. Treatment of childhood diseases in the Metropolis/District?

Programme	Type of Help Received (ITN, Vitamin A supplement, health education, Immunization, giving of food supplement, sex education, distribution of condoms, others) Please state as applied in each case.	Number of Times (once a year, every six months, annually, others)	Challenges associated with each programme
Malaria Prevention/Treatment			
Nutrition Immunization			
Excessive Breastfeeding			
Healthy Child Promotion Week			
Other(s) Specify…….			

If traditional answer questions 3 to 7

7. What is/are your reasons for accessing traditional health services for your child (ren)?

Tick as many responds as possible in question.....

[ ] cannot afford other types of health services

[ ] reliable

[ ] it has easy physical accessibility

[ ] cultural reasons

[ ] relatively cheaper than others

Others please

specify.....

.....

.....

.....

8. How often do you send the child (ren) for medical care?

[ ] weekly

[ ] monthly

[ ] every six months

[ ] annually

[ ] when there are emergencies

9. Do you pay for traditional health services for your child (ren)?

[ ] YES

[ ] NO

10. If YES, what is the average amount of money that you pay at the end of

Every visit? ……..

11. What is the average number of times you visit the facility in a year?

[ ] below 5 times

[ ] between 5 to 10 times

[ ] between 10 to 30 times

[ ] above 30 times

If orthodox medicine, answer 8 to.....

12. What is/are your reasons for accessing orthodox medicine for your child (ren)?

Tick as many responds as possible in question.....

[ ] cannot afford other types of health services

[ ] reliable

[ ] easy physical accessibility

[ ] cultural reasons

[ ] relatively cheaper than others

[ ] can access with National Health Insurance

Others, please

specify……

……

……

……

13. How often do you send the child (ren) for medical care?

[ ] weekly

[ ] monthly

[ ] every six months

[ ] annually

[ ] when there are emergencies

14. Which type of health service provider do you patronize the services for your child (ren)

[ ] Private providers

[ ] Public providers

[ ] Both private and public providers

15. If your respond is private providers in question 10, which type are you able to provide for the children? [ ] Hospitals

[ ] Clinics

[ ] CHPS Compound

[ ] Mobile health services

[ ] Drug stores/pharmacy shops

16. Do you have health insurance that covers your child (ren)?

[ ] YES

[ ] NO

17.If NO, do you pay for accessing health care for your child (ren)

[ ] YES

[ ] NO

18. What is the average amount you pay at every visit? GH ₵.....

19. Have you received any child health care assistance for your child (ren)?

[ ] YES

[ ] NO

20. If YES, who provided the assistance?

[ ] Government

[ ] Non Governmental Organizations

[ ] Community Based Organizations [ ]

Private individuals like Philanthropists

21. What type of health service assistance?

[ ] preventive

[ ] curative

[ ] Rehabilitative

22. What particular disease or sickness was assistance given?

[ ] Malaria

[ ] Diahoerroea

[ ] Respiratory

[ ] Anaemia

[ ] cholera

[ ] All sicknesses/diseases

23. What type of assistance did you received from the provider?

[ ] Free medicine

[ ] Mosquito nets

[ ] Food supplements

[ ] Capacity building workshops/seminars on child health care

24. How long have you received the assistance?

[ ] Less than a year

[ ] Between 1-3 years

[ ] Between 3-5 years

[ ] Above five years

25. Has the assistance improved the health conditions of your child (ren)?

[ ] YES

[ ] NO.

26. If yes, how has the programme(s) improved the health situation of your child (ren)?

.....

.....

.....

.....

.....

27. If no, give reasons

.....

.....

.....

.....

.....

28. What problems are encountered in accessing child health care in the Metropolis/District?

1) .....

.....

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.....

.....

2) .....

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3) .....

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4) .....

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29. What in your opinion should be done to improve child health care?

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Thank you

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Private Health Care Providers/NGO's SECTION A

1. Position of respondent.....

2. Level of Education of respondent

3. Name of institution.....

4. Name of District.....

5. Vision of the institution

i.....

ii.....

iii.....

6. **Mission of the institution**

i.....

ii.....

iii.....

iv.....

v.....

7. What is the role of this outfit in health provision in the District/Metropolis?

.....

.....

.....

.....

8. Does this outfit have specific programmes that target children?

A. Yes ☐ B. No ☐

SECTION B

1. If yes, what are they?

   a. Maternal and Child Health programmes B. Oral health and eye care programmes C. Poliomyelitis D. Tuberculosis E. Guinea Worm D. Others please specify……

2. Mention the child health care programmes your institution has supported or implemented since the year 2000 to date

No.	Name of programmes	Period (Duration)		Target communities	Community perception (remarks)
		From	To		
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

3. What are the goals of these programmes in the District/Metropolis?

.....

.....

.....

4. What are the objectives of these programmes in the District/Metropolis?

.....

.....

.....

5. What strategies were put in place to ensure the successful implementation of the programmes?

a. Promoting the consumption of iodised salt in all households
b. Institution of community base growth promoters
c. Formation of mother to mother support groups
d. Providing Vitamin A Supplementation for children 6 – 59 months and postpartum mothers
e. Others please specify

6. Which part of the District/Metropolis does the programme(s) cover? B. The whole area B. Selected communities
7. If some communities were selected, why?
8. Why did your outfit select these communities?

B. Piloting the programme B. Inadequate funds C. Difficulty assessing the area D. Others please specify.....

9. Do your outfit have any plans put in place to cover the areas which are not covered? B. Yes ☐ B. No ☐
10. Please provide an inventory of staff/ logistics of this outfit in the tables below. Table 10A: Staff Strength

Staff Type	Number Available	Number Required	Remarks

Table 10B: Logistics

Logistics Type	Number Available	Number Required	Remarks

11. What are the cost of services of these programme(s)

Programme	Sources of funding	Costs of services	Gaps

12. In what ways did communities participated in the programmes stated above?

No.	Programme/Project	The extent of community participation	Level of impact of participation on the programme
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

13. Please, in your opinion how will you describe the perception of the people in respect to the programmes?

No.	Programmes Project	Remarks on communities perception of the programmes
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

14. Does this outfit undertake its programmes in collaboration with other institutions? A. Yes ☐ B. No

15. If yes, which institutions?

……

……

……

……

16. The challenges of implementation and management of the child health care programmes**.**

No.	**Programmes**	**Challenges of implementation of programmes**
1		
2		
3		
4		
5		
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Please recommend policy directions to promote each of the child health care programmes

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Thank you