

**THE IMPACT OF POVERTY ON THE HEALTH OF RURAL COMMUNITIES  
IN GHANA: A CASE STUDY OF THE AMANSIE WEST DISTRICT, ASHANTI  
REGION**

**BY**

**PRINCE OSEI-WUSU ADJEI B.A (HONS)**

**A THESIS SUBMITTED TO THE DEPARTMENT OF GEOGRAPHY AND  
RURAL DEVELOPMENT, KWAME NKRUMAH UNIVERSITY OF SCIENCE  
AND TECHNOLOGY IN PARTIAL FULFILMENT OF THE REQUIREMENT**

**FOR THE DEGREE OF**

**DOCTOR OF PHILOSOPHY**

**FACULTY OF SOCIAL SCIENCES, COLLEGE OF ART AND SOCIAL  
SCIENCES**

**FEBRUARY, 2008**

© 2008, Department of Geography and Rural Development

## CERTIFICATION

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

Prince Osei-Wusu Adjei .....

(Student's Name)

Signature

Date

Certified by:

Prof. Dr. Dr. Daniel Buor .....

(Lead Supervisor)

Signature

Date

Dr. Peter Ohene Kyei .....

(Co-supervisor)

Signature

Date

Dr. (Mrs.) Eva Tagoe-Darko .....

(Head of Department)

Signature

Date

## **ABSTRACT**

Many rural Ghanaian communities are saddled with major social problems that undermine efforts towards rural development in the country. In the Amansie West District, poverty and ill health are major problems that militate against many households in the rural communities. However, the impact of poverty on health among households in the District has attracted little concern over the years. The survey analyses the poverty situation and how poverty impacts ill health in the rural communities in the District. Hypotheses tested were that, poverty is the root cause of poor health; and that, adequate income and knowledge ensure better health for the rural communities of the Amansie West District. Focus group discussions, participant observation, questionnaires and in-depth interviews were the methods employed for data collection from a sample of three hundred and six (306) heads of household randomly selected from deprived rural communities for a thorough analysis of the relationship between poverty and health in the District. Relevant data obtained were analyzed using both qualitative and quantitative methods. Percentage and frequency charts, cross tabulation and multivariate regression using the Statistical Package for Social Sciences (SPSS) were the methods used to analyse the data. The results from the study clearly justified the hypotheses set for the study. Poverty was found to be the major cause of poor health. Respondents with adequate income experience relatively better health conditions in the rural communities in the District. Further, majority of the low income earners within the rural communities either do not often or not at all use the very few healthcare facilities available in the District because of inability to pay for the service cost. Generally, poverty was found to have a significant influence on some of the highly prevalent diseases in the rural

communities in the District which included malaria, whooping cough, skin and diarrhoeal diseases, measles and intestinal disorders. It is concluded that any strategy or recommendation aimed at tackling poverty and health decay in the rural communities in the Amansie West District needs to focus on equipping the poor households with adequate and regular income as well as adequate level of health education. These could be achieved through the introduction of mechanized farming practices, effective implementation of government's youth employment programme (YEP), intensification of rural community health education, extension of village infrastructure projects and promotion of the national health insurance scheme. With adequate and regular income coupled with adequate health education, the poor would be able to satisfy their basic needs to improve their quality of life and health conditions very significantly. The difficulty in quantifying some of the poverty indicators such as hygiene using conventional measuring tools was an analysis problem which was corrected by the use of the qualitative approach. The study has provided a framework for the study of the linkages between poverty and health with both qualitative and quantitative methodologies which, in some cases, were often studied independent of each other. It has further provided a philosophical base for defining and measuring poverty. It is recommended that further research be directed to examine factors other than poverty which affect rural health for a holistic strategy to reduce health decay in rural Ghana. The key methodological innovations for the study included the use of both income and knowledge poverty in relation to health, the relationship established between the indirect effects of poverty and health and the use of both qualitative and quantitative techniques in analyzing poverty and health.

## TABLE OF CONTENTS

Title page.....	i
Certification page.....	ii
Abstract.....	iii
Table of content.....	v
List of tables and Boxes.....	x
List of figures and Plates.....	xii
Acronyms.....	xiv
Dedication.....	xvi
Acknowledgement.....	xvii

### CHAPTER ONE

1.0 OVERVIEW OF THE STUDY.....	1
1.1 Introduction.....	1
1.2 Statement of the problem.....	10
1.3 Research questions .....	14
1.4 Objectives of the survey.....	15
1.5 Conceptual framework.....	15
1.6 Hypotheses.....	19
1.7 Survey methods .....	19
1.7.1 Survey design.....	19
1.7.2 Data collection and analysis.....	20
1.7.2.1 The variables (type of data).....	20

1.7.2.2 Sample design.....	22
1.7.2.3 Data collection.....	24
1.8.2.4 Data analysis.....	26
<b>1.8 Limitations of the survey.....</b>	<b>29</b>
 <b>CHAPTER TWO</b>	
<b>2.0 REVIEW OF RELATED LITERATURE.....</b>	<b>31</b>
<b>2.1 Introduction.....</b>	<b>31</b>
<b>2.2 Definitions and measurement of poverty.....</b>	<b>32</b>
2.2.1 Concept and Definitions of Poverty.....	32
2.2.2 Measurement of Poverty.....	37
2.2.2.1 The absolute approach.....	38
2.2.2.2 The relative approach.....	49
2.2.2.3 The subjective approach.....	41
<b>2.3 Causes of poverty.....</b>	<b>43</b>
<b>2.4 Poverty trends and situation in Ghana.....</b>	<b>45</b>
<b>2.5 Definitions of health.....</b>	<b>49</b>
<b>2.6 Determinants of health.....</b>	<b>50</b>
2.6.1 Nutrition and Health.....	51
2.6.2 Hygiene and Health.....	53
2.6.3 Education and Health.....	53
2.6.4 Access and Utilization of Healthcare Facility.....	55
2.6.5 Housing and Health.....	57
2.6.6 Stress and Health.....	59

2.7 Measuring health.....	60
2.8 Relationship between poverty and health.....	62
2.9 Observations from the literature review.....	69
<b>CHAPTER THREE</b>	
3.0 PROFILE OF THE AMANSIE WEST DISTRICT .....	71
3.1 Introduction.....	71
3.2 Location and size.....	74
3.3 Physical feature.....	74
3.3.1 Relief and Drainage.....	74
3.3.2 Vegetation and Climate.....	75
3.3.3 Soils and Agricultural Land Use.....	77
3.4 Demographic characteristics and the built environment.....	78
3.5 Human resource development and basic social service.....	81
3.5.1 Education and Literacy .....	81
3.5.2 Health Care.....	84
3.5.3 General Health Situation.....	85
3.5.4 Water and Sanitation .....	86
3.3.5 Electricity.....	88
3.5.6 Transportation and Communication Services.....	88
3.6 Economic activities.....	90
<b>CHAPTER FOUR</b>	
4.0 POVERTY AND HEALTH IN THE RURAL COMMUNITIES.....	93
4.1 Introduction.....	93



<b>4.2 Poverty Situation in the Study Villages .....</b>	<b>94</b>
4.2.1 Perceptions of Poverty .....	94
4.2.2 Manifestations of Poverty .....	102
4.2.3 Income Dimension of Poverty .....	105
4.2.4 Educational Dimension of Poverty .....	109
<b>4.3 Health Conditions in the Study Communities.....</b>	<b>113</b>
<b>4.4 Socio-economic Status and Health Disparities.....</b>	<b>118</b>
4.4.1 Income Disparities and Health.....	118
4.4.2 Educational (Knowledge) Disparities and Health .....	124
 <b>CHAPTER FIVE</b>	
<b>5.0 LINKAGES BETWEEN POVERTY AND HEALTH.....</b>	<b>131</b>
<b>5.1 Introduction.....</b>	<b>131</b>
<b>5.2 Poverty Factors Influencing Health.....</b>	<b>132</b>
5.2.1 Poverty, Nutrition and Health.....	132
5.2.2 Poverty, Housing and Health.....	137
5.2.3 Poverty, Pollution and Health.....	141
5.2.4 Poverty, Health Education and Health.....	144
5.2.5 Poverty, Lifestyle and Health.....	146
5.2.6 Poverty, Access and Utilization of Health Care Facilities.....	154
<b>5.3 Multivariate (Regression) Analyses of Poverty and Health Relationships.....</b>	<b>160</b>
5.3.1 Poverty Indicators and Whooping Cough.....	161
5.3.2 Poverty Indicators and Malaria Prevalence.....	162



6.0 SUMMARY, CONCLUSIONS AND POLICY RECOMMENDATIONS.....	168
6.1 <b>Summary</b> .....	168
6.2 <b>Conclusions</b> .....	171
6.3 <b>Policy Recommendations</b> .....	175
REFERENCES.....	182
APPENDIX ONE.....	196
APPENDIX TWO.....	198



## LIST OF TABLES AND BOXES

### CHAPTER FOUR

Box One: Perceptions of Poverty.....	95
Box Two: Manifestation of Poverty .....	103
Table One: Influence of Income on Basic Needs .....	106
Table Two: Income Situation of Study Villages.....	108
Table Three: Education and Income Relationship.....	111
Table Four: Top Ten Diseases in Rural Amansie Communities .....	114
Table Five: Diarrhoea Prevalence and Household Monthly Income .....	121
Table Six: Whooping Cough Prevalence and Household Income.....	122

### CHAPTER FIVE

Table One: Household Monthly Income and Nutritional Status.....	133
Table Two: Knowledge about Food Nutrients and Education.....	136
Table Three: Refuse Disposal Practices .....	141
Table Four: Income Disparity and across Households Living within Polluted Surroundings.....	142
Table Five: Health Education and Income.....	145
Table Six: Correlation Coefficients for Household Size and Disease Prevalence.....	149
Table Seven: Correlation Coefficients for Addiction to Alcohol and Diseases.....	152
Table Eight: Utilization of Health Facilities across Different Income Groups.....	155
Table Nine: Income Levels and Self Medication.....	158
Table Ten: Poverty Factors Influencing Whooping Cough.....	161
Table Eleven: Poverty Factors Influencing Malaria.....	163

Table Twelve: Poverty Factors Influencing Measles Occurrence.....	166
Table Thirteen: Poverty Factors Influencing Skin Diseases.....	166
Table Fourteen: Poverty Factors Influencing Diarrhoeal Diseases.....	167

KNUST



## LIST OF FIGURES AND PLATES

### *LIST OF FIGURES*

#### CHAPTER ONE

Figure One: Cycle of Health and Poverty.....16

Figure Two: Schematic Model for Studying the Interrelationship between Poverty and  
Health .....17

#### CHAPTER THREE

Figure One: Location of the Amansie West District in National and Regional Context...72

Figure Two: Map of the Amansie West District Indication Study Villages.....73

#### CHAPTER FOUR

Figure One: Socio-economic Conditions of Villages as Perceived by Respondents.....100

Fig Two: Educational Status of Respondents.....110

Figure Three: Malaria Prevalence and Income .....120

Figure Four: Educational Levels and Malaria Prevalence.....126

Figure Five: Educational Level and Whooping Cough Prevalence.....127

Figure Six: Educational level and Diarrhoea Prevalence.....129

#### CHAPTER FIVE

Figure One: Households' Housing Conditions and Income Levels.....139

Figure Two: Pollution across Households with Different Income Levels.....144

Figure Three: Non-users of Family Planning Methods across Households with  
Different Income Levels.....148

Figure Four: Addiction to Alcohol and Income Disparities.....151

Figure Five: Depression and Income Disparity .....154

Figure Six: Relationship between Income Levels and Reasons for Non-use  
of Health Facilities .....156

Figure Seven: Reasons for the Practice of Self Medication.....159

**LIST OF PLATES**

Plate One: Household of Paulina Kromo with Nutritional Problems.....135

Plate Two: The Housing Condition of a Respondent at Korku.....138



## ACRONYMS



ACOD.....	ADVANCED CONCISE OXFORD DICTIONARY
AIDS.....	ACQUIRED IMMUNE DEFICIENCY SYNDROME
ANOVA.....	ANALYSIS OF VARIANCE
AWDA.....	AMANSIE WEST DISTRICT ADMINISTRATION
AWDP.....	AMANSIE WEST DISTRICT PROFILE
AWDPPM.....	AMANSIE WEST DISTRICT POVERTY PROFILE AND MAPPING
BMA.....	BASIC MEANS APPROACH
CHI.....	CASHPOR HOUSING INDEX
CIHI.....	CANADIAN INSTITUTE FOR HEALTH INFORMATION
CMHC.....	CANADA MORTGAGE AND HOUSING CORPORATION
CWSA.....	COMMUNITY WATER AND SANITATION AGENCY
DHMT.....	DISTRICT HEALTH MANAGEMENT TEAM
EAR.....	ENVIRONMENTAL HEALTH REPORT
GDHS.....	GHANA DEMOGRAPHIC AND HEALTH SURVEY
GLSS.....	GHANA LIVING STANDARD SURVEY
GSS.....	GHANA STATISTICAL SERVICE
IDS.....	INSTITUTE FOR DEVELOPMENT STUDIES
IFAD.....	INTERNATIONAL FUND FOR AGRICULTURAL DEVELOPMENT
KNUST.....	KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY
KVIP.....	KUMASI VENTILATED IMPROVED PIT
MOH.....	MINISTRY OF HEALTH
MWI.....	MINIMUM WAGE INDEX

NGO.....NON GOVERNMENTAL ORGANIZATION

OPD.....OUT PATIENTS DEPARTMENT

PCFA.....PER CAPITA FLOOR AREA

PHA.....PUBLIC HEALTH ALLIANCE

PHAA.....PARTICIPATORY HOUSING ASSESSMENT APPROACH

PPA.....PARTICIPATORY POVERTY ASSESSMENT

SAHR.....SOUTH AFRICAN HEALTH REPORT

SEI.....STOCKHOLM ENVIRONMENTAL INSTITUTE

SIF.....SOCIAL INVESTMENT FUND

SPSS.....STATISTICAL PACKAGE FOR SOCIAL SCIENCES

UNICEF...UNITED NATIONS INTERNATIONAL CHILDREN EMERGENCY FUND

UNO.....UNITED NATIONS ORGANIZATION

WHO.....WORLD HEALTH ORGANIZATION

WHVP.....WOMEN'S HEALTH VICTORIA PUBLICATION





## **DEDICATION**

I dedicate this piece of work to my mother, Madam Afua Pinamang, and Mr. Alex Osei

Adjei Korkor, my father.

# KNUST



## ACKNOWLEDGEMENT

I express profound gratitude to the Lord Almighty for His grace and protection which saw me through to a perfect completion of this study. I am particularly thankful to my able supervisors Prof. Dr. Daniel Buor and Dr. Peter Ohene Kyei for their invaluable contributions, motivation and guidance without which the work would not have been completed.

I sincerely appreciate efforts made by the late Prof. Kwesi Andam, former Vice Chancellor, KNUST and Prof. Ephraim, former Dean of Graduate School for their initiatives and guidance that put me on the path to this academic height. I very much appreciate the support given to me by Mr. Kwakye-Adeefe, former District Chief Executive together with the entire administration of the Amansie West District who helped to bring this work into fruition. I would not have come this far without the encouragement and prayers of Mr. Abraham Owusu and his wife both at Kwadaso Presbyterian Church. I appreciate their concern and support both spiritually and materially.

I also thank all my family members, friends and loved ones for their contributions in diverse ways to make my studies a success. I specifically appreciate the support of Grace Adwoa Amoah and Joyce Akua Acheampomaa without which I may not have reached the end of the road. The peace of God that transcends human understanding be with you all. Amen.

# KNUST



# **CHAPTER ONE**

## **1.0 OVERVIEW OF THE STUDY**

### ***1.1 INTRODUCTION***

On the eve of the 21<sup>st</sup> century, the Director General of the World Health Organization (WHO) reported that, over one billion of the world's people were cut off from the benefits of economic development and the advances in health that took place during the twentieth century. The challenges were that about one thousand three hundred million people, (20) per cent of the world's population, still lived in absolute poverty with income below US\$1 per day, and almost one-half the world's population survived on less than US\$2 per day (Sachs, 2005; WHO, 1999).

In Sub-Saharan Africa, it is estimated that almost (50) per cent of the population live in absolute poverty (Avery, 2007; Rowson, 2001; WHO, 1999). It is significant, however, to mention that the estimate of poverty incidence in sub-Saharan Africa would increase if poverty was seen beyond income poverty (Sahn and Stifel, 2002). The problem of faltering social progress is especially acute in Africa in contrast with other regions that have witnessed more sustained improvements in living standards (World Bank, 2001; UNICEF, 2000; UNO, 2000). Social exclusion, human right abuse and gender inequalities are major dimensions of poverty that deprive most people in Africa of their human dignity other than income differentials. Klasen (2000), Carter and May (2001) attribute South Africa's poverty situation to apartheid policies and its aftermath that denied equal access to education, employment, social services and resources to the black

population in the country. Poverty thus has strong racial, social and political dimensions with high concentration among African population. One could obtain a more comprehensive and accurate account on the issue of poverty when it is examined from a structural position, where not only economic (income) but other non-economic dimensions of poverty are considered as core in any poverty profile (Khan, 2005; Smeeding, 2000). Demery and Squire (1999) in a study in six African countries identified improvement in countries' macro-economic balances as means out of poverty. It was noted that many African governments are yet to display real commitment to macro-economic reforms; whereas the poorest of the poor have not yet benefited from recent growth in some African countries. Thus, the contributions of the insight into macro economic policies to poverty reduction are largely unfulfilled in Africa (Gunter, 2005).

African countries continue to grapple with widespread poverty in spite of efforts made to attack the menace it poses. The poverty situation in South Africa was captured in the inaugural speech of the South African President after ten years of abolition of the apartheid rule. In his speech he emphasized that, "endemic and widespread poverty continues to disfigure the face of our country. It will always be impossible for us to say that we have fully restored the dignity of all our people as long as this situation persists. For this reason the struggle to eradicate poverty has been and will continue to be a central part of the national efforts to build a new South Africa" (Mbeki, cited in Noble, 2004). It is imperative however to note that, within the African continent, poverty does not disfigure the face of only South Africa; many African countries and individuals within these countries live in conditions that deprive them of their human dignity. Prior to the

genocide in 1994, Rwanda was already experiencing rising poverty and inequality. Though the country is said to have come remarkably far in a relatively short time, major political and development challenges remain. Poverty remains very high, growth after an initial post-war 'bounce-back' shows signs of retarding, whilst the economy remains dominated by a largely subsistence based agriculture (Alison et. al., 2006).

The increase in poverty rate across the globe has been coupled with a correspondent increase in the incidence of diseases and deaths. Though it is difficult to make generalizations about health conditions in the Third World basically due to variations in health data from region to region, overall life-expectancy at birth is low. Tropical Africa records a life expectancy of 51 years (Feachem cited in Sindiga et. al., 2005). Mortality rate is high especially for children below five years of age. Data from the World Development Indicators show that life expectancy at birth for sub-Saharan Africa has declined over the past 15 years from 49 years in 1990 to 47 in 2005, and infant mortality rates increased in many sub-Saharan countries where poverty remains pervasive (World Bank, 2007). According to Earickson, some 14.5 million children die every year in developing countries (Earickson cited in Sindiga, 2005); while (10) per cent of all births end up in death by the first birthday and (20) per cent by the fifth birthday (Caldwell cited in Sindiga, 2005). It is emphasized that the relatively high mortality rate in Africa is as a result of parasitic infectious diseases. Diseases such as malaria, schistosomiasis, trypanosomiasis are endemic in many parts of Africa which affect productivity especially in respect of agriculture. The specific causes of morbidity and mortality are respiratory infections such as pneumonia, tuberculosis and whooping cough and water-borne

diseases such as dysentery, typhoid and cholera. With regard to the major causes of poor health conditions in Africa, Sindiga (2005) explains that, most of the Tropical African diseases are related to poor housing with little ventilation as well as sanitation; clean water supplies are often unavailable and waste disposal is a problem. As regards human waste, many people do not have pit latrines and thus help themselves in the bush. This is often collected by rain water and taken to rivers where people water their livestock and also fetch water for domestic use (Sindiga et al., 2005). The diseases that account for (50-90) per cent of illness and death among the poor in the underdeveloped world fall into two main groups. These, according to Sanders (2000), are nutritional deficiencies and communicable diseases which sometimes act separately but more often act together and aggravate each other (GHD, 2004 cf. Sanders, 2000). Thus, the high spate of mortality and morbidity in relatively less developed countries are associated with nutritional deficiencies, defective hygiene and lack of certain basic needs of life.

It has been found out that the total stock of the African debt rose from US\$61 billion in 1980 to US\$2226 billion in 1999. Similarly, diseases like the HIV/AIDS growth curve looks strangely like the debt curve (Amaizo, 2004). Whether there is a robust link between poverty and health has become an issue of global concern especially since the eve of the 21<sup>st</sup> century.

Over the years, research institutions and social scientists have delved deeply into poverty and health issues. However, in most cases, poverty and health issues are treated separately and the correlation between them is usually hidden (Peggy, 2003). In assessing the health status of any population, however, it is almost always found out that the poor



usually suffer greater mortality and morbidity than those with relatively higher socio-economic status. Few research institutions and countries are now beginning to examine the effect of poverty on the health of people, with the view of shaping policy formulation to benefit the poor and vulnerable. The WHO (1999) Report for instance, focused on the impact of poverty on health, and identified strategic measures in addressing the problem of poverty across the globe as means of ensuring health for all in the 21<sup>st</sup> century.

In some parts of sub-Saharan Africa where most of the people live below the poverty line, it has been observed that maternal mortality is one in twelve compared to one in four thousand in Europe (WHO, 1999). It is further pointed out that about (97) per cent of all infant deaths are in the developing world. The main causes of death in this group are malnutrition, diarrhoea and respiratory infections which also lead to stunting and failure to achieve mental and physical potential (WHO cited in Hubley, 2003). Mercer (2001) attributes the delay in the decline of diarrhoeal diseases, mortality among infants in contemporary developing countries to be due to more of poverty and ignorance than to failure of public- health measures to control infectious diseases. The Canadian Institute for Health Information (CIHI, 2003) issued collected papers comprising three separate parts: *The Impact of Poverty on Health*; *Policy approaches to address the impact of Poverty on Health*; and *Poverty and Health: links to action*. These papers juxtaposed poverty and health conditions among the Canadian population and identified socio-economic status as a chief determinant of health. The papers sought to design approaches and programs to tackle poverty as a measure to ameliorate the ill-health conditions of Canadians primarily living in poverty.

Studies have been undertaken in some African countries to analyze the relationship between poverty and health. In March, 2001, research papers were published on the experiences in South Africa concerning poverty and its impact on health. The findings indicated that the incidence of phthisis, lupus, acute rheumatic fever and middle ear diseases was more common among the poor than the well-to-do. The results further unearthed the geographical variations in the state of health amongst the people in the country (S.A.H.R, 2002).

Regardless of how poverty is measured, it has been identified as one of the most important risk factors to ill- health. People with annual incomes of less than US\$10,000 have been determined to have more than three times the risk of dying in a given year as those who earn US\$30,000 in some parts of the United States of America (Minkler, 1999). The implication is that poverty kills or breeds ill-health irrespective of the dimension from which it is examined. Within most African countries, there is clear evidence of regional disparities and inequality in terms of advances in development. Facilities such as good roads, health service facilities, good drinking water, high educational facilities and employment opportunities. are limited to a few urban areas. As a result of rapid population growth and urbanization under economic constraints, majority of residents in some African cities now live in overcrowded slums where health conditions and livelihood opportunities are poor (Mboup, 2003). Evidence suggests that age-old urban health problems such as acute-respiratory and gastro-intestinal infections resulting from the impact of high population density and mobility on disease transmission are exacerbated by the reproductive health consequences of urban poverty in Africa

(Mboup, 2003). Thus, unemployment, migration and urbanization have resulted in social marginalization and widespread poverty in many urban and peri-urban communities in Africa (Maxwel, 2000; Haddad, 1999). Within the West African sub-region, urban food insecurity and the dearth of research on intra-urban poverty has been recognized as major problems (Maxwell, 2000). Poverty, food insecurity and malnutrition in Africa were for some decades viewed as almost entirely a rural problem. However, by the close of the 20<sup>th</sup> century, rapid urbanization in sub-Saharan Africa had resulted in urban poverty severe enough to jeopardize livelihood, food and nutrition security (Maxwel, 2000). Urban growth has been accompanied by a host of intra-urban problems which include unemployment, underemployment, a burgeoning informal sector, deteriorating infrastructure and service delivery, overcrowding, environmental degradation and acute housing shortage which have dramatic impact on the quality of life of the people living in most urban areas in Africa.

In spite of the increasing and widespread intra-urban poverty situation in sub-Saharan Africa, rural poverty continues to pose difficult developmental challenge for many governments in the developing countries (Kakwani and Subbarao, 2005; Hellin et. al., 2005; Marter, 2005; Kydd, 2002). Masses of the population in Africa live in rural areas deprived of the benefits of socio-economic development and health advances capable of raising their well-being. Over the period 2000-2025, rural population of the developing world is projected to increase from 2.92 billion to 3.09 billion while the rural population of Africa is expected to increase from 510 to 702 million over the same period (UNO, 1998 cited in Haddad et. al., 1999). The implication is that, regardless of the phenomenal

growth of cities and increasing rural-urban migration in the developing world, the rural communities would continue to harbour a significant proportion of the population of Africa. Research has shown that about 1.2 billion people worldwide live on less than a 'standard' dollar –a-day; a category considered to be income poor. Forty-four per cent (44 per cent) are in South Asia, twenty-four (24 per cent) per cent in sub-Saharan Africa and East Asia and six and half per cent (6.5 per cent) in Latin America and the Caribbean. It is imperative to note that seventy five (75 per cent) per cent of the dollar-poor work and live in rural areas and sixty per cent (60 per cent) will continue to live in the rural areas by the year 2025 (IFAD, 2001).

Currently, majority of the population of most African countries live in rural areas. However, these communities are characterized by absolute poverty and deprivation with limited access to educational facilities, poor housing conditions, depleting natural resources, limited job opportunities, poor drinking water, unsanitary conditions, poor health and nutrition as well as inadequate health service facilities. Ghana is no exception. Generally, the standard of living of many Ghanaians is very low. The country has relatively poor infrastructural base, very low national and per capita income. More importantly, the economy of Ghana is predominantly rural. About (64) per cent of the population of Ghana live in rural areas denied of the benefits of the nation's limited resources in favour of the few urban centres chosen as growth centres (Encarta, 2004). A sharp rural- urban differential in terms of socio-economic status is evident in the development framework of the country. Rural- urban drift of the working force is thus becoming a permanent feature due to the failure of the socio-economic advances in the

few urban centres to trickle down to majority of the population living in the deprived rural areas. Absolute poverty is a common plague affecting the rural communities in general and the individuals living within them. The rural people are partly poorer because they are likely to live in remote areas, to be unhealthy and illiterate due to poor access and use of health care and educational facilities, to have higher child/adult ratios and to work in insecure and low-productivity occupation (IFAD, 2001). The Ghana living standard survey showed that rural welfare indicators have improved (GSS, 2000). However, it is worth noting that rural-urban gaps continue to be wide and not shrinking.

Rural areas in Ghana generally have less access than urban areas to safe water, adequate sanitation and health care services. As of 1997 (62 per cent) of urban inhabitants had access to adequate sanitation; whereas only (44 per cent) per cent of Ghanaians living in the rural areas had access to adequate sanitation (UNICEF, 1999 cited in IFAD, 2001). Eighty-eight (88) per cent of Ghanaians living in urban areas had access to safe drinking water; whereas only (52 per cent) of rural dwellers in the country had drinking water as of 1995 (World Bank, 1999 cited in IFAD, 2001). With regard to access to health service it was surveyed that (92 per cent) of urban inhabitants in Ghana had access to health service but only (45 per cent) of rural dwellers in Ghana had access to health service between 1985 and 1995 (UNICEF cited in IFAD, 2001). The biophysical environmental conditions and institutional arrangement of the rural communities generate conditions that do not augur well for the people to thrive healthily. The nature of the built environment creates potential environmental threats to the health of the people in the communities. Significantly too, the nature of the rural population and its over reliance on



subsistence agriculture for food supply result in widespread malnutrition (MeadCain, 1999). Poverty, social inferiority, physical weakness and health deterioration are some of the conditions that prevail in the rural areas (Quisumbing, 2003; Stryker et. al., 2003). The records on poverty in Africa particularly in the rural areas were indeed good reasons why rural poverty needed emphasis to help redirect a nation-wide attention towards rural poverty reduction and improvement in the quality of life of the rural people in Ghana. The research into how poverty impacts the health of the masses living in rural communities in the country was to guide policy makers and economic planners in resource allocation in their bid to promote rural development. The survey thus focused on the impact of poverty on the health of rural communities in Ghana, a case study of the Amansie-West District, Ashanti Region.

## ***1.2 STATEMENT OF THE PROBLEM***

One of the districts in Ghana facing socio-economic deprivation and poor health status is the Amansie West District in the Ashanti Region. The District, with 160 communities and virtually no urban characteristics, has over (80) per cent of the communities having a population of less than 1000, and with relatively poor health records (AWDA, 2004). The District has the highest prevalence of buruli ulcer in the Ashanti Region among other diseases common in the communities such as tuberculosis, malaria, diarrhoea, HIV/AIDS, cerebrospinal meningitis (CSM), cholera and measles. The reported cases of malaria in 2001 was 12, 058, which increased to 12,338 in 2002 and 11,681 new cases were reported in 2003. Cases of diarrhoea reported in 2001 were 1,250. This increased to

1,659 in 2002 and 1,098 new cases were reported in 2003. In 2002, 1,098 new cases of intestinal worms were reported (AWDA, 2003).

Beside these life threatening health conditions affecting the rural communities in the district, the socio-economic status of the entire Amansie West District and the individuals living within the district is one of deprivation. The social infrastructure in the district is poorly developed. Roads are in poor shape, and in some cases, one has to take about 25 minutes to make a journey of four kilometers. The District has virtually no communication network by phone or by post and the 160 communities have only one hospital located within the District with some other health posts. It is worth noting that, only one doctor serves the entire Amansie West District, with doctor: population ratio being 1: 144,197 (AWDP, 2004). Education and literacy level in the District is very low, with about 50 per cent of primary schools having no permanent structures. The Ministry of Education survey on performance of pupils in some selected schools in the District showed that, the mean score in English was (16.79) per cent (MOE cited in AWDP, 2004).

The low level of education significantly impacts their health. The poor level of education and ignorance deny the people the opportunity to take positive actions for health and make sound health and behavioural choices that influence their own health and that of their families and communities. These include helping people to recognize factors that influence health conditions such as beliefs, attitude, and opinions about health and health care services (WHO, 2001). Due to ignorance some women do not know the benefits of



breastfeeding and proper ways of weaning to keep children healthy (MOH, 2002; MOH, 2000). Within the District, girls as early as 12 and 13 years are forced into marriage as a result of extreme poverty which incapacitates guardians in paying their wards' school fees (AWDA, 2003). Thus, access to health care and education is very difficult in the District.

The general profile reveals a very low standard of living for majority of the population living within the District. The people survive on the traditional subsistence economy. It has been estimated that the average annual household income of the people living within the District is about US\$200 (AWDA, 2003). The District's Disease Control Officer emphasized that, "the living condition of majority of the people is very poor...When it is out of cocoa harvesting season, the income of some households is actually nil" (Interview with Mr. Ofosu, 2004).

In most rural areas in Ghana, with special emphasis on the Amansie West District, household expenditure is restricted to the provision of basic needs such as food, shelter and clothing that can keep the family surviving. Though the implementation of the school feeding programme and the capitation grant policy have increased school enrolment at the basic level, withdrawal of subsidies and cost sharing measures at second cycle and tertiary institutions make it difficult and sometimes impossible for families in the deprived communities in the Amansie West District to provide higher education for their wards (AWDA, 2005). It is significant to also mention that accessing and utilizing the few health facilities available in the Amansie West District is a major problem

particularly for the rural communities in the District. Factors identified to be responsible for the relatively poor accessibility and utilization of the health facilities in the District were geographical (physical), financial and cultural barriers which hinder easy access to and utilization of the health facilities in the District. “Most often due to poverty, ignorance and attitude towards health care services, most people visit the health centres in the district when their health conditions have completely deteriorated” (Interview with Mr. Ofosu, the District’s Disease Control Officer, 2005).

Since independence, successive governments of Ghana have made efforts to tackle some of the major problems in the rural areas such as health decay, absolute poverty, poor accessibility to health care provision and education, poor water supply and electricity as well as poor communication network to the rural areas. In spite of the attempts made, the depth of poverty and poor environmental conditions continue to deepen through time. One of the reasons for this outcome is that, much less rural-focused research has been done to systematically define the problems appropriately and offer workable approaches and programs to curb the socio-economic problems saddling the deprived communities in Ghana. As a result, the government of Ghana, as part of its development agenda, is shifting attention towards rural development in the country to raise the well-being of the poor living in the rural areas. To facilitate the achievement of this national agenda and raise concerns through the creation of awareness, research institutions and social scientists are beginning to focus on rural communities in Ghana, identifying their socio-economic problems and strategic measures to resolve them. It is against this background

that the theme of poverty and health in the rural communities was chosen as an area of concern for in-depth research and analysis.

The research thus focused on the impact of poverty on the health of rural communities in the Amansie West District which is typically rural. Impact was used in this study to imply the effect poverty has on the health conditions of households in the rural Amansie West communities. The study offered the opportunity to examine the problem from within the rural setting, involving the rural poor to properly explain their problem. The survey analyzes the main dimensions of poverty in the rural communities in the District and the extent to which they affect health and rural development. More significantly, it helps to identify appropriate approaches and programs that would guide policy formulation and unveil other avenues that need further research towards achieving rural development in Ghana.

### ***1.3 RESEARCH QUESTIONS***

The research questions focused on the individual households' background information, socio-economic status, health status and access to health care provision within the community. The questions further examined the respondents' view on poverty and its impact on health. Thus, given the dimension of the problem, the following were the research questions that emerged to serve as the basis for the objectives:

- (a) What are the characteristics of the poor in the community?
- (b) What percentage of the people living in the community has those characteristics?
- (c) What are the main causes of poverty in the community?
- (d) What are the common health problems among the poor in the community?

- (e) Which health facility do those who fall ill consult most frequently and why?
- (f) What should be done to improve the health of the poor in the community?

#### ***1.4 OBJECTIVES OF THE SURVEY***

The aim of the research is to identify the link between poverty and health in the rural areas and strategies for the improvement of health through poverty reduction. The specific objectives for the study are as follows:

- (a) To examine the poverty situation in the rural communities.
- (b) To identify common diseases and their prevalent rates in the rural areas.
- (c) Examine the linkages between poverty and health as demonstrated by the most prevalent diseases in their spatial perspectives.
- (d) Analyze how poverty impacts access to health care facilities in the rural communities.
- (e) Identify appropriate approaches to curb the increasing health decay in the rural communities through appropriate poverty reduction strategies.

#### ***1.5 CONCEPTUAL FRAMEWORK***

Impact assessment of poverty on health requires a comprehensive, comparative and policy-oriented framework which identifies the interconnections between them. Varying models have been developed separately for health and poverty alleviation in the rural areas. Figure 1 shows a cycle of poverty and health developed by Wagstaff to examine the relationship between poverty and health (Wagstaff cited in WHO, 2002).

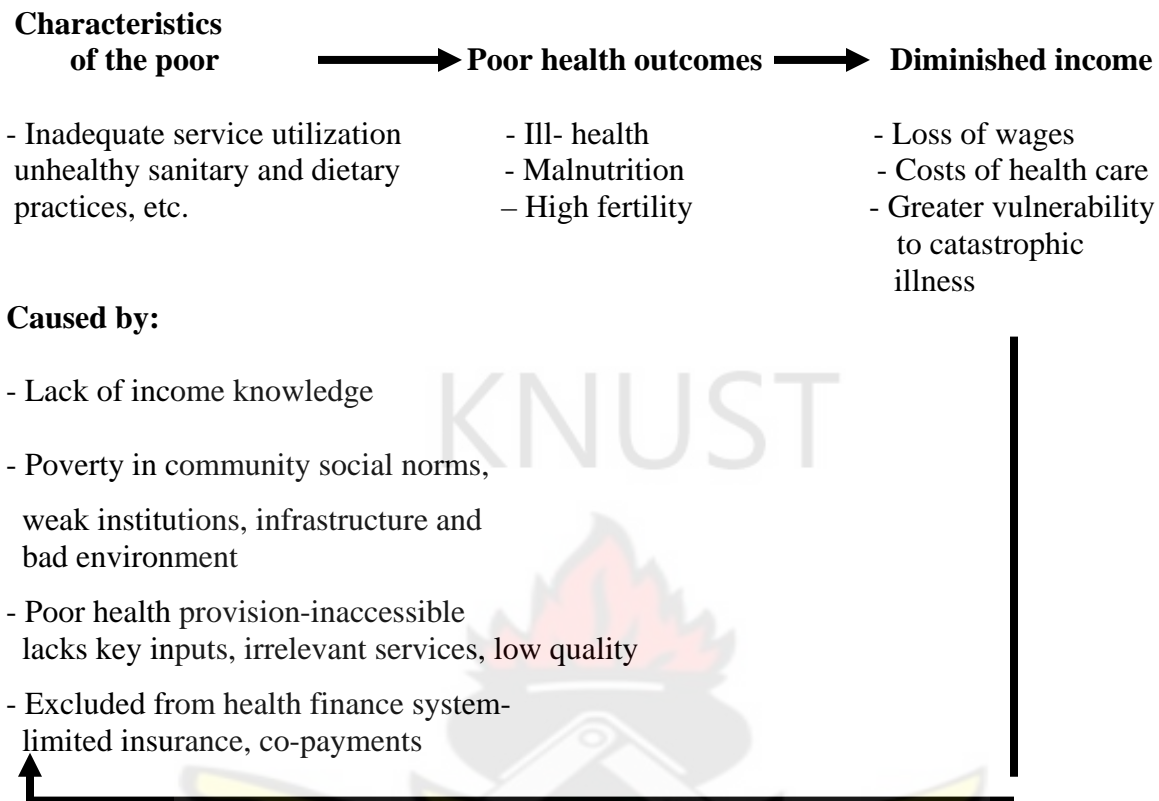


Fig. 1: Cycle of Health and Poverty

Source: ( W.H.O Bulletin, 2002)

Figure 2 is a schematic model developed out of Wagstaff's cycle of poverty and health to serve as the basis for the study. It identifies some of the major linkages which exist between poverty and health.

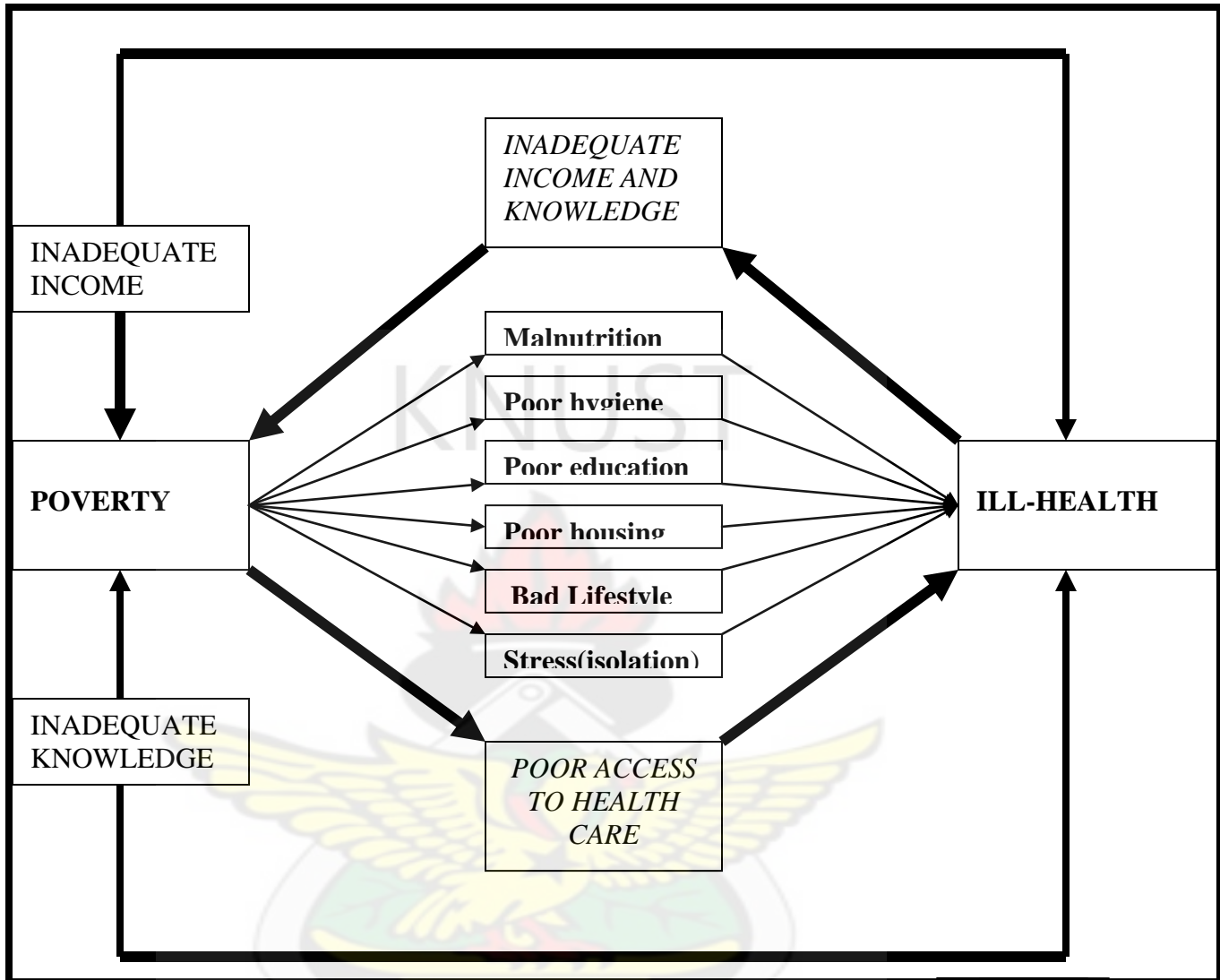


Fig. 2: Schematic Model for Studying the Interrelationships between Poverty and Health.

Source: (Adapted from- Wagstaff, 2002)

Figure 2 unveils the cyclical nature of poverty and health. In other words poverty and ill-health are intertwined; poverty breeds ill-health and ill health makes the poor much poorer. It shows the direct effects of poverty which impact the health status of the individual. Poverty was seen as the independent variable and health, the dependent variable. The model shows both the linear and circular relationship between poverty and



health. Such indicators as malnutrition, defective hygiene, poor housing, poor education, and stress were identified as the major indicators of poverty which ultimately cause ill-health. This represented the linear relationship poverty has with ill-health. It assumed that poor households were usually malnourished, especially in the rural areas, which had consequences on the health status of the households. Again, the poor living in rural areas were unable to maintain proper personal and environmental hygiene, afford decent accommodation, and lacked access to educational and health care facilities which were directly detrimental to their health. The feel of social inferiority, humiliation, powerlessness, among other socio-economic factors that relegate the poor in the rural areas to the background in decision-making also leads to stress on them. This had an impact on the health of the rural poor. Thus, the major indicators identified as direct consequences of poverty were used to assess the depth of poverty and its impact on health.

Figure 2 also shows the circularly causal relationship between poverty and health. As a result of income poverty, it is usually difficult and sometimes impossible for the poor in the rural areas to utilize the health facilities available in the District. This leads to health decay among the poor. With ill-health and physical weakness to work efficiently, the poor continued to earn little or no income, hence the vicious cycle. The survey examined how income levels in the rural areas affect access to health service facilities. Thus, figure 2 was the conceptual framework which guided the research process. It helped to identify the various dimensions of poverty in the rural areas in Ghana, particularly in the study area chosen. These were correlated with the common diseases prevalent in the deprived



areas to examine the relationship between poverty and health in the rural areas in the District.

## ***1.6 HYPOTHESES***

The study was guided by the following hypotheses

- (a) Poverty is the root cause of poor health in the rural communities in the District
- (b) Adequate income and knowledge ensure better health for most people residing in the rural communities
- (c) Provision of health care facilities in the rural communities would not guarantee utilization.
- (d) Access and use of health facilities improve health conditions of the rural households

## ***1.7 SURVEY METHODS***

### ***1.7.1 Study Design***

The survey was basically a cross-sectional one. It employed the simple random sampling method to select a sample of 306 heads of household and department for data collection. Data collection was done using structured interviews, focus group discussions and participant observation. Relevant data obtained from the field were analyzed using percentages and frequency charts, cross-tabulation and multivariate regression with the use of the Statistical Package for Social Sciences (SPSS) (see Section 1.7.2).

## **1.7.2 Data Collection and Analysis**

### **1.7.2.1 The Variables (Type of Data)**

Demographic data about respondents were obtained. These included age, sex, household average income levels, health insurance status, size of household, level of education and years of schooling of respondents. The demographic data gave details of the socio-economic status of respondents and whether a household was male headed or female headed. Even though several methods have been used to measure poverty, income was found to influence most of the poverty determinants including household possessions and assets. For this reason, the use of income was important for quantitative analysis of relevant information on household's socio-economic status. The two main variables identified to assess poverty were income levels and levels of education. With regard to income, information on the average monthly income of households in the communities selected for the survey was elicited. This helped put respondents into different socio-economic groupings using relative income levels based on the National Minimum Wage Index (MWI) (Wagstaff, 2002). The basis for the classification was to examine how income levels influence health conditions. The first group defined as the low income earners comprised households whose average monthly income earning fell far below the minimum wage of the country i.e. households that earned below (GH ¢40) were described as low income earners. In other words, they formed the low socio-economic group, hence poor. The second group described as the average socio-economic group comprised those whose average household income earnings fell a little below or above the minimum wage of the country i.e. households that earned between (GH ¢40) and (GH ¢60). Lastly, the third group described as the high socio-economic group comprised those

whose average household monthly income earnings fell relatively far above the minimum wage of the country i.e. households that earned (GH ¢60) or above. In other words, they formed the high socio-economic group which the survey described as the income non-poor. Within the low and high socio-economic groups, households that earned below (GH ¢20) as their average monthly income were described as households with very low socio-economic status; whereas households that earned above (GH ¢100) as their average monthly income were described as households with very high socio-economic status.

Significantly too, data on education levels of respondents were elicited to complement income levels to assess the poverty situation of the rural people and also as basis to assess the level of knowledge respondents were likely to have with regard to their health seeking behaviours. Three levels of education were established for the purpose of this survey to determine levels of knowledge of respondents in the various study communities. The first category of people defined as people with relatively lower level of education comprised heads of household whose educational level fell within the basic level of education. It is important to mention that heads of household without any formal education were however described as people with very low educational level. The second category of people described as people with average educational levels comprised heads of household with different levels of secondary education. Lastly, the third category of people defined as higher educational level group comprised heads of household with different levels or forms of tertiary education. Educational levels of respondents were relevant to this study because it was found to influence significantly the income levels of households as well as access to healthcare in the Amansie West District. People with relatively higher

education increased their opportunity for earning relatively higher income to meet their basic needs. Other sub-variables about which data were elicited included nutritional status of households, housing conditions, hygiene, lifestyle, health education as well as access and utilization of health care facilities in the District. These variables were relevant to the study as the pathways through which poverty could translate into ill health.

With regard to the health status of households and communities, data on diseases common in the identified rural communities and the frequency of their occurrence were collated based on self reported cases. These were complemented with the health profile of communities from the Amansie West District Health Department. This information provided the basis to examine the relationship that poverty was likely to have with the health conditions of households in the rural communities in the Amansie West District.

#### 1.7.2.2 Sample Design

The random sampling method was used to select respondents for data collection. This was to help ensure a higher level of precision and representation. The entire District was divided into 12 zones. Each of the twelve zones was under one area council: Watreso zone, Keniango zone, Mim zone, Datano zone, Essuowim zone, Mpatuom zone, Abore zone, Ahwerewa zone, Adubia zone, Antoakrom zone, Atwere zone and Manso Nkwanta zone. The division of the entire District into the twelve zones representing the existing area councils in the District was to ensure that rural communities from different geographical locations in the District were given equal chance of selection for data

collection. It also ensured representation of communities from different segments of the District for data collection. Eight out of the twelve zones were randomly selected. From each of the eight zones, a simple random sampling method was employed to select one poverty stricken community as defined in the Amansie West poverty profile and mapping survey (AWD, 2003). Thus, in all, a sample of eight communities was selected for the survey. A uniform sample of 34 households with average size of six was randomly selected from each of the eight communities. This implied that each household represented a sample unit. Uniform size of household was necessary for the study to determine accurately the health conditions of households using the frequency and severity of disease occurrence among each household and how the socioeconomic status of households influences their health condition. Within the household, the head of each of the selected households acted as the unit of inquiry (respondent) for the household. With population size of below three hundred and fifty and average size of fifty households for each of the eight deprived rural communities selected for the survey and the homogeneity of the socio-economic characteristics of the selected villages (AWDP, 2004), the thirty four respondents from each of the villages was enough to arrive at credible conclusions. In all, a sample of 272 households was chosen from the rural communities in the Amansie West District for the survey. In addition to the 272 heads of household from whom data were elicited, thirty four more respondents were selected from the District's capital, Manso Nkwanta which is relatively bigger than the other villages for interview to compare differences in socio-economic conditions between the district capital and the study communities. The 34 respondents included heads of household with relatively higher income, higher level of education, good housing condition with access to health

care facilities, to help properly assess how differences in socio-economic status and geographical variations could impact health. This implied that a total of 306 respondents were chosen as sample size for the study. To ensure that each of the households within a zone had an equal chance of selection, the lottery approach of the simple random sampling was adopted to select the thirty four households from each of the eight zones. All the houses in each zone and the households within the various houses were numbered from one to the  $n^{\text{th}}$  number. First, thirty four houses were selected from each zone. After the completion of the first selection process, one household was randomly selected from each of the thirty four houses earmarked for each of the eight zones until thirty four households were obtained from each zone. From this process, a sample of 306 households was obtained to represent the universe. Due to the homogenous nature of the rural communities in terms of their socio-economic and demographic characteristics, the sample size of 306 households was appropriate for a thorough investigation into the problem in the study area.

#### 1.7.2.3 Data Collection

Both the primary and secondary sources of data were used for the research. The primary information was elicited from selected respondents living in the rural areas about their health, access to health care services and their socio-economic status in terms of income and level of knowledge about some specific health issues such as nutrition, hygiene, family planning methods, exclusive breastfeeding etc. Data from health officers and practitioners directly involved in the provision of health care for the rural communities were collated for analysis. Other poverty and health related documents were also



consulted for information to put the problem in its right perspective. Structured interview, focus group discussions and participant observation were methods used for data collection. However, the interview method of data collection was used in most cases. Respondents were visited from house to house in the study villages for adequate and relevant data. In each case, questions were structured and read out to respondents in their own local dialect for clarity and understanding of questions. This was necessary to ensure that data collection process was interactive and participatory, and that respondents understood well the questions to which they were to respond. This was because majority of the people within the target group were illiterate, hence, a direct and face to face interaction with them made data collection more efficient and reliable. The interview method further helped to avoid call-backs and non-response to questionnaires. Significantly too, it gave heads of household and departments who were the units of inquiry the opportunity to participate in the survey process. Focus group discussions were conducted to supplement data obtained with the structured interview. The discussions actively involved both male and female heads of household to unveil their perception of poverty and how it influenced health in the study area. Sixteen focus group discussions with eight members each randomly selected were conducted for heads of household in the rural communities. In all cases, two separate discussions were held, one for male-headed households and one for female headed households in each community. The rationale was to examine the perception of poverty by different sex groups based on which appropriate strategies could be developed. These methods helped to understand poverty from within the rural setting and how it impacts the health status of the rural poor.



#### 1.7.2.4 Data Analysis

Both qualitative and quantitative tools of data analyses were employed to painstakingly scrutinize the volume of information that was obtained from the field. Through the focus group discussions and in-depth interviews, the opinion of respondents on such indicators of poverty as malnutrition, poor housing conditions, inadequate income, poor hygiene, vulnerability, stress, poor access to education and overcrowding etc which pertained to some of the rural communities and how they impacted the health conditions of the rural communities in the study area were carefully examined, summarized and tabulated. The questionnaires to elicit information on the impact of poverty on the health of the rural communities were designed in such a way that the Statistical Package for Social Sciences (SPSS software) becomes an instrument for the analysis of data elicited from the study area. The SPSS software was employed to organize the survey findings and to cross-tabulate the relationship between variables.

Data on household income and education levels on the one hand and the most prevalent diseases among households on the other hand were analyzed separately using descriptive statistical tools such as frequency and percentage charts. However, for quantitative analysis of data using cross-tabulation and multivariate regression, poverty was measured using scores for relative income levels of households. Once a strong relationship was established between education and income levels, it became imperative to apply relative income levels for cross-tabulation with the other sub -variables which included nutrition, housing conditions, hygiene, utilization of health facilities, lifestyle, health education and more importantly disease occurrence among households. The scores ranged from two (2)

for very low income levels i.e. below GH.¢20 to ten (10) for very high income levels i.e. above GH.¢100. With regard to health conditions, the product of frequency of disease occurrence and severity of the diseases as emphasized by Carr (2004) were used to measure the health conditions of households. The scores for the frequency of disease occurrence were determined by the number of times a disease occurred within a given household at a particular period, and severity of diseases was determined by the length of time a disease took to cure (see appendix). The product of frequency of disease occurrence and severity of the disease among households helped to determine health status of households as very poor, poor, good and very good if the products of the frequency and severity of a disease were <4, 6-9, 10-12 and 16 respectively. The product of frequency and severity of disease occurrence as reported by heads of household helped to determine health conditions of households. The assessment of the health of households for the study was based on Carr's (2004) recommendations in her article, *measuring health*.

The sub-variables were ranked using four to five point research questions on which verification tests were run to analyze how poverty through the sub-variables could translate into poor health among households. Nutrition was based on number of times heads of household found problems meeting the food needs of their households, practice of breastfeeding, knowledge about food nutrients and more significantly, ability of heads of household to meet their calorie requirements using the average standard value of 2400 Kilo Calories per day. The computation of calorie levels was done with a calorie calculator which examined respondents' weight and average working hours per day.

Housing conditions were based on structural conditions, quality of roof and walls as well as room occupancy rate using the 'Cashpor Housing Index' and the perceptions of respondents. The 'Cashpor Housing Index' is a tool that ranks houses in terms of structural conditions, quality of walls and roofs to assess their appropriateness. A dilapidated house with poor quality of walls was ranked [0]; whereas houses with average and good structural conditions and quality of walls were ranked two [2] and six [6] respectively based on the method's standard values. Hygiene was based on waste management practices with regard to toilet facility used and refuse disposal method a household employed. With regard to utilization of health facilities, the number of times members of a household visited a health facility when sick was used to measure frequency of utilization of health facility. Pertaining to health education, four point questions were asked to ascertain from respondents if they had received education either formal, informal or non-formal on some specific health indicators such as nutrition, hygiene, six killer diseases and family planning. Respondents were thus ranked based on level of knowledge on the health seeking behaviours identified. Level of knowledge was based on respondents' ability to answer questions on appropriate health seeking behaviours. A respondent was rated *very poor* if he had knowledge but in only one of the four health seeking behaviours; *poor*, if he had knowledge but in only two of the four health seeking behaviours; *good*, if a respondent had knowledge in three of the four health seeking behaviours and *very good*, if he had knowledge in all the four health seeking behaviours. Based on the four to five point research questions as applied in poverty and health related studies (GDHS, 2004; GSS, 2000) relevant data obtained from the field were analyzed. Cross-tabulation and multivariate regression were used to

determine the relationship between income and diseases highly prevalent in the rural areas. The methods also helped to determine the poverty indicator that significantly influenced health conditions of households. Significant statistics value below the standard .05 showed that a relationship was significant, while the strength of relationship between variables was determined on correlation coefficient (R) threshold of 0.5 standard value for the multivariate analysis.

### ***1.8 LIMITATIONS OF THE SURVEY***

The problems that hindered the progress of this survey were inadequate funds and the quantification of some variables. The nature of the survey required team work. There was the need to train field assistants to offer helping hands during data collection. The assistants were remunerated for a period of three months when they were engaged to assist in the collection of data. Adequate funds were also needed to acquire the needed research tools and devices such as computer, audio recorders and accommodation, among other requisite materials that were needed to facilitate the collection of data, analysis and documentation of the research findings. The amount of money made available by the Kwame Nkrumah University of Science and Technology to support this research work was woefully inadequate. During data collection, some heads of household demanded presents before availing themselves to be interviewed and for focus group discussions. This made the cost of data collection more expensive and tedious.

More significantly, some of the variables of poverty for the study such as stress and defective hygiene were difficult to quantify and thus affected a quantitative

representation of how they impact health in the rural areas. In such cases, a qualitative approach was employed for the analysis to ensure precision and avoid bias. The time frame for the survey was also challenging. There was the need for ample time for reconnaissance survey of the study area, proposal writing, literature review, data collection, data analysis and for writing of chapters. Other unforeseen circumstances such as ill-health, delay of funds etc. also cropped up to hinder the progress of the research. Poor transportation system and the dispersed nature of the selected deprived communities also made access to those areas extremely difficult.

However, appropriate measures were put in place to overcome the anticipated limitations of the survey. Adequate funds were raised from family members to supplement the financial support offered by the University for the purpose of this research. A proper schedule of work was designed to contain all the activities involved in the research, taking into consideration the unforeseen circumstances. This was a way of containing any problem pertaining to the timing of the research to ensure that it was completed within the stipulated three year period. Respondents were educated about the essence of the research and its intended benefits for the country, particularly, the rural communities to win their maximum co-operation for data collection. Where respondents were illiterates, the interview method of data collection was used to avoid call-backs and non-response to mail questionnaire.

## **CHAPTER TWO**

### **2.0 REVIEW OF RELATED LITERATURE**

#### ***2.1 INTRODUCTION***

This chapter aims at placing the study in a scholarly context by reviewing the main contributions made by researchers on the concept of poverty and health and the main linkages between them. It unveils some of the global views that people have shared particularly on the concept of poverty and the ideas expressed on the issue of poverty by some researchers through poverty surveys in the country. This sought to put the problem in its right perspective. The literature review thus helped this survey to build on the strengths and the weaknesses of those approaches. In addition, areas that needed further research or ought to be highlighted were identified.

The literature review has three main sections. The first major section considers issues on the definitions and measurements of poverty and where necessary identified the problems associated with the approaches. It further reviews the poverty trends in Ghana in the last decade. The second section focuses on the definitions of health, causes and determinants of health. The section also takes care of accessibility and utilization of health care facilities. Finally, the third section focuses on the linkages that exist between poverty and health.



## **2.2 DEFINITIONS AND MEASUREMENT OF POVERTY**

### **2.2.1 Concept and Definitions of Poverty:**

Several streams of ideas have emerged to inform and shape the new literature on poverty discourse across the globe. While these streams have many ideas in common, they do not add to a single coherent conceptual framework for defining poverty. However, Osmani (2003) points out that, a major common theme underlying all these streams of ideas is the diversity of ways in which people perceive and experience poverty, diversity of how poverty is measured and how poor people strive either to escape poverty or to cope with it, and diversity of policy interventions needed for combating poverty. It is important therefore for researchers into poverty to appreciate the diversity in the definitions of poverty in any poverty survey, notwithstanding the need to identify with a specific definition of poverty for any particular study.

Rowson (2001) gives the facts and figures about the relationship between poverty and health and suggests what health professionals should be doing about it. Rowson highlighted poverty as the number one killer in the world today, outranking smoking as the leading cause of death. His article “*Poverty and Health*” briefly surveys several areas including definitions of poverty and the number of people who are poor. He examines causes of poverty, the linkages between poverty and ill health and what can be done to reduce poverty both inside and outside the health sector. In his survey Rowson identified two main dimensions of poverty from which it could be defined; the income dimension and the non- income dimension. From the income dimension, he made reference to the World Bank’s poverty line of US\$1 expenditure level for every person a day; a figure



representing the minimal amount on which a person can fulfill his physical needs. Thus from the income perspective, a person is considered to be living in 'absolute poverty' if his income fell below US\$1 a day (World Bank, 2000). By this measure about 1.2 billion people are living in absolute poverty in developing and transitional economies (Rowson, 2001). In 1999, the WHO report showed that 1300 million people live in absolute poverty in the world (WHO, 1999). A cross reference of the two surveys by Rowson and WHO shows that absolute poverty, as defined in terms of US\$1 expenditure level, is rapidly increasing.

The use of the international poverty line by the World Bank has, however, attracted much criticism. The World Bank expenditure level of US\$1 below which people are considered living in absolute poverty has a number of limitations. First, it does not take into account cost of living differentials within and between countries. Thus US\$1 would buy different amounts of goods in urban and rural areas and the same amount will buy different quantities of goods in two different countries (Rowson, 2001). Again the World Bank's US\$1 poverty line does not show who lives in permanent and who lives in temporary poverty. It is further emphasized that the international poverty line does not consider the distribution of income within a household, but only values goods which are delivered on the market. In most cases people grow and rear food and animals for their own consumption, a process which is not captured by measures of income and consumption based on the measurements of the purchase of goods sold as commodities.

A focus on income alone is thus not always helpful when attempts are made to tackle poverty. Thus, a standard definition of absolute poverty from a non-income aspect has been given as “a condition of life so characterized by malnutrition, illiteracy, and disease as to be beneath any reasonable definition of human decency” (Rowson, 2001). This definition does not emphasize lack of income as a characteristic of poverty; it rather highlights what it means to be in a state of poverty - to have inadequate food, to be uneducated, to lack access to basic health care. However, it is imperative to mention that income is helpful as an instrument in obtaining such basic necessities. In his survey Rowson further observed that any broader definition of poverty which he called ‘the human poverty’ as opposed to income poverty requires different sets of indicators to be used to describe it (Rowson, 2001). Such indicators might include access to health care services, clean water and sanitation, life expectancy, infant, child and maternal mortality rates, literacy levels among others. Thus, if a person lives below the poverty line, then he lives in a community without access to clean water and other basic facilities. It is imperative to point out that the social indicators identified by Rowson in defining what he described as human poverty are determinants that are influenced by income. The basic idea underpinning the World Bank and Rowson’s analyses of poverty is that, the definition of poverty should take into consideration some social standards and income; however, poverty will always depend on what people in a particular society at a particular point in time perceive as poor.

May (1998) equally expounds on poverty. According to him, poverty is defined as the “inability to command sufficient resources to satisfy a socially acceptable minimum

standard of living” (May et al. 1998). A critical look at May’s view of poverty in conjunction with the view expressed by Rowson indicates that they both agree on ‘income’ which May calls ‘resources’ as the main instrument for procuring the basic social needs. The definitions of poverty given by Rowson (2001) and May are based on the means to acquire the basic needs of life.

Other researchers into poverty such as Nayaran (2000) and Appiah (2000) perceive poverty based on the needs and wants of the poor. Nayaran (2000) describes poverty as ‘pain’, characterized by “continuous ill health, arduous and often hazardous work for low income, no power to influence change and high levels of anxiety and stress” (Nayaran et al. 2000). The implication is that the adverse effect of lacking access to basic socio-economic needs is a perpetual pain to the poor. To be poor therefore implies a form of disempowerment (Friedman, 1999). In his investigation Appiah (2000) points out that poverty is a condition that prevents people from realizing their potential. This condition manifests in terms of material deprivation, lack of assets, isolation, vulnerability, lack of decision making power and freedom of choice. This is as a result of the perception that the poor are commonly seen as having very few possessions which is reflected in their lack of clothing, housing and consumer durables. Poverty is also associated with food insecurity and absence of provision for survival in an emergency, inadequate food security and intake and resultant poor nutritional status and poor health as well as poor education or illiteracy (Appiah, 2000). It is further highlighted that poverty is also a state of vulnerability especially to external shocks and internal social conflicts. The precarious conditions of the poor can quickly and most significantly result in change in poverty

status of households or individuals at risk. The basic idea of vulnerability originates from the realization that shock of economic and non-economic nature can exacerbate the problem of poverty. At any point in time, there are people who are not poor but are nonetheless in such a parlous state that a sudden shock could easily push them into poverty. These people form the vulnerable group, even when they are not poor. On the other hand people who are already in poverty may be at risk of falling into even deeper poverty when faced with shocks. They too are also vulnerable (Osmani, 2003). Vulnerability can arise from natural factors such as climatic and environmental change; economic changes such as reduced output, price fluctuation and social changes such as ill health, broken home, death as well as political factors such as war. Households as a result of their socioeconomic status, which opens them to exploitation even by other poor groups, may also be vulnerable.

The various definitions of poverty given by researchers reveal that poverty as a concept refers to different forms of deprivation which can be expressed in a variety of terms including income, access to basic needs and human capabilities to participate fully in society. It has been observed that poverty defies a single definition. Also any relevant poverty study examines it from a multidimensional perspective with multiple approaches. Though there is no single generally acceptable definition of poverty, a common indicator in most perceptions of poverty remains the idea of 'lack or scarcity of' (ACOD, 2004). This also makes the approach to be used in assessing poverty an important element in any poverty survey.

Summary on the definitions given by the earlier researchers reveal the notion that poverty means having no or inadequate income to meet the basic needs of life. It is also lack of access to basic facilities which include education, health care, water and participation in the management and control of the economy which affect them. George (1988) however argued that “the definitions of poverty used in the advanced industrialized societies are not sensitive enough to cope with the breath and depth of deprivation in the Third World countries” (George, cited in Donkor, 1997). It shows therefore that poverty is a relative concept which when defining should take into consideration the needs of the people and the geographical setting within which the concept is being defined. For the purpose of this study, poverty was defined as lack of adequate resources to procure one’s basic needs and wants of life. The resources identified for the study included adequate income and knowledge (education). Education impacts income levels by expanding the opportunities for a household to earn adequate and regular income to satisfactorily meet their basic needs. The approach helped to differentiate poverty from the effects of poverty.

### **2.2.2 Measurement of Poverty**

Alternative methods have over the years been adopted for constructing poverty profiles. However, focusing on their internal consistencies and appropriateness for guiding policy formulation, none of the methods appears to be perfect. Some of the methods rather appear to be preferable to others when the aim is to inform policies for fighting absolute consumption poverty (Jolliffe, 2006; Murgai, 2005; Ravallion and Bidani, 1994). In their survey on *the impact of poverty on health*, the Canadian Institute for Health Information



(CIHI, 2003) outlined three main approaches to explain the meaning of poverty and how it is measured: the absolute, relative and subjective approaches.

#### 2.2.2.1 The Absolute Approach

The absolute poverty approach defines poverty based on the ideas that individuals are poor if they have insufficient income to purchase some 'objective' minimum bundle of goods (CIHI, 2003). The definition of poverty which focuses on some objective minimum has a long history. In 1901, Rowntree classified families as poor if "their total earnings were insufficient to obtain the minimum necessities for the maintenance of merely physical efficiency" (Rowntree, cited in Donkor, 1997). This idea underlies both the United States' official poverty lines which are derived from recommended minimum adequate food budget (Ruggles, 2000). An appeal of that measure is that they represent a fixed bench mark against which progress can be made over time. However, a major disadvantage of the approach is that it is extremely difficult to choose an objectively defined 'minimum set of necessities' (CIHI, 2003). This means that the minimum standard will necessarily change over time. Absolute poverty is based on the capacity to survive. This implies having enough food to keep one healthy (Encarta, 2004). A measure of absolute poverty is, therefore, almost entirely based on a person's nutritional status. The implication is that when using this method for example, those individuals unable to purchase enough food to meet their essential nutritional requirements are classified as poor.

Several scholars have identified myriad of problems with the concept and use of absolute poverty. Lister (1993) emphasized that “within the absolute poverty approach human needs are interpreted as being predominantly physical need - that is, for food, shelter and clothing, rather than social needs. People are not, it is argued, simply individual organism requiring replacement of sources of physical energy. They are social beings expected to perform socially demanding roles as workers, parents, partners, neighbours and friends” (Lister cited in Donkor, 1997). From this assertion Townsend (1993) expounds that people do not only consume tangible goods but produce those goods and are active participants in active complex social, economic and political association (Townsend, 1993: cited in Donkor, 1997). It is thus not enough to define and measure poverty in a community based on nutritional intake of an individual or a household alone which is even difficult to determine neglecting other basic requirements that human beings desire to satisfy for which they lack. It is contended that people without access to education and health services should be considered poor even if they have adequate food (Encarta, 2004).

#### 2.2.2.2 The Relative Approach

The relative concept of poverty defines individuals as poor if they have significantly less income than others around them. Most typically, relative measure of poverty defines poor individuals as having less than some percentage (40 or 50 per cent) of median equivalent income (CIHI, 2003). A major advantage of this approach is its simplicity and transparency. It requires no decision about what constitutes a minimum necessary basket (Osberg, 2000).



According to Oppenheim and Hawker (1996) cited in Kyei (2004), relative poverty is defined in relation to a generally accepted standard in a specific society at a particular time and goes beyond biological needs. This confirms that there is a notion of an acceptable standard of living and quality of life in a particular society on which poverty line is based in relative terms. Thus, people are relatively deprived if they cannot obtain at all or sufficiently the conditions of life i.e. the diets, amenities, standards and services which allow them to play the roles, participate in the relationships and follow customary behaviours which are expected of them by virtue of their membership of a society. People in such conditions are said to be living in poverty (Townsend, 1993 cited in Kyei, 2004). Thus the relative approach to defining poverty shows that people realize their level of poverty only when they compare their socio-economic condition with an acceptable standard of living for the community in which they live. This explains the assertion that poverty as a relative concept appears only to require an appeal to common sense; hence the explanation given to the concept would vary from one geographical area to another.

Townsend (1993) observes poverty as relative deprivation and highlighted that as the only way of proving an objective definition of the concept which can be applied consistently only in terms of the concept of relative deprivation. Thus individual families and groups within a given population can be said to be in poverty when they lack the resources to obtain the type of diets, participate in the activities and to attain the living conditions and amenities which are customary or are at least widely encouraged or approved in the societies to which they belong. In other words their resources are so seriously below those commanded by the average individual or family that they are in

effect excluded from ordinary living patterns, customs and activities (Townsend cited in CIHI, 2003). The problem with the concept of poverty is that, it categorizes all people who fail to meet particular societal standards as poor even though some may be non-poor in absolute terms.

#### 2.2.2.3 The Subjective Approach/ Participatory Poverty Assessment

A much more involving approach to defining and measuring poverty which had been ignored but currently attracting the attention of most researchers is what has been referred to as the subjective poverty by the Canadian Institute for Health Information (2003). It is an approach which argues that individuals are poor when they feel they do not have enough to get along. Proponents for the subjective poverty assessment approach argue that the best way to assess how much income people need to make ends meet is to ask them (CIHI, 2003). Ruggles (2000) points out that, subjective poverty lines are obtained from surveys which ask such questions as “living where you do now and meeting the expenses you consider necessary what would be the very smallest income you and your family would need to make ends meet?” (Ruggle, 2000). Poulin (1998) used a supplement to the 1983 survey of consumer finances and came out with estimates of subjective poverty lines for Canada.

The subjective approach to defining poverty has been fused into what has been termed in modern parlance as the participatory poverty approach of assessing poverty introduced by World Bank and launched in 1992 as a complement to the conventional poverty measures. The participatory poverty assessment is a tool for including the perceptions of

the poor in poverty analysis and control, leading to the formulation of policies to reduce poverty (IDS, 2000). This approach has the advantage of understanding poverty from the viewpoint of the poor by focusing on their realities, needs and priorities. The participatory poverty assessment according to Robb (1999) enables the opinion of the poor to be included in national policy and opens up the process of policy dialogue to include a cross section of the civil organization in the formulation of poverty reduction policies (Robb, 1999). This strategy involves the poor in analyzing their own poverty using qualitative information. The participatory poverty assessment involves consultation with communities usually with qualitative methodologies to explore the poor's perception of poverty. With such a process the poor and vulnerable groups regain power and control over the process by taking part and influencing it. Thus the participatory poverty assessment makes it possible to examine issues of powerlessness, social exclusion, physical weakness, vulnerability, seasonality, self-respect, etc which the quantitative poverty assessment approach relegate to the background (World Bank, 1995).

In 1994, the World Bank employed a qualitative participatory poverty assessment approach to supplement a quantitative method in the extended poverty survey in Ghana (World Bank, 1995). The Bank observed that such surveys as the GLSS 1987/88 and that of 1991/92 were not able to measure all the dimensions of poverty, especially those of qualitative nature. As a result household surveys using the conventional poverty assessment approach alone have not proved efficient in eliciting information on people's attitude towards their own situations and their views on how best to resolve the socio-economic problems they face. Poverty should be defined by the poor themselves by

guiding them to express and analyze their individual and shared realities. As a result of giving the poor voice in the definition of their own poverty and analysis of what they know, experience, as well as their needs and wants, they bring to light dimensions which normally professionals tend to miss or misperceive (Chambers, 1997 cited in Kyei, 2004). McGee (1998) also contends that by giving poor people a stake in poverty reduction policy and programmes from the initial phase of gathering information on the problems, it enhances the likelihood that these will be taken up and will attain their goals (McGee cited in Kyei, 2004) .

The participatory poverty assessment and relative approach with income and levels of education as the tools for assessment were employed to involve the rural folks in defining and analyzing poverty from the perspective of the poor and how their situation influenced their condition of health. Such qualitative tools as the focus group discussion, in-depth interviews and participant observation were used to explore the people's perception of poverty for this study.

### ***2.3 CAUSES OF POVERTY***

In his concept of the 'culture of poverty', Lewis demonstrates that laziness is a major cause of poverty in any society. When the culture of a society is supportive of hard work, social conditions of that society automatically improve (Lewis cited in Khan, 2005).

In his investigation, Rowson (2001) in line with his definition of poverty points out that several factors interlock to cause poverty. These include lack of income and assets; isolation whereby poor women spend many hours a day fetching water and taking care of

children, diverting them from income generating activities; and physical weakness, for instance illness can prevent the poor from earning income, hence pushing them further into poverty. Rowson further identifies powerlessness i.e. the poor having little access to justice, as well as vulnerability which may be provoked by a range of events as factors that push people into poverty. The International Fund for Agricultural Development (IFAD, 2002) made an assessment of rural poverty with focus on Eastern and Southern Africa. In their survey attempts were made to ascertain why the rural Africans are poor. IFAD pointed to the inequitable distribution of land as the most striking and evident determinant of poverty today. It was further pointed out that the disempowerment of the African rural communities is not restricted to access to land. Issues of lack of incentives for production including good pricing policies, monopoly control of most farm commodities whether for export or domestic trade and cheap food prices kept earnings by rural farmers low, reducing their capacity to invest in their farms and equipments in order to raise their labour productivity.

However, it has been observed that “the immediate cause of poverty may have been lack of access to assets and to free market. The underlying cause has been lack of reflection of the interests of the rural poor in key political, economic and institutional processes” (IFAD, 2002). IFAD also underscores labour constraints for land preparation and planting as a major cause of rural poverty. This has been as a result of men being forced by rural poverty to seek employment in urban areas to supplement income coupled with lack of farm implements. The effect is that, it presents an enormous limitation on the



amount of land that can be prepared , planted and harvested which ultimately leads to the rural small scale farmers always plunging themselves into persistent poverty situation.

In his study on Nadowli women and poverty alleviation under the District Assembly of Ghana, Kyei (2005) observed that poverty among women in the northern regions of Ghana is caused by lack of control and ownership of resources. He identified that such resources as land, buildings, livestock, poultry, water bodies, farm produce, bullocks, radio, bicycle, and labour are owned and controlled by men. Wives do not have the right to inherit the husbands' property. Women in northern Ghana are thus pushed into poverty and gender-based exclusion from resource ownership. It is further pointed out that the dowry system (in the form of cows, cowries and cash paid by men) to a larger extent reinforces the subservient position of the woman since the man and his family consider themselves as not only having the right to her services, but also actually owning her (Mahama, 1996 cited in Kyei, 2005). The literature on the causes of poverty shows that the institutional arrangement ruling within any social set-up including economic, political and socio-cultural could push the vulnerable group into poverty.

#### ***2.4 POVERTY TRENDS AND SITUATION IN GHANA***

For the purpose of analyzing poverty with quantitative tools to yield a higher level of accuracy in poverty study, two poverty lines were set for poverty study in the country (GSS, 2000). A lower poverty line of (GH ¢70) per adult per annum which focuses on what is needed to meet the nutritional needs of household members. Individuals in Ghana whose total expenditure falls below this line are considered to be in extreme poverty. This poverty line is 46.6 per cent of mean consumption levels in 1998/1999 (GSS, 2000).

The assumption is that people whose standard of living measures lie below the lower poverty line would not be able to meet their calorie requirements even if they spent their entire budget on food. Significantly too, an upper poverty line of (GH ¢90) per adult per year which included both food and non-food consumption exists for poverty analysis in Ghana. The implication is that Ghanaians whose consumption level is above the upper poverty line can be considered able to meet their nutritional requirements and as well satisfy their basic non-food needs (GSS, 2000). Hitherto the establishment of the two most recent poverty lines for studying living standards in the country, previous poverty lines defined as two thirds and one third of mean expenditure in 1988 were used for the extended poverty study in Ghana by the World Bank in collaboration with the Ghana Government to analyze the poverty situation in Ghana. Households in the vicinity of the upper poverty line were found to derive just over 2100 calories from food expenditures which provided support for this bench mark in the quantitative poverty analysis (World Bank, 1995). Aside the economic dimension of poverty analysis in the country, attempts were made in 1994 to employ qualitative research tools through participatory poverty assessment in which the views of the poor were obtained to analyze poverty trends in the country.

It has been observed that poverty trends in Ghana during the 1990's were broadly encouraging. Using the upper poverty line of (GH ¢90), the percentage of the population of Ghana described as poor reduced from almost 52 per cent in 1991-1992 when the third Ghana Living Standard Survey was conducted to just under 40 per cent in 1998-1999 (Canagarajah and Portner, 2002; GSS, 2000; World Bank, 1995). The national poverty



survey in Ghana has further shown that poverty is not evenly distributed geographically across the country. The extended poverty survey conducted by the World Bank in 1995 about Ghana poverty: past, present and future showed that poverty is greater in the rural savanna and rural forest areas which accounted for 60 per cent of total poverty in the country (World Bank, 1995). Similar data on national poverty trends in the 1990's provided by the Ghana Statistical Service on living standards in Ghana showed that the incidence of poverty in the rural forest defined as the proportion of a given population identified as poor was 61.6 per cent as compared to 25.8 per cent in the urban forest; whereas rural savanna experienced a rate of 73.0 per cent poverty incidence as compared to 31.8 per cent in the urban savanna in 1992 (GSS, 2000). Thus the rural savanna and the rural forest alone accounted for 65.9 per cent of total poverty in Ghana taking the upper poverty line into consideration. Further, the two areas accounted for about 73.6 per cent of the extremely poor population in Ghana. However, generally, 82.2 per cent of the Ghana population defined as poor in the country and 86.3 per cent of the extremely poor population reside in the rural areas of Ghana (GSS, 2000).

The most recent national poverty survey has shown that, taking the upper poverty line of (GH ₵90), the percentage of the Ghanaian population defined as poor had fallen from almost 52 per cent in 1991-1992 to just fewer than 40 per cent in 1998-1999 (Darkwa, 2005; GSS, 2000). Though the overall trend in poverty during the 1990's had been broadly favourable in Ghana, the decline was not significantly felt in the rural areas of Ghana. Teal (2005) points out that during that period, the largest and the poorest section of Ghanaians, the farmers, saw a fall in their expenditure over the decade by some 3 per

cent. Significantly too, evidence from the manufacturing sector suggested a substantial fall in the real wages of the unskilled by some 23-26 per cent between 1992 and 1998. Thus, generally in Ghana, the economy has not created a large number of decent employment opportunities for its working population, despite a record of sustained moderate growth over the past decade (Heintz, 2005). Pertaining to the rural savanna region, the incidence of poverty rather grew worse. In 1999, rural Ghana accounted for 83.7 per cent of total poverty and 85.6 per cent of the extremely poor population lived in rural areas (GLSS 4, 2000). It is imperative to mention that even though the incidence of poverty had fallen at the dawn of the 21<sup>st</sup> century, the depth of poverty defined as the extent to which those described as poor fall below the poverty line for the poor has remained relatively stable. Analysis of poverty by economic activities in Ghana indicates that poverty is highest by far among food crop farmers. Their contribution to the national poverty is much in excess of their population share. At the national level, around 59 per cent of those identified as poor are from households for whom food crop cultivation is the main economic activity (GSS, 2000). The concentration of poverty among food crop farmers becomes much more pronounced using other measures which also take account of the depth of poverty or when extreme poverty is considered.

Research has also shown that women in Ghana experience greater poverty than men due to the following circumstances: women have limited opportunities, capabilities and empowerment in terms of access to and control over productive resources such as land and other property, labour, capital/credit, human capital assets including education and health as well as social capital assets such as participation at various levels, legal rights

and protection (Awumbila, 2004; Baden, 2004). The implication is that poverty relatively impacts severely on women than men in Ghana due to gender inequalities in accessing resources for the satisfaction of basic needs.

A recent study has identified Ghana as one of the eight African countries on track to reach the millennium development goal target; however, it has been pointed out that the country continues to have significant regional inequalities (Azeem et. al., 2006).

A critical examination of the national poverty survey in the 1990's has revealed that poverty in the country is basically a rural phenomenon. The incidence of poverty among the rural population justifies the need to focus on the rural areas for a meaningful conclusion to be drawn about the relationship between poverty and health in Ghana.

## ***2. 5 DEFINITIONS OF HEALTH***

In the constitution of the WHO cited in Stuart (2004), health is defined as “a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity”. However, the definition of health by the WHO has been described by some researchers into health issues as idealist. The concepts of disease, disability, and death tend to be much easier for health professionals to address than this idealistic concept of health (Yassi, et. al., 2001). The broader WHO definition of health is, however, the most appropriate for use and constitutes a universal ‘basic need’- a social need and basic right aligned to social justice (Doyal and Gough, 1991). The Stockholm Environmental Institute (SEI) (2004) related health to vulnerability or susceptibility to diseases. In simple terms, it described vulnerable people as those who are at risk from damage or

deterioration to their health for a variety of reasons (WHO, 2000 cited by Stuart, 2004). Health is thus the ideal condition of a perfect physical, psychic and social well-being more than the absence of a disease. The main factors of a good health have been identified by Hendy (2000) as healthy nutrition, healthy environment, health in the area of the spiritual factors and the main danger for good health is a disease. Disease is thus defined as a disturbance of the efficiency and the well-being of an organ.

## ***2. 6 DETERMINANTS OF HEALTH***

The health of people is affected by many factors, which include: where we live, the state of their environment, genetics, income, educational level, and relationships with friends and families. Factors such as these have an impact in determining health and, combined together, are significant (PHACR, 2006; Berkman and Kawachi, 2000; Bjerregaard and Young, 1999). Numerous studies have shown consistently that a person's place in the social order strongly affects health and longevity (Fein, 1995). It now seems well-established that poverty and social rank are the most important factors determining health, more important even than smoking (Evans, 2001; Haines, 1998).

Kilborn (2000), a Boston pediatrician emphasized level of a person's income, lifestyle and race as important determinants of health in any social set-up. He asserted that, "tell me someone's race; tell me their income; and tell me whether they smoke. The answers to those three questions will tell me more about their longevity and health status than any other questions I could possibly ask". Hong (2000) also points out that, deterioration of the global environment and the ecological crises manifested as climate change, ozone depletion, degradation of food producing systems, depletion of fresh water sources, loss

of biodiversity, the spread of invasive species, and chemical pollutants are threatening the biosphere and its capacity to sustain healthy human life (Hong, 2000). The Stockholm Environmental Institute (2004) investigated into some pathways to vulnerability to diseases. In their survey, key determinants of risk to diseases such as locality, physiology, education/awareness, empowerment, poverty and exposure/susceptibility were identified for use. Attempts were made to find out people at risk emerging from processes of vulnerability specific to those determinants. The Institute ascertained that physiology (susceptibility) is an important determinant of health because children or old people are especially vulnerable for specific reasons: children drink more water, eat more food and breathe more air in relation to their body weight than adults; they are therefore more susceptible to pathogenic micro organisms (viruses, bacteria and protozoan parasites) than adults (Stuart, 2004).

### **2.6.1 Nutrition and Health**

Poverty and ill-health are very closely related, and nutrition (food) is one of the important connections between the two. Nutrition and health researchers have unveiled that prenatal and post natal nutrition influence the risk of developing chronic degenerative diseases, whereas nutritionally-mediated intrauterine growth retardation may permanently impair the development of immune function (Moore, 2006; Kynast-Wolf, 2006; Stavola et. al. 2006; Prentice and Moore, 2005; Ngom, 2004; McDade, 2001; Moore, 2001; 1999). It has further been pointed out that, the economic reforms which followed after economic crisis in Africa affected nutritional outcome, as social spending in general was affected



(Sahn, 2004). Weaver (2000) concluded from a survey that, "You are what you eat." Weaver's study involved a random sample of 226 children between the ages of seven months and 16 years. About 16 per cent were found to be underweight for their age, 15 per cent had stunted growth, and 8 per cent showed evidence of muscle wastage. He explained that poor diet can affect a child's growth. He concluded from his survey at Yorkhill Hospital, that poverty and ill-health are inextricably linked as many families cannot afford a more varied diet. This implies that poor nutrition has significant influence on the health of people.

Micronutrient malnutrition (deficiencies of vitamin A, iodine, and iron) affects about two billion persons worldwide (WHO, 1995 cited in McCauley, 1998). Iron supplements can improve the intellectual and motor abilities of infants, while enriched educational programmes can ameliorate some of the problems associated with malnutrition; but unfortunately poor people rarely live where such programmes are available (Brown and Pollitt, 2006). It has been established that, iron-deficiency anaemia is a major threat to maternal and child health in Ghana. More than three-quarters of Ghanaian children between five and fifty-nine months old have some level of anaemia, 49 per cent of Ghanaian women are anaemic, while 9 per cent of Ghanaian women were found to be severely malnourished (GSS, 2004). It could thus be established that poor nutrition has devastating health effects on individuals as food related deficiencies are associated with greater vulnerability to endemic and epidemic diseases (Destombes, 1999).



### **2.6.2 Hygiene and Health**

Kofie and Nabila (2004) among other researchers unveil poor environmental conditions and defective hygiene to be influential on the health status of people. In their survey, it was realized that buruli ulcer and diarrhoeal diseases were common in rural communities where there is poor access to safe water, unsanitary conditions, inappropriate waste disposal methods, lack of education and information and restricted access to health care services (Rheingans et. al., 2006; Kofie and Nabila, 2004; Sally, 2002; Roux, 2000). Further studies have revealed that, the incidence of depressive symptoms is higher for poverty area residents and those with excellent/good health are more likely to have fair/poor health respectively if they lived in a poverty area. The Ghana Demographic and Health Survey (2004) unveiled that diarrhoeal-causing agents are frequently related to the use of contaminated water and unhygienic practices related to food preparation, hand washing and excreta disposal (GSS, 2004). Thus, the characteristics of a place affect the health conditions and health status of people (Borrel and Crawford, 2006; Bowling et. al., 2006; Pearce et. al., 2006; Muntaner et. al., 2004; Kahlmeier, 2001; Bosma et. al., 2001; Yen and Kaplan, 1999).

### **2.6.3 Education and Health**

A recent World Bank survey showed that income improvement resulted in only about a fifth decline in mortality between 1960 and 1990, whereas women education and use of new knowledge played a more important role in this respect (Sabri, 2000). Education has been found to play a significant role in reducing health decay within a household. Higher level of education has the potential of impacting nutrition, hygiene, housing condition and more significantly access to organized health service facilities and thereby reducing

ill health. Poverty leads to poor access to proper education which negatively impacts the health status of the poor. Studies into education, fertility and mortality have revealed that increase in female education and urbanization contribute to decline in fertility and child mortality (Benefo and Pillai, 2005; Setel, 2000; Benefo and Schultz, 1996). In a paper presented on Gender, Health and Development, Ostergaard (1999) outlined the major determinants of health as economic, social and cultural conditions as well as lifestyle and life stress. She went further to highlight the fact that education is a catalyst operating behind all the carriers of ill health and that lack of education aggravates the effects of ill health but sufficient education alleviates their most devastating consequences. Ostergaard asserted that “Education is a means of overcoming poverty, increasing income, improving nutrition and health, reducing family size and not the least important, raising people’s self-confidence and enriching the quality of their lives.” This is identifiable in the areas of nutrition and immunization of children against childhood diseases.

Underpinning this stance are the research findings from the 2003 Ghana Demographic and Health Survey on Maternal and Child Health as well as nutrition. The survey showed that children of women with no education are less likely to be immunized than educated mothers. Related to nutrition, it was found out that, children with no education are more likely to be reported as very small, or smaller than average; and malnourished children decrease with increasing level of mothers’ education (GSS, 2004). This implies that the level of education of a person influences the need to use or not to use a health care facility, apply instructions from a medical practitioner and undertake follow-ups on one’s health status. It has thus been ascertained that the level of still births and diseased

children are more common among the uneducated than the educated mothers due to their use of health care facilities during pregnancy.

#### **2.6.4. Access and Utilization of Healthcare Facility**

Utilization of health facilities ameliorates the effects of ill health. Nursing mothers who seek pre-natal and ante-natal care from health professionals stand the chance of improving the health conditions of their children (GSS, 2004). The review on utilization of healthcare facilities helped the study to identify poverty related factors that impact access and utilization of health services and the likely consequences on health conditions of people. Several researchers have made efforts to investigate into factors that influence access and utilization of health care facilities. Humphreys (1998) points out that many rural communities lack the health services they require, hence, small, isolated rural communities struggle to access health care. Public social spending on health care in several African countries does not favour the poor living in rural areas (Barat, 2004; Wagstaff et. al., 2004; Castro-Leal, 1999). A survey by the Institute of Development Studies (IDS cited in Buor, 2004) revealed that in the Jasikan District of Ghana, distance plays a significant role in determining utilization of health services in the District. The Institute found out that  $\frac{3}{4}$  of all registered patients come from within four miles and that over 90 per cent of the people living within four miles do register at the health unit but only about  $\frac{1}{10}$  of the population living within more than six miles from a health facility appear to be registered at all in Jasikan. The implication is that people within communities with no health facilities are less likely to cover relatively longer distances to

utilize a facility than if they had a health care facility in their community. Thus the distance one has to cover is a major determinant of utilizing a health service.

According to Kissah- Korsah (2004) the use of a health service is likely to be influenced by availability of means and modes of transport, the existing transport fares, gender as well as the level of education. Factors that violate the distance decay mechanism include quality of care provided, and the nature of illness. A patient is prepared to cover a greater distance depending on the gravity of his health problem. Thus, the gradients of distance patients travel to seek health care are relative to the nature of illness (Girt cited in Buor, 2004). Births attended to by skilled health personnel and life expectancy at birth have been established to correlate strongly with maternal mortality (Buor and Bream, 2004). However, rural people tend to rely on intervening options such as self medication, using traditional medicine and resorting to 'quack doctors' and pharmacy shops that can result in serious health implications (Buor, 2004). Aside physical accessibility factors such as socio-economic status, demographic, cultural and political factors influence the use of health service. In a household survey in rural Iraq, Vaughan (1986) observed that the use of health facility increased substantially with increasing income (Vaughan cited in Buor, 2004). Ke-Xu (2003) concluded in a survey on accessibility and utilization that low income is a strong barrier to the utilization of modern primary medical facilities even when publicly provided. Poverty has been established in separate studies to be a strong barrier to the utilization of health service (Nyonator and Kutzin, 1999). Using multivariate models, Montgomery (2005) concluded from a survey that household living standards are closely associated with three health measures: unmet need for modern

contraception, attendance of a trained health care provider at childbirth and young children's height for age.

### **2.6.5 Housing and Health**

In 1986, the Ottawa Charter for Health Promotion (WHO, 1986) recognized shelter as a basic prerequisite for health. However, it is quite recently that researchers and policy makers are focusing on shelter as an important determinant of health. The concept of 'housing poverty' has also become relevant in health related poverty. Housing poverty introduced by United Nations Commission on Human Settlement (UNCHS) Global Report on Human Settlements 1996, highlights that, "individuals and households who lack safe water, secure and healthy shelter with basic infrastructure such as pipe borne water and adequate provision for sanitation, drainage and the removal of household waste could have poor health" (UNCHS, 1996). The shortage of affordable housing for low-income urban households in developing countries has resulted in a proliferation of slums and squatter settlements. In these slums, hunger is increasingly becoming an urban problem, and policy makers have shifted focus on housing as a prime determinant of health. Housing insecurity can be determined by various indicators including the number of people who sleep in the street, use temporary shelters, live in substandard dwellings and who spend more than 30 per cent of their income on housing (Bryant, 2002). Bansal and Saxena (2002) concluded from their study on overcrowding and health in India that, as the Per Capita Floor Area (PCFA) of a family decreases, communicable diseases, infective and parasitic diseases and respiratory episodes exhibited a significant increase.



The Canada Mortgage and Housing Corporation (CMHC, 2000) uses the term 'core needs' to identify the number of households unable to access adequate rental accommodation in their communities. The term measures affordability, suitability and adequacy. Households with core housing needs face one or more of the following issues. Affordability implies that households spend more than 30 per cent of their gross income on housing. Suitability explains households living in overcrowded conditions i.e. household size and composition exceeds their actual home space requirement; whereas adequacy explains lack of basic facilities in the dwelling such as full bathroom (Layton, 2000). Empirical surveys have found out that homeless people and people who suffer core housing needs experience a much greater incidence of a variety of negative health conditions and ailment. Bines (1994) showed that people who used substandard accommodation were more likely than the general population to have musculoskeletal and chronic breathing problems, headaches as well as seizures. A survey by Ambrosio (2002) unearthed that those who do not have permanent place of residence had higher risk than the general population for many chronic conditions including respiratory track diseases, arthritis , rheumatism, high blood pressure, epilepsy and diabetes (Ambrosio et. al., 2002). Such factors as access to health care, psychosocial rehabilitation and proper housing conditions are needed to reduce conditions of mental ill health and stress in rural communities where health care reform policy development usually appears to be neglected (Lantican, 2006; Glisson, 2005; Stark, 2004; Gellis, 2004; Razelle, 2000; Kane and Ennis, 1996). Krieger and Higgins (2002) identified poor housing conditions to be associated with wide range of health conditions including respiratory infections, asthma, lead poisoning, injuries, and mental health. They emphasized that, addressing housing



poverty issues by enforcing housing guidelines, and codes, implementing healthy home programmes to improve indoor environmental quality, assessing housing conditions and advocating for healthy and affordable housing offers the opportunity to address an important social determinant of health.

#### **2.6.6 Stress and Health**

In a survey on how income levels impact health, Minkler (1999) observed that inadequate income to satisfy basic necessities of life has the potential of causing elevated stress on individuals which becomes even more severe where the poor are surrounded by people with relatively higher socio-economic status. Schaffer and Pritchard (2002) surveyed 220 students at Midwestern University to ascertain how stress impacts their health and sexual behaviour. They observed that stress correlates strongly with gastrointestinal ailments and men under stressful conditions usually have successful sexual intercourse only under the influence of alcohol and drugs.

The literature review on the causes and determinants of health thus shows that several conditions interact to influence the health status of people. Chief among them include nutrition, environmental conditions, access and utilization of health services, housing, educational levels, stress and lifestyle. Such conditions, therefore, became relevant for the purpose of establishing how poverty impacts the health of people living in the rural communities in the Amansie West District.

## **2.7 MEASURING HEALTH**

Researchers have shown the diverse ways by which the health status of individuals and groups of individuals could be assessed. In her paper *improving the health of the world's poorest people*, Carr (2003) provided the main approaches by which health status could be measured and compared. She emphasized the first option as using self-reported information of individuals about their health status. This implies that individuals' health status could be measured based on the perceptions of the individuals themselves about their health. Carr argues however that, the perception of individuals of their health may vary dramatically from the assessment of a trained health professional and the poor with lower levels of health literacy and understanding may also be less able to assess and report on their health (Carr, 2003). In an interview with Dordoye, a trained medical officer, however, it was identified that, medical doctors in some cases base on the perception approach to assess the health condition of patients for drug prescription. This is done by asking patients how they feel, the symptoms they experience as diagnostic strategy to determine the state of health of individual patients (interview with Dordoye, 2006). The efficiency of the self-reported information lies in its ability to help ascertain information on a person's social, mental and even physical state of health emphasized in the WHO's definition of health, even though there may be absence of disease or infirmity which trained medical professionals usually examine.

In most demographic health surveys, another option usually used for assessing health is survey data based on health indicators such as infant mortality rates, maternal mortality, nutrition and fertility rates (GSS, 2004). When using this approach, heads of household

and sometimes mothers are made to recount the number of births they have had within a period of time and the number of children who have died. In surveys using nutrition as a measure of health, researchers may measure the weight and heights of household members and conduct blood testing to ascertain estimates for levels of anaemia (GSS, 2004). Carr (2003) further emphasized accessibility and utilization of health care facilities as another common strategy by which the health of individuals could be assessed. In 2003, the demographic and health survey conducted in Ghana employed this method of measuring health status to ascertain the likelihood of different socio-economic groups to use some health facilities to determine their health status (GSS, 2004). Carr (2003) explains that when using this method, whether people use health care services such as vaccination coverage, child health care visits and the use of family planning and maternity related services are ascertained. Researchers using the method ask heads of household or mothers questions such as how many vaccines their children have received, whether children with symptoms of diarrhoea or fever are taken to health care facilities, whether they have ever used or currently use contraceptives; whether they received prenatal and post natal care during their last pregnancy; whether they delivered their last baby at a clinic or hospital and whether their delivery was attended to by a trained health professional (Carr, 2003).

Another method of assessing health status of individuals and groups of people is by examining the frequency and severity of specific common diseases among people. In 2001, the South African Health Sector employed this method to analyze how poverty impacts the health of South Africans with great success. The sector examined the

frequency and severity of such diseases as lupus, phthisis and acute rheumatic fever to determine the health status of the poor on the one hand and the well-to-do on the other hand (S.A.H.R, 2001). Health is also measured by examining health facility records and availability of medical services and personnel in an area. According to Carr, when using this method to assess a community's health status, analysts may examine the number of hospital beds or trained medical officers available in that community (Carr, 2003). This method may, however, be subjective and less effective in measuring health especially where people in the study area resort to other health services from traditional health providers rather than clinics or hospitals. This study focused on examining self-reported cases on the frequency and severity of certain diseases among communities with varying socio-economic conditions to ascertain how such conditions influence their health status.

## ***2.8 RELATIONSHIP BETWEEN POVERTY AND HEALTH***

In their most recent review of literature, Benzeval and Judge (2001) provided pieces of evidence from sixteen studies using eight different data sets from different countries about the relationship between poverty and health. The health status outcome measures they used included: subjective health reports, mortality, emotional stability, chronic conditions, general life satisfaction and physical functioning of the bodily organs; while socio-economic status measures include current income levels, recent income change, poverty flags, current earnings, multi period average incomes, distribution and number of spells of poverty. In summing up their review, the authors concluded “all of the studies that include measures of income levels are significantly related to health outcomes.” (Benzeval and Judge 2001 cited in CIHI, 2003). It has been estimated that if developing

countries enjoyed the same health and social conditions as the most developed nations, the current annual toll of more than twelve million deaths in children younger than 5 years of age could be reduced to less than four hundred thousand (WHO, 1999).

Mullay et. al. (2001) also demonstrated in their empirical studies and review that there exists a robust association between income levels and morbidity and mortality using various measures of both income and health across samples and at various points in time. In their study on poverty and health, CIHI (2003) acknowledged the possibility for ill-health to limit an individual's ability to engage in paid work and thereby reduce his income (CIHI 2003). The problem is that if one should examine ill health and low income together, it can hardly be sorted out which caused the other. But in most cases research papers on poverty and health conclude that reverse causation variously referred to as health selection or endogeneity is not a serious problem. Rather the main direction of influence is from poverty to poor health. The WHO (1999) in their end of century report identified a cyclical relationship between poverty and health. It highlighted why better health is a relevant component of poverty reduction. The WHO observed that ill health is both a cause and a consequence of poverty. Illness can reduce household savings, create lower learning ability, reduce productivity, and lead to a diminished quality of life- thus creating or perpetuating poverty. The poor in turn are exposed to greater personal and environmental risk, less well nourished, have less exposure to information and are less able to access health care facilities. "The poor are therefore more at risk of illness and disability" (WHO, 1999). The poverty and health research also provided evidence that better health can offer a route out of poverty. However, less attention has been given to



this stand, but it is obvious that better health makes children able to learn, while adult breadwinners are more able to work hard and provide for their families.

In his studies, Wagstaff (2002) also analyzed the relationship between poverty and health. He found out that poverty and ill health are intertwined; poor countries tend to have worse health outcomes than better-off countries. Significantly too, it was identified that within countries, poor people have worse health outcomes than better-off people (Wagsaff, 2002). Globally, ill-health can also exacerbate and perpetuate poverty (WHO, 2001; WHO, 2000; Haines, 2000). Thus, poverty breeds ill health and ill health keeps poor people poorer. This association reinforces the evidence of causality running in both directions. Thus poor countries and poor people within countries are bedeviled with multiplicity of deprivations that translate into high susceptibility to diseases and death. The measuring of socio-economic inequalities in health has been a long tradition in Europe. However less empirical work has been undertaken on the subject in other regions most especially in developing countries. In Europe it has been observed from empirical research that inequalities in health are almost always to the disadvantage of the poor: the poor tend to die earlier and to have higher levels of morbidity than the better-off.

In a survey on poverty and health, experiences in South Africa (2001), 59 schools were visited in two provinces and 1,749 children between the ages of 9 and 15 years were examined. Although the author noted the inevitable inaccuracies in measurement, dietary histories were elicited for more than 63 per cent of the children but no account was taken of problems of recall. The authors concluded that the incidence of phthisis, lupus, acute



rheumatic fever and middle ear disease was more common among the poor than the well-to-do. Minkler (1999) in his paper “*Poverty Kills*”, emphasized that for want of resources millions of people face early death and ill health. He noted that one of the most important socio-behavioral factors underlying ill health is poverty. Minkler describes poverty as “perhaps the single most important risk factor for premature death and disability.” Williams (1999) at the University of Michigan undertook a survey on how income levels impact the health of people. It was found out that people with annual income of under US\$10,000 had more than three times the risk of dying in a given year as those who earned more than US\$30,000 (Williams cited in Minkler, 1999). As a result of poverty, people become malnourished, unable to secure adequate health services and engage in health promoting behaviours (Ashiabi, 2000).

Some researchers into poverty and health emphasize that some pathways through which chronic deprivation can dramatically worsen health are through limited access to food, proper housing, and education. Significantly too, the poor are also exposed to environmental toxins, physical threats to health and safety, unsafe jobs as well as chronic psychological stress (Levins cited in Minkler, 1999). Minkler also added that income inequality has a higher propensity to cause ill health. He emphasized that not just being income poor but being poor in a country where many others are rich, causes individuals to experience elevated stress, lower feelings of control over their lives and lack of trust in society and surroundings (Minkler, 1999). In this regard, poverty and socio-economic status have been cited as one of the most important factors that cause emotional distress (Patel and Kleiman, 2003; Aidoo and Harpham, 2001). Psychosocial factors interact with

material, behavioural and socio-cultural factors to contribute to the health outcome of the people living in the rural communities (Bernadette, 2005; Payet, 2005; Hayes et. al. 2005; Bourke, 2004; Frazer et. al. 2002; Mahoney et. al. 2001; Dixon and Welch, 2000). Wilkinson (1998) assembled two sets of data. First, he found no clear relation between income or wealth and health when comparisons were drawn between countries (for example, there was no relation between per capita gross domestic product and life expectancy at birth in comparison between developed countries at similar levels of industrialization). But in 1999 Wilkinson's observation showed a strong relation between income inequality and mortality within countries, a relation that has been confirmed more recently in a survey by Kennedy and Kaplan (2001).

In the DFID Health Systems Guide, emphasis was made on how the livelihood approach traces the pathways through which ill health reduces productivity and increases the burden of households and shows how this can make households and communities less able to withstand shocks. Sabri (2000) also highlighted that, in the 20<sup>th</sup> century, development was usually equated to economic growth without defining clear links between economic prosperity and health which is seen as a relevant component of human development. The Women's Health Victoria Publication (WHVP, 2002) highlights how gender inequality impacts health. It emphasizes that, gender differences which are considered as an important dimension of poverty influence exposure to risk factors, access to and understanding of management, prevention and control; subjective experience of illness and its social significance; attitudes towards the maintenance of one's own health and that of other family members; providers of service and perceptions

of quality care. It stressed that given the social context of women's lives, women are more likely to experience more significant detrimental consequences of policies that ignore potential gender impacts. When gender considerations are not captured in policy formulation, women suffer a great deal, because, the incidence and severity of socio-economic deprivation among women is usually very high. It is obvious that in whatever way poverty is measured it has a direct reciprocal relationship with ill health.

At the official launching of the Global Commission to tackle the 'causes behind the causes of ill-health' in March, 2005 in Santiago, Chile, Jong-Wook (Director General-WHO) stressed, "social standing plays a big part in whether people will live to be 40 or 80, whether they will be treated for a curable disease and whether their children survive their fifth birthday. People should not die young because they are poor. This Commission will assist countries, no matter rich or poor to implement strategies that will help people who are poor and marginalized to live longer, healthier lives" (Jong-Wook, 2005). A clear analysis of what Jong-Wood highlighted could be summed up in the words of Minkler (1999) that, 'poverty kills'. Poverty is the basic concept for all the socio-economic determinants which create the conditions capable of sweeping people into poor health. They include poor housing, social exclusion, malnutrition, unsafe working conditions, and lack of quality health systems, poor education and poor lifestyle. The Chair of the Global Commission emphasized that "a great share of health problems is attributable to social conditions and this is why the poor carry the greatest burden of ill-health" (Marmot, 2005). Emphasis is made that, given the strong and pervasive relationship between poverty and health, commitment to health necessarily implies

commitment to reducing poverty i.e. material deprivation and the multiple social disadvantages associated with it (Braveman and Gruskin, 2003).

The 2002 European Health Report (EHR) on the burden of ill health put much emphasis on how poverty translates into ill health. The relationship between poverty on the one hand and hygiene, nutrition, immunological status, and disease susceptibility on the other was well documented. The report identified some pathways of poverty into ill health as increased environmental risk, malnutrition, and food insecurity as well as limited access to knowledge, information and health care. “Poverty, whether defined by income, living conditions or education is the single largest determinant of ill health due to communicable diseases” (EHR, 2002). Studies are now beginning to show consistently that poverty and social rank are most important factors determining ill-health even more than smoking and other generic determinants. Evidence from Ghana shows that, poverty affects the intake of iodine and vitamins which makes mothers and children anaemic. About 80.1 per cent of children born to rural dwellers where poverty is endemic, were identified to be anaemic (GSS, 2004). Such a situation affects children’s resistance to diseases, visual system, growth and development. Countries which have identified the likelihood for poverty to impact health over the years make efforts to examine poverty in relation to health as an attempt to fashion out a strategy that is geared towards poverty reduction as a measure of ensuring health for all its citizens. However, in most cases developing countries including Ghana investigate into their health conditions and poverty situations separately, thereby, concealing the correlation between them.

“Poverty is currently known to be the world’s largest source of harm; it causes more death, diseases, suffering and misery than any other social phenomenon. Poverty is now a bigger scourge of humanity than plague, pestilence or famine. Each year over 10 million children die mainly from preventable causes which go untreated due to poverty” (Sachs, 2005; Gordon, 2004). It has been observed that for all the existing poverty reduction strategy documents from the developing countries, none of them explicitly identified the burden of disease among the poor even though about one-half described the general population health status using country averages. Diseases that are known to be most commonly found among the poor are mentioned (Gwatkin and Guillot, 1999). However, they do not explicitly identify these diseases as such due to inadequate study to examine poverty and health together (Laterveer, et. al., 2003).

## **2.9 OBSERVATIONS FROM THE LITERATURE REVIEW**

The review unveiled that the concept of poverty has been variously defined from income to non- income viewpoints, hence the conception that poverty defies a single definition with multidimensional character. It was however realized that, the existing views expressed through the study of poverty showed that there was virtually no effort by the early researchers to study and define poverty separately from the effects of poverty. This results in the multidimensional approach to the study of poverty, hence the complexity in its study and attack. More significantly, researchers into poverty and health usually conclude that poverty influences health, whilst ill health keeps the poor people much poorer; whereas the review on the determinants of health showed that some researchers identify ill-health with some poverty related indicators such as nutrition, hygiene,



education e.t.c. Though there is a general knowledge that poverty influences health, a clear analysis of how poverty translates into ill-health has not been comprehensively studied. This was found to be due more to the observation that researches into poverty and health particularly before the 21<sup>st</sup> century were done separately keeping the linkages between those two social pandemics hidden.

In Ghana, for example, where poverty remains predominantly a rural phenomenon, with significantly poor rural health records, there is virtually no research work done on the relationship between poverty and health in rural Ghana, hence very scanty literature exists on the subject. This research thus observes closely the concept of poverty from a dual dimensional perspective to examine the relationship between poverty and health. This was done by studying some effects of poverty such as poor nutrition, low health education, poor hygiene and housing as well as poor access to health care facilities as indicators and linkages through which poverty is likely to translate into ill health. The results thus have provided a comprehensive information and research-based knowledge to curb the increasing health decay in rural Ghana through poverty reduction.



## **CHAPTER THREE**

### **3.0 PROFILE OF AMANSIE WEST DISTRICT**

#### ***3.1 INTRODUCTION***

This chapter examines the geographical features in the District which interact to define the present situation of the study area. It further unearths the socio-economic and institutional arrangements as situated in the District to help appreciate the potentials and constraints to development in that geographical setting chosen for the study as related to poverty and health. The prevailing situation in the District was observed in line with the Ghana poverty reduction strategy policy arrangement for poverty assessment and reduction in the country which aims at creating wealth by transforming the nature of the economy to achieve growth, accelerate poverty reduction and to protect the vulnerable and excluded within a decentralized, democratic environment. It is in this spectrum that the relevance of the nature of the District's economy as influenced by its geophysical features in relation to the poverty and health survey in the District could be appreciated in the national context. The main source of data for this chapter was secondary material from the District Administration and other relevant materials on the background and prevailing circumstances of the Amansie West District. Figure 1 shows the location of the Amansie West District in the national and regional context, and figure 2 shows the map of the District indicating study villages chosen for the survey.

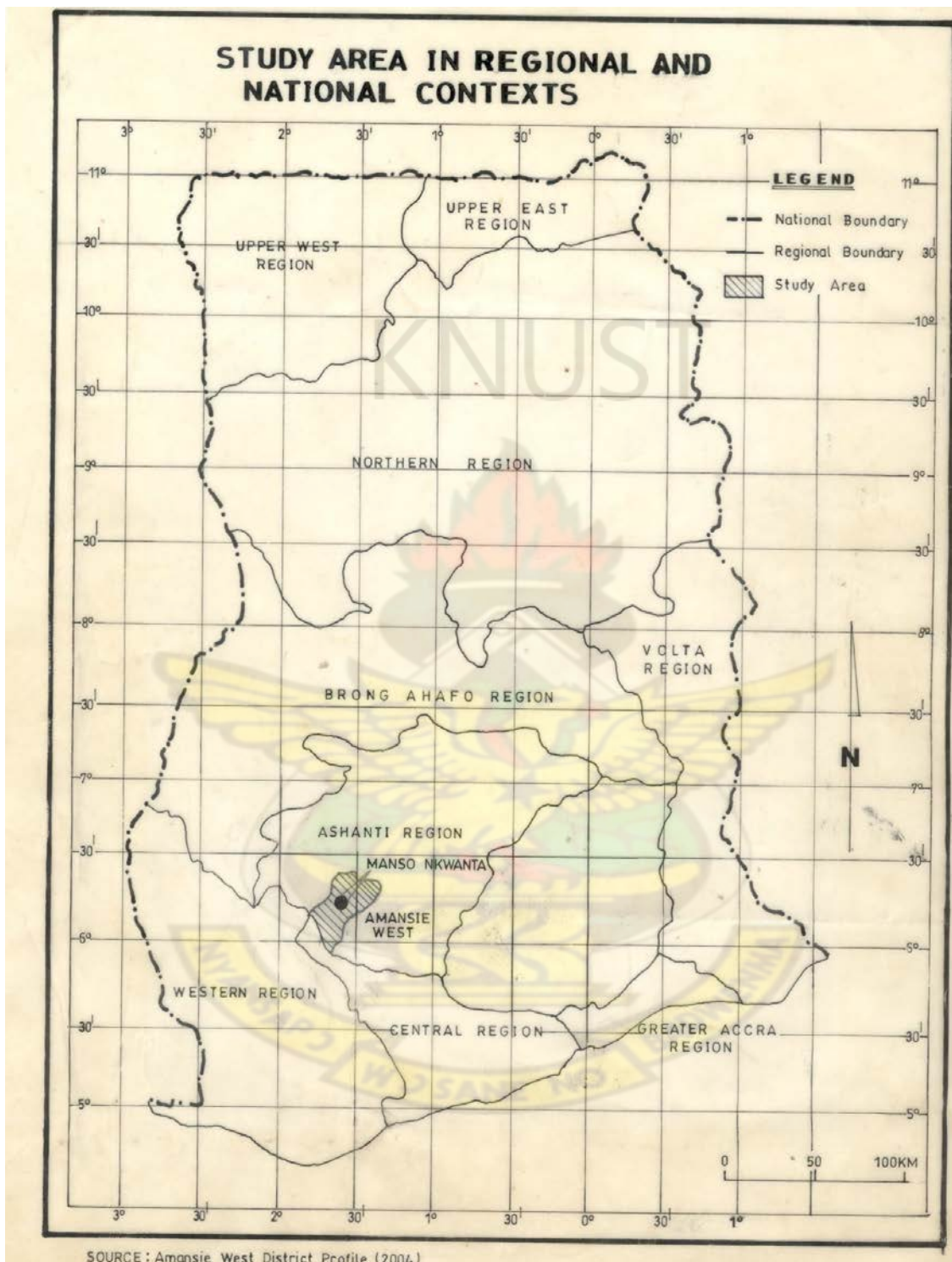


Fig. 1: Location of the Amansie West District in National and Regional Context.



Fig. 2: Map of the Amansie West District Indicating Study Villages



### ***3.2 LOCATION AND SIZE***

The Amansie West District is located in the south-western part of Ashanti Region. The District was carved out of the Amansie East District in 1989 as part of the then government's decentralization policy. It shares boundaries with the Amansie East District in the west, Atwima Mponua District in the east, Atwima Nwabiagya District in the north and Amansie Central in the South. The Amansie West District falls within latitudes 6° 35' and 6° 51' North and Longitudes 1° 40' and 2° 05' West (AWDP, 2004). The District covers an area of about 1,364 sq. km. and forms about 5.4 percent of the total land area of the Ashanti Region (AWDP, 2005). The entire District comprises 160 communities with Manso Nkwanta as the District capital. It is divided into 12 local councils, 21 area councils and subdivided into 48 electoral areas. The major towns which serve as growth poles include Manso Nkwanta, Mpatuam, Manso Mem, Manso Atwere, Edubia, Watreso, Abore, Keniago, Essuowin, Ahwerewa and Datano.

### ***3.3 PHYSICAL FEATURES***

#### ***3.3.1 Relief and Drainage***

The topography of the Amansie West District is generally undulating with an elevation of about 210m above sea level (AWDP, 2004). The most prominent feature in the District is the range of hills which stretches across the north-western part of the District, most especially around Manso Nkwanta, Abore, Esaase, and Mpatuam. The District is drained in the north by the Offin and the south by Oda Rivers and their tributaries such as Gyeni, Nwene, Adubia, Subin, Pumpin and Emuna. However, the usefulness of the rivers to the District is limited due to the higher level of pollution from various sources most

especially through mining activities in the District. The pollution of the water bodies in the District poses a great threat to the health of communities that use the rivers as source of drinking water and for other domestic purposes. Water related diseases are more likely to be prevalent within the District especially in areas where there is shortage of pipe borne water. The topography of the District makes it possible for the people to cultivate variety of crops. It thus presents an opportunity for farmers in the District to increase their income levels through commercial farming to reduce poverty among households in the District. However, lack of credit facilities for farm implements and agrochemicals, and overdependence on rainfall for farming, make it impossible for farmers in the District to embark on large-scale farming activities in their communities. This makes it impossible for farmers in the District to raise adequate income from their farming activities to satisfy their basic needs.

### **3.3.2 Vegetation and Climate**

The District lies entirely in the rain forest belt and exhibits moist, semi-deciduous characteristics. It is much resourced with timber, herbs of medicinal values and fuel wood. However, the virgin forest cover has been degraded in several areas in the District. Factors such as increased population, excessive and reckless logging for export and unscientific and environmentally unfriendly mining activities are responsible for the alarming rate of deforestation in the Amansie West District. As a result, the typical forest cover of the District has been destroyed and replaced by a mosaic of secondary forest, shrub covered land and agricultural holdings. It is only in a few areas, particularly those immediately outside the forest reserves in the District that traces of virgin forest are

found. Four main forest reserves are found in the Amansie West district; the Oda river forest reserve, Apamprama forest reserve, Gyeni river forest reserve and Jimira forest reserve.

The District lies within the wet semi equatorial climatic region. The hottest period of the year with a mean monthly temperature of about 27.40°C, occurs during February to March prior to the commencement of the rainy season. Maximum daily temperature of the District during the hot months of the year does not exceed 35°C. From July to August the weather is relatively cold with a mean daily temperature of about 24.1°C (AWDP, 2004). The rainfall pattern of the District is not different from that of the Ashanti Region except the hilly areas of the District that experience relief rainfall occasionally. The District falls within the higher rainfall belt of Ghana, hence, has double maxima rainfall pattern. The rainfall period begins as early as March through June and July when it attains its apex and begins to subside. In October and November it rains again at a relatively minor scale to pave way for the dry season. The average annual rainfall for the District is about 1200mm (AWDP, 2005). Rainfall is evenly distributed in the District and supports most of the rain forest crops grown in the District. Almost all the farming activities that take place in the District highly depend on the rain because there is no well developed irrigation schemes to support agriculture in the District. Rainfall is indispensable in the District when it comes to the development of agriculture. The climatic condition within the District offers an opportunity for the people to intensify agriculture as a way out of poverty to improve the quality of their life. However, when it is out of crop-harvesting season, farmers in the District are saddled with acute income



poverty. As a result, farmers adopt coping strategies such as felling of trees for charcoal and firewood, clearing of vegetation for illegal mining operations and hunting for game which are economically less viable and can degrade the environment. Consequently, poverty among the rural farmers is intensified with adverse health effects as a result of the degradation of their environment.

### **3.3.3. Soils and Agricultural Land Use**

The soils found in the Amansie West District can be grouped under the geological formation from which they were developed. They include soils developed over granite rocks which comprise the Nyanako-Tinkong Association; soils developed over birimian rocks comprising of Bekwai-Oda Compound Association, Mim-Oda Compound Association, Kobeda-Esciem-Sobenso-Oda Complex and, soils developed over alluvium which comprises of Awaham, Kakum, Chichiwere Association (AWDP, 2005). The Bekwai- Oda Compound Association has relatively good agricultural value. They are suitable for a number of crops. Such food crops as plantain, cocoyam, cassava, maize, legumes and vegetables thrive well on them. Cash crops such as oil palm, cocoa, coffee, citrus and pear are also cultivated on them. It is also imperative to mention that with proper water management, the valley bottom soils can significantly support rice, vegetables and sugar cane cultivation (AWDP, 2005).

For the purpose of crop cultivation, Kobeda series of the Mim-Oda compound Association are relatively limited because of their shallow depth and susceptibility to drought. The middle slopes are, however, very fertile due to the basic rocks from which

they were developed. But their extent, location and inaccessibility make them agriculturally unimportant. They are rather useful for forestry purposes. The lower slopes and valley bottom are however, suitable for rice, sugarcane and vegetable cultivation (AWDP, 2005). Awaham and Chichiwere series are not extensively used because of the pebbly character of the former and the loose sandy nature of the latter which make them easily susceptible to erosion and drought. Nutrient holding capacity of Awaham and Chichiwere series is very low. Kakum series can be useful for rice cultivation, sugarcane and vegetable production under good water management. Generally, however, the soil formation in the District supports most of the cash and food crops produced in the country. With constant supply of water through irrigation schemes, the economy of the District could be improved through agricultural activities. Through improved agriculture both communal and individual poverty would reduce. With poverty reduction, access to basic facilities such as health care and educational facilities would improve.

### ***3.4 DEMOGRAPHIC CHARACTERISTICS AND THE BUILT ENVIRONMENT***

The number of people, their composition by sex and age are vital in assessing the manpower requirements and subsequent planning of various services and their spatial distribution. Based on the 2000 national population census, the District population was estimated at 108,273 and the density estimated at 79 persons per sq. km. at a growth rate of 1.5 per cent between 1984 and 2000. The District's population of 108,273 represents 2.9 per cent of the regional population of 3,612,950 (AWD, 2004). Using projection rate of 2.5 per cent, the projected population for the District for the year 2004 was estimated

at 119,573. Though the population density is comparatively lower than that of the region and national estimate of 127 and 212 persons per sq. km. respectively, the dispersed nature of settlements with low population density makes access to basic services difficult and expensive (AWD, 2004).

The population growth rate of 1.5 per cent for the District is far on the lower side compared to the regional growth rate of 3.4 per cent. However, the average size of a household in the District is relatively larger (about 6) hence the possible explanation to the low population size of the District could be attributed to migration of some of the inhabitants to the urban centres like Kumasi and Accra as means out of poverty. Considering the population density, the Amansie West District can be classified as predominantly rural. Only 25.6 per cent of the 160 communities have population of over 1000 and 24 per cent of the remaining communities have population between 101-1000. The rest of the communities have a population of less than 100. About 51.3 per cent of the total population is estimated to be females and 49.7 per cent are males. The estimation of the average household size in the district is six (6), ranging from minimum of about three (3) to as many as eighteen (18) household size. Most of the inhabitants belong to the Christian faith. About 80 per cent of the population are Christians. Adherents of Islamic and traditional religions constitute 10 per cent and 3 per cent respectively; whereas 7 per cent do not belong to any of the types of the religious groups (AWD, 2005). The 0-14 age cohort constitutes 41.9 per cent of the total population whereas the aged group 65 and above make up only 5.3 per cent. Thus the dependent population consisting of the total of the two age cohorts constitutes about 47.2 per cent of

the total population in the District. The economically active population which falls between the ages 15 and 64 constitutes 52.8 per cent of the total population of the District. The dependency ratio which represents the ratio of the elderly (aged 65 or above) and children (under 15 years of age) to the population in the economically active group in the District is estimated at 1:0.90 (AWDP, 2004). The implication is that every 100 economically active persons cater for 90 people. Though this may be considered low as compared to that of the region's dependency ratio of 1:1.0, the high rate of unemployment and urban migration makes this very significant. The settlement pattern in the District is the dispersed type hence making access to the communities which are distant away from the District capital very difficult.

The demographic characteristics of the District have major implications on poverty and health in the District. The relatively higher proportion of the population in the labour force could be a potential for increasing productivity in the District which can affect household income levels positively. Once household income is improved, people can meet their basic needs to improve the quality of their health. However, the low level of development in the District inhibits the expansion of job opportunities for the increasing labour force. Unemployment rate and poverty incidence are thus high in the District which affect their health status significantly. The recent socio-economic and reconnaissance survey conducted in the District revealed that, about 90 per cent of the houses are compound houses with more than two households living in them. There are, however, few detached and semi-detached houses in the relatively bigger towns such as Manso Nkwanta, the District capital, Moseaso, Atwere, Mpatuam, Abore, Datano, and

Pakyi No. 2. Most of the buildings in the District are built with landcrete with few having their outer walls completed with cement. Thus most of the buildings in the District are of poor quality. The buildings are mostly roofed with iron sheets with few in thatch. As a result of persistent erosion and weathering, the foundations of most of the houses are exposed, making them risky for human life.

It is significant to note that generally most of the houses in the District have inbuilt kitchen and bathrooms. However, latrine facilities and well constructed gutters are rarely found in the individual houses. Due to poor drainage system, waste water disposal is very poor, making the people susceptible to poor health. The poor drainage system and the housing conditions of the people influence the spread of diseases such as malaria, diarrhoeal diseases and skin diseases associated with poor housing and environmental conditions.

### ***3.5 HUMAN RESOURCE DEVELOPMENT AND BASIC SOCIAL SERVICES***

#### **3.5.1. Education and Literacy**

Access to education in the Amansie West District is very difficult. The District has (98) Primary Schools, (50) Junior Secondary Schools and three (3) Senior High Schools (AWD, 2004). Considering the population density of the District, it can be asserted that the District has adequate primary schools; however, there is the need to expand facilities at the Junior and Senior High School levels and to re-examine the spatial distribution of the educational facilities available in the District to ensure easy access by all children of school-going age from the various segments of the District.



There is relatively low school enrolment from the primary level to the Senior High School level, with females being less favoured. The enrolment at the primary level including pre-school was 20,703 in 2002 out of which 9,792 were females. The gross primary school enrolment rate in the District is 66 per cent which is below the national average of 77 per cent. The gross primary school enrolment for girls in the District is 60 per cent as against the national average of 72 per cent. Enrolment at the Junior Secondary School level in 2002 was 4910 out of which 2818 were males and 2092 were females (AWD Profile, 2004). However, over 80 per cent of the Junior Secondary Schools have no workshops due to the inability of the communities to finance the construction of workshops when the JSS concept was initiated. With the introduction of the capitation grant policy in 2003, enrolment at the basic level has increased but not so significantly. This is, however, attributed to the use of children as source of labour by parents on their farms and ignorance of some parents about the importance of education in general.

Poor staffing and lack of library facilities are some major problems in the schools at all levels. Almost all the schools at the first cycle are poorly staffed mainly due to lack of decent accommodation in the communities for teachers posted to the District. There are about 455 trained and 235 untrained teachers serving the entire District. The pupil-teacher ratio as of 2002 was 32:1. From hindsight this ratio reveals a relatively appreciable comparison; however, this relationship is as a result of poor enrolment of pupils at the basic level of education. The poor staffing situation in the District with regard to trained teachers contributes tremendously to the lowering of educational



standards in the District. A survey conducted in the District by the Ministry of Education on the performance of pupils in some selected subjects revealed that the mean scores in English and Mathematics were 16.79 per cent and 28.78 per cent respectively (MOE Baseline survey cited in AWDP, 2004). Another contributory factor to the poor standard of education in most communities in the District is the malfunctioning of School Management Committees. The dropout rate is very high especially for girls. This increases exponentially with rising levels of education. The dropout rates at the primary and junior secondary schools are about 35 per cent and 10 per cent respectively. This is relatively higher compared to the national average of 24.5 per cent at the primary level. The main causes of the relatively higher dropout rate are economic and low level of education of heads of household. The attractive gains from 'galamsey operations' in the mining areas have pushed some children out of school whilst extreme poverty has also rendered some parents incapable of financing their wards' schooling. The drop out rate of girls at the primary level is 38 per cent as against the national average of 29.50 per cent. Some children are made to drop out of school to enter into employment to contribute to the financial upkeep of the family. Some of the girls in the District are also forced into marriage as early as 12 and 13 years not only because of cultural practices but economic reasons since the parents are not able to cater adequately for the financial needs of the family (AWD, 2003).

Other factors that have also contributed to low school enrolment in the Districts include lack of physical structures, inadequate teachers, and low priority given to rural people's education by planners and policy makers. It has been identified that about 50 per cent of

primary schools in the District do not have permanent buildings and 45 per cent have no kindergartens (AWD, 2004). As a result of the low enrolment rate and high school dropout, the literacy level in the District is very low, which is seriously affecting development in the District. The supply of furniture at the first cycle schools is very poor. It is evidenced that close to 65 per cent of the schools do not have adequate furniture. This is basically due to the inability of parents and the District Assembly to provide the required furniture for the schools. The three secondary schools in the District are Mansoman Secondary School located at Manso Atwere, Esaase Bontefufuo Secondary Technical at Esaase Bontefufuo and Adubia Secondary School at Manso Adubia. As of 2002, the total enrolment for the three second cycle schools stood at 625; of which 198 (32 per cent) were girls and 427 (68 per cent) were boys (GES cited in AWD Profile, 2004).

### **3.5.2 Health Care**

There are fourteen health facilities in the District comprising one hospital located within the frontiers of the District specifically at Agroyesum. In addition, there are five health centres, four clinics and four maternity homes which are unevenly distributed within the District. According to the District Health Administration, these facilities are manned by relatively few medical personnel. The doctor-population ratio is 1: 144,197 whilst the nurse population ratio stands at 1: 5,452. This situation prevailing in the District adversely impacts the efficient and effective health care delivery in the District (DHMT cited in AWD Profile, 2004). There are 69 trained and 101 untrained Traditional Birth Attendants in the District who also attend to the health needs of majority of the people in

the District. There are few registered chemical sellers in the District's bigger communities such as Atwere, Manso Nkwanta, Pakyi No. 1 and No. 2, as well as Antoakrom.

It is important to highlight that majority of the people particularly in the hinterland do not have access to the existing health care facilities hence, mostly rely on quack drug peddlers and traditional medicine. This may be due to the bad nature of roads, irregular flow of transport, poverty and existing cultural beliefs. The resultant effects are high mortality rates especially among children and women in the District. The health status of the people most often deteriorates before seeking medical attention from orthodox health care. The health systems and health problems in the District reveal the level of development of the District. The conditions of some of the structures are rather poor and need renovation. Most of the clinics lack facilities such as laboratories, staff and office accommodation. This affects coordination and communication, hence impacts the performance of the District Health Management Team adversely (AWD Profile, 2004).

### **3.5.3 General Health Situation**

Diseases such as malaria, upper respiratory track infections (URTI), malnutrition, and high infant mortality as well as risk to women during childbirth are some major problems affecting the health of the people in the District. Buruli ulcer also continues to remain a major health problem in the District. The number of Buruli ulcer cases continues to rise every year. The HIV/AIDS pandemic is equally hitting hard on the District. Available data indicate a prevalence rate of 5 per cent. The five top causes of Out Patients'

Department attendance as of 2001 were malaria, diarrhoeal diseases, URTI, skin diseases and accidents. Unfortunately there is inadequate staff to address the numerous health problems facing the District. Lack of social amenities in the District makes the District unattractive to most medical personnel.

There is only one doctor serving the entire District with no pharmacist, and woefully inadequate nurses in the District. The doctor: population ratio of 1:144,197 and the nurse: population ratio of 1: 5,452 are relatively higher than the regional ratios of 1: 31,477 and 1: 3,082 respectively (AWDP, 2005). This has been having serious effects on health care delivery in the District. The focus of the District has, however, been on reorientation and relocation of community health nurses to remote areas to provide quality health care at the doorsteps of community members with local people's full participation. However, lack of appropriate structures to house the officers and the trainees is hampering the progress of this strategy.

#### **3.5.4 Water and Sanitation**

In spite of the efforts made by government and some NGO'S in providing potable water for rural communities, access to potable water is a major problem for several communities in the District. The major sources of water for majority of the people in the District are rivers and streams, hand dug wells, boreholes and pipe borne water. There are 86 communities with a total of 200 boreholes and 37 hand-dug wells. It is significant to note that, out of the 160 communities in the District, only three communities in the District; namely Manso Nkwanta, Atwere and Esaase enjoy pipe borne water. It is

estimated that, given the distribution of boreholes, hand dug wells and mechanized boreholes in the District, about 40 per cent have access to potable water. This is far below the national average of 61 per cent. The remaining 60 per cent of communities in the District continues to rely on streams and ponds as their major sources of water supply (AWDP, 2004). Most of these communities are found in the rural communities in the District. The prevalence of water borne diseases continues to be high in the District as some of the communities such as Muawano under the Mim local council rely on unsafe water source for their supply. Since most of the streams and ponds dry up during dry seasons, women and children in the communities saddled with water problems in the District spend most of their time looking for water. This situation has the tendency of encouraging absenteeism, lateness and other poor attitudes to school. The informal and agricultural sectors are also affected adversely during the dry seasons as the women who are actively involved in those sectors divert their attention looking for water.

The District has generally poor sanitation. Facilities for both liquid and solid waste disposal are woefully inadequate. It is important to mention that over 95 per cent of the communities in the District do not have well constructed gutters within and around their buildings for proper liquid waste disposal. It is also estimated that more than 80 per cent of the communities use uncovered pit latrine. The only communities with KVIP toilets are Manso Nkwanta, Agroyesum, Atwere, Adubia, Manso Nkran, Keniogo, Moseaso and Ahwerewa. However, most of these facilities are malfunctioning due to over utilization.

The sanitation situation in the District is a source of concern as it makes most of the communities susceptible to the spread of diseases.



### **3.5.5 Electricity**

A great disparity exists between the District and other Districts in Ashanti region in particular and the entire nation as a whole in the area of electricity distribution. Only about 33 per cent of the population in the District has access to electricity (AWDP, 2004). It is significant to note that even within the District, the provision of electricity is unevenly distributed. The facility is highly concentrated in the southern sector of the District and even where the people have access to electricity supply, there is the problem of constant interrupted power supply.

This situation is likely to have adverse effects on development and poverty reduction strategies in the District. Investors cannot take advantage of the abundant resources such as cocoa, forest products, labour, mineral deposits among other food crops in the District to establish cottage, mining and small scale agro-based industries to create employment for the people in the District. Significantly too, the poor electricity supply in the District makes commercial activities in the District almost always stagnant. For example, due to the constant power interruption most of the cold stores in the District have folded up. Thus people divert attention from trade and industrial activities to agriculture. This leads to pressure on agricultural land use and also compound the unemployment problem in the District; situations that result in poor quality of life for some communities in the District.

### **3.5.6 Transportation and Communication Services**

The District has only one trunk road and a number of feeder roads linking almost all the communities. The trunk road is the Anwiankwanta-Manso Nkwanta-Abore highway



which is about 49.6km. Generally existing roads are in very deplorable condition which is one major challenge to development in the District. Majority of farmers particularly in the hinterlands find it extremely difficult to transport their farm produce to the nearest market center for sale due to the deplorable nature of the roads and the unwillingness of vehicle owners to ply such roads. Even when they do, the exorbitant fares they charge leave high percentage of food stuffs rotten on the farms as farmers are not able to afford transporting them to nearby market for sale.

The District lacks access to telephone facilities. The only communication centre which serves the entire District is a private one located at Manso Nkwanta. This facility is not even reliable due to its frequent breakdown and power cuts. The District has only one post office and a number of postal agencies and the District Assembly continues to rely on its Motorola communication system for message transmission. The unavailability of telephone facilities in the District coupled with inadequate postal services, lack of internet services and poor road network have adverse effects on information flow in the District. In most cases information either gets to the people in the District rather late or does not get to them at all. As a result the District is almost always put behind development within the modern information technological advancement as a tool for development and poverty reduction. It has thus become a cost to individuals, corporate bodies and the general public as the District is unable to move forward at the same pace in the development process as other Districts with relatively easy access to information.

### **3.6 ECONOMIC ACTIVITIES**

The availability of fertile lands that support the cultivation of variety of crops for both the local market and for export has made agriculture an important sector in the economy of the Amansie West District in terms of employment creation and income generation.

The agricultural sector employs about 70 per cent of the economically active population in the District. Women constitute about 60 per cent of the labour force in the sector (AWDP,2002). The male components of the labour force are mostly found in the mining sector which looks more lucrative. However, due to their low level of education, the indigenous people in the District are offered menial jobs in this sector. Another reason for female dominance in the agricultural sector is the general out-migration of the energetic male youth to Kumasi, Accra and other urban centres in the country to search for greener pastures. Mining, which is the second contributor to the District economy, is an activity which dates back to the pre-colonial era. The District served as an important source of gold to the Ashanti kingdom. The sector currently employs about 22 per cent of the labour force in the District, mainly the male population who are found in both large scale and illegal mining activities. Industrial activity in the District is very poor. Major activities in the industrial sector are palm oil extraction, akpeteshie distilling, and gari processing on a relatively small scale. The sector is however, not expanding basically due to absence of electricity in many communities and poor quality of accessible roads to facilitate marketing of these products.

Lumbering concessions have been given out to timber firms, and are carried out in many places in the District. However, the activities of those engaged in the timber trade are not

controlled and managed properly (AWDP, 2004). As a result, forest reserves in the District have been encroached upon leading to the depletion of many of the valuable species both in the reserves and off-reserve areas. The service sector in the District is not well developed in the District, and employs just about 2 per cent of the labour force.

Income generation from activities in the District for its development is discouraging. It is estimated that the average annual income of people in the District is about \$200 (AWD, 2003). The District Assembly depends largely on the mineral royalties from the mining sector. About 80 per cent of the District's revenue comes from the mineral and timber royalties. Since September 2001, mineral royalties have not been paid to the District by the government (AWD Profile, 2004). Due to the unreliable nature of the District Assembly's major source of revenue, implementation of major development projects in the District is hampered. Productivity in the agricultural sector is completely dependent on the availability of rain. Majority of the farmers are into subsistence farming and quite a few of the farmers are into commercial farming, cultivating crops such as maize, rice, cassava, coffee, cocoa, and oil palm trees which are limited to few areas in the District.

Usually productivity at this sector in the District is low compared to that of the region. Consequently farmers in the District usually earn very low income from their seasonal production. This problem is even compounded by the poor nature of roads linking farming communities to marketing centres and the absence of storage facilities in the District.

Commerce is a very important economic activity in the District. There are several small scale market centres in the District. The major ones include Antoakrom, Datano, and

Keniago markets. Pakyi No.2 and Manso Nkwanta markets are yet to be used. Marketing is done on daily bases. There is no periodic large scale marketing activity in the District. Marketing activities are not brisk in the District unlike the Ejura-Sekyedumasi District. This may be as a result of a number of reasons of which poor nature of roads is the major factor. Articles of trade that flow from outside into the District's market centres include second hand cloths and kerosene; whilst foodstuffs also move out of the District to other areas. Due to the bad nature of the roads, numerous varieties of goods and services do not flow into the District markets, making the few brought into the District for sale expensive and cost of living relatively high. However, much of the foodstuffs get rotten on the farms whereas the middlemen who visit the District to purchase the few farm produce brought into the markets offer unattractive prices to the farmers, thereby aggravating their poor living conditions.

The low income earned from the economic activities makes access to some basic needs such as food, quality education, housing and health care very difficult for most people in the District. The District boasts of four (4) Banks established to ensure the growth of the private sector by giving credit to people engaged in economic activities (AWDP, 2005). But lack of collateral and high interest rates make it difficult for the people to access credit to expand their economic activities to reduce poverty in the District.

## **CHAPTER FOUR**

### **4.0 POVERTY AND HEALTH IN THE RURAL COMMUNITIES**

#### ***4.1. INTRODUCTION***

This chapter is in two sections. Section one provides a thorough discussion and analysis of useful results obtained on the nature of poverty in the rural communities selected for the survey. The assessment of poverty situation in the rural communities was based on the relative income approach. Income and level of education (knowledge) were identified to examine the incidence of poverty and the extent to which the poor are poorer in health in the rural communities in the Amansie West district.

For the purpose of validating the level of education and income approaches to the study of poverty in the rural communities, the participatory poverty assessment (PPA) approach was first employed to ascertain the perceptions of poverty by the rural communities themselves to initiate the application of the relative incomes poverty assessment approach. This method was to involve the rural communities in analyzing their own poverty using focus group discussions to help them gain control over the process of defining poverty by making them part of the process of studying poverty in the rural communities. The SPSS software was used to analyze, describe, summarize and cross-tabulate data where necessary for easy understanding and clarification.

The second section observes closely and analyzes findings on the health situation of the people living in the communities chosen for the study by carefully examining diseases

prevalent in the study communities, frequency of their occurrence as well as their severity as discussed in the methodology. It further unveils the relationship between poverty and the health conditions of the people in the study communities to assess the impact poverty has on health in the rural areas

## ***4.2 POVERTY SITUATION IN THE STUDY VILLAGES***

### **4.2.1 Perceptions of Poverty**

The perceptions of poverty by the rural folks were examined using focus group discussions among different sex groups. A cross examination of how the male and female heads of household perceive poverty as indicated in Box One reveals certain similarities in the areas of health, nutrition, housing conditions, education and employment conditions as chief poverty factors within both sex groups which need primary concern in any poverty assessment or efforts towards reducing poverty to benefit both sexes in the rural communities. It was drawn from the focus group discussions that proper nutrition, housing, education, health and gainful employment are the basic needs common to both male and female headed households without which the individuals and households living in the rural communities are considered poor. It should be highlighted that, physical weakness as a result of old age and sickness is noted as characteristics of poverty among both sex groups. This is because when a person is physically weak it becomes impossible for such a person to work to earn income, and usually becomes dependent on others for survival. Box One gives details of the perceptions of poverty by both sex groups arranged in order of importance.



### Box One: Perceptions of Poverty

Theme	Male Groups	Female Groups
Perceptions of poverty within male and female headed households in the study villages in the Amansie West district.	<ul style="list-style-type: none"> <li>❖ Having no job or vocation</li> <li>❖ Having no better accommodation</li> <li>❖ Inability to get what one wants to eat</li> <li>❖ Inability to cater for children's education</li> <li>❖ Inability to afford medical care when sick</li> <li>❖ Having no advocate when in a precarious situation</li> <li>❖ Lack of strength and skills to work (e.g. old age and sickness)</li> <li>❖ Inability to afford decent clothing for family members</li> <li>❖ Lack of money capital to purchase farm inputs</li> <li>❖ Lack of access to basic social services</li> </ul>	<ul style="list-style-type: none"> <li>❖ Not having good food to eat</li> <li>❖ Living in a dilapidated house</li> <li>❖ Having no money to educate one's children</li> <li>❖ Not having any good work to do to earn a living</li> <li>❖ Inability to clothe one's self and her children decently</li> <li>❖ Having a very bad health condition (sickness)</li> <li>❖ Poverty is aimlessness</li> <li>❖ A condition of being defenseless</li> <li>❖ Having no support from a husband</li> </ul>

Source: Author's Field Survey, November, 2005

Generally, the study villages found employment to be having a job that offers regular monthly income, hence found their farming activities as no employment opportunity. This is because farming brought seasonal income to many households in the rural

communities. When it is out of crop harvesting seasons, the income of most households is actually nil. This incapacitates them from meeting their basic needs. It was observed however that, though to both study groups, lack of employment was identified to explain what poverty meant in the rural areas, to the male discussion group, lack of employment was seen as the chief predictor of poverty. Almost 90 per cent of the male heads of household agreed on unemployment as a major predictor of poverty. In an attempt to verify why unemployment was noted as the chief predictor of poverty, Yaw Donkor, a member of the male heads of household discussion group emphasized,

*“In our community farming is our major occupation. Those who do not have land and adequate capital to farm and trade are the most poorest in our community. They are not able to feed their families or send their children to school.”*

The male headed households, identifying poverty chiefly with unemployment, brought to bare the importance of employment creation as a required poverty reduction intervention in the communities. This was because as heads of families, they play roles as bread-winners of their respective families and are also responsible for paying for their children's education, health care among other social duties which are better performed with gainful employment. Thus, to the male heads of household, unemployment signified poverty since it makes them irresponsible and more importantly denied them their headship status within their households. This also confirmed Lister's (1993) assertion against absolute poverty measure that “people are not, simply individual organism requiring replacement of sources of physical energy. They are social beings expected to perform socially demanding roles as workers, parents, partners, neighbours and friends” (Lister cited in Donkor, 1997).

On the other hand, the female groups identified poor nutrition as the most important poverty factor as indicated in Box One. This shows how important nutritional requirement determines the socio-economic status of families particularly with the female headed households (see Chapter five, Plate One).

It was noted that within individuals, households and even communities there are differences in what could be described as the most pressing needs of people. This explains to policy makers that poverty means different conditions to different people, making it important for the consultation of the poor before any poverty reduction intervention for specific rural communities is implemented to yield the fullest impact. Differences in access to potable water and educational facilities between study communities were also vivid. The differences in how the male and female heads of household in the rural communities perceive poverty justifies Osmani's (2003) conception that "there are streams of ideas with certain common understanding in poverty discourse, yet they do not add to a single coherent conceptual framework for defining poverty due to the inherent diversity in the streams of ideas." The diversity is vivid in the ways people perceive and experience poverty, and how poor people strive either to escape poverty or to cope with it. The female heads of household in their discussion groups also highlighted defenselessness, aimlessness and lack of support from a man which were explained as being unsafe within the physical environment one finds herself, lack of knowledge (skills) about something worth doing to earn a living, and husbands irresponsibility with regard to child care and farm activities as key poverty conditions that make women more vulnerable. It was observed that when women's groups in the

study villages are unable to enjoy a certain level of safety and security and find difficulties in identifying what they are capable of doing to earn a living, it creates a situation which puts them in a more vulnerable position. A member of the females' discussion group emphasized,

*“My husband takes care of my children. Without him, I could not have taken my child to secondary school. I help him on his farm because he provides everything we need”* (Focus Group Discussion, 2006).

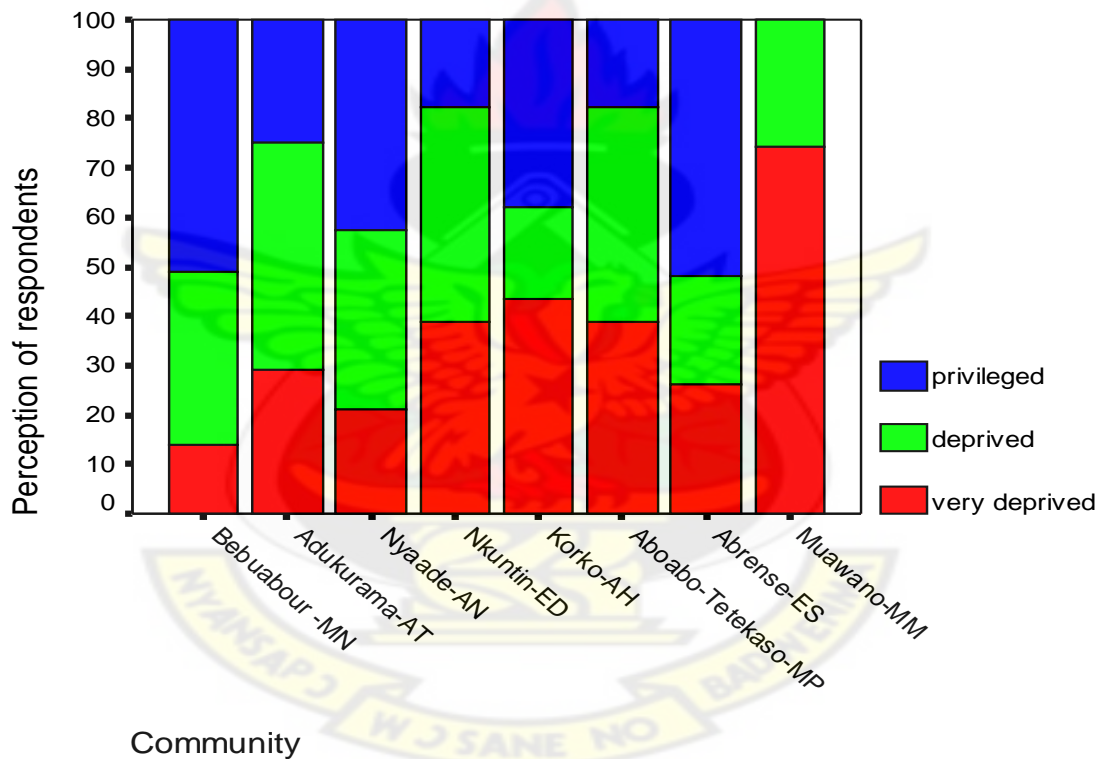
This shows that in a situation where the husband becomes irresponsible, the woman becomes vulnerable. The emphasis on defenselessness, aimlessness and lack of support by the women's groups also confirm Maslow's classification of human needs which highlights safety and security needs as the second category of needs people seek to fulfill after satisfying their basic needs such as food, shelter and potable water (Ayerterey, 2002). The condition of defenselessness, aimlessness and lack of support is attributed to lack of effective women empowerment and capacity building activities, lack of control and ownership of productive resources such as farm inputs, adequate land, micro credits and extension services which saddle the women groups in the rural communities in the district. As a result female headed households are found to be more vulnerable and likely to fall into deeper depth of poverty than male headed households in the rural areas in the district. At Bebuabour, one of the study communities, the focus group discussion among the women's group revealed that, young girls are made to drop out of school at very early age to enter into marriage at a time when they have no employable skills. They work on their husbands' farms since most of the females are landless. Again, due to absence of women organizations in the rural communities, the banks in the district fail to extend loan

facilities to them. This makes majority of the women in the district dependent on their husbands. Thus, in situations of divorce, loss of husbands or husbands' irresponsibility, women become defenseless, aimless and more vulnerable.

One significant finding from the discussions of the male heads of household was that, living in the rural setting where there are inadequate social amenities such as electricity, motorable roads, potable water and health centres as well as lack of other job opportunities apart from farming, puts residents of the villages in a deplorable condition that does not offer any hope for escaping poverty in the rural environment. This idea reflected clearly at Muawano where they had a very poor built environment with no health facility, school, electricity, toilet facility, very bad roads and the community members still depended on rain water and an unprotected well for drinking. It was realized that, lack of basic social services underpinned the high rate of rural-urban migration of the people particularly males who in most cases are the breadwinners of their families. Over 70 per cent of respondents complained of excessive out-migration of the youth from their communities due to lack of basic social amenities. The people in rural Amansie thus recognize a decision to stay in the rural communities where the basic social amenities are non-existent as acceptance to be in persistent poverty, because to them, poverty also meant living in rural communities such as Muawano and Nkuntin with no basic social amenities.

Questions were asked to confirm or decline the claim that people feel they are poor when they are living in rural communities. The survey sought to find out how respondents perceive the socio-economic status of their communities in relation to other communities

in the district using a four-point research question. The results established that about 46.3 per cent and 41.2 per cent of respondents from the study villages described their communities as highly deprived and deprived respectively, whereas only 12.5 per cent representing (34) respondents perceived they live in privileged communities with no one accepting to live in a highly privileged community. Details of findings have been graphically represented in Figure 1 using cross examination of the study villages and socio-economic status as perceived by the respondents in the rural communities.



**Fig. 1: Socio-economic conditions of villages as perceived by respondents**

From hindsight it could be observed that Muawano, Korku, and Nkuntin are relatively the highly deprived communities whereas Bebuabour, Abrense and Nyaade are relatively privileged as perceived by respondents.



Kofi Boamah, a respondent from Muawano commented on the level of deprivation in the community.

*“Here we are backward, we still live in darkness, we have no light, poor roads, and we have no borehole, no toilet facility, no school and hospital unlike those at Agroyesum and Bebuabour. If we want anything, we have to walk to Agroyesum for them. The government should come to our aid.”*

(In-depth Interview , February, 2006)

In actual fact, Muawano and Nkuntin are communities with no educational facility, health centre, electricity, toilet, and potable water; whereas Korku also has relatively poor primary school building, but has no toilet facility, electricity and health centre. On the other hand Bebuabour and Abrense are two of the only three villages with electricity. Besides they have bore-hole water facility, basic schools and are relatively closer to Manso Nkwanta and Antoakrom which happen to be the two major towns in the district. However, Nyaade is the only village with a KVIP and also has a basic school, bore-hole water facility, though it lacks electricity facility.

In sum, it could be explained that a total of 87.5 per cent of respondents from the study villages recognize their situation to be one of deprivation. From this perspective poverty could be said to be endemic in the rural communities with relatively high incidence rate. Significantly too, the findings from the respondents justify the assertion by the male heads of household that, poverty means living in the rural communities with no social services. It further unveils the fact that, the perceptions of people particularly those in the rural communities about poverty are likely to change with changes in their environmental conditions as regards provision of social services.

#### 4.2.2 Manifestations of Poverty and Coping Strategies

The survey revealed that poverty in the rural communities is a visible condition with manifold manifestations. A member of the female heads of household discussion group at Bebuabour in the Manso Nkwanta local council could not find enough words to explain what poverty meant to her; but she could demonstrate it by pulling close to her, her grandson who had been made to drop out of school at age nine due to her inability to afford the boy's school uniform and books. As she pointed to the boy, she exclaimed,

*“Mr., this is poverty. I am now very old, I am unable to work to feed myself and my grand children or send them to school.”*

(Focus Group Discussion, February, 2006)

It was gathered from her demonstration that, poverty in the rural communities was not just a word of mouth, that is merely saying ‘I am poor’, but rather having something to show for one's poverty. Among the male heads of household discussion group, the survey discovered that, landlessness, poor housing conditions, low self-esteem, drunkenness and lack of storage bans were major manifestations of poverty within households in the rural communities in the district. On the other hand, the female discussion groups raised poor housing conditions, poor harvest, physical weakness, poor feeding habit, inability to access health care facilities when sick, landlessness, self medication, inability to send children to school and inability to pay debt and bills as manifestations of poverty within their households.

Thus, generally, the focus group discussions among the male and female heads of household revealed that the poor in the study villages have their poverty manifesting in several ways as indicated in Box Two.

## Box Two: Manifestations of Poverty

- Almost always wearing tattered clothes
- Their children drop out of school
- Have no land or relatively smaller pieces of land
- Harvest very little produce during harvesting time
- Seek no proper medical care when sick
- Buy food on credit in most cases
- Most often eat food without meat or fish
- Live in dilapidated houses
- Borrowing from neighbours in most cases
- Owe a lot of people in the community hence feel isolated
- Always working for other people on their farms to pay off debt
- Have no storage bins
- Physically challenged
- Practise self medication most often

Source: Field Survey, 2005

It was further established that the conditions within which the poor find themselves are not only consequences of poverty but also push the poor into deeper depths of poverty situation. The survey found out that, the poor in the rural communities, irrespective of their socio-economic situation identify some strategies to cope with the conditions in which they find themselves. The coping strategies the poor in the study villages adopt for their survival range from engaging themselves in 'by day' labour services, 'patra' i.e.

engaging themselves in very small scale vegetable farms near river banks, reduction of daily meals, illegal mining activities, sales of fire wood and children dropping out of school. It was observed also that most often the energetic youth migrate to Kumasi and Accra to escape the poverty situation in the rural areas. The persistent migration of the people in the rural areas into the urban centres offers no hope for the efforts by government to curb rural-urban drift in the country. It also has the potential of reducing agricultural productivity which can affect the rural economy in general.

With regard to their health issues, it was found out that, due to poverty the rural folks most often rely on traditional health care providers, self medication or depend on ‘quack’ doctors as coping strategies instead of utilizing the existing orthodox health facilities in the district when sick (see Section 5.2.6). Agnes Boakye, a respondent from Adukurama emphasized,

*“I practise self medication because I have no money to register for the Health Insurance in the district. Now my husband is sick but we have no money to see a doctor. If we had money, we would pick car to anywhere to seek medical care... We have very poor roads; people have to walk about ten miles from Adukurama to Agroyesum to see a doctor. Those here see it as good to walk four miles from Adukurama to Asarekrom to seek traditional medical care.”*

At Nyaade, a respondent further reiterated,

*“We have no money to visit hospital so our people visit the Malam – Kramo Mahamadu for herbs and spiritual healing whenever they are sick”*

(In-depth Interview, November, 2005).

Traditional medicine plays key role as coping strategy for the poor in rural communities chosen for the study. It was observed that, some households solely depend on herbs for the treatment of skin diseases, malaria, intestinal disorder and diseases of psychic nature. Some respondents confirmed the efficacy of the herbs and other traditional medicines as coping strategies for the sick who are unable to utilize the orthodox health facilities in the district. However, lack of education on the chemical composition of the herbs and appropriate dosage and methods of preparing the medicines pose greater challenge to the health conditions of the poor in the rural communities who rely on traditional medicine for health care. Significantly too, the operations of quack doctors and the practice of self medication threaten the health conditions of some rural households in the district. This was confirmed by John Kusi, a respondent from Nkuntin who claimed to have lost his sight as a result of washing his eyes with a concoction given to him by a 'native doctor'. It is important that since traditional medicine is patronized most often by the poor in the rural Amansie West communities, it should be given the needed attention (See Section 6.3.4)

#### **4.2.3 Income Dimension of Poverty**

Recent studies on poverty indicate that poverty includes but more than income poverty (Osmani, 2003; Nayaran, 2000; Appiah, 2000). However, income level is a major dimension and determinant of poverty since it influences the ability of individuals to meet their basic needs. Rowson (2001) and May (1998) used income levels to examine poverty incidence and severity within desperate countries in East Asia and concluded that lack of adequate income is the underlying cause of the poor health conditions among

households in the region. As regards the reasons why the poor experience such manifestations of poverty as shown in Box Two, it was realized that, they lack the means to acquire decent clothing, suitable houses, large tracks of land and proper health care. The findings revealed that adequate income is the single most important determinant of poverty, which, to a larger extent influence access to basic needs of the people in the rural communities. An opinion poll was run to verify the extent to which the study villages attributed their inadequacies to income poverty. This was done to assess the opinions of the total respondents chosen for the survey with regard to the choice of income and education for the study of poverty situation in the study villages in order to achieve the highest level of accuracy. The test yielded the results indicated in Table 1.

**Table 1: Influence of Income on Basic Needs**

<b>Income is responsible for</b>		<b>Strongly Agree</b>	<b>Agree</b>	<b>Disagree</b>	<b>Strongly Disagree</b>	<b>Don't Know</b>	<b>Total frequencies</b>
Poor nutrition	F	186	120	0	0	0	306
	P	60.8	39.2	0	0	0	100
Poor housing	F	171	134	1	0	0	306
	P	55.9	43.8	.3	0	0	100
Overcrowding	F	204	98	4	0	0	306
	P	66.7	32.0	1.3	0	0	306
Poor health	F	168	135	3	0	0	306
	P	54.9	44.1	1.0	0	0	100
Poor education	F	159	147	0	0	0	306
	P	52.0	48.0	0	0	0	100
Poor hygiene	F	97	175	32	2	0	306
	P	31.7	57.2	10.2	.7	0	100
Powerlessness	F	141	136	28	0	1	306
	P	46.1	44.4	9.2	0	.3	100
Poor access to healthcare	F	157	148	0	1	0	306
	P	51.3	48.4	0	.3	0	100

Source: Field Survey, 2005

**Key: F → Frequencies of respondents    P → Percentages of respondents**



The results in Table 1 indicate clearly that income level was a justifiable measure to assess the poverty situation of the target group since it was found to be the single most important determinant of the ability of the rural dwellers to meet their basic needs which included nutrition, housing, health status, education, hygiene and access to health care facilities. In all cases the survey recorded over 85 per cent of respondents attributing their ability or inability to satisfy their basic needs to their income levels in the study communities. Income levels from this perspective were thus helpful for the survey to assess how poverty in the study villages impacts the health conditions of people living in the rural communities in the district.

The survey thus adapted the minimum wage index of Ghana to establish the income quintiles of households as a way of determining the socio- economic status of the target group. The minimum wage defined as the amount of money a worker should earn to keep him/her surviving and in business (GSS, 2000) was found to be an appropriate measure for determining the socio-economic status of households particularly with regard to its impact on health in the study villages. As elaborated in the methodology, three main socio-economic groups were identified to ascertain the income poverty situation of the people in rural Amansie West communities and the relationship socio-economic status has with health conditions. The study to examine the socio-economic status with regard to income levels of households within the study villages yielded the results indicated in Table 2.

**Table 2: Income Situation of Study Villages in Cedis**

Income levels (GH¢)	Frequency	Percent (%)	Cumulative percent
below 20	128	41.8	41.8
20-40	132	43.1	84.9
> 40-60	32	10.4	95.3
>60-100	13	4.2	99.5
>100	1	.3	99.8
Total	306	100.0	

**Source: Field Survey, November, 2005**

The results shown in Table 2 indicate that, very significant number of respondents in the study village fall within the low income group. The few rural non-farm inhabitants who were mostly teachers, nurses and administrative officers in the district fell within the high socio-economic group. The number of respondents in the study villages was further found to decrease significantly with increasing income levels as indicated in Table 2.

The income poverty situation of the study villages was underpinned not only by the rural people's geographical location but also by the nature of occupation in which the rural community dwellers found themselves. It was unveiled that, 90.1 per cent of the total respondents from the study villages were subsistence food crop farmers, hence, seasonal employees. As a consequence of this, the survey did not only identify an inexplicably higher number of the rural respondents as income poor but also realized that, 82.4 per cent of the rural respondents had no regular monthly income due to the nature of their occupations. This confirmed the assertion by Mr. Ofosu, the Amansie West district disease control officer that, "the living conditions of majority of the people are very poor...when it is out of cocoa harvesting season, the income of some households is actually nil"(Interview with Mr. Ofosu, 2004). On the other hand, respondents whose

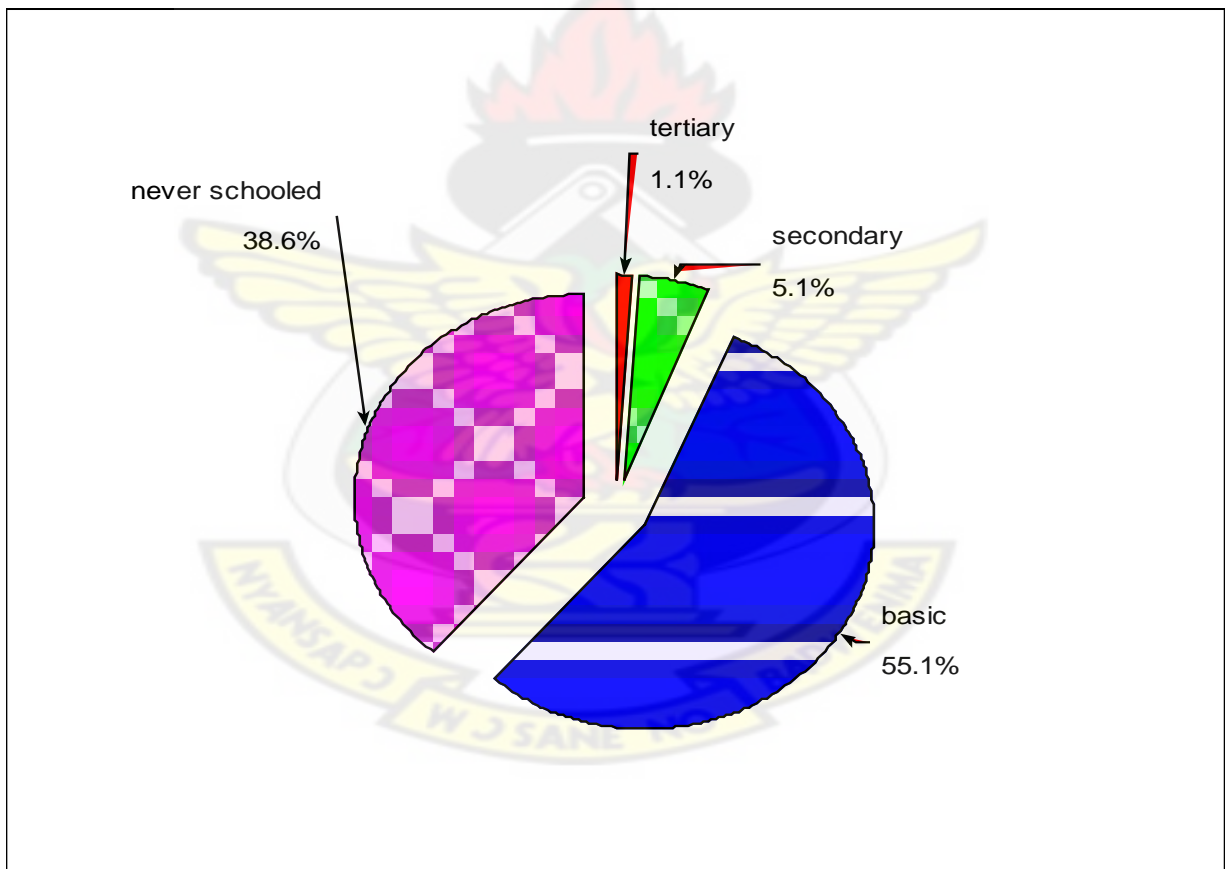
occupations included teaching, nursing and trading recorded 100 per cent total respondent income flow being regular. The results thus confirmed the findings of the fourth round of the Ghana Living Standards Survey (1999) by the Ghana Statistical Service that even within countries, regions or district, there are occupational variations with regard to poverty incidence in the country (GSS, 2000)

#### **4.2.4 Educational Dimension of Poverty**

Ostergaard (1999) observed in a survey that “Education (acquisition of knowledge) is a means of overcoming poverty, increasing income, improving nutrition and health, reducing family size and not the least important, raising people’s self-confidence and enriching the quality of their lives.” In a discussion with Buor, it was noted that among some rural communities people may have adequate income but continue to be in a state of deprivation due to ignorance (low level of education) (Interview with Buor, 2005). In his study on poverty and health, Rowson (2001) further admitted that income alone is not adequate for assessing the poverty situation of people. He emphasized that other social indicators including education levels are relevant for examining poverty holistically.

The ideas shared by the early researchers explain that lack of knowledge is a contributing factor of persistent poverty, poor health, inferiority, exclusion from decision making and poor quality of life. It implies that adequate knowledge through education is one other means aside income that individuals and communities require in overcoming their deprivation and poor health. Inadequate knowledge represented a relevant dimension of poverty for the purpose of assessing how poverty impacts health in the study villages.

Level of education of heads of household became important complement of income levels to assess the poverty situation and how it impacts the health of the people in the study communities. Based on the defined categories of levels of education, a verification test was run using a four- point research question to assess the educational status of respondents in the various communities chosen for the study as a way of determining their possible level of knowledge on some specific health indicators. Figure 2 summarizes the results obtained on the educational levels of respondents.



**Fig 2: Educational status of respondents**

From the educational dimension of poverty assessment, the study ascertained that 93.7 per cent of rural farmers from the study villages had relatively lower levels of education;

out of which 38.6 per cent of heads of household had never had any form of formal education. Within the study villages the survey found that only 5.1 per cent and 1.1 per cent respondents had had secondary and tertiary education respectively. The relatively lower level of education of majority of respondents from the study villages results in the limited opportunities for the rural dwellers to generate adequate income to improve their standard of living.

The survey further showed that virtually all the heads of household with relatively lower levels of education also earned relatively lower household income, hence, had very poor socio-economic status. Education thus influences income levels in the study communities with resultant effects on households' ability to afford adequate food for their household, decent shelter and practise proper health seeking behaviour. The strength and significance of the relationship between education based on years of schooling of respondents and relative income levels of respondents are indicated in Table 3.

**Table 3: Education and income relationship**

Model	R	R Square	Adjusted Square	RStd. Error of the Estimate
1	.710*	.504	.502	.86692

\* Predictors: (Constant), educational status

\*Beta coefficient .710

The model summary as indicated in Table 3 shows that the correlation coefficient (R) is greater than 0.5 standard value, an Adjusted R Square of 0.502 with Coefficient value of 0.710. The implication is that, there exists a very strong relationship between educational levels of heads of household and household income levels in the rural communities. Thus, a proportionate increase in level of education leads to a significant increase in

income levels of households in the rural communities. Based on the strength of the relationship between education and income, income levels were employed predominantly to examine how poverty impacts the health of households in the rural Amansie communities.

From income and educational perspectives it is observed that the incidence of poverty is very high within the villages chosen for the study. It is significant, however, to point out that, amongst the study villages, the education and income poverty assessment charts continue to unearth majority of respondents from communities such as Muawano, Nkuntin and Korku as the communities with relatively higher incidence of poverty; whereas Bebuabour, Nyaade and Abuabo-Tetekaso though experiencing higher incidence of poverty have few of their community members falling within the average socio-economic groups. About 59 per cent of the households with low income levels were found at Nkuntin, Korku and Muawano rural communities. This was attributed to lack of electricity and market centres for the people in those communities to engage in any alternative livelihood activities such as petty trading to raise their income levels.

It was also found out that the poor in the rural communities are conscious of their needs and wants. These were demonstrated in their ability to explain their poverty situation and how it manifested as gathered from the focus group discussions. In other words, what the poor in the rural communities lack is not the knowledge about the kind of food, potable water, suitable housing facilities, clothing and other basic needs good for them; but rather the means to access those needs of which they have been deprived. These means were



identified in the villages as adequate income and adequate education. Thus, poverty in the rural communities for majority of heads of household respondents had to do with inadequate income and low level of education to access certain basic needs to improve their quality of life. Low level of education limited their income earning opportunities, while inadequate income limited their ability to meet their basic needs to improve their quality of life.

#### ***4.3 HEALTH CONDITIONS IN THE STUDY COMMUNITIES***

Several diseases were examined to ascertain their prevalent rates within the respective communities of respondents. The selection of diseases was done with a guide from the districts' health profile and focus group discussions. This was necessary for the survey to establish the high ranking health problems that are borne by the rural communities in the district and more importantly establish the linkages between poverty and health amongst the people in the study communities. Information gathered from the focus group discussions and interview of respondents in the study villages about the diseases prevailing within the rural communities, supported with data from the health profile of the district, unveiled the following as the top ten diseases highly prevalent within the districts' rural communities: malaria, whooping cough, skin diseases, diarrhoeal diseases, intestinal disorder, measles, cholera, typhoid, stunted growth and tuberculosis with frequencies as indicated in Table 4.

**Table 4: Top Ten Diseases in Rural Amansie Communities**

Prevalence	Very high		High		Cumulative		Low		Very low		Cumulative		Don't Know	
Diseases	F	%	F	%	F	%	F	%	F	%	F	%	F	%
Malaria	106	34.6	171	55.9	277	90.5	20	6.5	4	1.3	24	7.8	5	1.6
Whooping cough	81	26.5	120	39.2	201	65.7	44	14.4	58	19.0	102	33.4	3	1.0
Skin diseases	86	28.1	106	34.6	192	62.7	74	24.2	32	10.5	106	34.7	8	2.6
Diarrhoea	47	15.4	136	44.4	183	59.8	85	27.8	28	9.2	113	37.0	10	3.3
Intestinal disorder	11	3.6	169	55.2	180	58.8	92	30.1	19	6.2	111	36.3	15	4.9
Measles	29	9.5	140	45.8	169	55.3	99	32.4	32	10.5	131	42.9	6	2.0
Cholera	9	2.9	124	40.5	133	43.4	137	44.8	29	9.5	166	54.3	7	2.3
Typhoid	7	2.3	112	36.6	119	38.9	118	38.6	51	16.7	169	55.3	18	5.6
Stunted growth	19	6.2	74	24.2	93	30.4	158	51.6	45	14.7	203	66.3	10	3.3
Tuber- culosis	-	-	61	19.9	61	19.9	175	57.2	58	19.0	233	76.2	12	3.9

Source: Field Survey, November, 2005

**Note: F → Frequency, % →Percent: Total frequency: 306; Total percentage: 100**

From Table 4, it is observed that the highly prevalent diseases within the rural communities in the district include malaria which recorded the highest reported cases of 90.5 per cent, whooping cough (65.7 per cent), skin diseases (62.7 per cent), diarrhoeal diseases (59.8 per cent), intestinal disorder (58.8 per cent) and measles (55.3 per cent). These were found to be the most common diseases affecting majority of the people in the rural Amansie West district. Malaria was identified to be one disease that occurs most often with widespread coverage. The disease becomes highly predominant during rainy

season when farmers are expected to take advantage of the rain to cultivate their crops for a higher yield. Thus, even though the rainy seasons create a conducive environment for farming activities in the rural areas, they also pose a great challenge for the health condition of the people within the study communities. This affects the productivity levels of the people particularly in the area of agriculture. The association of rising incidence of malaria to the onset of rains is basically due to lack of runoff channels and gutters to ensure easy flow of rain water. The rain water gets stagnated in dug holes, and other surfaces which promote the breeding of mosquitoes. At Nyaade and Nkuntin for example, respondents complained of persistent mosquito bites due to the presence of abandoned ponds that collect rain water occasionally to promote the breeding of mosquitoes. People suffering from malaria usually used between one week and one month to cure the disease depending on the severity of the disease and the type of health care applied to cure the disease. Whooping cough was found to occur frequently and usually at the beginning of every month in virtually all the rural communities chosen for the study. It was noted that though whooping cough was found to prevail in virtually all the study villages, there were variations with regard to the rate of prevalence within the various study communities. Majority of household respondents from Bebuabour, Nyaade and Aboabo Tetekaso recorded relatively higher prevalence of whooping cough and skin diseases which according to Bansal (2002) are associated with poor housing conditions.

Some of the diseases identified to be common within the study communities have been studied by early researchers to unearth their possible causes. Bansal (2002) found out in his survey that, such diseases as tuberculosis, skin diseases and whooping cough which

the study found to occur in the rural communities are associated with poor housing with little ventilation; whereas typhoid and cholera are water borne diseases (Sindiga et. al., 2005; Bansal, 2002). Nyamwaya and Oduon on *communicating health* disclosed that poor waste management, poor management of public latrines, compounds uncleared of tins that may collect rains, unclean environment and poor personal hygiene in general are the underlying cause of malaria, cholera and typhoid (Nyamwaya and Oduon, 1998). Yom and Duston (1997) reiterate the view of Nyamwaya and Oduon when they wrote: “Proper waste management practices and improved hygiene can reduce the spread of diseases such as diarrhoea, worms, cholera, typhoid and poliomyelitis which are spread in this way” (Yom and Dustin, 1997). As regards stunted growth and ricket which are indications of malnutrition, the Ghana Health Service attributes that to poor child nutrition (GSS, 2004).

With regard to disease occurrence, no significant difference was found to exist between the District capital and the rural communities chosen for the study. It is important to note that most of the diseases identified to be prevailing amongst the rural communities in the Amansie West district could generally be associated with poor nutrition, poor sanitation and hygiene (poor waste management practices), as well as poor housing conditions; hence, preventable (see Section 5.2). The relatively higher prevalence of intestinal disorder and diarrhoeal disease was associated with poor hygiene particularly as regards improper hand washing, food preparation and water quality. It was further observed that, within the study communities, children bore greater burden of measles and diarrhoeal diseases prevalent in the communities. Majority of heads of household complained of

frequent occurrence of diarrhoeal diseases among their children under five years in their households. The widespread occurrence of measles, whooping cough and diarrhoeal diseases was attributed to poor patronage of immunization by the rural community members against childhood diseases. Only 15.8 per cent of respondents were identified to frequently seek pre-natal and post-natal care at birth for immunization of their children against childhood diseases. Ghana Health Service Report (1996) on immunization coverage in Kumasi revealed that, “in the absence of immunization, up to 90 per cent of children born each year may be expected to get measles and 80 per cent whooping cough”. The diarrhoeal cases found to be common among children in the study communities than adults was attributed to the unhygienic conditions within which nursing mothers in the study villages handle the feeding of their children (GHS, 1996).

On the other hand such diseases as guinea worm, buruli ulcer, kwashiorkor, ricket, tuberculosis, CSM, stunted growth, schistosomiasis, cholera and typhoid recorded low prevalent rates within the study communities. It is imperative to mention that though the Amansie West district is described as a district with a relatively higher incidence of buruli ulcer cases in the Ashanti region, the study found the disease to have very low reported cases, with 89.8 per cent of respondents identifying it as uncommon within their households or communities. However, this may be due to two main reasons. The use of the random sampling method to select study communities and the respondents may have resulted in the neglect of the communities worst affected by buruli ulcer. Significantly too, the buruli ulcer diseases may be concentrated within few areas, hence, not widespread within the entire district. It should also be noted that though diseases such as cholera and typhoid were identified by the frequency distribution to belong to the group



of diseases with low prevalence in the study communities, their reported cases of 43.4 per cent and 38.9 per cent respectively (see Table Section 4.3, Table 4) need to attract the concern of stakeholders. Though they may not be treated as widespread diseases, they are indications of poor sanitation, hygiene and waste management practices within the district as pointed out by Sindiga (2005).

#### ***4.4 SOCIO-ECONOMIC STATUS AND HEALTH DISPARITIES***

##### **4.4.1 Income Disparities and Health**

The results on the health status of the study areas demonstrate that the rural communities bear much of the burden of health problems found to be highly prevalent in the study areas including malaria, whooping cough, skin diseases, diarrhoeal diseases and measles. From hindsight one would say that the highly prevalent diseases are common to all the study communities. Such an exposition is true from the results of the study and it confirms the general similarities that exist amongst the rural Amansie communities as regards environmental conditions, housing, water, nature of occupation and probably the living conditions of the people in the rural communities which underlie the relatively high incidence of malaria, whooping cough, skin diseases, diarrhoeal diseases, intestinal disorders and measles. However, notwithstanding the general similarities of health problems affecting the study villages, it should be pointed out that variations in terms of the socio-economic groupings in relation to their burden of ill health were found to be an inherent reality within the study communities. The analysis of the poverty situation of the study communities using the income and knowledge approach showed that 84.9 per cent and 93.7 per cent of respondents from the study villages fall within the low socio-

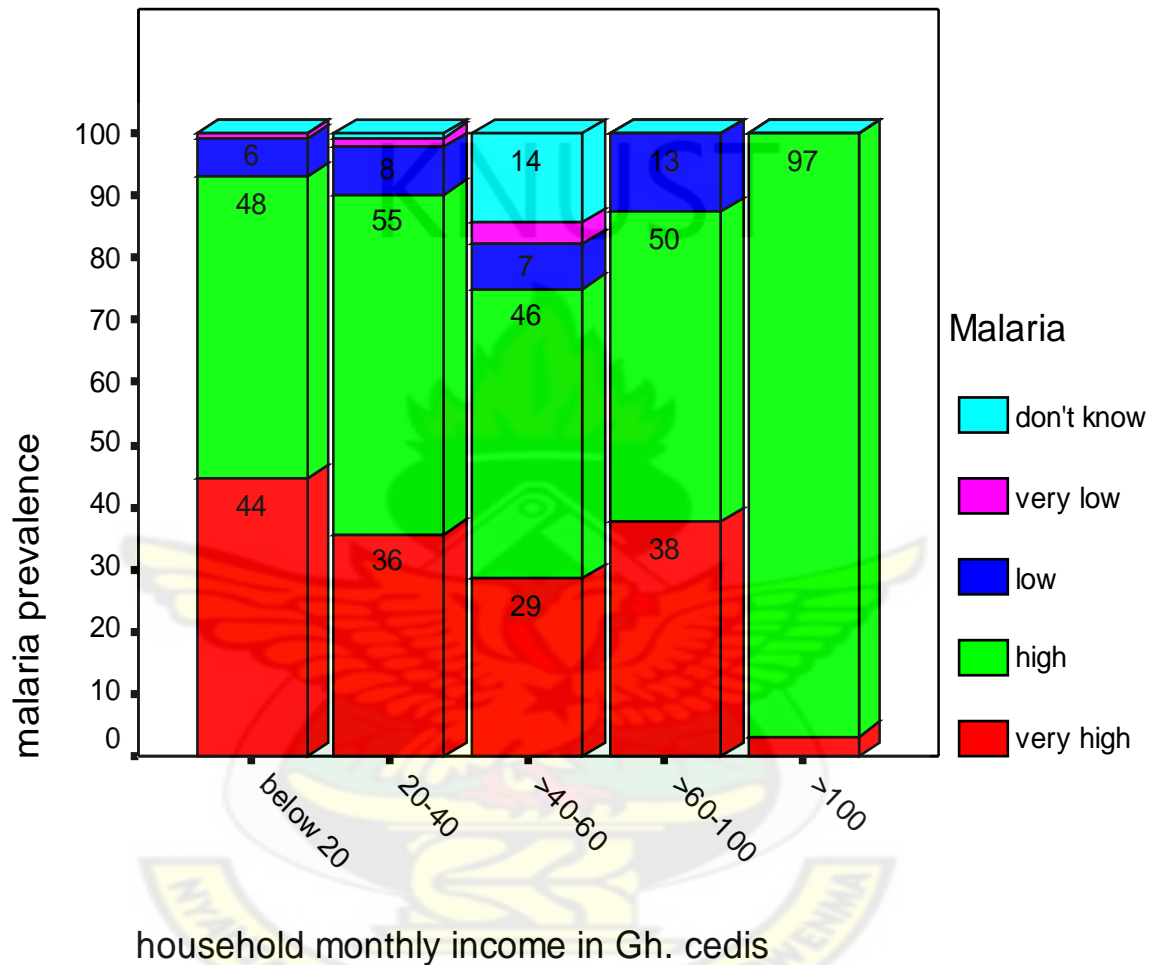


economic group (income poor) and low level of education group respectively (see Section 4.2.4 Table 2 and Fig. 2), with 41.8 per cent earning average household monthly income below (GH ₵20).

The low levels of income and education culminate into greater burden of diseases that affect the rural folks. For most of the common health problems identified with the study villages, it was found out that people with relatively low socio-economic status as regards relatively low income and level of education were found to bear much of the burden of ill health within the rural environment. The three most prevalent diseases identified in the study communities were examined in relation to the socio-economic status of households to explain the relationship poverty has with health. The rationale behind the choice of diseases cross-tabulated with income status was to examine how income and educational disparities influence the burden of disease occurrence within households in the study villages to establish the impact socio-economic status has on health.

Malaria was generally found to be highly prevalent among virtually all the different socio-economic groups. However, as indicated in Figure 4, within most of the households belonging to the relatively low and average income groups, the prevalence of malaria was found to be very high as compared to households with relatively very high average monthly income status. Relatively, 44.4 per cent of respondents from the very low income earners' group reported very high malaria prevalence within their households as compared to only 3.2 per cent of respondents from the very high income earners' group. Thus, people with relatively low income status experience malaria very frequently with

more severe effects than their counterparts with relatively higher income levels in the rural Amansie communities (see Section 5.2.3). Figure 3 illustrates the relationship between income and malaria prevalence within the study communities.



**Fig. 3: Malaria prevalence and Income**

Diarrhoeal diseases and whooping cough were rather found to decrease with increasing income levels as shown in Tables 5 and 6 respectively. With regard to the occurrence of diarrhoeal diseases among households with different average income levels, the results are indicated in Table 5

**Table 5: Diarrhoea Prevalence and Household Income**

		Household average monthly income in cedis (GH¢)										TOTAL	
		below 20		20-40		>40-60		>60-00		>00			
diarrhoea	very high	F	%	F	%	F	%	F	%	F	%	F	%
		15	15.2	26	19.7	4	14.3	2	12.5	-	0.00	47	15.4
	high	49	49.5	78	59.1	5	17.9	3	18.8	1	3.2	136	44.4
	low	25	25.3	16	12.1	11	39.3	9	56.3	24	77.4	85	27.8
	very low	10	10.1	5	3.7	5	17.9	2	12.5	6	19.4	28	9.2
	don't know	-	0.00	7	5.3	3	10.7	-	0.00	-	0.00	10	3.3
Total		99	100	132	100	28	100	16	100	31	100	306	100

\*Pearson Chi-Square value 98.973

Asymp. Sig. (2-sided): .000

**Source: Field Survey, November, 2005**

The prevalence of diarrhoeal diseases was found to increase with decreasing income levels. Table 5 indicates that 15.2 per cent of respondents from households with very low income reported of very high prevalence of diarrhoeal diseases within their households as compared to 0.00 per cent of respondents from households with very high average incomes. About 49.5 per cent of respondents from households with very low incomes reported of diarrhoeal diseases prevalence being high within their households as compared to 3.2 per cent of respondents from households with very high average incomes. Significantly too, between the two extreme cases, the survey discovered that 19.7 per cent, 14.3 per cent and 12.5 per cent of respondents from low, average and high average monthly income households reported of very high prevalence of diarrhoeal diseases within their households. The Chi-Square tests indicated below Table 5 further establish that the relationship between diarrhoeal diseases and income levels among the rural households is significant.

The disparities in the share of the burden of ill health among households with different income levels were no different for the reported cases of whooping cough and measles within the study villages. Household respondents with relatively low income levels were found to experience relatively higher prevalence of whooping cough and measles within their households than their counterparts with relatively higher income levels. There is a clear indication that, whooping cough disease is highly prevalent within the study communities. However, it was revealed that, whooping cough prevalence decreases with increasing income levels. Table 6 shows a cross tabulation of household monthly income and prevalence of whooping cough within households in the study communities.

**Table 6: Whooping Cough prevalence and Household Income**

Whooping cough occurrence	INCOME (GH¢)										Total	
	below 20		20-40		>40-60		>60-100		>100			
	F	%	F	%	F	%	F	%	F	%		
very high	27	27.3	44	33.3	7	25.0	3	18.8	-	0.00	81	26.5
high	44	44.4	62	47.0	8	28.6	6	37.5	-	0.00	120	39.2
low	14	14.1	19	14.4	7	25.0	3	18.8	1	3.2	44	14.4
very low	14	14.1	7	5.3	3	10.7	4	25.0	30	96.8	58	19.0
don't know	-	-	-	-	3	10.7	-	0.00	-	0.00	3	1.0
Total	99	100	132	100	28	100	16	100	31	100	306	100

\*Pearson Chi-Square Value: 176.080

Asymp. Sig. (2-sided): .000

**Source : Field Survey, November, 2005**

Relatively, 27.3 per cent of respondents from households with very low average monthly income reported of very high whooping cough prevalence within their households as compared to 0.00 per cent of respondents from households with very high average monthly income. It is also imperative to highlight that between the two extreme cases, it was further observed that 33.3 per cent, 25.0 per cent and 18.8 per cent of respondents from low, average and high average monthly income households respectively reported of very high whooping cough prevalence within their households (see Sections 5.2.1, 5.2.2, 5.2.3). This implies that, the prevalence of whooping cough within the rural communities decreases with increasing income of households. The Chi-Square tests for whooping cough prevalence and income indicated below Table 6 also establish that the relationship between whooping cough and income among the rural households is significant.

With regard to skin diseases it was discovered that, about 77 per cent, 50 per cent and 30 per cent of respondents from within the low, average and high socioeconomic groups respectively reported of higher prevalence of skin diseases within their households with only 3.0 per cent of respondents with very high income levels, reporting of higher prevalence of skin diseases within their households. Thus, the relationship between income and skin diseases as well as measles followed the same pattern as between income, whooping cough and diarrhoeal diseases.

From the income dimension, the survey discovered that there exists a strong relationship between income levels and disease prevalence within the households of respondents in the study communities particularly as regards some of the highly prevalent diseases within the rural areas including whooping cough, diarrhoeal and skin diseases.

Households with relatively lower income levels experience disease occurrence more often than their neighbours with relatively low income levels. However, this was not particularly so for malaria which was identified as the most prevalent disease among households in the rural communities.

#### **4.4.2 Educational (Knowledge) Disparity and Health**

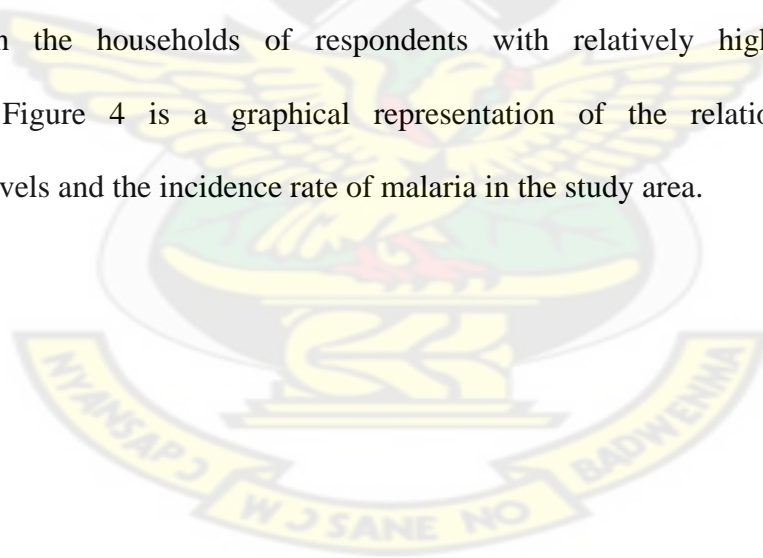
Aside the relationship which was drawn between income levels and the burden of ill health of the respondents in the study communities, the survey further discovered that educational differences also have significant impact on the burden of ill- health borne by households. With virtually all the diseases found to be highly prevalent among the study communities, majority of respondents with relatively low level of education were found to have very high experience of the diseases within their households than their counterparts with relatively higher levels of education. The discoveries could be attributed to the fact that heads of household with relatively higher educational levels also had adequate knowledge about the diseases, hence, followed measures to control or prevent the occurrence of diseases before they become very critical within their households.

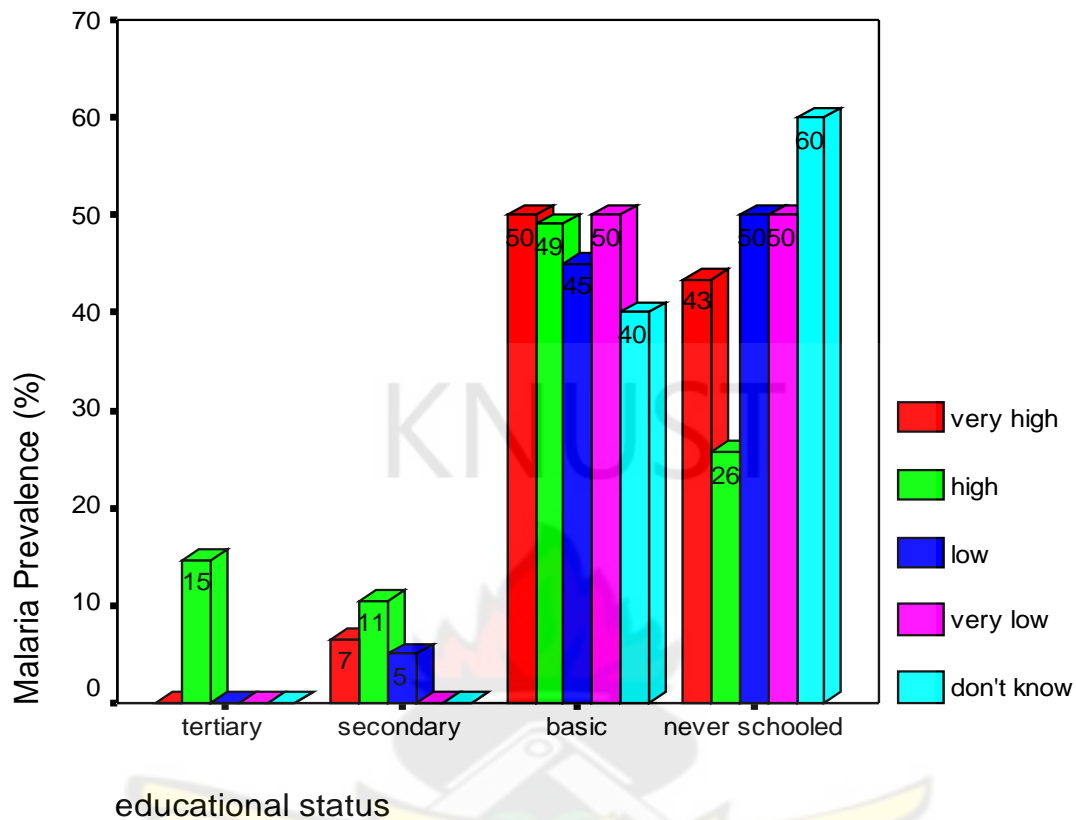
With regard to the experience of malaria, it was realized that the disease is common amongst all the households of respondents with different educational background. However, households of respondents with low level of education (basic and never schooled) were found to have very high prevalence of malaria than households of respondents with relatively very high educational background. Out of the total



respondents of three hundred and six (306) drawn for the survey, one hundred and six (106) respondents representing 34.6 per cent reported of very high prevalence of malaria within their households. More importantly, 93.4 per cent of the respondents who reported of very high occurrence of malaria within their households were found to have low level of education. 50 per cent of them had different levels of primary education and 43.4 per cent had never schooled.

On the other hand only 7 per cent and 0.00 per cent of respondents with secondary and tertiary education respectively experienced relatively high malaria occurrence within their households. Thus, the frequency at which the disease occurs within the households with relatively low educational levels is relatively higher as compared to how frequent it occurs within the households of respondents with relatively higher educational background. Figure 4 is a graphical representation of the relationship between educational levels and the incidence rate of malaria in the study area.

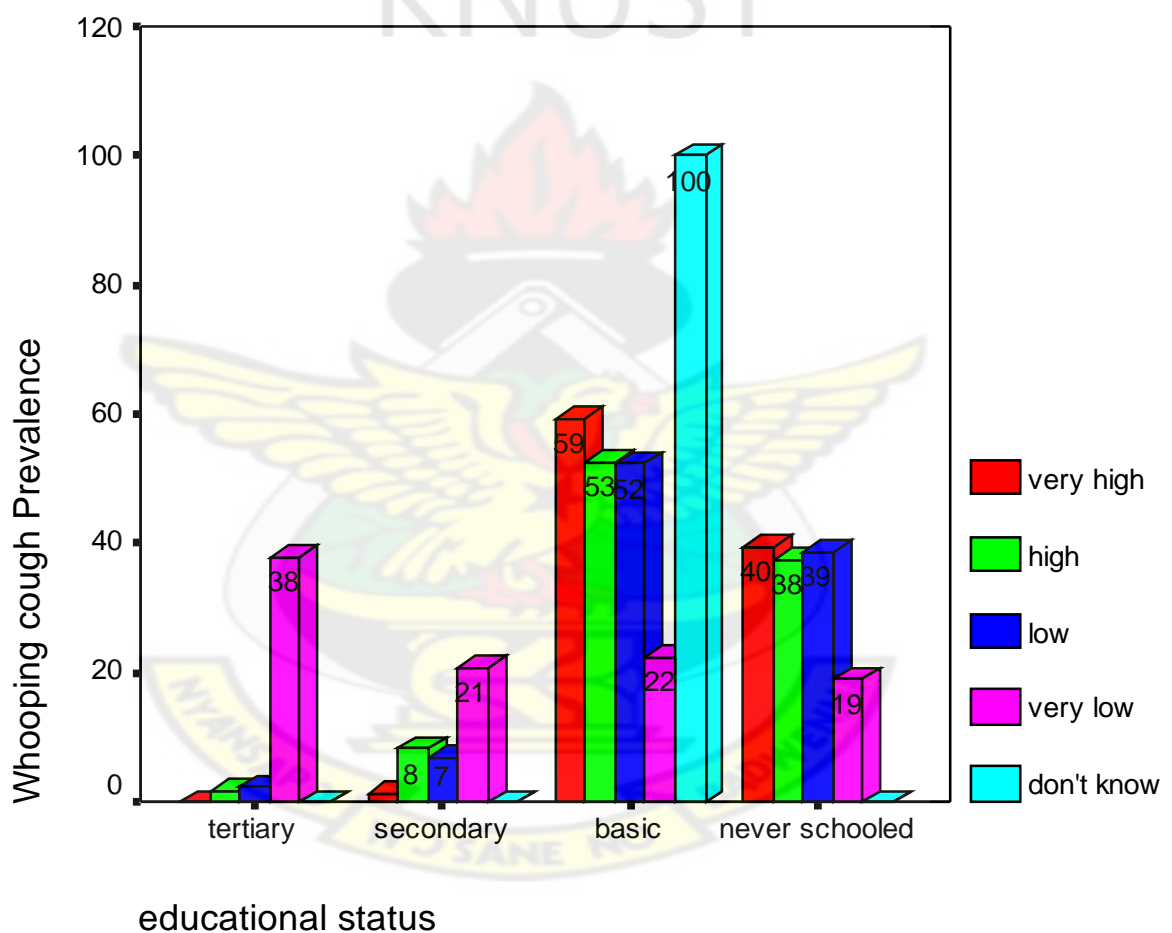




**Figure 4: Educational levels and malaria prevalence**

Aside malaria which was found to be common within all the households of respondents with different educational backgrounds, other diseases with relatively higher prevalent rate within the study communities such as whooping cough and diarrhoeal diseases were found to be widespread within households of respondents with relatively lower levels of education. As regards the relationship between educational levels and the incidence of whooping cough, the study found that about 65.7 per cent of the total respondents have relatively higher prevalence of whooping cough within their households. It was further realized that there exists a robust relationship between education and the experience of whooping cough within the study communities. The results obtained on education and the

incidence of whooping cough showed that 99 per cent of respondents with relatively low levels of formal education (59 per cent basic and 40 per cent never schooled) as compared to only 1.00 per cent and 0.00 per cent of respondents with secondary and tertiary education respectively, had very high prevalence of whooping cough disease. Figure 5 provides details of results on the analysis of the relationship between education and whooping cough incidence in the study communities.



**Figure 5: Educational levels and whooping cough prevalence**

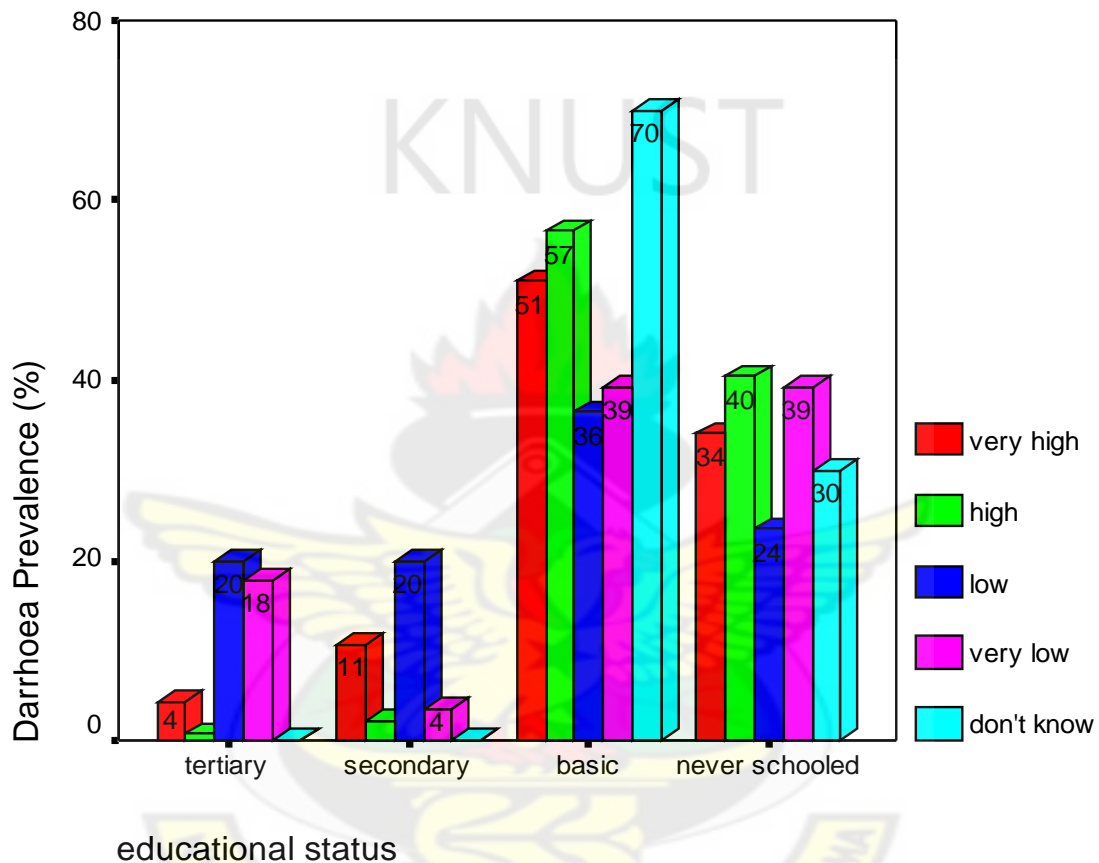
With reference to Figure 5, it could be pointed out that, people with relatively higher educational levels less frequently experience whooping cough with less severe effects

within their households than their counterparts with relatively lower educational levels in the rural communities in the Amansie West district. The implication is that, though the disease was found to be highly prevalent within the study communities, the highly educated heads of household patronize immunization exercises and live in appropriate housing and hygienic conditions to avert the occurrence of whooping cough disease within their households than the less educated heads of household. This was confirmed from the findings that, the highly educated who also earn adequate income, utilize available health facilities in the district more often than the relatively less educated in the rural communities in the district. A respondent with teaching as his profession professed at Abrense, one of the study villages,

*“none of my children was born at home. They were all given birth to at the St. Martin’s Hospital. I ensure that my wife and children visit the hospital regularly and follow medical instructions given them. We seldom suffer from malaria and none of my children experienced any childhood diseases like measles and whooping cough, though whooping cough is common in our community”* (In-depth Interview, November, 2005).

The results realized from the analysis of the relationship between the prevalence of diarrhoeal diseases and educational levels of respondents were not very different from the relationship found to exist between education and the prevalence of whooping cough. Pertaining to diarrhoeal diseases, the results unveiled that, 4 per cent of heads of household with tertiary education reported of diarrhoeal disease prevalence being very high within their households, whereas 11 per cent, 51 per cent and 34 per cent of heads of household from the groups with average, low and very low educational levels

respectively had very high prevalence of diarrhoeal diseases within their households. Details of results on the relationship between diarrhoeal diseases and educational levels of respondents have been indicated in Figure 6.



**Figure 6: Educational levels and diarrhoeal prevalence**

It is significant to point out that the nature of the relationships found to exist between income and the prevalence of malaria, whooping cough and diarrhoeal diseases followed almost the same trend as the relationships found to exist between educational levels of respondents and the occurrence of malaria, whooping cough and diarrhoeal diseases within the study communities. This was found to be due to the fact that within the study communities, income of households increases with increasing levels of heads of

household's education. Respondents with relatively higher educational levels were found to earn regular and relatively higher income than people with lower levels of education relatively. It was observed that, people with tertiary education and secondary school certificates were found in relatively gainful employment such as teaching, mining, nursing among other professions, whereas, most of the rural dwellers with no form of formal education or some form of basic education were mostly food crop farmers. Almost 100 per cent of respondents with teaching or nursing profession in the study communities had relatively higher levels of education as compared to their counterparts into food crop subsistence farming. This explains the disparities in income levels in line with levels of education (see Section 4.2.4, Table 3). It further confirms the findings by Ghana Statistical Service in the Ghana Living Standard Survey Four document (1998/99) that, food crop farmers who constitute 59 per cent of the poor population in Ghana, are the occupational group that bears greater burden of the country's poverty (GSS, 2000).

Within the Amansie rural communities, it was further found out that the poverty of the food crop farmers is to a larger extent tied to their relatively lower levels of education; and more importantly bear greater burden of most of the highly prevalent diseases identified with the rural communities in the district particularly malaria, diarrhoeal diseases and whooping cough within their households most probably due to their relatively low levels of education and household income. It is however important to point out that, aside poverty which reflected in the education and income levels of the people in the rural Amansie West communities, other factors such as heredity are likely to play a role in diseases occurrence in the district. This will call for further survey.



## **CHAPTER FIVE**

### **5.0 LINKAGES BETWEEN POVERTY AND HEALTH**

#### ***5.1 INTRODUCTION***

The assessment of the poverty situation in the study communities uncovered that from both the income and knowledge dimensions, poverty within the rural communities is very high with about 84.9 per cent and 93.7 per cent of respondents from the study villages falling within the low socioeconomic group (income poor) and low level of education group (knowledge poor) respectively (see Sections 4.2.3 and 4.2.4). Significantly too, though no clear spatial differences exist, it was unveiled that the relatively poor within the study communities experience greater burden of ill health as regards the highly prevalent diseases within the Amansie rural communities.

This chapter has two main sections. The first section examines the pathways (factors) through which poverty translates into ill health within the rural communities which could possibly explain the effects of poverty that cause ill health amongst the poor rural communities. Thus variables such as the housing conditions, nutritional conditions, hygiene, health education, lifestyle and utilization of health care facilities are examined to assess the extent to which they act as media through which poverty affects the health of the people in the rural communities. The second section looks at multivariate analyses of poverty and health in the rural communities. It thus observes the level of significance of the actual relationship between the identified poverty factors (sub-variables) found to be influenced by income levels such as nutrition, access to health care facilities, hygiene,

housing conditions, health education etc. on the one hand and disease prevalence on the other hand. The linear regression tool of the Statistical Package for Social Sciences was the main instrument used to analyze the data to establish the level of significance between the main indicators of poverty and health in the study area. The linear regression was used to model the value of the dependent variable which in this regard was the highly prevalent diseases based on their linear relationship to one or more of the predictors (independent variables) which in this regard were the poverty factors which included nutrition, hygiene, housing condition, health education, lifestyle and use of health care facilities.

## ***5.2 POVERTY FACTORS INFLUENCING HEALTH***

### **5.2.1 Poverty, Nutrition and Health**

One significant pathway through which poverty in the study communities was identified to translate into ill health was nutrition. The study found out that majority of the poor in the rural communities face problems satisfying the food needs of their households particularly regarding the consumption of protein and vitamins. The poor in the study communities were also found to be ignorant of the basic nutrients required for a meal to be balanced. This implies that it was very unlikely that they would eat a balanced diet even when they were capable of buying nutritious food. The analysis of the nutritional status of respondents was based on the frequencies at which respondents found problems satisfying the food needs of their households and estimates of calories members derive from their food sources. Generally most of the rural households' food availability translates into increased intake of high-calorie staple foods such as cassava and maize.

However, most of the households are often unable to obtain the necessary dietary varieties to meet their nutritional requirements. The results suggest a myriad of nutritional problems associated with the rural communities as a result of poor diet quality coupled with inappropriate dietary habits. With the average calorie intake of 2400K Calorie per day as a standard (Sen, 2005), it was observed that greater number of heads of household with relatively high income levels met their daily calorie requirements as compared to heads of household with average and low income levels. This was made possible with a calorie calculator which examined respondents' weight and average daily work period. A significant number of households that do not meet their daily average calorie requirement reported that they either always or most often found problems satisfying their food needs particularly with regard to the intake of protein and vitamins. The results on income and heads of household's ability to satisfy the food needs of their households with their correspondent Kilo Calories per day have been summarized in Table 1.

**Table 1: Household monthly income and nutritional status**

<div><div>Kilo Calories/day</div><div>Income (GH¢)</div></div>		Problems satisfying food needs of household									
		never		seldom		most often		always		Total	
		2500+KCal.		2001-2500 KCal.		1500-2000 KCal.		<1500KCal.			
		F	%	F	%	F	%	F	%	F	%
below 20		5	5.1	26	26.1	48	48.5	20	20.2	99	100
20- 40		21	15.9	27	20.5	78	59.1	6	4.5	132	100
>40-60		5	17.9	10	35.7	12	42.8	1	3.6	28	100
>60-100		9	56.3	5	31.3	2	12.5	-	0.0	16	100
>100		29	93.5	2	6.5	-	0.00	-	0.0	31	100
total		69	22.5	70	22.9	140	45.8	27	8.8	306	100

\*Pearson Chi-Square Value: 146.340  
Source: Fields Survey, November, 2005

Asymp. Significance (2-sided): .000  
**F- Frequency of respondents**

The cross- tabulation of households' average monthly income and problems satisfying the food needs of respondents' household as shown in Table 1 indicates that 93.5 per cent of households with very high income status (>GH ¢100) never had problems satisfying the food needs of their households compared to only 5.1 per cent of respondents with very low average monthly income (<GH ¢20). Results from the Chi-Square tests for income and nutrition indicated below Table 1 confirm a significant difference with regard to the impact of income on nutrition in the rural Amansie communities. The results reveal that generally within the rural communities, heads of household's ability to satisfy the food needs of their households improves with increase in income level. Thus, households' nutritional status is greatly influenced by income levels of households. The implication is that, the poor in the study communities find problems satisfying the food needs of their households especially with regard to items that are not directly obtained from their crop farms such as meat and fish. It is important, however, to point out that, this may be influenced by the size of the household. Paulina Kromo, a respondent at Nyaade with low income level and a household size of eleven (11) as shown in Plate 1, complained,

*“I have problems satisfying the food needs of my household because  
I have a lot of children and I find it difficult feeding them all.”*

(In-depth Interview, November, 2005).

This implies that, aside income, other factors such as household size also influence the nutritional status of households in the study communities. It should however be emphasized that, with adequate household income, the rural people would be able to meet the food needs of their households even if the size of the household is relatively larger.

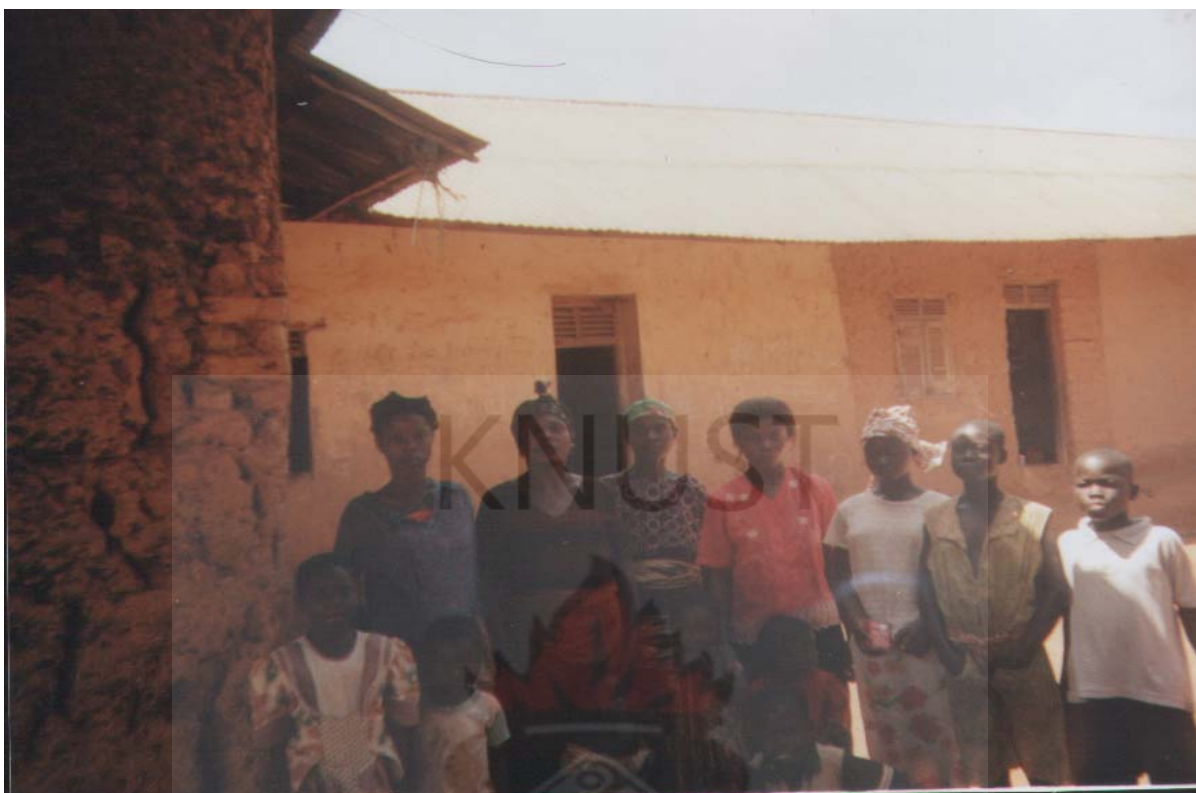


Plate 1: Household of Paulina Kromo with nutritional problems

It was further realized that aside their inability to satisfy the food needs of the households due to their relatively low income levels, the poor also have poor level of knowledge about the sources of some basic food nutrients such as protein, carbohydrate and vitamins. This was verified to establish the likelihood of the poor to practise proper nutritional habits with adequate income. However, the results showed that only 37.0 per cent of total respondents from the study communities had any knowledge about basic food nutrients. It was further ascertained that, 80.0 per cent of heads of household with low education levels (primary level) had no knowledge about the basic food nutrients as compared to 31.3 per cent of heads of household with relatively high educational levels (secondary level). Moreover, as shown in Table 2, 85.9 per cent and 0.00 per cent of



heads of household with no formal education and tertiary education respectively had no knowledge about the basic food nutrients. Table 2 gives a detailed representation of the relationship between educational levels and knowledge about basic food nutrients.

**Table 2: Knowledge about food nutrients and education of heads of household**

	<i>Education</i>	never schooled		primary		Middle/ JSS		Secondary		Tertiary		Total	
		F	%	F	%	F	%	F	%	F	%	F	%
<i>knowledge about food nutrients</i>	yes	14	14.1	27	20.1	10	35.7	11	68.8	31	100	93	30.3
	no	85	85.9	105	80.0	18	64.3	5	31.3	-	0.00	213	69.7
	Total	99	100	132	100	28	100	16	100	31	100	306	100

Source: Field Survey, November, 2005

With regard to knowledge and practice of exclusive breastfeeding within the households of respondents, the study discovered that 60.3 per cent of respondents with relatively low educational levels, had knowledge about exclusive breastfeeding; whereas 97.1 per cent of respondents with relatively higher educational levels, had knowledge about exclusive breastfeeding. However, with regard to the practice of exclusive breastfeeding, it was found out that, only 26.5 per cent of respondents with relatively low educational levels, practised exclusive breastfeeding, whereas 82.4 per cent of respondents with relatively higher education, practised exclusive breastfeeding. The relatively lower acceptance and practice of exclusive breastfeeding amongst the rural communities with 84.9 per cent and 93.7 per cent of their respondents respectively falling within the income and knowledge poor categories was attributed to their perception that, exclusive breastfeeding could be harmful to the health of their children, whereas others did not find it necessary because they grew up healthily even though their parents gave them water and other local solid foods.



Poor nutrition among majority of the poor households in the rural communities was found to have significant impact on the prevalence of whooping cough, measles, skin and diarrhoeal diseases among households in the rural communities. Evidence of relationship between nutrition and prevalence of diseases is indicated in Tables 10, 11, 12, 13 and 14 which provide details of significant coefficients of variation for the poverty factors and disease occurrence. The relationship between nutrition and health confirms the report by the district's health directorate of the higher incidence of malnutrition in the district (AWDP, 2004). The poor nutrition as a result of income and knowledge poverty thus plays a significant role in the poor health status of majority of people living in the rural communities. It was thus established that, low income and educational levels of the rural inhabitants lead to poor feeding habits which ultimately affect their health conditions significantly.

### **5.2.2 Poverty, Housing and Health**

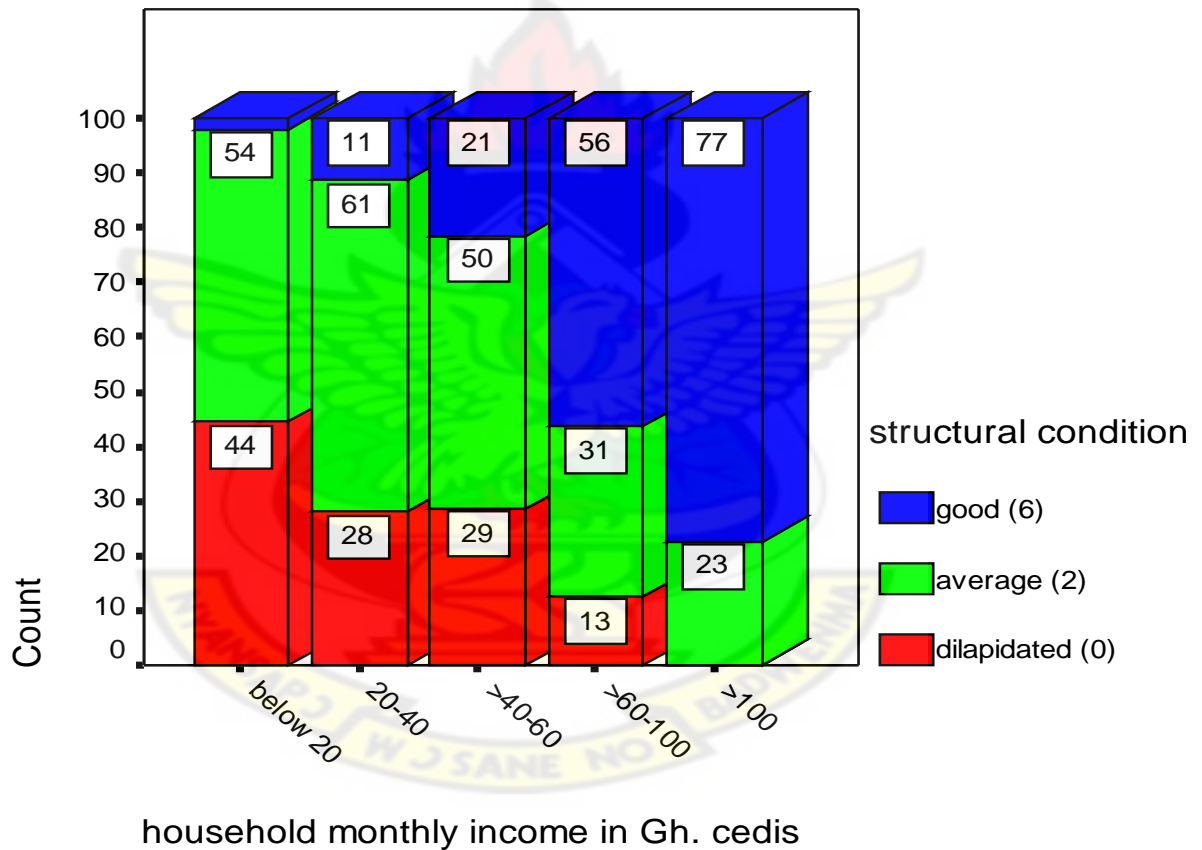
The housing conditions of some households were found to be one other means by which poverty in the rural communities translates into ill health. Two main approaches were adopted in the study to examine the housing conditions of respondents. They were the Participatory Housing Assessment Approach (PHAA) and the Cashpor Housing Index (CHI) as highlighted in the methodology. Under the participatory approach, respondents were asked to give some characteristics of poor housing conditions from their own opinion, based on which their housing conditions were assessed. With regard to the use of the participatory approach it was realized that respondents perceived a house to be in very poor condition if the house was dilapidated, had no windows, not cemented, had no

ceiling, no water facility, no toilet and bathroom facility, had no gutters around it and finally no electricity. Based on their perceptions of poor housing conditions, respondents were asked to assess the condition of their houses using a four-point research question. The results from the participatory housing assessment approach unveiled that, majority of respondents with relatively higher household monthly income live in relatively good houses whereas those with relatively low income dwell in poor or very poor housing conditions. About 48.5 per cent of households with very high average monthly income (>GH ¢100) were found to live in very good houses whereas only 1.0 per cent of households with very low average monthly income (<GH ¢20) lived in good houses.



Plate 2: Housing condition of a respondent at Korku

The Cashpor Housing Index (CHI) which ranks houses based on structural conditions, quality of walls and quality of roofs was also adopted to complement the participatory housing assessment approach. Under this method dilapidated houses had the lowest rank of zero (0), average (weak condition) houses had the rank of two (2) whereas good (strong structural condition) houses had the highest rank of six (6) based on the standard values of the model (CMHC, 2000).



**Fig. 1: Households' housing conditions and income levels**

The results realized from the assessment of the housing conditions of respondents with the Cashpor Housing Index (CHI) shown in Figure 1 followed almost the same trend as realized from the Participatory Housing Assessment Approach (PHAA). With regard to the use of the Cashpor Housing Index, it was realized that 44 per cent and 54 per cent of households with very low average monthly income (<GH ¢20) were found to respectively live in dilapidated and average (weak) mud brick structures with no protection against disease causing vectors such as mosquitoes and houseflies with only 2 per cent living in houses with good structural condition. On the other hand, 0.00 per cent and 23 per cent of households with very high average monthly income (>GH ¢100) were found to respectively live in dilapidated and average (weak) houses with 77 per cent living in houses with good structural conditions. The details of the results of the Cashpor Housing Assessment as shown in Figure 1 reveal that, majority of people with relatively higher income live in relatively good housing conditions than their counterparts with relatively lower income (the income poor).

It is significant to emphasize that the coefficients of variation on poverty indicators and disease occurrence among the rural communities in the district indicated in Tables 10, 12 and 13 show that housing conditions of masses of the rural people contribute significantly to the prevalence of whooping cough, measles and skin diseases among the rural poor in the district. The poor housing conditions patronized by the income poor population in the study communities expose them to disease causing organisms, hence, making them more susceptible to the highly prevalent diseases in the district. This explains why the prevalence of whooping cough and skin diseases is high in the district and very high

among the low income earning households. The poor housing conditions of the low income earners in the rural communities partly explain why majority of the people with low socio-economic conditions reported of very high prevalence of skin diseases and whooping cough within their households.

### 5.2.3 Poverty, Pollution and Health

The nature of the built environment was found to play a significant role in the spread of diseases within the study communities. Generally, majority of the rural population are saddled with sanitation problems within the study areas which underlie the relatively higher incidence of malaria, diarrhoea and cholera among households. The study revealed that 71.6 per cent of the total respondents relied on uncovered pit latrine situated within the confines of the villages, which, to a larger extent, serves as a source of pollution and breeding grounds for disease causing pathogens. In furtherance of this, it was unveiled that 85.0 per cent of the total respondents dumped refuse at community dumping grounds which were located not too far from places of residence of the rural people with only 11.1 per cent of respondents having their refuse collected away from their places of residence as shown in Table 3.

**Table 3: Refuse disposal practices**

Refuse management practice	Frequency	Percent
Collection Bin	34	11.1
Burned	1	.3
Public dump	260	85.0
Dump in bush	11	3.6
Total	306	100.0

Source: Field Survey, November, 2005



The generally poor waste disposal practices and sanitation problems faced by the people in the study areas have adverse effects on the environment and health of the people. Notwithstanding the generally poor built environment in the study area, the unhygienic conditions within the study communities predominantly affect the poor in the communities. It was found out that 62 per cent of the very poor population (very low household monthly income earners) had their surroundings polluted through improper waste management practices whereas only 19 per cent of the respondents with relatively very high household monthly income had their surroundings polluted through poor waste management practices. Table 4 shows that, the poor were more often found living within unhygienic conditions in the study areas. As the income of people in the study communities increased, there was the likelihood for them to improve their hygienic conditions.

**Table 4: Income Disparity across Households Living Within Polluted Surroundings Count**

		Income levels (GH¢)		below 20		20-40		>40-60		>60-100		>100		Total	
		F	%	F	%	F	%	F	%	F	%	F	%	F	%
<b>Pollution around dwelling</b>	yes	61	62.0	91	69.0	16	57.0	7	44.0	6	19.0	181	59.2		
	no	38	38.0	41	31.0	12	43.0	9	56.0	25	81.0	125	40.8		
Total		99	100	132	100	28	100	16	100	31	100	306	100		

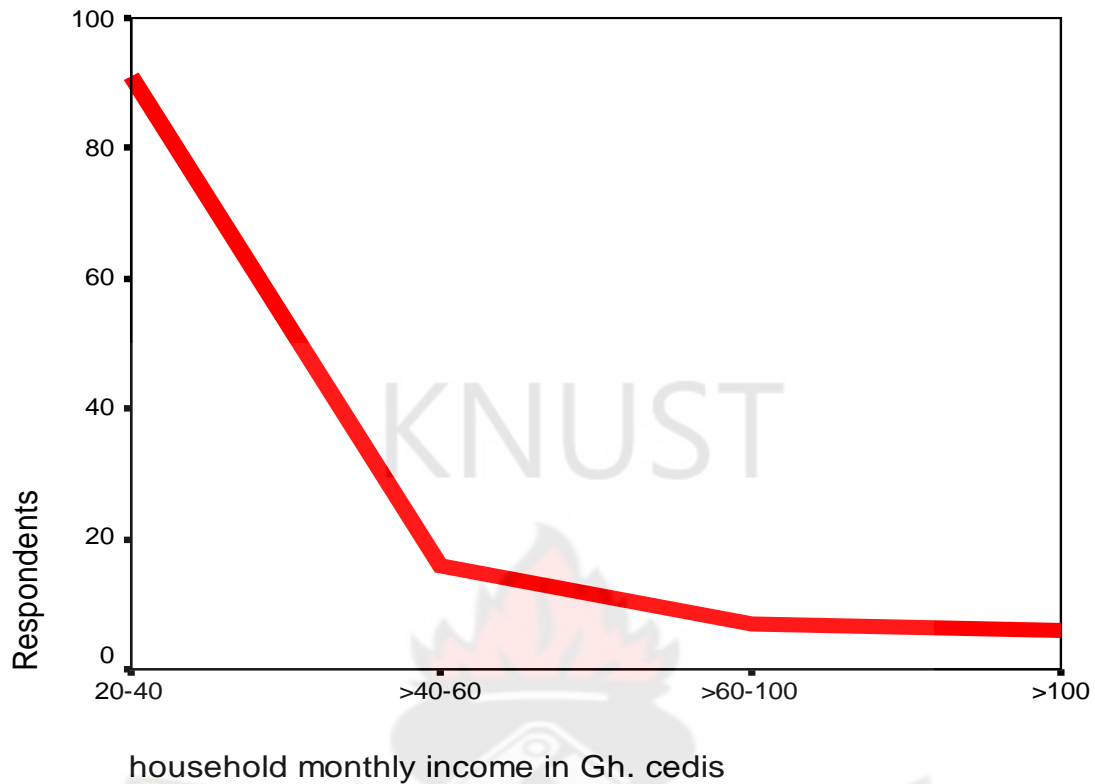
Source: Field Survey, November, 2005

The downward slope of the graph from left to right as shown in Figure 2 indicates the number of respondents that complained of living within polluted surroundings in relation to their household monthly income levels. It can be observed that majority of the



respondents with relatively lower income levels complained of living within polluted surroundings. More importantly the number of respondents who complained of living within polluted surroundings decreased significantly with increasing income levels. Thus, the relatively poor within the study areas were found to live in relatively unhygienic housing and environmental conditions.

The unhygienic surroundings coupled with the housing conditions and relatively poor nutrition were found to contribute significantly to the prevalence of malaria, whooping cough, skin and diarrhoeal diseases among households in the rural communities. Evidence of relationship between hygiene and prevalence of diseases is indicated in Tables 10, 11, 13 and 14 which provide details of significant coefficients of variation for the poverty indicators and disease prevalence. Thus, the poor were found to bear greater burden of malaria, diarrhoea, whooping cough and skin diseases found to be highly prevalent within the study communities because majority of low income earners lived in areas that are highly polluted in the rural areas. Evidence from the District Health Report (2004) further shows that, malaria remains the major cause of morbidity and mortality and remains the number one cause of Out Patients' Department attendance (40.4 per cent) and the highest cause of under five deaths. Malaria further remains the highest cause of hospital admission in the district. The devastating effects of malaria among other common diseases particularly in the rural communities were attributed to the nature of the housing and environmental conditions of majority of the rural dwellers which makes them susceptible to disease causing organisms that thrive well within such unhygienic environmental conditions.



**Fig. 2: Pollution across households with different income levels**

#### **5.2.4 Poverty, Health Education and Health**

Studies have shown that the level of health education people have informs them about their health seeking behaviour and practices which thus contribute greatly to the health condition of people. The WHO (2000) points out that, health education promotes and reinforces healthy behaviour through full participation of individuals and countries concerned; encourages people to make informed decisions to improve and maintain their health; helps people understand that their own behaviour is a key factor in the transmission of diseases and identify with behaviour that is conducive to health. This

study further identified poor health education as one of the media through which poverty in the rural communities in the Amansie West district translate into ill health.

Majority of the people found to belong to the low socio-economic group were not only income poor but also had relatively poor knowledge about some specific health issues. The study ascertained from respondents if they had received any form of education be it formal, informal or non-formal about some specific health indicators which included nutrition, hygiene, six killer diseases and family planning. The results from the study have been summarized in Table 5:

**Table 5: Health education and income**  
Count

<b>Income Levels (GH ¢)</b>	below 20		20-40		>40-60		>60-100		>100		<b>Total</b>	
<b>Knowledge in specific health issues</b>	F	%	F	%	F	%	F	%	F	%	F	%
very good	-	0.00	5	4	-	0.00	3	19	9	29	17	5.5
good	21	21	37	28	17	61	8	50	22	71	105	34.3
poor	61	62	57	43	9	32	4	25	-	0.00	131	42.8
very poor	17	17	33	25	2	7	1	6	-	0.00	53	17.3
<b>Total</b>	99	100	132	100	28	100	16	100	31	100	306	99.9

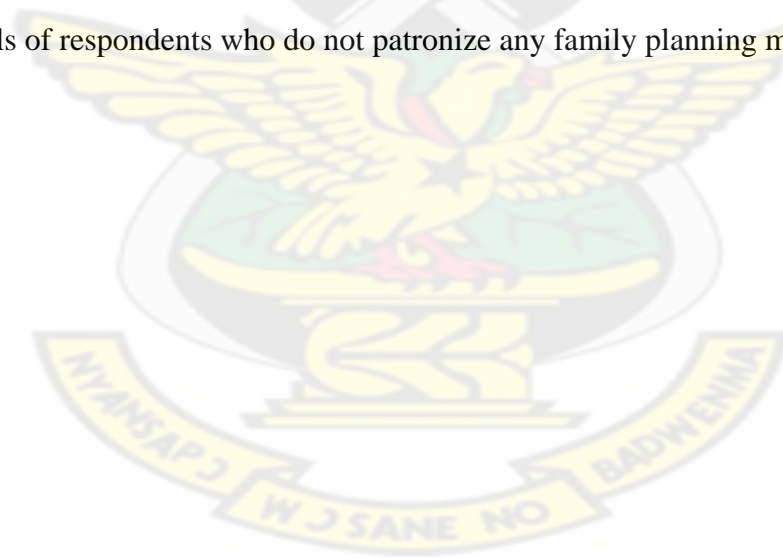
The results indicate that majority of the respondents with very high income levels also had good health education, whilst majority of the respondents with relatively very low income levels had poor health education. The detailed results shown in Table 5 reveal that as income of respondents increased, their level of knowledge with regard to health seeking behaviour is improved. This is due to the observation that respondents with relatively higher income within the study communities also have relatively higher level of

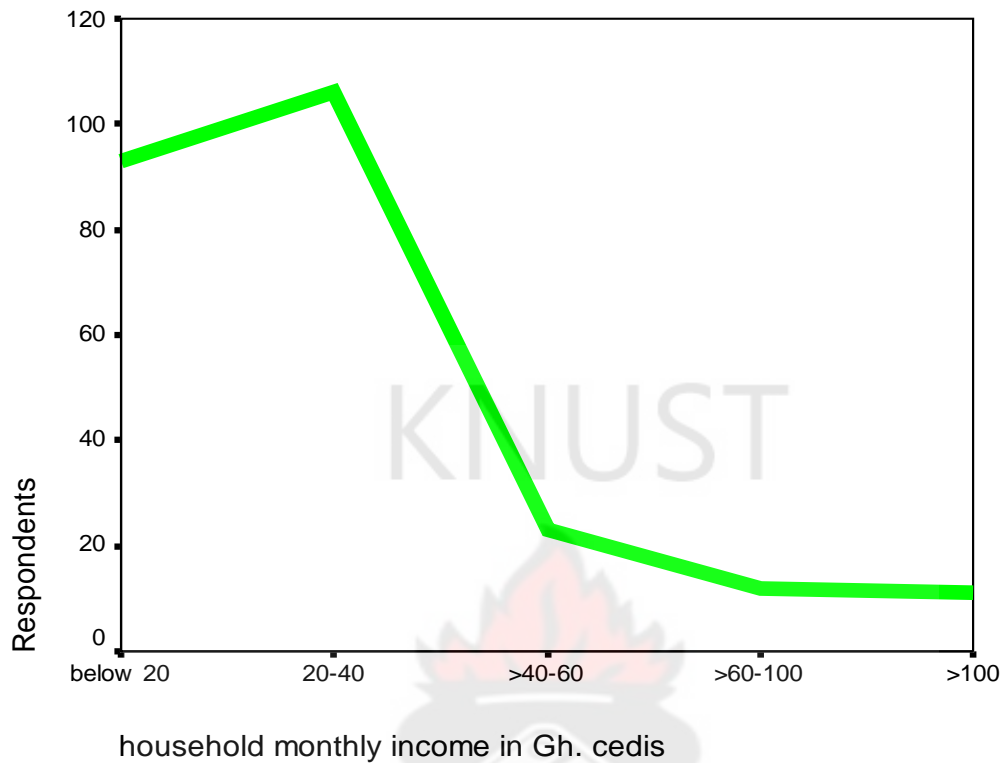
education. The implication is that, majority of the relatively poor in the study communities are less likely to seek appropriate medical care or practise any meaningful health seeking behaviour that can improve the quality of their health due to their relatively low level of health education. The study found out that, health education has a significant impact on malaria, measles, skin and diarrhoeal disease prevalence in the rural communities. The relationship between level of health education and disease prevalence has been established in Tables 11, 12, 13, and 14. Thus, aside their inability to satisfy the food, housing and sanitation requirements of their households due to low socio-economic status of the poor, the relatively low level of health education further explains why the poor in the study communities were found living in unhygienic conditions and stayed malnourished which worked together to influence their health adversely.

#### **5.2.5 Poverty, Lifestyle and Health**

The lifestyle of the people in the rural communities was examined to see how it was influenced by their socio-economic conditions and the extent to which lifestyle was likely to impact the health conditions of the households of respondents. Two major aspects of the life of respondents were examined for the purpose of the study. These included the extent to which respondents patronize family planning methods to ensure good health particularly for mothers and children within their households and addiction to alcoholic beverages. With regard to the use of contraceptives it was realized that, generally there was a very poor patronage of family planning services within the study communities with 80.10 per cent of total respondents not patronizing any form of family planning services within the study communities.

It was, however, realized that, acceptance and patronage of family planning services within the district's rural communities increased with increasing income. Relatively, 16.0 per cent of respondents with very low income level and 19.7 per cent of respondents with low income levels (income poor) patronize family planning services as compared to 64.5 per cent of respondents with very high socio-economic status (income non-poor) who patronize family planning services. The implication is that the poor within the study communities, in spite of their relatively lower socio-economic status, were more likely to give birth to more children than the relatively non- poor. This basically explains why residents in the rural communities where majority of them had relatively low socio-economic status rather had relatively larger household sizes with a minimum of six and a maximum of eighteen (AWDP, 2004). Figure 3 gives a graphical representation of income levels of respondents who do not patronize any family planning method.





**Fig. 3: Non-users of Family Planning Methods across Households with Different Income Levels**

With regard to the reasons why there was very poor patronage of family planning services by respondents in the study communities, it was found that more than one-half of the total respondents perceive family planning services as unnecessary because a relatively larger family size was helpful as source of farm labour for the rural communities. Some of the respondents who did not patronize family planning services either did not know any method suitable for them or suspected it to be harmful. At Muawano in the Mim Local Council, Kwaku Appau, a respondent emphasized,

*“I do not practice any family planning because I think it is not necessary.*

*What is necessary is to plan for the children you have brought forth*

*and not those you will give birth to” (In-depth Interview, Nov., 2005).*



The reasons given for the poor patronage of family planning services within the study communities further indicate the level of ignorance of the poor with regard to the importance of family planning to the individual households in particular and the communities in general. This also confirmed that, those with relatively higher income levels (income non-poor) also had adequate education about issues that affect their lives particularly with regard to their health conditions.

**Table 6: Correlation Coefficients for Household Size and Disease Prevalence**

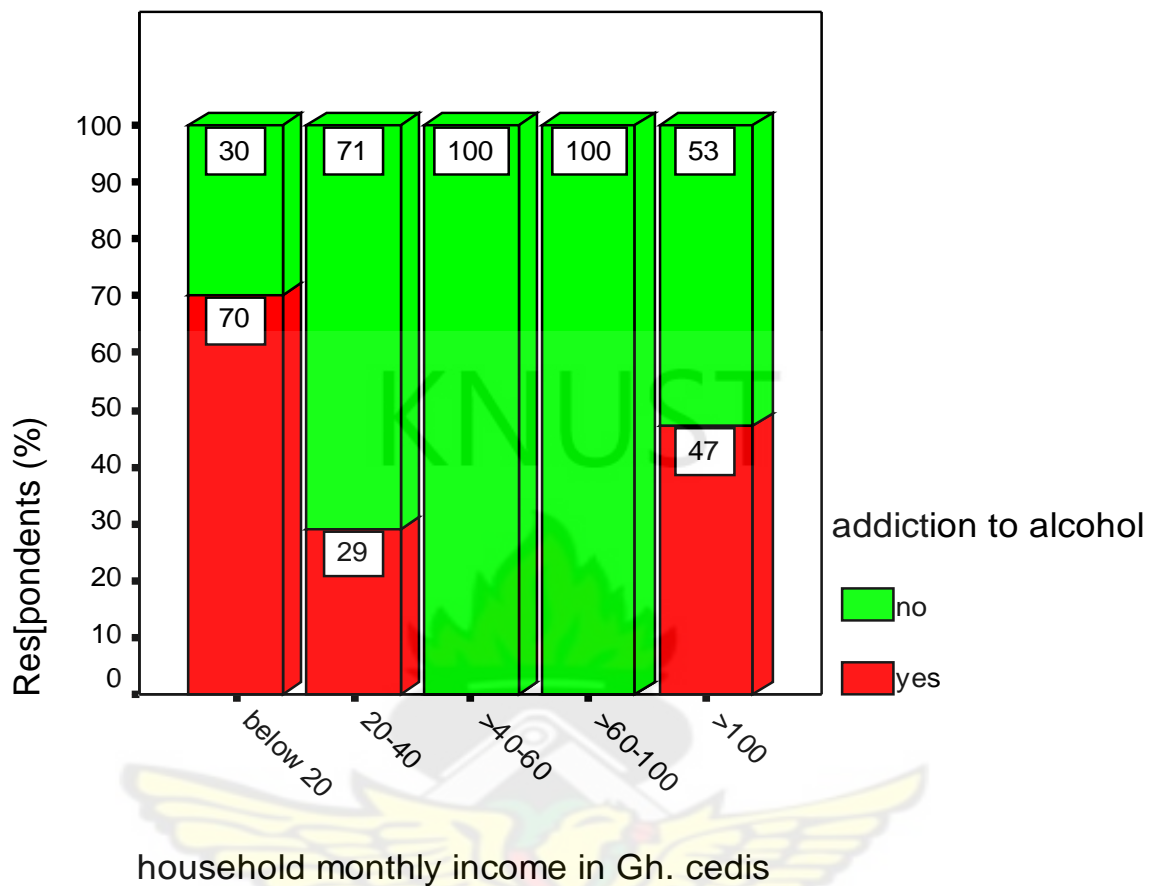
		<b>size of household</b>	<b>skin diseases</b>	<b>diarrhoea</b>	<b>whooping cough</b>
size of household	Pearson Correlation	1	-.353	-.195	-.322
	Sig. (2-tailed)	.	.000	.001	.000
	N	306	306	306	306
skin diseases	Pearson Correlation	-.353	1	.496	.515
	Sig. (2-tailed)	.000	.	.000	.000
	N	306	306	306	306
diarrhoea	Pearson Correlation	-.195	.496	1	.446
	Sig. (2-tailed)	.001	.000	.	.000
	N	306	306	306	306
whooping cough	Pearson Correlation	-.322	.515	.446	1
	Sig. (2-tailed)	.000	.000	.000	.
	N	306	306	306	306

\*\* Correlation is significant at the 0.01 level (2-tailed).

Table 6 gives details of significant correlation between household size and the prevalence of whooping cough, skin and diarrhoeal diseases. The results indicate that, the relatively

low acceptance and patronage of family planning services among households in the rural communities resulting in relatively larger family sizes contribute significantly to the health conditions of majority of the rural households who experience high prevalence of whooping cough, skin and diarrhoeal diseases. Further, the results show a negative relationship between household size and skin, diarrhoeal and whooping cough diseases in the rural areas. It implies that, though the impact of household size on diseases occurrence is not so strong, increase in household size has adverse effect on the members of that household.

Pertaining to addiction to alcoholic beverages, the study found out that majority of respondents belonging to the very low socio-economic group (income poor) and a significant number of respondents from the very high socio-economic group (income non-poor) were found to be addicted to alcoholic beverages, whereas an insignificant number of respondents from the low socio-economic group and nobody from the average and high socio-economic groups were found to be addicted to alcoholic beverages. The details of results on income status of households of respondents and addiction to alcohol have been graphically represented in Figure 4.



**Fig. 4: addiction to alcohol and Income disparities**

The discrepancy in the findings about lifestyle with regard to addiction to alcohol and income status as shown in Figure 4 explains that income status of households of respondents does not correlate with addiction to alcohol. Thus, lifestyle with regard to addiction to alcoholic beverages cannot be a possible medium through which poverty influences the health of the study communities with regard to the highly prevalent diseases that affect the rural communities. Table 7 provides details of results on how addiction to alcohol correlates with the highly prevalent diseases in the rural communities.

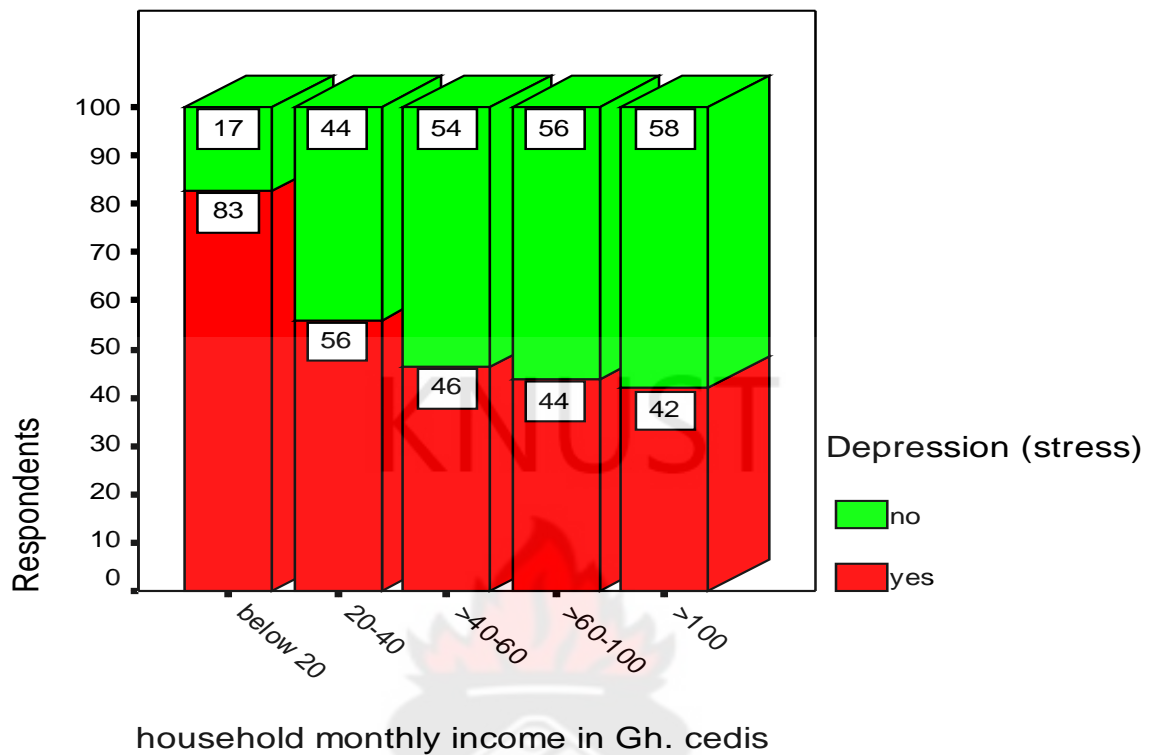
**Table 7: Correlation Coefficients for Addiction to alcohol and diseases**

		skin diseases	diarrhoea	whooping cough	Malaria	addiction to alcohol
skin diseases	Pearson Correlation	1	.496	.515	.323	.029
	Sig. (2-tailed)	.	.000	.000	.000	.616
	N	306	306	306	306	306
diarrhoea	Pearson Correlation	.496	1	.446	.232	.099
	Sig. (2-tailed)	.000	.	.000	.000	.082
	N	306	306	306	306	306
whooping cough	Pearson Correlation	.515	.446	1	.229	.019
	Sig. (2-tailed)	.000	.000	.	.000	.742
	N	306	306	306	306	306
Malaria	Pearson Correlation	.323	.232	.229	1	.087
	Sig. (2-tailed)	.000	.000	.000	.	.129
	N	306	306	306	306	306
addiction to alcohol and tobacco	Pearson Correlation	.029	.099	.019	.087	1
	Sig. (2-tailed)	.616	.082	.742	.129	.
	N	306	306	306	306	306

\*\* Correlation is significant at the 0.01 level (2-tailed).

The Pearson correlation values for addiction to alcohol and diseases occurrence as shown in Table 7 reveal a positive relationship. It implies that increase in alcohol intake would result in a correspondent increase in disease occurrence in the rural communities in the district particularly with regard to the prevalent diseases identified in the study communities.

Table 7 further confirms that there is no significant correlation between addiction to alcohol and the highly prevalent diseases in the rural Amansie communities. The implication is that, lifestyle with regard to the intake of alcoholic beverages as a poverty factor does not contribute significantly to the adverse effects poverty has on the health of the rural poor. However, the poor were found to drink alcohol often due to their inability to satisfy the basic social needs of their households, whereas majority of the non-poor were found to drink alcohol often for relaxation during their leisure hours. Thus, the poor were more likely to increase the intake of alcoholic beverages as their socio-economic conditions deteriorate which may ultimately lead to depression. This could make them even more vulnerable to diseases; hence, contribute to their poor health conditions significantly. Figure 5 indicates that, based on self-reported cases, majority of the poor suffer depression (stress) as compared to the relatively non-poor within the study communities. This confirms Minkler's (1999) findings that poverty leads to elevated stress, especially so, when the poor live together with people with relatively higher socio-economic status. This implies that, though members of the study communities were likely to suffer some form of stress (depression) irrespective of one's socio-economic status, the poor were more likely to undergo stressful conditions which were attributable to their level of deprivation and socio-economic unrest.



**Fig. 5: Depression and income disparity**

#### 5.2.6 Poverty, Access and Utilization of Health Care Facilities

The study further examined the extent to which poverty impacts access and utilization of health care facilities available in the district. This was important to determine the extent to which the health condition of the poor was likely to be influenced by their inability to utilize the existing healthcare facilities available within the district when sick. Issues such as frequency of use or non-use of existing health care facilities and practice of self medication were examined.

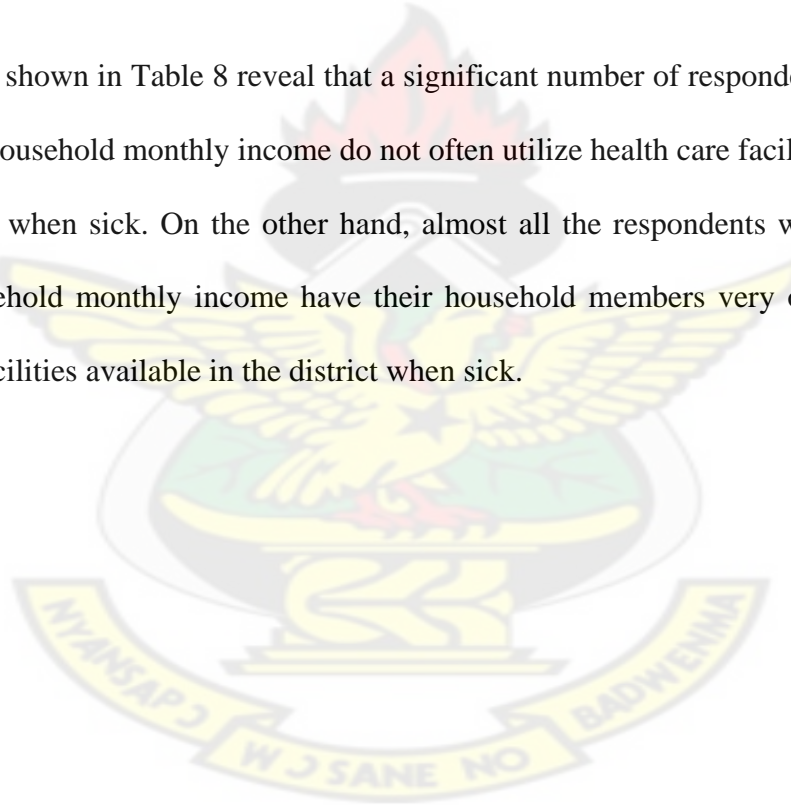
A four- point research question was run to assess the frequency at which members of respondents' households patronize health care facilities when sick. Details of results have been shown in Table 8.

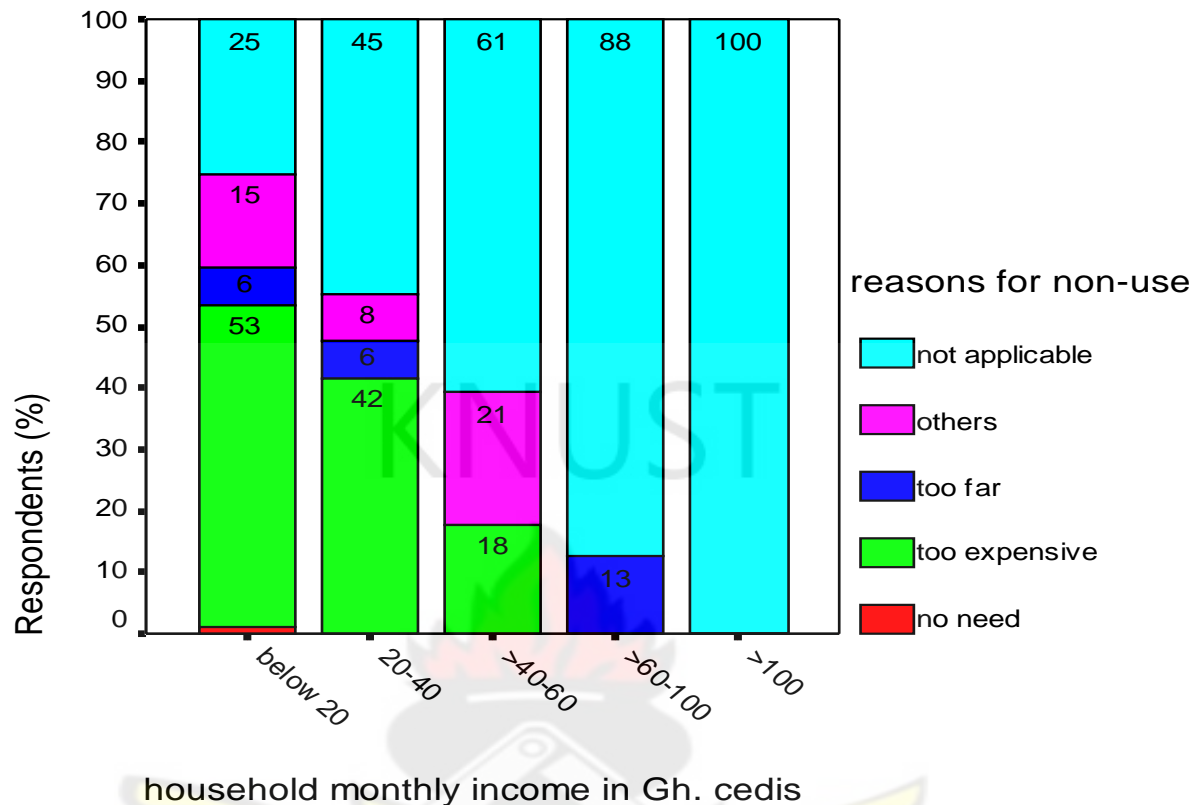


Table 8: Utilization of Health Facilities across Different Income Groups

<b>Income (GH¢)</b>  <b>Use of health facilities</b>	below 20		20-40		>40-60		>60-100		>100		Total	
	F	%	F	%	F	%	F	%	F	%	F	%
very often	7	7	13	10	1	4	6	38	17	55	44	14
quite often	22	22	53	40	18	64	8	50	14	45	115	38
not often	53	53	50	38	7	25	2	12	-	-	112	37
not at all	17	17	16	12	2	7	-	-	-	-	35	11
Total	99	100	132	100	28	100	16	100	31	100	306	100

The results as shown in Table 8 reveal that a significant number of respondents with very low average household monthly income do not often utilize health care facilities available in the district when sick. On the other hand, almost all the respondents with very high average household monthly income have their household members very often utilizing health care facilities available in the district when sick.





**Fig. 6: Relationship between income levels and reasons for non-use of health facilities**

With regard to the reasons why respondents were unable to utilize the available facilities, the results indicated in Figure 6 were realized. The findings with regard to the reasons for peoples' inability to access and utilize health care facilities available in the district showed that income was the major factor. This explains why majority of the relatively poor attributed their inability to use available health service to expensive health service delivery cost, whereas virtually none of the respondents from the relatively non poor households gave reasons for inability to utilize health care facilities in the district. The implication is that the relatively non poor households are more able to access and utilize health care facilities because they are able to afford service delivery cost as shown in Figure 6. The results further show that the rural dwellers were prepared to cover any

distance for affordable health service considering the relatively insignificant number of respondents to whom distance was the reason for not using the health facilities in the district. The coefficients of variation for poverty and disease prevalence indicated in Tables 10, 11, 12, and 13 establish that there is a significant relationship between utilization of health facility as a poverty indicator and the prevalence of malaria, whooping cough, measles and skin diseases among the rural Amansie communities chosen for the study. The implication is that, the poor experience relatively higher prevalence of malaria, whooping cough, measles and skin diseases partly due to their inability to utilize existing health facilities in the district. Thus, majority of the rural poor more often resort to intervening options such as self medication, traditional medicine and ‘quack doctors’ that can have serious repercussions on their health conditions (see Section 4.2.2).

In an effort to ascertain the extent to which members of the study area apply self medication, the study revealed that generally majority of people within the study communities practise self medication. About 91 per cent of households with very low income levels and 87 per cent of households with very high income levels were found to practise self medication. This shows that even across people with different socio-economic backgrounds, there were still significant numbers of people who practised self medication within the study communities. Thus, the results as indicated in Table 9 confirm that poverty has no direct influence on the practice of self medication in the rural Amansie West communities. Significant numbers of respondents with varying socio-economic backgrounds are all involved in the practice of self medication in the study

communities. Table 9 gives details of respondents who practise self medication within their households.

**Table 9: Income levels and self medication**

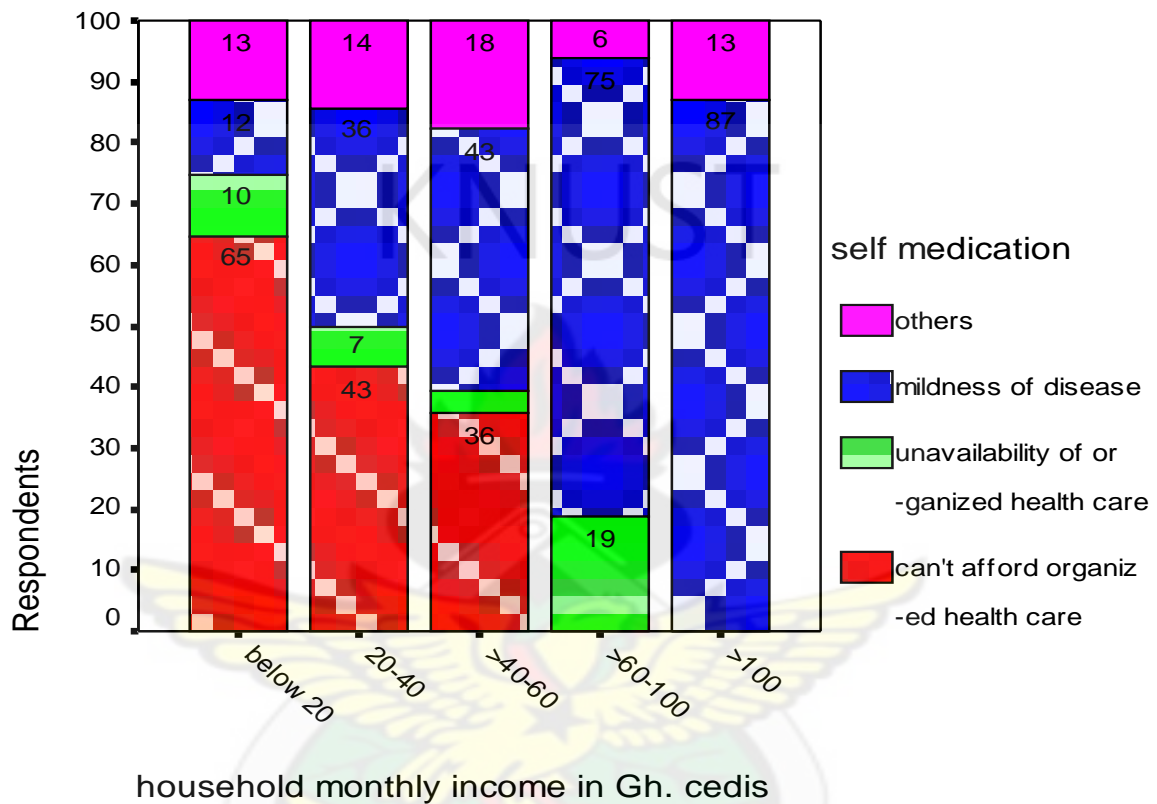
Income (GH ¢)	below 20		20-40		>40-60		>60-100		>100		Total	
Self medication	F	%	F	%	F	%	F	%	F	%	F	%
yes	90	90.9	116	87.9	23	82.1	15	93.8	27	87.1	271	88.6
no	9	9.1	16	12.1	5	17.9	1	6.2	4	12.9	35	11.4
Total	99	100	132	100	28	100	16	100	31	100	306	100

Though generally majority of people practise self medication irrespective of their socio-economic status, it was however verified that, households with different socio-economic status have different reasons for practising self medication. Whereas majority of respondents with very low socio-economic background practised self medication within their households due to their inability to afford orthodox health care facilities within the district, it was realized that the relatively non-poor population most often practised self medication when they perceived sickness to be mild and can be treated with over-the-counter drugs. It suggests that the relatively poor depend on unreliable medical services even when they were in severe condition of ill health due to inadequate income to utilize existing health facilities in the district. This was confirmed by Mr. Ofosu, the district's disease control officer in an interview. He emphasized that,

*“The health condition of the rural dwellers usually deteriorate before they report to the health centres due to their inability to pay for service cost”*

(In-depth Interview, February, 2006).

Figure Seven gives some of the reasons why respondents with different household income levels practise self medication.



**Figure Seven: Reasons for the practice of self medication**

The reasons why majority of the poor within the study communities are poorer in health may be enormous; however, as regards the highly prevalent diseases identified mostly with the poor which include malaria, whooping cough, diarrhoea and skin infections as well as measles, the linkages were found to be poor nutritional conditions, poor housing, poor hygiene (pollution), poor health education and poor access and utilization of health care facilities.

Majority of the poor by virtue of their low income and level of education are unable to adequately satisfy the food, accommodation, education and medical needs of their households. These inadequacies of the relatively poor in the study communities generate conditions that do not auger well for them to live healthily. The nature of the built environment of majority of the poor leads to the breeding of disease-causing vectors; and, coupled with poor nourishment and utilization of health care facilities, create potential threats to the health of the poor in the study communities.

### ***5.3 MULTIVARIATE ANALYSES OF POVERTY AND HEALTH RELATIONSHIP***

It has been revealed that majority of households with low income and educational levels, hence, poor in the rural communities more often found problems satisfying the food needs of their households, lived in relatively poorer housing and hygienic conditions, have relatively low level of health education with regard to specific health issues such as malnutrition, proper waste management practices, drug abuse, exclusive breastfeeding etc. and as a result of their low income levels and low levels of education are less able to access health care facilities when sick (see Section 5.2). Thus, the identified poverty factors for the model including nutritional status, housing conditions, hygiene, health education, stress and access to health care facilities account for the reasons why the poor in the rural communities were found to experience higher prevalence of the commonest diseases identified in the rural areas of the Amansie West district which included malaria, whooping cough, skin diseases, measles, intestinal disorders and diarrhoeal diseases. A linear regression was run to ascertain the specific poverty factors that are more likely to have stronger and significant influence on the commonest diseases.



### 5.3.1 Poverty Indicators and Whooping Cough

With regard to the actual relationship between poverty and whooping cough, it was realized that most of the poverty factors work together to impact strongly on whooping cough occurrence in the rural communities in the district as shown by the multiple regression factors in Table 10. Thus, unlike the relationship between poverty and malaria incidence, there is rather a very strong and significant linear relationship between poverty and whooping cough in the study areas. However, not all the poverty factors entered into the model were found to have significant influence on whooping cough. Such factors as nutritional status, hygiene, access to health care facilities, housing condition and lifestyle actually have significant influence on whooping cough incidence in the rural Amansie communities, however, the Beta values as indicated in Table 10 are low for such factors as nutrition, housing condition and health education. Thus though the negative Beta values for the predictors show a reciprocal relationship between the poverty factors and whooping cough, the impact of nutritional status, level of health education and housing condition relatively is not very strong.

**Table 10: Poverty Factors Influencing Whooping Cough**

Model Predictors	Unstandardized Coefficients		Standardized Coefficients	Significance
	B	Std. Error	Beta	
(Constant)	7.859	.407		.000
Nutritional status	-.371	.098	-.194	.000
Hygiene status	-.731	.104	-.335	.000
Utilization of healthcare facility	-.485	.088	-.310	.000

Housing condition	-.220	.085	-.135	.010
Health education	8.866E-03	.094	.005	.925
Lifestyle	-.446	.110	-.200	.000

**Model Summary:**

- a. Dependent Variable: Whooping cough b. Multiple correlation coefficient (R) .647  
c. Coefficient of determination ( $R^2$ ) .419 d. Adjusted Square .407

The identified relationship existing between poverty and whooping cough in the rural areas shows that mere improvement in peoples' income and level of education may not reduce significantly the incidence of whooping cough. Incidence of the disease would only reduce if adequate income and level of education led to improvement in household nutritional status, housing condition, access to health care facilities, hygienic conditions with regard to proper waste management practices and lifestyle practised by people with low socio-economic status. It is also imperative to mention that, though there was a strong relationship between poverty and whooping cough, considering the coefficient of determination ( $R^2$ ), factors other than the identified poverty factors also have significant influence on whooping cough incidence. These factors may include changes in climatic conditions considering the observation that, most of the households whose members were susceptible to whooping cough in the rural communities commonly had the attack of the disease at specific periods of the month usually at the closing periods of each month.

### 5.3.2 Poverty Indicators and Malaria Occurrence

Malaria was found to be the most prevalent disease in the rural communities as indicated by the districts health records and confirmed with the self reported cases used for this survey. It was however revealed through a cross -tabulation of income and malaria spread that, the disease was highly prevalent among all the different socio-economic groups,

though its prevalence was found to be very high among some of the households with very low socio-economic status (see Section 4.4.1). The implication is that, income and level of education of heads of household do not actually have any significant influence on malaria spread in the rural Amansie West communities.

Having identified nutrition, housing, hygiene, health education, lifestyle, and utilization of health care facilities to be the pathways (poverty indicators) through which poverty translates into ill health in the rural communities, a linear regression was run to examine the relationship between the prevalence of malaria and the poverty factor. This was to identify the poverty factors that actually have significant influence on the prevalence of malaria in the rural communities in the district.

**Table 11: Poverty Factors Influencing Malaria**

Model Predictors	Unstandardized Coefficients	Standardized Coefficients		Significance
	B	Std. Error	Beta	
(Constant)	3.155	.348		.000
Hygiene status	-.270	.089	-.178	.003
Nutritional status	.189	.086	.142	.029
Lifestyle	-7.379E-02	.095	-.048	.436
Utilization of health care facility	-.171	.072	-.157	.018
Health education	-.178	.061	-.192	.004
Housing condition	-2.925E-02	.074	-.026	.692

**Model Summary:**

- a. Dependent Variable: Malaria
- b. Multiple correlation coefficient (R): .336
- c. Coefficient of determination (R<sup>2</sup>): .113
- d. Adjusted Square: .095

The results of the coefficients of predictors indicated in Table 11 show that, poverty through such factors as hygiene, nutritional status, access to health care facilities and health education has significant impact on malaria spread in the rural communities in the Amansie West district. From the predictors, housing condition and lifestyle can be seen to have no significant influence on malaria in the study areas.

It should also be pointed out that the adjusted regression squared ( $R^2$ ) as indicated in Table 11 is low. Thus the linear relationship poverty has with malaria is not so strong, though the relationship of some of the variables with it is strong. The implication is that, though the Beta values show negative (reciprocal) relationship between the poverty factors and malaria occurrence in the rural communities, reduction in poverty of households may not directly influence malaria cases in the study areas. Factors other than household socio-economic status also underpin the relatively higher prevalence of malaria in the rural communities. This confirms the fact that malaria is prevalent among households with varying socio-economic status with regard to household income and level of education of heads of household. Thus, the poor and the non-poor are all more susceptible to malaria in the study communities. This may be due to factors that do not only affect individual households in the rural areas but rather the entire communities where both the poor and the non-poor reside. Poor drainage system, lack of health care facilities in the rural communities and poor community waste management practices were found to be the factors that make malaria highly prevalent among all classes of people living in the rural areas in the district.

Other diseases such as measles and skin diseases were found to correlate strongly with poverty among households of respondents in the rural communities. Significantly too, the negative Beta values for the relationship between the poverty factors and measles, skin and diarrhoeal diseases further indicate a reciprocal relationship between poverty and disease occurrence in the rural communities. Thus, as the poverty factors improve, occurrence of such diseases as measles, skin and diarrhoeal diseases reduce. However, with regard to the linear relationship between poverty and diarrhoea indicated in Table 14, it was revealed that the correlation between them was not as strong as it is for whooping cough, skin diseases and measles. Generally, the influence of poverty on all the diseases identified to be prevalent in the study areas was significant. However, in any particular case, poverty was found to translate into ill health through specific significant pathways for each of the diseases identified to have strong relationship with poverty. With regard to the relationship between poverty and measles, it was discovered that poverty factors such as lifestyle, housing condition, nutritional status, health education and utilization of health care facilities were the major indicators that have significant impact on measles in the study communities.

Skin diseases from the significant coefficient values indicated in Table 13 are influenced significantly by poverty factors such as hygiene, nutritional status, lifestyle, utilization of health care facilities, health education, and housing condition of households. Tables 12 to 14 give details of results on the multivariate analyses for poverty and other prevalent diseases including measles, skin diseases and diarrhoeal diseases.

**Table 12: Poverty factors influencing measles occurrence**

Model predictors	Unstandardized Coefficients	Std. Error	Standardized Coefficients	Significance
	B		Beta	
(Constant)	2.141	.389		.000
Lifestyle	-.398	.097	-.218	.000
Housing condition	-.170	.074	-.132	.023
Nutritional status	-.213	.044	-.273	.000
Hygiene	-.189	.104	-.103	.071
Health education	-.306	.060	-.271	.000
Utilization of health care facility	.224	.071	-.177	.002

**Model Summary:**

- a. Dependent Variable: measles b. Multiple correlation coefficient (R): .552  
c. Coefficient of determination ( $R^2$ ): .305 d. Adjusted Square: .291

**Table 13: Poverty factors influencing skin diseases**

Model predictors	Unstandardized Coefficients		Standardized Coefficients	Significance
	B	Std. Error	Beta	
(Constant)	6.126	.426		.000
Hygiene status	-.284	.111	-.133	.011
Nutritional status	-.229	.106	-.123	.031
Lifestyle	-.500	.116	-.230	.000
Utilization of health care facility	.320	.089	-.210	.000
Health education	-.319	.074	-.246	.000
Housing condition	.221	.053	-.222	.000

**Model Summary:**

- a. Dependent Variable: skin diseases b. Multiple correlation coefficient (R): .570  
c. Coefficient of determination ( $R^2$ ): .325 d. Adjusted Square: .309



**Table 14: Poverty factors influencing diarrhoeal diseases**

Model predictors	Unstandardized Coefficients		Standardized Coefficients	Significance
	B	Std. Error	Beta	
(Constant)	2.996	.472		.000
hygiene status	-.375	.113	-.193	.001
Health education	.522	.126	.259	.000
Utilization of health care facility	.125	.067	.122	.063
Nutritional status	-.465	.132	-.227	.000
Housing condition	.171	.086	.121	.048
Lifestyle	.170	.074	.132	.023

**Model Summary:**

- a. Dependent Variable: diarrhea b. Multiple correlation coefficient (R): .424  
 c. Coefficient of determination ( $R^2$ ): .180 d. Adjusted Square: .166

The study and review through qualitative and quantitative approaches suggest a generally robust and significant association between poverty using various indicators of socio-economic status across samples and health using reported cases of common diseases. An important research issue is the possibility for low levels of income and education to jointly impact access to certain basic needs of life including proper feeding habits, utilization of health care facilities, level of health education, hygiene, and housing conditions among other poverty factors that ultimately lead to ill health conditions in the rural areas in the District. Poverty, though not the sole cause of ill health in the rural communities, was identified as a major contributing factor to ill health. Poverty increases susceptibility, exacerbates symptoms or hasten the progress of a disease among households with low income levels in the rural Amansie communities.

## **CHAPTER SIX**

### **6.0 SUMMARY, CONCLUSIONS AND POLICY**

#### **RECOMMENDATIONS**

##### ***6.1 SUMMARY***

Poverty and health are crucial issues in the development agenda of any economy. In Ghana, poverty and health are usually studied separately. Poverty issues are studied independent of health. As a result, the linkages between them are usually hidden. Against this background, the specific objectives of the study were to examine the relationship poverty has with health, with a focus on rural communities in the Amansie West District in the Ashanti Region. The study also sought to analyze the poverty situation in the rural communities in the District and identify diseases highly prevalent among poor households in the study area. It also examined the relationship and the linkages through which poverty translates into ill health among people in the study villages to establish the relationship between poverty and health.

In order to achieve the specific objectives of the survey, a total of three hundred and six (306) households were selected for the study, with the head of each household as the unit of inquiry. Methods used for data collection included focus group discussions, interviews, participant observation and questionnaires; whereas percentages, cross tabulation, frequency charts, linear regression, bar, line and area graphs with the help of the SPSS software were the methods used to analyze relevant data obtained from the study area.

With regard to the assessment of the poverty situation in the study villages, two main approaches including the participatory poverty assessment approach and the relative income approach were used. Though no clear spatial variations exist, it was identified that poverty within the rural communities was commonly associated with inability to provide proper nutrition to household members, lack of proper accommodation, low level of education, inability to work and lack of gainful employment. The rural dwellers again associate poverty with inadequate social services within their communities. This incapacitates them in their efforts to escape the poverty syndrome within the rural setting. Poverty was realized to have manifold manifestations. Among other things, the poor in the rural Amansie communities were found wearing tattered cloths, patronize traditional medicine most often when sick, almost always buy food and other necessities on credit, own relatively smaller farmland, live in dilapidated structures and almost always found working on other people's farms either to defray debt or earn a living.

The relative income levels and the level of education identified to assess poverty from income and education perspectives in the study villages further unveiled the depth of poverty in the rural communities in the District. The relative income levels approach identified five socio-economic groups based on households' income levels. These were the low and very low income earners who constituted the income poor, average income earners and the high and very high income earners who constituted the income non-poor. About 84.9 per cent of total respondents from the study villages were found to be income poor. The poor, aside their low income levels, were also saddled with income irregularities due to the seasonal nature of their employment. Significantly too, about

93.7 per cent of the heads of household selected for the survey were identified to have low level of education, hence knowledge poor (see Sections 4.2.3 and 4.2.4).

Pertaining to the health situation of the rural communities, the survey predominantly used self-reported cases from the respondents. Several diseases were found to beset the people in the study villages. However, malaria, whooping cough, skin diseases, diarrhoeal diseases, intestinal disorders and measles were found to be highly prevalent among households in the study villages, with malaria being the most prevalent (see Section 4.3). The poor were found to bear greater burden of the diseases identified to be highly prevalent in the rural communities basically due to their low income levels to adequately meet their basic needs including food, housing, access and use of health care facilities. Among other things, the community members with low socio-economic status almost always found problems satisfying the food needs of members of their households, lived in dilapidated houses with little or no protection from disease causing vectors and unhygienic conditions, had little or no knowledge about some important health seeking behaviours and their repercussions and more importantly were less able to patronize health care facilities available in the District when taken ill (see Section 5.2). Thus, poor nutrition, improper housing conditions, poor hygiene, low level of health education, poor access and utilization of health care facilities in the District were major linkages through which poverty in the Amansie West rural communities translates into ill health within the households of the poor population in the District. Poverty was found to have strong and significant linear relationship with the general health conditions of households in the rural communities in the District.

## **6.2 CONCLUSIONS**

The study has made significant contributions with regard to the methodology for the study of poverty and its adverse effects on health, particularly within a rural setting relevant for the achievement of the Millennium Development Goals (MDG's).

First, it has provided a framework for further research into poverty and health issues which over the years were studied independent of each other, concealing the linkages between them. In addition to the qualitative approach to explain the relationship between poverty and health which early researchers usually employed for their study, this survey also applied a quantitative tool such as cross tabulation and multivariate regression with the use of the Statistical Package for Social Sciences (SPSS) to identify the actual poverty factors through which poverty significantly translates into ill health with regard to disease occurrence in the rural communities in the District (see Section 5.3). Significantly too, the study has provided a philosophical base for defining and measuring poverty as well as reducing health decay through effective poverty reduction strategies. Emphasis should be put on the fact that the poverty and health model developed out of Wagstaff's cycle of poverty to examine the relationship between poverty and health in the rural Amansie West Communities clearly explained the nature of poverty as situated in the rural areas and the reasons why the poor are poorer in health which other existing models do not highlight (see Section 1.5). The poverty and health model is thus adaptable for further studies on poverty and health issues.

The results have adequately justified the objectives and the hypotheses set for the study. Pertaining to the objectives set for the study, the focus group discussions with the rural



communities coupled with the use of the relative income approach, the poverty situation, its manifestations and coping strategies of the rural poor were identified. In addition, a careful scrutiny of self reported cases of diseases occurrence in the rural communities supported with data from the District Health Directorate of the Amansie West District, the very common diseases in the rural areas and their rates of occurrence were examined. Through the use of cross tabulation, stack graphs and multivariate regression, robust relationship was established between poverty and ill health (see Sections 4.2.2, 4.4, 5.2, 5.3). The poor were identified to suffer greater burden of ill health than the well-to-do in the study communities. The study further identified the major poverty indicators that act as linkages through which poverty translates into ill health and the influence income has on the utilization of health facilities in the District. Based on this, it was concluded that efforts to improve the health conditions of the poor in the rural communities need to be focused on empowering the rural poor to acquire adequate income and knowledge as a means to satisfactorily meet their basic needs of life and also practise proper health seeking behaviour that can improve the quality of their health significantly. These could be achieved through the introduction of mechanized farming practices, effective implementation of government's Youth Employment Programme (YEP), intensification of rural community health education, education and training of traditional health care providers, extension of village infrastructure projects and promotion of the national health insurance scheme in the District.

It is important to point out that there has been a clear justification of the hypotheses set for the research work. It was proposed that poverty was the root cause of poor health in



the rural communities in the District. Considering the results realized from the linear regression and cross tabulation, it was ascertained that the factors that have significant impact on the occurrence of whooping cough, diarrhoeal diseases, skin diseases etc. were poverty induced (see Section 5.3). The relatively poorer households suffer greater burden of ill health than the non poor. With low levels of income, the poor households are unable to maintain proper hygiene, afford decent accommodation, have problems satisfying the food needs of their households and make use of the available health facilities when sick. These are the factors that create conditions for the growth of disease causing pathogens that lead to health decay among the poor households in rural communities. Significantly too, the poor were found to be poorer in employable skills (knowledge) due to their relatively low levels of education which incapacitate them from securing gainful employment for adequate and regular income. Thus, low level of education and lack of adequate and regular income make it difficult for majority of the rural poor to meet their basic needs of life to improve the quality of their health and standard of living. Once the people in the Amansie West rural communities are equipped with adequate income and empowered through education, they would be able to satisfy their basic needs to ensure better health for members of their households.

On the other hand, the results revealed that majority of the low income earners either do not often or not at all use the very few health care facilities available in the District not because of unavailability but predominantly because of inability to pay for service cost (see Section 5.2.6). It is thus obvious that if government expanded health facilities to the rural areas in the District, it would not guarantee utilization unless it is accompanied by

effective poverty reduction strategy to improve the income levels and education of the rural poor in the District.

Some methodological limitations which could be sources of bias were encountered in the survey process. The simple random sampling method applied for the selection of study villages and respondents led to some parts of the District being excluded from the study. Significantly too, some of the poverty indicators such as hygiene and stress were difficult to quantify with conventional measuring tools. In such situations data were analyzed with descriptive statistical tools such as percentages and frequency charts. Considering the homogenous nature of the rural communities in the District with regard to poverty and health issues the exclusion of some of the villages and respondents from the study did not affect the credibility of the results. It rather allowed for a thorough investigation into the problem for appropriate recommendations to improve rural health through rural poverty reduction.

The survey unveiled major poverty induced variables such as poor nutrition, low level of education, poor hygiene and housing condition as contributing significantly to the spread of malaria, whooping cough, skin diseases, intestinal disorder, diarrhoeal diseases and measles in the rural communities. However, it is imperative to note that though some of the major poverty factors were proven to have significant influence on the prevalence of some diseases, the coefficients of determination as indicated below Tables 10, 11, 12, 13 and 14 show that the poverty factors only partly account for the reasons why those diseases were very common in the study villages. The implication is that, there are factors

other than poverty induced variables that also account for the relatively higher prevalence of malaria, whooping cough, skin diseases, measles, intestinal disorder and diarrhoeal diseases. It is therefore suggested that researchers interested in poverty and health issues particularly in rural areas also examine the factors other than poverty that account for the high prevalent rate of the identified diseases for a holistic approach to improve rural health in the Amansie West District in particular and Ghana in general.

### ***6.3 POLICY RECOMMENDATIONS***

#### **6.3.1 Introduction**

Heads of household identified for the survey highlighted issues pertaining to provision of micro-credit to help the rural farmer increase productivity and income levels, provision of farm inputs, rehabilitation of roads linking farming communities to market centres in the District for easy marketing of farm produce and creation of more jobs alternative to farming as strategies required by the rural folks to reduce poverty. Provision of community health posts was also emphasized by the rural people as means of making health care accessible to the rural folks in the District. Thus any strategies or recommendations aimed at reducing poverty in the rural communities in the District, whether at the communal or individual level, should focus on equipping the poor with the needed resources including adequate income and education. With the adequate income and level of education, the poor would be able to act in ways that can improve their quality of life and health conditions significantly. Based on the research findings and suggestions made by the rural folks, the following are some recommendations which

were identified as means of empowering the rural poor in the District to reduce poverty and improve their health status.

### **6.3.2 Intensification of Rural Community Health Education**

The need for people to alter their behaviour to reduce susceptibility to diseases is an important tool in this regard for the rural communities in the District. Most of the diseases common in the rural communities are preventable and more related to improper solid waste management, nutrition and poor housing conditions. The survey unveiled that the low level of health education of majority of the rural dwellers plays a significant role in promoting ill health conditions among most of the rural dwellers. The communities ought to understand the relationship between potable water, hygiene, food and diseases. With this, they are more likely to feel a need for good sanitation, proper nutrition and their sustainability to ensure better quality of health. Intensification of health education in the rural areas would promote and reinforce healthy behaviour through full individual and community participation by encouraging them to identify with behaviours that are conducive to good health.

It is recommended that an integrated approach to intensify rural community health education be employed in the District. The District health directorate, due to inadequate personnel should team up with the District education service and agricultural extension officers to organize training workshops for resident teachers in the various rural communities to offer health education on specific health issues to the communities. The teachers, together with the community health inspectors, could intensify health education

in the various communities and also offer door-to-door health services to the rural communities. The health education given to the rural communities could enlighten them on proper waste management practices, good housing and nutritional habits and the dangers associated with self medication and reliance on quack doctors.

### **6.3.3 Promotion of the National Health Insurance Scheme**

The study further unveiled that, as of December, 2005, only (28) representing 9.2 per cent of total respondents had registered and paid their premium for the National Health Insurance Scheme, (39) representing 12.1 per cent had registered without paying the premium and (239) representing 78.1 per cent had not registered at all for the scheme (Field Survey, February, 2006). The very low number of people identified to have registered for the National Health Insurance Scheme as of December, 2005 confirms the magnitude of income poverty and the low level of education the people had about access and use of health care facilities. It is needful that the people are given proper education on the scheme and opportunity to pay the premium by installment to get them registered. Since majority of the people fail to utilize health care facilities due to the inability to afford service cost, understanding the purpose of the scheme and its acceptability are the only ways to make health care affordable to the people in the rural communities in the District.

### **6.3.4 Education and Training of Traditional Health Care Providers**

Traditional medicine is highly embedded in the socio-cultural roots of the rural communities in the District (see Section 4.2.2). It is strongly felt that due to the financial strains on the households in the study communities particularly those within the low

income groups, traditional health care providers who provide health care at a relatively affordable cost be given the necessary attention as complement of government's efforts towards the improvement of the health of the rural poor. Usually the efficacy of traditional medicine is limited by the teething problems associated with preparation processes and recommended dosage (Buor, 1993).

It is recommended that the District Administration teams up with the District Health Management Team to organize education and training workshops occasionally for traditional health care providers in the District who are more accessible by the poor in the District's rural communities. The workshops could create awareness on the need to prepare medicines in more hygienic surroundings and through scientifically appropriate process. When these are done, the danger of users having some infections would be averted.

#### **6.3.5 Extension of Village Infrastructure Projects (VIP) to the District**

Poverty and ill health among the rural communities in the District are greatly underpinned by the deplorable state of the roads linking the villages to the major towns in the District and lack of environmentally friendly sanitation facilities in the communities. Generally, about 71.6 per cent of the total respondents use uncovered pit latrines located not too far from their places of residence. Significantly too, 85.0 per cent of the total respondents use areas located not too far from their places of residence as dumping grounds for refuse (see Section 5.2.3). These improper sanitation practices, unfriendly to the environment, emerged as major contributors to the higher incidence of malaria,



diarrhoeal diseases and intestinal disorders among the people in the rural areas. It is important that a programme be designed to focus on rural infrastructure development in the District to improve the quality of life and the health situation of the people.

It is recommended that rural community infrastructure rehabilitation scheme targeting road rehabilitation, KVIP construction and solid waste management be designed for the District administration as timely intervention scheme to tackle the problems of waste management, rural electrification and poor road network. The District administration could liaise with NGO's, Community Water and Sanitation Agency (CWSA), the facilitators of the Village Infrastructure Projects (VIP), and the Ministry of Local Government, Environment and Rural Development to mobilize financial and technical support to implement the scheme. If government's Village Infrastructure Project (VIP) is extended to the District and properly implemented for the benefit of the rural communities, it would lead to increased agricultural productivity and effective marketing of farm produce. The scheme would further go a long way to significantly reduce the out migration of the youth into the urban centres, avert the breeding of disease causing organisms and also encourage access and utilization of health care facilities in the District.

#### **6.3.6 Effective Youth Empowerment Policy**

The study identified that most often the energetic youth who constitute the active rural labor force leave the villages for the aged and children as means of escaping rural poverty, usually due to the unattractive nature of the farming occupation and lack of

alternative avenues for them (see Section 4.2.1). There is therefore the need for effective implementation of the government's youth employment programme (YEP) in the District particularly in the deprived areas as youth empowerment policy. This could make the youth in particular economically productive to help them earn a living as a means of controlling the increasing out-migration into the urban centres for non-existing white collar jobs. It is recommended that youth centres and trade schools be attached to the District administration with the basic function of offering career guidance and counseling and equipping the youth in the communities with specific vocations such as carpentry, masonry, tie and die making, dressmaking and hair dressing. Other economically viable activities such as mushroom cultivation, grass cutter rearing and bee-keeping could also be introduced to the youth as alternative ventures to earn a living.

#### **6.3.7 Introduction of Mechanized Farming Techniques**

About 90.1 per cent of the respondents from the study villages earn their livelihood through food crop farming. It was this category of people who were mostly found to have low income and very low level of education, hence very poor and poorer in health. The high incidence of poverty among the farming communities stemmed from the nature of their occupation. The poor in the study villages are unable to increase food productivity to help them improve the quality of their lives. Majority of the people continue to rely on rudimentary farming implements and practices such as hoes and cutlasses for their farming activities. These crude implements do not make it possible for any large-scale farming to feed their families and earn adequate income to satisfy other basic needs of their households. Significantly too, lack of credit facilities for the farmers in the rural

communities, poor storage facilities and over dependence on rain-fed agriculture in the villages account for the low productivity, food insufficiency and consequently very low income levels for the farmers in the villages. Agricultural transformation through irrigation schemes and tractor services could provide sustainable livelihood and regular income to the people in the study villages.

It is recommended that since majority of the poor are food crop farmers, government and other stakeholders should provide farmers with micro-credit facilities and initiate irrigation projects throughout the farming communities by making use of the rivers available in the communities. With that initiative, the communities could obtain inputs and have constant supply of water to feed their crops throughout their farming seasons for higher productivity. This could provide the poor in the communities with sustainable livelihood and regular income. With adequate and regular income, the rural farmers could properly feed their households, give their wards better higher education, afford decent shelter, good medical care and improve their quality of life. These could improve the health conditions of the people living in the rural communities in the District.

Once the rural poor are able to increase their yield through mechanized farming technology and are able to have easy access to the market centres with improved rural infrastructure, the poor are more likely to increase their household income as a means of escaping rural poverty. As the poor are able to raise adequate income, coupled with adequate health education, they are more likely to meet the basic needs of life satisfactorily and also adopt behaviours that would improve their health significantly.

## REFERENCES

- Advanced Concise Oxford Dictionary (ACOD) (2004): *Definitions of Poverty* (United Kingdom: Oxford University Press, 2004) p. 981
- Aidoo, M. and T. Harpham (2001): *The Explanatory Models of Mental Health amongst Low-Income Women and Health Care Practitioners in Lusaka, Zambia*. Health Policy and Planning Vol. 16: 206-213.
- Alison, E., et. al., (2006): *Independent Evaluation of Rwanda's Poverty Reduction Strategy 2002-2005* (Rwanda: Centre for Resource Analysis, 2006)
- Amaizo, Y. E. (2004): *Poverty and HIV/AIDS: Instruments For Regulating African Insecurity*. African Development and Governance Strategies in the 21<sup>st</sup> Century. Essays in Honour of Adebayo Adedeji (United Kingdom: Zed Books Ltd., 2004) pp. 175-177.
- Ambrosio et. al. (2002): *The Street Health Report: A Study of the Health Status and Barriers to Health Care Of Homeless Women* (Toronto: Street Health Report, 1992)
- Appiah, K. O. A. (2000): *Poverty Reduction in Ghana: Guidelines and Options for the Preparation of an Agenda and Strategy*. (Paper Prepared For the Technical Committee on Poverty, NDPC,) pp. 1-3
- Apusiga, A. A., (2005): *Diagnosing Poverty in Northern Ghana: Institutional Verses Community Views*. Ghana Journal of Development Studies Vol.2 (2):1-14.
- Ashiabi, G. S. (2000): Some Correlations of Childhood Poverty in Ghana, Journal of Children and Poverty, Vol. 6 (2): 155-168
- Avery, K. (2007): The Least Developing Countries: Closing the Technological Gap, United Nations Conference on Trade and Development ([www.untad.org/template/wedflayer](http://www.untad.org/template/wedflayer))
- A.W.D.A (2003): *General Background and Analysis of Current Situation* (Ghana: Amansie West District Profile 2003) pp. 1- 16
- A.W.D.A (2004): *Demographic Characteristics and Infrastructural distribution* (Ghana: Amansie West District Profile 2004) pp. 12- 26
- A.W.D.A (2005): *Micro Economy* (Ghana: Amansie West District Profile 2005) pp. 1- 16
- Awumbila, M., (2004): *Gender and Poverty Reduction Strategies in Ghana: Poverty, Health and Gender; Proceedings of the NUFU Workshop* (Accra: Media Design Ltd., 2004) pp. 10-11
- Ayertey, I. (2002): *Mastering Social Studies* (Ghana: Excellent Publishing and Printing, 2002) pp. 329-336

Azeem, V. et. al. (2006): *Evaluation of DFID Country Programmes: Country Study: Ghana 2000-2005*. Evaluation Report EV662.

Baden, S. et. al., (2004): *Background Paper on Gender Issues in Ghana*. Report Prepared for the West and North Africa Dep't. (DFID), UK; 2004, Jan.

Bansal, R.K. and D.M. Saxena (2002): *Overcrowding and Health*. Indian Journal of Medical Science 56(4): 177-179.

Bansal, R.K (2002): *Housing and Disease Occurrence*. Indian Journal of Medical Science 56(3): 108-112.

Barat, L. M. et. al. (2004): *Do Malaria Control Interventions Reach The Poor? A View through the Equity Lens*. American Journal of Tropical Medicine and Hygiene Vol. 71(2): 174-178

Benefo, K. D. and T. P. Schultz (1996): *Fertility and Child Mortality in Cote d' Ivoire and Ghana*. The World Bank Economic Review Vol. 10 (1): 123-158

Benefo, K. D. and V.K Pillai (2005): *The Reproductive Effects of Family Planning Programmes In Rural Ghana: Analysis By Gender*. Journal of Asian and African Studies, Vol.40 (6): 463-477

Berkman, L. and Kawachi, I. (2000) *Social Epidemiology* (New York: Oxford, Vas Press)

Bernadette M. W. et. al. (2005): *Patterns of Home and Community Care Service Delivery to Culturally and Linguistically Diverse Residents of Rural Victoria*. Australian Journal of Rural Health Vol.13 (6): 348-352

Bines W., (1994): *The Health of Single Homeless People* (UK: Centre for Health Policy)

Bjerregaard, P. and T. K. Young (1999): *The Circumpolar Inuit: Health of a Population in Transition*. British Medical Journal 318(7176): 133

Borrell, L. N. and N. D. Crawford (2006): *Race, Ethnicity, and Self-Rated Health Status in the Behavioral Risk Factor Surveillance System Survey*. Hispanic Journal of Behavioral Sciences, Vol. 28(3): 387 – 403

Bosma, H. et. al., (2001): *Neighborhood Socioeconomic Status and All-Cause Mortality*. American Journal of Epidemiology, Vol. 153(4): 363 - 371.

Bourke, L. et. al. (2004) *Developing A Conceptual Understanding of Rural Health Practice*. Australian Journal of Rural Health Vol.12 (5): 181-186



- Bowling, A. et. al.(2006): *Do Perceptions of Neighbourhood Environment Influence Health? Baseline Findings from a British Survey of Aging*  
Journal of Epidemiology and Community Health, Vol.60 (6): 476 - 483.
- Braveman P. and S. Gruskin (2003): *Poverty, Equity, Human Rights and Health*  
Bulletin of W.H.O, Vol. 81 (7)
- Brown, J.L. And E. Pollitt (2006); *Malnutrition, Poverty and Intellectual Development*.  
Scientific American Journal, 274 (2): 38-43
- Bryant, T., (2002): *Housing as a Determinant of Health*: Conference Paper for the Social Determinant of Health (Toronto: Across the Life-Span Conference)
- Buor, D., (1993): *The Impact of Traditional Medicine on Health Care Delivery Services in Ghana: The Ashanti Situation*. Journal of the University of Science and Technology, Vol. 13 (3): 38-145
- Buor, D. (2004): *Accessibility and Utilization of Health Services*. (Lecture Series Four, Department of Geography and Rural Development, KNUST)
- Buor, D., and K. Bream (2004): *An Analysis of the Determinants of Maternal Mortality in Sub-Saharan Africa*. Journal of Women's Health, Vol. 13 (8): 926-938
- Canagarajah, S. and C. Portner (2002): *Evolution of Poverty and Welfare in Ghana in the 1990's: Achievements and Challenges* (Washington: World Bank Report, 2002)
- Carr, D. (2004): *Improving the Health of the World's Poorest People*. Health Bulletin Vol. 21 (2): 1-7
- Carter M.R. and J. May (2001): *One Kind of Freedom: Poverty Dynamics in Post-Apartheid South Africa*. World Development Vol. 29 (12): 1987-2006
- Castro-Leal, F. (1999): *Public Social Spending In Africa: Do the Poor Benefit?* World Bank Research Observer: Vol. 14 (1): 49-72
- C.I.H.I., (2003): *Poverty and Health: Links to Action Proceeding Report* (Canada: CPHISPS)
- C.M.H.C. (2000): *Housing Market Survey Statistics and Small Area Data* (Ottawa: Advocate Institute)
- C.N.H.S. (1992): *Enough To Make You Sick: How Income and Environment Affect Health* (Canberra National Health Strategy)
- Crossette B., (1996) *UN Survey Finds World Rich-Poor Gap Widening*: (New York Times July 15, 1996 Cited In Rachel's Environment and Health News) P.A3



- Darkwa, A. K. (2005): *Poverty Trends in Ghana over the Last Fifteen Years*. Legon Journal of Sociology, Vol. 2 (1): 81-96
- Demery, L. and L. Squire (1999): *Macroeconomic Adjustment and Poverty in Africa: An Emerging Picture*. World Bank Research Observer-Oxford Journals, Vol. 11(1): 39- 59.
- Destombes, J. (1999): *Nutrition and Economic Destitution in Northern Ghana, 1930-1957*. A Historical Perspective on Nutritional Economics Working Paper No. 49/99 (London: London School Of Economics, 1999)
- Dixon, J. and N. Wench (2000): *Researching the Rural- Metropolitan Health Differential Using the Social Determinants of Health*. Australian Journal of Rural Health (AJRH), Vol. 8 (5): 254
- Donkor, K., (1997): *Structural Adjustment and Mass Poverty in Ghana* (England: Ashgate Publishing Ltd) pp.206-213
- Doyal, L. and I. Gough (1991): *A Theory of Human Need* (London: Macmillan Edu. Ltd.)
- European Health Report (2002): *The Burden of Ill Health*.
- Evans, T et. al. (2001): *Challenging Inequalities in Health: From Ethics to Action* (New York: Oxford University Press, 2001)
- Fein O., (1995): *The Influence Of Social Class On Health Status In America And Britain: Research on Health Inequalities*. Journal of General International Medicine, Vol. 10: (1): 577-586
- Fleur H. et. al. (2003): *Rural Community Pharmacy: A Feasible Site for A Health Promotion and Screening Service for Cardiovascular Risk Factors*. Australian Journal of Rural Health, Vol. 11(1): 28-35
- Fraser, C. et. al., (2002): *Does One Size Really Fit All? Why The Mental Health Of Rural Australians Requires Further Research*. Australian Journal of Rural Health, Vol. 10 (6): 288-295
- Friedmann, J. (1999): *Rethinking Poverty: Empowerment and Citizens' Rights*. International Social Science Journal Vol. 148 (1): 161-164.
- Gellis, Z.D. (2004): *Urban and Rural Differences in Job Activities, Job Stress and Job Satisfaction*. Journal Of Behavioural Health Services And Research 31 (4)
- Ghana Health Service Report (1996): *A Study into the Reasons for Low Immunization Coverage in Kumasi Metropolis* (Ghana: Health Education Unit, 1996)

Ghana Statistical Service (2000): *Poverty trends in Ghana in the 1990's* (Ghana: GSS, 2000) pp. 1-9

Ghana Living Standards Survey Four Report (Ghana: GSS, 2000) pp. 1-15

Ghana Health Digest (GHD), (2004): *Report on Community Health*, September, 2004, Vol. 4 (3):1-3

Glisson, C. (2005): *The ARC Organizational and Community Intervention Strategy for Implementing Evidence-Based Children's Mental Health Treatments*. Mental Health Service Research, Vol. 7 (4)

Gordon, D., (2004): *Eradicating Poverty in the 21<sup>st</sup> Century: When Will Social Justice Be Done* (Inaugural Lecture by Prof. Dave Gordon, Bristol University 18<sup>th</sup> October, 2004)

Graeme I. J. et. al., (2003): *Removing the Roadblocks to Medical and Health Student Training in Rural Hospitals in Victoria*. Australian Journal of Rural Health, Vol. 11(5): 218-223

GSS, Noguchi Memorial Institute of Medical Research (NMIMR), and ORC MACRO, (2004). Ghana Demographic and Health Survey 2003. (Calverton, Maryland: GSS, NMIMR AND ORC MACRO.) pp. 113-235

Gunter, G. B. et. al. (2005): *Analyzing Macro-Poverty Linkages: An Overview*. Development Policy Review, Vol. 23(3): 253

Gwatkin D.R. and M. Guillot (1999): *The Burden of Diseases among the Global Poor. Current Situation, Future Trends and Implications for Strategies*.  
[www.worldbank.org/poverty/health/library/burden.pdf/](http://www.worldbank.org/poverty/health/library/burden.pdf/)

Haddad, L. (1999): *Are Urban Poverty And Undernutrition Growing? Some Newly Assembled Evidence* (Washington: FCND International Food Policy Research Institute)

Haines, A. et. al. (1998): *Poverty and Health: The Role of Physicians*. Annals of International Medicine.

Haines, A. et. al. (2002): *Joining Together to Combat Poverty: Everybody Welcome and Needed*. British Medical Journal Vol. 320 (1):1-2

Hayes, L. J. et. al., (2005): *New South Wales Trends in Mortality Differentials between Small Rural and Urban Communities over a 25-Year Period, 1970–1994*. Australian Journal of Rural Health, Vol. 13 (2): 71-76

Health Foundation of Ghana (2004): *Some Common Micro-Organisms that Cause Food Poisoning*. Ghana Health Digest, Vol. 4 (3): 1-3

- Heintz, J. (2005): *Employment, Poverty and Gender in Ghana* (Amherest: PERI, 2005)
- Hellin, J. et. al., (2005): *Mapping the Market: Market Literacy for Agricultural Research and Policy to Tackle Poverty in Africa*. International Seminar Paper: Beyond Agriculture: Making Markets Work for the Poor, London: Feb. 28- March 1, 2005.
- Hendy, S. (2000): *Factors contributing to Aboriginal ill health*. Bush Book, Vol. 2: 26  
[www.nt.gov.au/health/healthdev/health\\_promotion/bushbook/volume2/chap1](http://www.nt.gov.au/health/healthdev/health_promotion/bushbook/volume2/chap1)
- Hong, E. (2000): *Globalization And The Impact On Health: A Third World Views- Socioeconomic Causes Of Ill Health* (People's Health Movement) pp. 3-9
- Hubley, J. (2003): *Communicating Health* (London: Macmillan Educational Ltd.)pp.3
- Humphreys J. S. (1998) *Rural Health and the Health of Rural Communities* (Australia: Media Services, La Trobe University, Bendigo, 1998)
- I.D.S Participatory Group (2000): *PPA's, The Voices of the Poor and PRSP's* (Brighton: Institute of Development Studies, University of Sussex)
- IFAD., (2002): *Assessment Of Rural Poverty: Eastern And Southern Africa* (Italy: Palombi Press) pp. 9-54
- IFAD, (2001): *Rural Poverty Report* (New York: Oxford University Press) p.5
- Isaacs, S. L. et. al., (2004): *Class- The Ignored Determinants of the Nations Health*. The New England Journal of Medicine, Vol. 351: 1137-1142
- Jolliffe, D., (2006): *Poverty, Prices and Places: How Sensitive Is the Spatial Distribution of Poverty to Cost Of Living Adjustments*. Economic Inquiry, Vol. 44 (2): 296-310
- Jong-wood, L., (2005): *Global Commission to tackle the 'Causes behind the Cause of Ill Health.'* Santiago, Chile.
- Kahlmeier, S. et. al. (2001): *Perceived Environmental Housing Quality and Wellbeing of Movers*. Journal of Epidemiology and Community Health, October 1, 2001; 55(10): 708 - 715.
- Kakwani, N. and K. Subbarao (2005). *Aging And Poverty In Africa And The Role Of Social Pensions*: (Washington: Social Protection Advisory Services, 2005)p. 14
- Kane, F.C. and J. M. Ennis (1996) *Health Care Reform and Rural Mental Health: Severe Mental Ill Health*. Community Mental Health Journal Vol. 32 No. 5

Kaplan G. A. et. al. (2000): *Inequality in Income and Mortality in the United States: Analysis of Mortality and Potential Pathways* British Medical Journal, Vol. 312: 999-1003

Ke Xu et. al., (2003): *Household Catastrophic Health Expenditure: A Multicountry Analysis*. The Lancet, Vol. 362: 111-117

Kennedy B.P. et.al., ( 2001): *Income Distribution And Mortality: Cross Sectional Ecological Study of Robin-Hood Index in the United States* British Medical Journal, Vol. 312: 1004-1007

Kilborn P.T (2000): *Black Americans Trailing Whites in Health Studies Say* (New York Times, January 26, 2000) p. A16

Kissah- Korsah (2004): *Accessibility and Utilization of Health Services* Poverty, Health and Gender; Proceedings of the NUFU Workshop (Accra: Media Design LTD, 2004)

Khan, M. I., (2005): *Challenges in Constructing the Sociological Concept of Poverty*. Bangladesh e-Journal of Sociology Vol. 2 (1)

Klasen, S. (2000): Poverty, Inequality and Deprivation in South Africa: Analysis of 1993 SALDRU Survey. Social Indicators Research, Vol. 41 (1): 55-94

Kofie, R. Y and John S. Nabila (2004): *Poverty and Buruli Ulcer in Ghana* Poverty, Health and Gender; Proceedings of the NUFU Workshop (Accra: Media Design LTD, 2004) pp. 44-45

Krieger, J. and D. L. Higgins (2002): *Housing and Health: Time Again For Public Health Action*. American Journal of Public Health Vol. 92 (5) 758-768

Kusher, C. (1998): *Better Access, Better Care: A Research Paper on Health Service And Homelessness in Toronto* (Toronto Mayor's Action Taskforce, 1998)

Kydd, J., (2002): *Agriculture And Rural Livelihoods: Is Globalization Opening Or Blocking Paths Out Of Rural Poverty?* Network Paper No. 121. (London: Overseas Development Institute)

Kyei, P.O. (2004): *Understanding Poverty and Decentralization*. (Lecture Series on Poverty at the Department of Geography and Rural Development, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana)

Kyei, P.O. (2005): *Crawling Out of Poverty: Nadowli Women and Poverty Alleviation Under the Decentralized System in Ghana* (Lecture Series on Poverty at the Department of Geography and Rural Development, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana)



Kynast-Wolf, G. et. al. (2006): *Season of Death and Birth Predict Patterns of Mortality in Burkina Faso*. International Journal of Epidemiology, Vol. 35 (2): 427 - 435.

Lantican, L. (2006): *Health Service Utilization and Perceptions of Mental Health Care among Mexican American Women in the U.S- Mexican Border*. Hispanic Health Care International Vol. 4 No. 2

Laterveer, L. et. al. (2003): *Pro-Poor Health Policies in Poverty Reduction Strategies*. Health Policy and Planning; 18(2): 138-145

Layton, J., (2000): *Homelessness, the Making and Unmaking of a Crisis* (Toronto: Penguin Books)

Mahoney, M. et. al. (2001): *An 'Upside-Down' View of Rural Health Care*. Journal of Consumer Studies and Home Economics Vol. 25 (2): 102-113

Marmont, M., (2005): *Global Commission to Tackle the 'Causes behind the Cause Of Ill Health,'* Santiago, Chile.

Marter, A. (2005): *Market Information Needs of Rural Producers*: International Seminar Paper: Beyond Agriculture: Making Markets Work for the Poor. London: Feb. 28- March 1, 2005.

Maxwell, D. (2000): *Urban Livelihood And Food And Nutritional Security In Greater Accra, Ghana* (Ghana: IFPRI Research Report- International Food Policy Research Institute)

May, J et. al. (1998) *Poverty and Inequality in South Africa*; (Report Prepared for the Office of the Executive Deputy President and the Inter Ministerial Committee, South Africa)

McCauly, M. et.al., (1998) *Poverty And Health: Physicians Can And Should Make A Difference*. Medicine and Public Issues, Vol. 129 (9).

McDade, T. W. et. al. (2001): *Prenatal undernutrition, postnatal environments, and antibody response to vaccination in adolescence*  
American Journal of Clinical Nutrition, October 1, 2001; 74(4): 543 - 548.

MeadCain, G. M. (1999): *Rural Development And Population* (New York: Oxford University Press) pp. 3-24

Mercer, A. (2001): *Disease, Mortality and Population* (Great Britain: Biddles Ltd)

Microsoft Encarta Encyclopedia Standard – 2004

- Minkler, M. (1999): *Poverty Kills*: WHO Poverty and Health Bulletin, Vol. 10: 1-3
- M.O.H. (2000): *Manual On Nutrition and Growth Monitoring* (Ghana: NHLMC) p. 53
- MOH/GHS (2002): *Practising Health Education and Health Promotion in Ghana* (Ghana: National Health Learning Materials Centre, 2002) pp. 11-13
- Montgomery, M.(2005): *Urban Poverty and Health in Developing Countries: Household and Neighbourhood Effects*. Demography, Vol.42 (3): 397-425
- Moore, S.E. et. al. (1999): *Prenatal or Early Postnatal Events Predict Infectious Deaths in Young Adulthood in Rural Africa*. International Journal of Epidemiology Vol. 28 (6): 1088-1095
- Moore, S. E. (2006): *Commentary: Patterns in Mortality Governed by the Seasons*. International Journal of Epidemiology; Vol. 35 (2): 435 - 437.
- Moore, S. E. et. al.( 2001): *Immune function in rural Gambian children is not related to season of birth, birth size, or maternal supplementation status* American Journal of Clinical Nutrition, Vol. 74 (6): 840 - 847.
- Mpoub, G. (2003): *Urban Poverty and Health Study in Sub-Saharan Africa* (New York: Unstarts Division)
- Mullay, R., and Wolfe (2001), “*Health, Income and Inequality*” pp. 5-6
- Muntaner, C. et. al. (2004): *Socioeconomic Position and Major Mental Disorders*. Epidemiological Review, Vol. 26 (1): 53 - 62.
- Murgai, R. and S. Zaidi (2005): *Poverty Trends in Bangladesh during The 1990's*. Journal Of Developing Societies Vol. 21(1):7-32
- Nayaran, D. et. al. (2000); *Voices of the Poor: Can Any One Hear Us* (USA: Oxford University Press) pp.1-3
- Ngom, P. T. et. al. (2004): *Improved Thymic Function in Exclusively Breastfed Infants is Associated with Higher Interleukin 7 Concentrations in their Mothers' Breast Milk*. American Journal of Clinical Nutrition, Vol.80 (3): 722 - 728.
- Noble, M. et al. (2004): *Conceptualizing, Defining And Measuring Poverty In South Africa: An Argument For A Conceptual Approach* (England: CASAP, 2004) pp. 2-8.
- Norton, A. et. al. (2001) *A Rough Guide to PPA's: Participatory Poverty Assessment: An Introduction to Theory and Practice* (London: ODI, 2001)



- Nyamwaya, D. and E. Oduon (1998): *Health Education: An Essential Test for Schools* (Nairobi: AMREF, 1998) pp. 52-62
- Nyonator, F. and J. B. Kutzin (1999): *Health for Some? The Effects of User Fees in the Volta Region of Ghana*. Health Policy and Planning Vol. 14 (4): 329-341
- O'Campo, P. (2001), and J. Tang: *Poverty and Health: Gendered Pathways* (Canada: 2001) pp. 1-3
- Osberg, (2000): *Presidential Address, Poverty in Canada and the United States: Measuring Trends and Implication*. Canadian Journal of Economics, Vol. 33(4): 847-877
- Ostergaard V. (1999): *Gender, Health and Development*. Letters on World Development Vol. 18: 14 -29.
- Osmani, S. R., (2003): *Evolving Views on Poverty Concept, Assessment and Strategy* (Asia: Asian Development Bank Document) pp. 1-9
- Patel, V. and A. Kleinman (2003): *Poverty and Common Mental Disorders in Developing Countries*. W.H.O. Bulletin, Vol. 81(8): 12-16
- Payet, J. et. al., (2005): *Gascoyne Growers Market: A sustainable health promotion activity developed in partnership with the community*. Australian Journal of Rural Health, Vol.13 (5): 309-314
- Pearce, J. et. al.( 2006): *Neighbourhoods And Health: A GIS Approach to Measuring Community Resource Accessibility*. Journal of Epidemiology and Community Health, Vol. 60 (5): 389 - 395.
- Peggy, M., (2003): *Histories of Poverty and Self-Rated Health Trajectories*, Journal of Health and Social Behaviour, Vol. 44 (2):198-214
- Phipps S., (2003): *The Impact Of Poverty On Health: A Scan Of Research Literature* (Canada: Canadian Institute for Health Information) pp. 1-5
- Poulin, S., (1998): *An Application of Analytic Techniques to Canadian Income Satisfaction Data* (Canada: Statistics Canada, Labour and Household Surveys Analysis Division Staff Report No. 8)
- Prentice A. M. and S E Moore (2005): *Early Programming of Adult Diseases in Resource Poor Countries*. Archives of Disease in Childhood, Vol. 90(4): 429 - 432.
- Public Health Agency (2005): *Determinants of Health* (Canada: Canadian Health Network)
- P.H.A.C.R. (2006): *Determinants of Health* (Canada: Canadian Health Network)

- Queensland Health, (2001): *Social Determinants of Health* (Brisbane: Queensland Public Health Services Report)
- Quisumbing, A. R. (2003): *Food Aid and Child Nutrition in Rural Ethiopia* (Washington: International Food Policy Research Institute) pp.1-2
- Ravallion, M. and B. Bidani (1994). *How Robust Is a Poverty Profile*. World Bank Economic Review Vol. 8 (1): 75-102
- Razelle, W. (2000): *An Exploratory Investigation into the Housing Preferences of Consumers of Mental Health Services*. Australian and New Zealand Journal of Mental Health Nursing Vol.9 (4): 58-69
- Rheingans, R. et. al. (2006): *Beyond the Millennium Development Goals: Public Health Challenges In Water and Sanitation*. Global Public Health, Vol. 1(1): 31-48
- Robb, C. (1999): *Can The Poor Influence Poverty? Participatory Poverty Assessment in the Developing Countries* (Washington: D.C World Bank Document)
- Roux, A. D., (2001): *Investigating Neighbourhood and Area Effects on Health*. American Journal of Public Health, Vol. 91(11): 1783-1789
- Rowson M., (2001): *Poverty and Health*. Student British Medical Journal, Vol. 9: 1-3
- Ruggles, P., (2000): *Drawing the Line: Alternative Poverty Measures and their Implication for Public Policy* (Washington: The Urban Institute Press) pp. 33-38
- Sabri, B., (2000) *Health and Development* Eastern Mediterranean Health Journal Vol. 6 (4): 758-765
- Sachs, J. D., (2005): *The end of poverty: how we can make it happen in our time* (USA: Penguin Press, 2005) pp. 20-25
- Sahn, E. D and D. C. Stifel (2002): *Progress towards the Millennium Development Goals in Africa* (United Kingdom: Cornell university, 2002) p. 26
- Sahn, E. D. (2004): *Economic Reform, Poverty and Nutrition in Africa* American Economic Journal, Vol. 84 (2): 285-290
- Sally, M. et.al. (2002) *Place Effects on Health: How Can We Conceptualize, Operationalize and Measure Them?* Journal of Social Sciences and Medicine (Pergamon) Vol. 55: 125-139
- Sanders, D. (2000): *The Struggle for Health* (London: Macmillan Edu. Ltd.) pp.15-30
- Sara, P., (2005): *Poverty and Mental Health in the Breadline Survey*

Schaffer, J. and M. Prichard (2002): *Impact of Stress on Health and Coping Tactics in Relation to Sex*. Psi Chi Journal, Vol. 8 (1): 1- 11

Sen, A. (1981) *Poverty and Famine* (USA: Clarendon Press)

Sen, P., (2005): *Poverty-Under nutrition Linkages*. Bulletin of Nutrition Foundation of India, January 2005 Edition.

Setel, P. et. al. (2000): *Educational Status is related to Mortality at the Community in Three Areas of Tanzania, 1992-1998*. Journal of Epidemiology and Community Health Vol. 54 (12): 936-937

S. I .F. / G.T.Z Collaboration (2003): *Amansie West District Poverty Profiling and Mapping* (Kumasi: FEDS, KNUST Report, 2003)

Sindiga I. et. al. (2005): *Traditional Medicine in Africa* (Nairobi: East African Educational Publishers Ltd)

Smeeding, T. M. (2000) *Sociology of Poverty: Luxembourg Income Study Working Paper No. 315* (New York: Maxwell School of Citizenship and Public Affairs, Syracuse University,)

South African Health Report (2001): *Poverty and Health Does Research Matter? Experiences in South Africa*

Stark, C. (2004): *Newspaper Coverage of a Violent Assault by a Mentally Ill Person*. Journal of Psychiatric and Mental Health Nursing Vol. 11 (6): 34-43

Stavola, B.D. L. et. al. (2006): *Statistical Issues in Life Course Epidemiology* American Journal Epidemiology., Vol.163 (1): 84 - 96.

Stuart, F. (2004): *Concept Paper on Poverty and Health* (Stockholm: Stockholm Environmental Institute, 2004)

Sryker, D. et. al. (2003): *Ensuring the Benefit of Globalization Reach the Poor* (United Kingdom: AIRD Publications, 2003) pp. 4-8

Teal, F. (2005): *Consumption, Welfare and Well-Being in Ghana in the 1990's* (United Kingdom: Global Poverty Research Group, 2005)

UNCHS (1996): *Urban World: Global Report on Human Settlement* (Oxford: Oxford University press)

UNICEF (2000): *State Of The World's Children, 2000 Report*

UNO (2000): *Millennium Summit Goals*. (NEW YORK: UNO)

- Wagstaff A. (2002) *Poverty and Health Sector Inequalities*.  
Bulletin of W.H.O Vol. 80 (2): 40-49
- Wagstaff, A. et. al. (2004) *Child Health: Reaching the Poor*. American Journal of Public Health Vol. 19 (5): 726-736
- Weaver, L. (2000): *Poverty Causes Child's Ill-health*. B.B.C. News Online; February, 25, 10:36 G.M.T.
- Wilkinsin R.G. (1998): *National Mortality Rates: The Impact of Inequality*  
American Medical Journal for Public Health, Vol. 82: 1082-1088
- W.H.O., (1999): *Poverty and Health* (Director General,s Report Executive Board 105<sup>th</sup> Session, 1999)
- W.H.O (1986): *Ottawa Charter on Health Promotion*  
(Geneva: W.H.O Report)
- W.H.O Constitution (1948) –*Definition of Health* cf. Stuart, L. (2004): *Concept Paper on Poverty and Health* (Stockholm: Stockholm Environmental Institute, 2004)
- W.H.O, (2001): *Investigating Health for Economic Development*.  
Report of the Commission on Macro-economics And Health
- W.H.O (2000): *Health: A Precious Asset. Accelerating Follow-Up to the World Summit for Social Development*. W.H.O. Document WHO/HSD/HID/001
- W.H.O. (2001): *Health Promotion in Developing Countries: Briefing Book to the Sundvall Conference on Supportive Environment*, 1991 (Geneva: WHO Division of Health Education) pp. 8-11
- W.H.V. P (2002): *Gender as a Determinant of Health*  
[http://www.whv.org.au/health\\_policy/gender.htm](http://www.whv.org.au/health_policy/gender.htm)
- World Bank (2000): *Attacking Poverty: World Development Report*, 2000
- World Bank (1993): *Investigating In Health: World Development Report*  
(New York: Oxford University Press, 1993.)
- World Bank (1995): *Ghana Poverty, Past, Present and Future*  
(Ghana: Ghana Statistical Service, 1995) pp. 3-12
- World Bank (2001): *2001 African Development Indicators*. Washington D.C World Bank.

World Bank (2001): *Understanding the Access, Demand and Utilization of Health Service by Rural Women in Nepal and their Constraints* (South Africa: Human Development Section)

World Bank (2007): *Regional Facts Sheet from the World Development Indicators: Sub-Saharan Africa*. [www.scoop.co.nz](http://www.scoop.co.nz)

Wright, J. D. et. al. (1998): *Beside the Golden Door, Policy, Politics and Homelessness* (New York: Asdine De Gruyter) pp. 6-9

Yassi, A. et. al. (2001) *Basic Environmental Health* (London: Oxford University Press) pp. 16-28

Yen, I. H and G. A. Kaplan (1999). *Poverty Area Residence and Changes in Depression and Perceived Health Status: Evidence from the Alameda County Study*. International Journal of Epidemiology Vol. 28 (1): 90-94.

Yom, B. and S. Dustin (1997): *Primary Health Education* (England: Addison Wesley Longman Ltd., 1997) pp. 68-73





**APPENDIX ONE**  
**CODING AND RANKING OF CORE VARIABLES**

<b>POVERTY INDICATORS</b>	<b>CODES</b>	<b>INDICATIONS</b>	<b>RANKS/SCORE</b>
INCOME (GH¢)	1	< 20	[ 2 ]
	2	20-40	[ 4 ]
	3	> 40-60	[ 6 ]
	4	> 60- 100	[ 8 ]
	5	> 100	[10]
EDUCATIONAL LEVELS	1	Never Schooled	[ 2 ]
	2	Basic School	[ 4 ]
	3	Secondary School	[ 6 ]
	4	Tertiary Institution	[ 8 ]
YEARS OF SCHOOLING	1	<5	[ 2 ]
	2	5+	[ 4 ]
	3	10+	[ 6 ]
	4	15+	[ 8 ]
	5	20+	[10]
<b>SUB-VARIABLES</b>			
HOUSING (Structural Conditions)	1	Dilapidated	[ 2 ]
	2	Weak	[ 4 ]
	3	Strong	[ 6 ]
	4	Very Strong	[ 8 ]
NUTRITION (Problems Satisfying Food Needs)	1	Never	[ 2 ]
	2	Seldom	[ 4 ]
	3	Most Often	[ 6 ]
	4	Always	[ 8 ]
POLLUTION (Waste Management Practices)	1	Public dump	[ 2 ]
	2	Bush	[ 4 ]
	3	Burned	[ 6 ]
	4	Buried	[ 8 ]
	5	Collected	[10]
HEALTH EDUCATION (Major Health Issues)	1	One of four	[ 2 ]
	2	Two of four	[ 4 ]
	3	Three of four	[ 6 ]
	4	Four of four	[ 8 ]
LIFESTYLE (Addiction to drugs)	1	Yes	[ 0 ]
	2	No	[ 2 ]
DEPRESSION (Vulnerability to Stress)	1	Yes	[ 0 ]
	2	No	[ 2 ]



NUMBER OF HEALTH FACILITIES AVAILABLE	1	None	[ 0 ]
	2	One	[ 2 ]
	3	Two	[ 4 ]
	4	Three	[ 6 ]
	5	Four +	[ 8 ]
UTILIZATION OF HEALTH FACILITIES	1	Not at all	[ 0 ]
	2	Not often	[ 2 ]
	3	Quite often	[ 4 ]
	4	Very often	[ 6 ]
	5	Always	[ 8 ]
<b>HEALTH INDICATORS</b>			
FREQUENCY OF DISEASE OCCURRENCE	1	Weekly (Very High)	[ 1 ]
	2	Monthly (High)	[ 2 ]
	3	Three months (Low)	[ 3 ]
	4	After Six months (Very Low)	[ 4 ]
SEVERITY OF DISEASE OCCURRENCE	1	Three months	[ 1 ]
	2	Two months	[ 2 ]
	3	One month	[ 3 ]
	4	Week(s)/ Few days	[ 4 ]
DISEASE PREVALENCE (Frequency * Severity)	1	Very High	[ 2 ]/ <4
	2	High	[ 4 ]/ 6-9
	3	Low	[ 6 ]/ 10-12
	4	Very Low	[ 8 ]/ 16

**APPENDIX TWO**  
**QUESTIONNAIRE FOR DATA COLLECTION**

**SECTION A: DEMOGRAPHIC DATA**

No.	Question	Response options
1.	Name	
2.	Community	
3.	Sex	1. Male 2. Female
4.	Occupation	
5.	Age	
6.	Income per month (household)	
7.	Marital status	1. Married 2. Single
8.	Occupation of spouse (if married)	
9.	Employment status	1. Employed 2. Unemployed
10.	Educational status	1. Basic 2. Secondary 3. Tertiary 4. Never schooled
11.	Years of schooling	1. 5 2. 10 3. 15 4. 20 5. Others (specify).....
12.	Size of household	1. 2 2. 6 3. 9 4. 12 5. Others (specify)....
13.	Health insurance	1. Fully insured 2. Partly insured 3. Uninsured

**SOCIO-ECONOMIC STATUS**

**SECTION ONE: NUTRITIONAL STATUS.**

NO.	QUESTION	RESPONSE OPTIONS
14.	How many times in a day do you usually eat?	1. Four times 2. Three times 3. Two times 4. Once 5. Others (specify).....

15.	How many thousand pieces of meat/fish do you eat each week?	..... ..... ..... ..... .....		
16.	How often in a week do you eat fruits?	1. Most often 2. Quite often 3. Not often 4. Never		
17.	How many times do you add beans and nuts to your meals every week?	1. Most often 2. Quite often 3. Not often 4. Never		
18.	Do you have any idea of food nutrients	1. Yes 2. No		
19.	If yes what percentage of your daily meals can be said to contain the following nutrients?	<b>1.NUTRIENTS</b>  1. Carbohydrate 2. Vitamins 3. Minerals 4. protein	<b>1.PERCENTAGE</b>      	<b>2. TYPE OF FOOD (SOURCE)</b>      
20.	How often in the last for weeks did you have problems satisfying the food needs of the household?	1. Never 2. Seldom 3. Most often 4. Always		
21.	How would you describe the nutritional status of the household?	1. Good 2. Satisfactory 3. Poor 4. Very poor		
22.	Give reason(s) for you answer in question 21?	..... ..... .....		
23.	When do you usually wean your children?	1. Six months old 2. 1 year old 3. 1 ½ years old 4. 2 years old 5. Above 2 years old		
24.	What food do you usually give to your children after weaning	..... ..... .....		
25.	What diseases do your children	.....		

	usually contract after weaning?	..... .....
26.	Do you know about exclusive breastfeeding?	1. Yes 2. No
27.	If yes do you practice exclusive breastfeeding?	1. Yes 2. No
28.	Give reason(s) for your answer to question 27?	..... .....

## SECTION TWO: HOUSING CONDITION

NO.	QUESTION	RESPONSE OPTIONS
29.	In what type of dwelling does the household live?	1. Separate house 2. Semi-detached house 3. Flat/Apartment 4. Hut 5. Kiosk/Store 6. Others (specify).....
30.	What is the material of the wall of the house?	1. Stones 2. Burnt brick 3. Concrete/Sandcrete 4. Wood/Bamboo 5. Others (specify).....
31.	What is the main source of drinking water for the household?	1. Pipe within compound 2. Public outdoor taps 3. Borehole 4. Protected well 5. Unprotected well/Rain water 6. Rivers/Lake/Pond 7. Others (specify).....
32.	Are they well constructed gutters/ runoff channels around your house?	1. Yes 2. No
33.	If yes what construction material is the floor of the channel made of?	1. Mud 2. Sand/Gravels 3. Concrete 4. Others (specify)
34.	Does the dwelling have an inbuilt toilet facility?	1. Yes 2. No
35.	What kind of toilet facility does the household usually use?	1. Flush toilet 2. Pan/Bucket latrine 3. Covered pit latrine 4. Uncovered pit latrine 5. KVIP 6. Others (specify).....

36.	Does the household have electricity?	1. Yes 2. No
37.	What is the status of the household in the dwelling?	1. Owns the dwelling 2. Rents 3. Uses without paying 4. Others (specify)
38.	How many living rooms does the household occupy?	..... .....
39.	How many people live in that dwelling?	
40.	What is the room occupancy rate?	1. <2 2. 2 3. 4 4. 6 5. 8 +
41.	Which of the following represents your housing condition?	1. Overcrowded 2. Crowded 3. Spacious 4. Very spacious
42.	Give reason(s) for your answer to question 41?	..... .....
43.	Would you say that your dwelling is well protected from disease causing vectors such as mosquitoes?	1. Yes 2. No
44.	If 'no' give reason(s) for your answer to question 43?	..... .....
45.	What in your opinion are some characteristic of a poor housing condition?	..... ..... .....
46.	How would you describe the general housing condition of the household?	1. Very good 2. Good 3. Poor 4. Very poor
47.	Do you know of some health problems associated with poor housing condition?	1. Yes 2. No
48.	If 'yes' mention any three of those health problems?	..... ..... .....

### SECTION THREE: HYGIENE

NO.	QUESTION	RESPONSE OPTION
49.	How does the household dispose of refuse?	1. Collected 2. Burned 3. Public dump 4. Buried 5. Dump in a bush 6. Others (specify).....
50.	Does the household treat drinking water in anyway before drinking?	1. Yes 2. No
51.	If yes, by what means?	1. Apply chemicals 2. Boil 3. Sieve 4. Others (specify).....
52.	Is your surrounding affected by pollution?	1. Yes 2. No
53.	If yes, what type of pollution?	1. Land 2. Air 3. Water 4. Noise
54.	How often do you experience mosquito bites in your community?	1. Always 2. Very often 3. Often 4. Seldom 5. Never
55.	How would you describe the general surroundings of your dwelling?	1. Very good 2. Good 3. Poor 4. Very poor
56.	How often do members of the household wash their hands with soap before eating?	1. Never 2. Seldom 3. Often 4. Always 5. Others (specify).....
57.	Given the water facility available in the house how many times do members of the household have their bath daily?	1. Never 2. Once 3. Twice 4. Three times 5. Others (specify).....
58.	Do you have any idea about personal hygiene?	1. Yes 2. No
59.	If 'yes', how would you describe the maintenance of personal hygiene in the household?	1. Very good 2. Good 3. Poor 4. Very poor



60.	How often did the household find problems obtaining the following items in the past four weeks?					
	<b>ITEMS</b>	<b>NEVER</b>	<b>SELDOM</b>	<b>OFTEN</b>	<b>ALWAYS</b>	<b>REASON(S)</b>
	1.Soap					
	2.Toothpaste					
	3.Blade					
	4.Water					
	5.Mosquito net/coil					
61.	Give any three examples of health problems associated with poor hygiene		..... ..... .....			

#### SUBSECTION FOUR: EDUCATION

NO.	QUESTION	RESPONSE OPTION															
62.	How many members of your household can read and write any language?	..... ..... .....															
63.	Can you read and write in any language?	1. Yes 2. No															
64.	How many adult members of the household could not go through the following institutions	<table border="1"> <tr> <th>INSTITUTION</th> <th>NUMBER</th> <th>REASON(S)</th> </tr> <tr> <td>Basic school</td> <td></td> <td></td> </tr> <tr> <td>Secondary school</td> <td></td> <td></td> </tr> <tr> <td>Tertiary institution</td> <td></td> <td></td> </tr> <tr> <td>apprenticeship</td> <td></td> <td></td> </tr> </table> Reasons : 1. Couldn't afford 2. Illness 3. Poor academic performance 4. unwillingness	INSTITUTION	NUMBER	REASON(S)	Basic school			Secondary school			Tertiary institution			apprenticeship		
INSTITUTION	NUMBER	REASON(S)															
Basic school																	
Secondary school																	
Tertiary institution																	
apprenticeship																	
65.	How many basic schools are in this community?	..... .....															
66.	How would you describe the present condition of the school's facilities?	1. Very good 2. good 3. poor 4. very poor															

# HEALTH EDUCATION

NO.	QUESTION	RESPONSE OPTION					
67.	Have you ever received education of any kind about the following health issues?						
	HEALTH INDICATOR	1. YES	2. NO	IF YES LEVEL OF KNOWLEDGE			SOURCE
				1. Very good	2. Good	3. Very poor	
	1. Malnutrition						
	2. HIV/AIDS						
	3. Breastfeeding						
	4. Hygiene						
	5. Prenatal care						
	6. Child care						
	7. Drug abuse						
	8. Six killer diseases						
	9. Postnatal care						
	10. Immorality						
	11. Waste management						
	12. Contraceptives						
	SOURCE: 1. Health officer 2. Radio 3. Television 4. Parents 5. Social club 6. Others						
68.	Has ignorance in any of the health issues in question 67 affected your household in any way?	1. Yes 2. No					
69.	Give reason(s) for your answer to question 68	..... .....					
70.	Has adequate knowledge in any of the health issues in question 67 helped you in any way?	1. Yes 2. No					
71.	Give reason(s) for your answer to question 70?	..... .....					
72.	Do you use any family planning method?	1. Yes 2. No					
73.	If no what may be the reason?	1. Don't know any 2. Too expensive 3. Not necessary					
74.	If yes what method do you use?	.....					

#### SUBSECTION FIVE: LIFESTYLE (MORAL POVERTY)

75	Is any member of your household addicted to drugs	1. Yes 2. No
76	Which of the following are you addicted to?	1. Alcohol 2. Cigarette 3. Hard drug 4. Womanizing 5. Others (specify).....
77	What in your opinion is the main cause of HIV/AIDS?	..... .....
78	Which of the following do you adopt to prevent HIV/AIDS?	1. Abstinence 2. Condom 3. Faithfulness 4. Others (specify).....
79	What health problem has any member of your household faced as a result of bad lifestyle?	..... ..... .....

#### SUBSECTION FIVE: STRESS (ISOLATION/VULNERABILITY)

80.	Do you feel satisfied with your condition as a Ghanaian like some people feel?	1. Yes 2. No
81.	Would you say you have equal opportunity to actively participate in the governance of the country?	1. Ys 2. No
82.	Give reason(s) for your answer to question 81?	..... .....
83.	Do you feel isolated from the rest of the members in this part of the community?	1. Yes 2. No
84.	Give reason(s) for your answer to question 43?	..... .....
85.	Do socioeconomic conditions of the community encourage you to stay in the community throughout your life?	1. Yes 2. No
86.	Give reason(s) for your answer to question 85?	..... .....
87.	Which of the following describes the rate at which people leave this community for other parts of Ghana for greener pastures	1. Very frequent 2. Frequent 3. Less frequent 4. Never 5. Don't know

88.	Which of the following represents the state of your household as compared to the socioeconomic conditions of other households in the districts as of now?	1. Very deprived 2. Deprived 3. Privileged 4. Highly privileged
89.	Give reason(s) for your answer to question 88?	..... .....
90.	Do you feel stressful as a result of socioeconomic conditions of the household?	1. Yes 2. No
91.	Give any health problems which can result from stressful condition?	..... ..... .....

#### SUBSECTION SIX: INCOME AND EXPENDITURE

NO.	QUESTION	RESPONSE OPTIONS
92.	What is the average monthly income of the household	
93.	How would you compare the overall economic situation of the household with that of one year ago?	1. Much worse 2. Worse 3. Same 4. Better 5. Much better
94.	Who contributes much to the household cash income?	..... .....
95.	What is his/her average contribution to the monthly income of the household?	..... ..... .....

96.	Does the household own any of the following?		
	ITEMS	1. YES	2. NO
	1. Livestock/Poultry		
	2. Television		
	3. Electric iron		
	4. Video deck		
	5. Mattress/Bed		
	6. Stove		
	7. Fan		
	8. Iron		
	9. Audio cassette player		
	10. Crop farm		
	11. Sofa		
97.	How much of the household monthly income is spent on the following?		
	ITEMS	1. EXPENDITURE	2. PERCENTAGE (%)
	Health care		
	Bills and rates		
	Food, meat and fish		
	Education		
	Others (specify).....		
98.	Do you have additional income from a relative outside your household	1. Yes 2. No	
99.	Is the household monthly income regular?	1. Yes 2. No	
100.	If no, give reason(s) for your answer to question 99?		
101.	Is the household monthly income able to meet the nutritional requirements of the household adequately?	1. Yes 2. No	

102.	Give reason(s) for your answer to question 101?	..... .....
103.	How satisfied are you with the financial situation of the household?	1. Very satisfied 2. Satisfied 3. Dissatisfied 4. Very dissatisfied
104.	How often does the household buy food items on credit	1. Very often 2. Often 3. Seldom 4. Never
105.	Which of these best represents the financial condition of the household?	1. Non poor 2. Normal 3. Poor 4. Very poor
106.	If there is a crisis such as poor crop yield, loss of job or ill health how would you rate the household's ability to survive?	1. Very secure 2. Secure 3. Insecure 4. Very insecure
107.	Compare with one year ago, would you say the financial situation of the household has improved?	1. So much 2. Quite well 3. Not quite 4. Not at all
108.	Which of the following represents the financial situation of the household?	1. Highly dependent 2. Dependent 3. Independent 4. Highly independent
109.	Compared with other households in the community, how would you describe the financial situation of the household?	1. Very good 2. Good 3. Bad 4. Very bad

110.	How would you describe the socioeconomic condition of the household/community under the following indicators?					
	INDICATORS	*	1.V. good	2.Good	3.Poor	5.V. poor
	1. Nutrition	1.HH				
		2.COM				
	2. Hygiene	1.HH				
		2.COM				



	3. Access to health	1.HH				
		2.COM				
	4. Educational facilities	1.HH				
		2.COM				
	5. Good drinking water	1.HH				
		2.COM				
	6. Housing condition	1.HH				
		2.COM				
	7. Employment (income)	1.HH				
		2.COM				
	8. Transportation/Tel . Com. network	1.HH				
		2.COM				
	*: (residence) HH: Household, COM: Community					

#### SECTION C: HEALTH STATUS

SECTION C: RESEARCH SKILLS

NO.	QUESTION						
111.	Which of these describes the incidence rate of the following diseases in the community?						
		DISEASES	1.Very Common	2.Common	3.Uncommon	4.V. Uncommon	5.Don't know
		1.Buruli Ulcer					
		2.Malaria					
		3.Trypanosomiasis					
		4.Typhoid					
		5.Cholera					
		6.Schistosomiasis					
		7.Kwashiokor					
		8.Ricket					
		9.HIV/AIDS					
		10.Skin diseases					
		11.Diarrhoea					
		12.Measles					
		13.Tuberculosis					
		14.Intestinal disorders					
		15. CSM					
		16.Guinea Worm					
		17.Whooping					

	cough					
	18.Stunted growth					
	19.Others (specify					
112.	Which of the above mentioned diseases are common among members of your household?					
113.	How often do the diseases occur every year?	1. Very often 2. Quite often 3. Not often 4. Not at all				
114.	How long does it take the household to treat the diseases when they occur?	1. Few days 2. Few weeks 3. Few months 4. Few years				
115.	How many deaths has your household suffered within the last two years?	1. None 2. One 3. Two 4. three 5. four				
116.	Is any member of your household disabled?	1. Yes 2. No				
117.	What is the health condition of members of the household?	1. Very good 2. Good 3. Poor 4. Very poor				
118.	What is the main cause of that health condition as in question 117?					
119.	Is any member of your household permanently on any medicine or drugs?	1. Yes 2. No				
120.	Do you get depressed most often looking at the socio-economic condition of your household?	1. Yes 2. No				
121.	Give reason(s) for your answer to question 120.					
122.	How would you describe the state of health of members of the community?	1. Very good 2. Good 3. Poor 4. Very poor				
123.	How would you describe the state of health of members of your household?	1. Very good 2. Good 3. Poor				

		4. Very poor
--	--	--------------

#### SECTION D: IMPACT OF POVERTY ON HEALTH

NO.	QUESTION																																																																																																																																																							
124	<p>To what extent would you agree that the state of health of members of your House/Community is as a result of the following poverty indicators?</p> <table border="1"> <thead> <tr> <th>INDICATORS</th><th>*</th><th>1.Stronly Agree</th><th>2. Agree</th><th>3. Disagree</th><th>5.Strongly Disagree</th><th>5.don't know</th></tr> </thead> <tbody> <tr> <td rowspan="2">1. Malnutrition</td><td>1.HH</td><td></td><td></td><td></td><td></td><td></td></tr> <tr> <td>2.COM</td><td></td><td></td><td></td><td></td><td></td></tr> <tr> <td rowspan="2">2. Poor drinking water</td><td>1.HH</td><td></td><td></td><td></td><td></td><td></td></tr> <tr> <td>2.COM</td><td></td><td></td><td></td><td></td><td></td></tr> <tr> <td rowspan="2">3. Overcrowding</td><td>1.HH</td><td></td><td></td><td></td><td></td><td></td></tr> <tr> <td>2.COM</td><td></td><td></td><td></td><td></td><td></td></tr> <tr> <td rowspan="2">4. Poor personal hygiene</td><td>1.HH</td><td></td><td></td><td></td><td></td><td></td></tr> <tr> <td>2.COM</td><td></td><td></td><td></td><td></td><td></td></tr> <tr> <td rowspan="2">5.Unsanitary condition</td><td>1.HH</td><td></td><td></td><td></td><td></td><td></td></tr> <tr> <td>2.COM</td><td></td><td></td><td></td><td></td><td></td></tr> <tr> <td rowspan="2">6. Poor Housing</td><td>1.HH</td><td></td><td></td><td></td><td></td><td></td></tr> <tr> <td>2.COM</td><td></td><td></td><td></td><td></td><td></td></tr> <tr> <td rowspan="2">7. Poor health education</td><td>1.HH</td><td></td><td></td><td></td><td></td><td></td></tr> <tr> <td>2.COM</td><td></td><td></td><td></td><td></td><td></td></tr> <tr> <td rowspan="2">8. Air pollution</td><td>1.HH</td><td></td><td></td><td></td><td></td><td></td></tr> <tr> <td>2.COM</td><td></td><td></td><td></td><td></td><td></td></tr> <tr> <td rowspan="2">9. Stress\depression</td><td>1.HH</td><td></td><td></td><td></td><td></td><td></td></tr> <tr> <td>2.COM</td><td></td><td></td><td></td><td></td><td></td></tr> <tr> <td rowspan="2">10. Poor waste management</td><td>1.HH</td><td></td><td></td><td></td><td></td><td></td></tr> <tr> <td>2.COM</td><td></td><td></td><td></td><td></td><td></td></tr> <tr> <td rowspan="2">11. Inadequate income</td><td>1.HH</td><td></td><td></td><td></td><td></td><td></td></tr> <tr> <td>2.COM</td><td></td><td></td><td></td><td></td><td></td></tr> </tbody> </table> <p>*: (residence) HH: Household, COM: Community</p>	INDICATORS	*	1.Stronly Agree	2. Agree	3. Disagree	5.Strongly Disagree	5.don't know	1. Malnutrition	1.HH						2.COM						2. Poor drinking water	1.HH						2.COM						3. Overcrowding	1.HH						2.COM						4. Poor personal hygiene	1.HH						2.COM						5.Unsanitary condition	1.HH						2.COM						6. Poor Housing	1.HH						2.COM						7. Poor health education	1.HH						2.COM						8. Air pollution	1.HH						2.COM						9. Stress\depression	1.HH						2.COM						10. Poor waste management	1.HH						2.COM						11. Inadequate income	1.HH						2.COM						
INDICATORS	*	1.Stronly Agree	2. Agree	3. Disagree	5.Strongly Disagree	5.don't know																																																																																																																																																		
1. Malnutrition	1.HH																																																																																																																																																							
	2.COM																																																																																																																																																							
2. Poor drinking water	1.HH																																																																																																																																																							
	2.COM																																																																																																																																																							
3. Overcrowding	1.HH																																																																																																																																																							
	2.COM																																																																																																																																																							
4. Poor personal hygiene	1.HH																																																																																																																																																							
	2.COM																																																																																																																																																							
5.Unsanitary condition	1.HH																																																																																																																																																							
	2.COM																																																																																																																																																							
6. Poor Housing	1.HH																																																																																																																																																							
	2.COM																																																																																																																																																							
7. Poor health education	1.HH																																																																																																																																																							
	2.COM																																																																																																																																																							
8. Air pollution	1.HH																																																																																																																																																							
	2.COM																																																																																																																																																							
9. Stress\depression	1.HH																																																																																																																																																							
	2.COM																																																																																																																																																							
10. Poor waste management	1.HH																																																																																																																																																							
	2.COM																																																																																																																																																							
11. Inadequate income	1.HH																																																																																																																																																							
	2.COM																																																																																																																																																							
125.	What health facilities are available in the communities?																																																																																																																																																							
126.	How often do members of your household patronize the hospital/clinics when ill?	1. Vey often 2. Quite often 3. Not often 4. Not at all																																																																																																																																																						

127.	If “not at all”, any reason for your answer?	1. No need 2. Too expensive 3. Too far 4. Ineffective 5. Others (specify).....																														
128.	Compared with the health condition of members of the household last year, would you say the health condition of members of your household has improved?	1. Yes 2. No																														
129.	What is responsible for your answer to question 128?	..... .....																														
130.	Would you agree that members of your community suffer income poverty due to the following reasons?	<table border="1"> <thead> <tr> <th>REASONS</th> <th>1.Stronly Agree</th> <th>2. AGREE</th> <th>3. DISAGREE</th> <th>5.Strongly Disagree</th> <th>5.don't know</th> </tr> </thead> <tbody> <tr> <td>1. Lack of jobs</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>2. Laziness</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>3. Poor skills and training</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>4. Poor working conditions</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	REASONS	1.Stronly Agree	2. AGREE	3. DISAGREE	5.Strongly Disagree	5.don't know	1. Lack of jobs						2. Laziness						3. Poor skills and training						4. Poor working conditions					
REASONS	1.Stronly Agree	2. AGREE	3. DISAGREE	5.Strongly Disagree	5.don't know																											
1. Lack of jobs																																
2. Laziness																																
3. Poor skills and training																																
4. Poor working conditions																																
131.	How often do members in the household find problems buying drugs prescribed for them when sick?	1. Always 2. Very often 3. Often 4. Seldom 5. Never																														
132.	How much has the household spent on health care in the last three months?																															
133.	What proportion of the household income was spent on health care in the last three months?																															
134.	Has members of the community been receiving financial assistance for health care for some of the common diseases prevalent in the area?	1. Yes 2. No																														

135.	Would you agree that income poverty results in the following?																																									
	INDICATORS	<table border="1"> <tr> <td>1.Stronly Agree</td> <td>2. Agree</td> <td>3. Disagree</td> <td>5.Strongly Disagree</td> <td>5.don't know</td> </tr> <tr> <td>1. Malnutrition</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>2. Poor Housing</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>3.Overcrowding</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>4.Poor Health</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>5. Poor education</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>6.Poor Hygiene</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>7.Powerlessness</td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	1.Stronly Agree	2. Agree	3. Disagree	5.Strongly Disagree	5.don't know	1. Malnutrition					2. Poor Housing					3.Overcrowding					4.Poor Health					5. Poor education					6.Poor Hygiene					7.Powerlessness				
1.Stronly Agree	2. Agree	3. Disagree	5.Strongly Disagree	5.don't know																																						
1. Malnutrition																																										
2. Poor Housing																																										
3.Overcrowding																																										
4.Poor Health																																										
5. Poor education																																										
6.Poor Hygiene																																										
7.Powerlessness																																										
136.	Do members of the household practise self medication?	1. Yes 2. No																																								
137.	If 'yes', give reasons for that practice?	.....																																								
138.	Is any member of the household ill at home as a result of inability to pay for hospital bills?	1. Yes 2. No																																								
139.	How often do members of the community refuse to seek Pre-natal/Post-natal care from hospital/clinics as a result of inability to pay for service cost?	1. Always 2. Very often 3. Often 4. Seldom 5. Never 6. Don't know																																								

140.	What recommendations would you give to resolve three most pressing Socio-economic problems of the Household/Community?																						
	<table border="1"> <thead> <tr> <th></th> <th>PROBLEMS</th> <th>RECOMMENDATIONS</th> </tr> </thead> <tbody> <tr> <td rowspan="4">1. HOUSEHOLD</td> <td>1..... .....</td> <td>1..... .....</td> </tr> <tr> <td>2..... .....</td> <td>2..... .....</td> </tr> <tr> <td>3..... .....</td> <td>3..... .....</td> </tr> <tr> <td></td> <td></td> </tr> <tr> <td rowspan="4">3. COMMUNITY</td> <td>1..... .....</td> <td>1..... .....</td> </tr> <tr> <td>2..... .....</td> <td>2..... .....</td> </tr> <tr> <td>3..... .....</td> <td>3..... .....</td> </tr> <tr> <td></td> <td></td> </tr> </tbody> </table>		PROBLEMS	RECOMMENDATIONS	1. HOUSEHOLD	1..... .....	1..... .....	2..... .....	2..... .....	3..... .....	3..... .....			3. COMMUNITY	1..... .....	1..... .....	2..... .....	2..... .....	3..... .....	3..... .....			
	PROBLEMS	RECOMMENDATIONS																					
1. HOUSEHOLD	1..... .....	1..... .....																					
	2..... .....	2..... .....																					
	3..... .....	3..... .....																					
3. COMMUNITY	1..... .....	1..... .....																					
	2..... .....	2..... .....																					
	3..... .....	3..... .....																					
141.	To what extend would you agree that Poor socio-economic condition leads to Poor health condition?	1. Strongly agree 2. Agree 3. Disagree 4. Strongly disagree																					
142.	Would you agree that income poverty leads to poor utilization of health care facilities in your community?	1. Strongly agree 2. Agree 3. Disagree 4. Strongly disagree																					



## CASHPOR HOUDING INDEX

Tick as appropriate for your dwelling (house)

### STRUCTURAL CONDITION

Condition	Rank	Tick
1. Dilapidated	0	
2. Average	2	
3. Good	6	

### QUALITY OF WALLS

Condition	Rank	Tick
1. Poor quality	0	
2. Average	2	
3. Good	6	

### QUALITY OF ROOF

Condition	Rank	Tick
1. THATCH/LEAVES	0	
2. Iron sheet	2	
3. Permanent	6	

# HOUSEHOLD DATA QUESTIONNAIRE

		NAMES OF MEMBERS OF THE HOUSEHOLD	
		Years of schooling	
		* <b>RELATIONSHIP TO HEAD</b>	
		1.MALE	<b>SEX</b>
		2.FEMALE	
		<b>AGE</b>	
		1.SINGLE	<b>MARITAL STATUS OF MEMBERS OF HOUSEHOLD</b>
		2.MARRIED	
		3.DIVOCED	
		4.WIDOWED	
		1.EMPLOYED	<b>EMPLOYMENT STATUS</b>
		2.UNEMPLOYED	
		1.PRIMARY (SPECIFY)	<b>OCCUPATION</b>
		2.SERVICE	
		3.COMMENCE	
		4.INDUSTRY	
		1.NEVER	<b>EDUCATIONAL LEVEL</b>
		2.PRIMARY	
		3.MIDDLE/JSS	
		4.SECONDARY	
		5.TERTIARY	
		1.YES	<b>CONTRIBUTES TO H.INCOME</b>
		2.NO	
		1.YES	<b>HAVE CHRONIC DISEASES/DISABILITY</b>
		2.NO	

\*RELATIONSHIP TO HEAD:Head-1, Spouse-2, child-3, parent-4, others-5