

*Full Length Research Paper*

# Involvement of income and educational disparities on occurrence of disease in rural communities: Case study of the Amansie west district in Ghana

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Many rural communities are saddled with major socio-economic developmental challenges which undermine efforts to accelerate rural development and poverty reduction processes. In rural Ghana, poverty emerges as a visible condition with manifold manifestations confronting opportunities to actualize the health related goals to be achieved by 2015. However, very little effort has been made to examine the impact of socio-economic indicators on the health situation of rural inhabitants relevant to inform policy making for appropriate poverty reduction strategies which can ultimately address the health needs of the rural communities. The paper was prepared from a study on the impact of poverty on the health of rural communities of Ghana, situational analysis of the Amansie West District of Ghana. It identifies inadequate household income and very low level of education of heads of rural household as the basic dimensions of poverty underpinning the multiple manifestations of deprivation in rural communities. The paper further examines how income and education inequalities account for the susceptibility of rural inhabitants in the study villages to highly prevalent diseases in rural Ghana. Thus, through qualitative and quantitative methodologies, the paper reveals why the poor rural inhabitants of Ghana are poorer in health

**Keywords:** Rural, poverty, income, education, health, inequality.

## INTRODUCTION

Poverty has become a global scourge and a social canker in many rural communities. Recent studies have indicated that every year millions of people die in deprived communities because they are too poor to stay alive (Sachs, 2005; Gordon, 2004, WHO, 1999). This situation is particularly so in Africa south of the Sahara which harbour an overwhelming number of the absolutely poor people (Maxwell, 2000; Haddad, 1999). Social exclusion, human right abuse, hunger and diseases are major manifestations of poverty in many sub-Saharan African countries. For this reason, what underpins the causes of the manifestations of poverty in rural regions,

and why the poor are poorer in health have become emerging research and development policy issues.

In Ghana like many developing countries, poverty is predominantly a rural phenomenon. Recent report on the Ghana living standards survey indicates that poverty is reducing and has reduced from 52% in 1992 to 28.5% in 2006 (Nelson, 2008; GSS, 2006; GPRS, 2006; GPRS, 2003; GSS, 2000/1992). However, the benefits of growth and development which have led to poverty reduction in the country have been urban bias. Poverty reduction impact has only been felt in urban areas. Whereas urban poverty has been reducing and affecting the general poverty trends in Ghana, rural poverty has been growing worse by increasing from 82.2% in 1992 to 85.7% in 2006 (GSS, 2006/ 2000/1992). Income, educational and health inequalities are major developmental challenges that clamp down masses of rural households to socio-

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economic doldrums. These are research and policy issues that make the actualization of the Millennium Development Goals in deprived communities everybody's business. Shockingly inadequate rural-based research data on poverty and health relationships to appropriately include the views of rural inhabitants in policy formulation account for the failure of poverty reduction strategies in the country. The study was designed to examine the core poverty dimensions affecting deprived Ghanaian communities and establish how the identified poverty factors increase the susceptibility of rural households to prevalent diseases in the communities.

### **SURVEY OBJECTIVE, METHODOLOGY AND KEY VARIABLES**

The survey was basically a cross-sectional one aimed at ascertaining the relationship existing between income and educational inequalities and disease prevalence among rural households. Simple random sampling method was employed to select a sample of three hundred and six (306) rural households from the Amansie West district in southern Ghana for data collection, with heads of household as units of inquiry. Structured interviews, focus group discussions, survey questionnaires and participatory rural appraisals were data collection tools used for the survey. Relevant data obtained from the field were analyzed using both qualitative and quantitative tools. Chi square tests, cross tabulations and bi-variate regression were quantitative tools used to validate key findings.

Relative income levels of households and heads of household's level of education were key variables used. The product of frequency of disease occurrence within a household and the severity of the disease i.e. the length of time a disease takes to cure was used to determine the health condition of a household. The approach was relevant to establish how income and educational disparities increase the susceptibility of poor households with inadequate income and lower levels of education to the most prevalent diseases prevailing in the rural communities of Ghana.

### **SURVEY RESULTS AND DISCUSSIONS**

This section presents and discusses key finding on the nature, depth and dimensions of rural poverty in Ghana. It indicates specific results on the most prevalent diseases in the study rural communities and how their occurrence is influenced by household income and level of education. Results from the study revealed that poverty in rural communities is a visible condition with manifold manifestations. Gender-specific group discussions and wealth ranking however indicated that, the manifestations of poverty among rural inhabitants of

Ghana are ripple effects of inadequate household incomes and low level of education of heads of household. Thus, lower household income and education levels showed as the dual dimensions of poverty which act collectively to deprive masses of rural inhabitants of lives of human decency.

### **Income Inequalities among Rural Inhabitants**

Ongoing poverty discourse confirm that poverty includes but more than income poverty (Osmani, 2003; Nayaran, 2000; Appiah, 2000). Nonetheless, income inequalities constitute a major dimension and determinant of poverty. At community and household levels, income status influences the ability of individuals to meet their basic needs. In different empirical studies, 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 the varying manifestations of poverty in rural Ghana, it was realized that, they lack the means to acquire decent clothing, suitable houses, large tracks of land and proper health care. Analysis of the situation in the Amansie West District of Ghana unravelled adequate income as the single most important determinant of poverty, which, to a larger extent influences access to basic needs of the people in the rural communities. A verification test run to evaluate the extent to which the study villages attributed their inadequacies to income poverty yielded the results indicated in Table 1.

The results in Table 1 demonstrate that income level is a justifiable measure to assess the poverty situation in rural communities. The results affirm income level as a 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 rural 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 minimum wage index of Ghana was employed 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 alive 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. Three main socio-economic groups were identified to ascertain the income poverty situation

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

Income responsible for	is	Strongly Agree	Agree	Disagree	Strongly Disagree	Don't Know	Total frequencies
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
Pooraccess healthcare	toF	157	148	0	1	0	306
	P	51.3	48.4	0	.3	0	100

**Key:** F-Frequencies of respondents; P-Percentages of respondents  
Source: Field Survey, 2008

**Table 2.** Income Situation of Study Villages in GH Cedis Source: Field Survey, 2008

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	

of the people in rural Amansie West communities and the relationship socio-economic status has with health conditions. The study yielded the results indicated in Table 2.

The study observed marked disparities in household incomes in the rural communities. Very significant number of rural households in the district predominantly food crop farmers, earns relatively very low income. The few rural non-farm inhabitants who were mostly teachers, nurses and administrative officers in the district fell within the relatively 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. Ofori, 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. Ofori, 2004). On the other hand, respondents whose occupations included teaching, nursing and trading recorded 100 per cent total respondents' income flow being regular. The results thus confirmed the findings of

**Table 3.** Education and income relationship

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

\* Predictors: (Constant), educational status  
\*Beta coefficient .710

the fourth round of the Ghana Living Standards Survey (1999) by the Ghana Statistical Service that, within countries, regions or district, there are occupational variations with regard to poverty incidence (GSS, 2000).

### Educational Inequalities among Rural Inhabitants

The assessment of poverty using educational status of heads of household as an indicator was a relevant complement for income in rural Ghana for several reasons. Ostergaard (1999) in his study observed 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, a professor of geography at the Kwame Nkrumah University of Science and Technology, Ghana, 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 admits that income alone is not adequate for assessing the poverty situation of people. He emphasized other social indicators including education levels as relevant for examining poverty holistically. The experiences of the early scholars imply that lack of knowledge is a contributing factor of persistent poverty, poor health, inferiority, exclusion from decision making and poor quality of life. It further indicates 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 for income levels to assess the poverty situation and how it impacts the health of rural inhabitants.

### Educational Poverty: Evidence from rural Ghana

The use of educational status as a tool for poverty assessment revealed the underlying causes of the inability of several rural households in Ghana to enter into

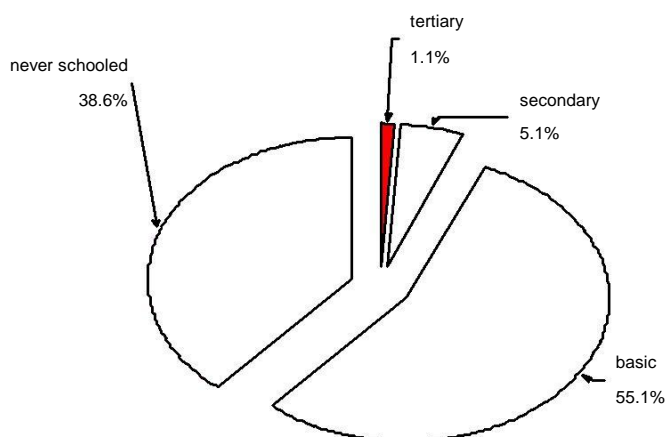
alternative livelihood activities to improve their household income and quality of health. The results from the study rural communities indicated that 93.7 per cent of rural inhabitants had relatively very low levels of education; out of which 38.6 per cent of heads of household had never had any form of formal education. Within the study villages only 5.1 per cent and 1.1 per cent of heads of household had acquired different levels of secondary and tertiary education respectively. The relatively lower level of education of majority of respondents from the study villages underpinned the limited opportunities for the rural dwellers to generate adequate income to improve their standard of living. Figure 1 shows the results summary obtained on the educational levels of respondents.

### Income and Education Collinearity

The survey results showed a collinear relationship between income levels and educational status of heads of rural household in the Amansie West District of Ghana. 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.

The results summary in Table 3 implies 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 of Ghana.

From income and educational perspectives it is observed that the incidence of poverty is very high within the villages chosen for the study. The poor in the rural communities are however conscious of their needs and wants. This was demonstrated in their ability to explain their poverty situation and how it manifested through



**Figure 1.** Educational status of respondents

focus group discussions. Thus, 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 they require; but rather the means to access the needs of which they are 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.

### **Socio-Economic Disparities and Disease Occurrence**

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 the general 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 1.3, Table 2 and Figure 1), with 41.8 per cent earning average household monthly income below (GH  $\text{¢}20$ ). 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 have been 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.

### **Income Inequalities and Malaria Occurrence**

Malaria was generally found to be highly prevalent among virtually all the different socio-economic groups.

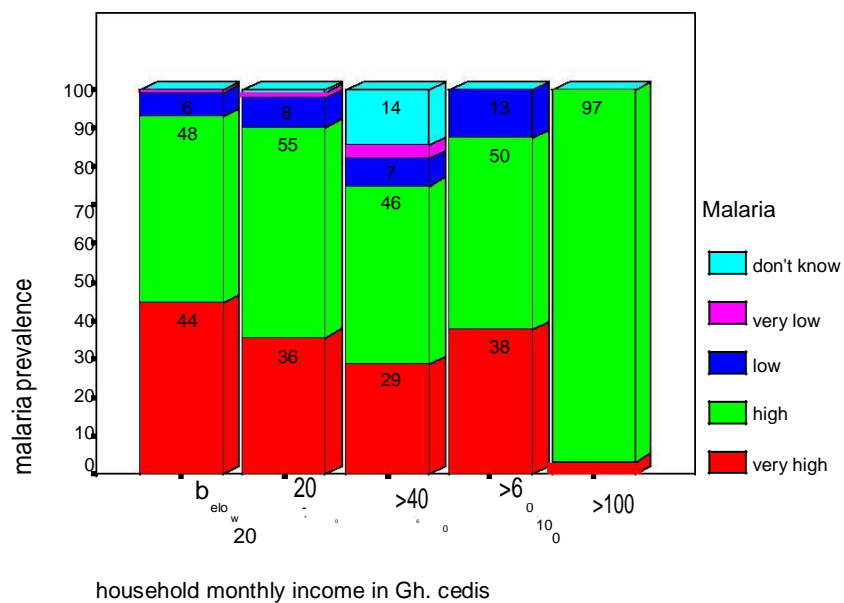


Figure 2. Malaria prevalence and Income

Table 4. Diarrhoea Prevalence and Household Income

	Household average monthly income in cedis (GH¢)										TOTAL	
	below 20		20-40		>40-60		>60-100		>100		F	%
diarrhoea	F	%	F	%	F	%	F	%	F	%	F	%
very high	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, 2008

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. Figure 2 illustrates the relationship between income and malaria prevalence within the study communities.

**Income Inequalities and Diarrhoeal Occurrence**

Diarrhoeal diseases and whooping cough were rather found to decrease with increasing income levels as shown in Tables 4 and 5 respectively. The prevalence of diarrhoeal diseases was found to increase with decreasing income levels. Table 4 indicates that 15.2 per

**Table 5.** Whooping Cough prevalence and Household Income

Whooping cough occurrence	Income (GH¢)										Total	
	below 20	20-40	>40-60		>60-100		>100				%	
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	-	0	-	-	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, 2008

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 4 further establish that the relationship between diarrhoeal diseases and income levels among the rural households is significant.

### Income Inequalities and Whooping Cough Occurrence

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. Table 5 shows a cross tabulation of household monthly income and prevalence of whooping cough within households in the study communities.

### Educational (Knowledge) Disparity and Disease Occurrence

The survey further discovered significant relationship

between educational inequalities and 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 findings that head 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. Thus, the results confirm the co-linearity found to exist between income and education in rural Ghana.

### Education and Malaria Occurrence

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

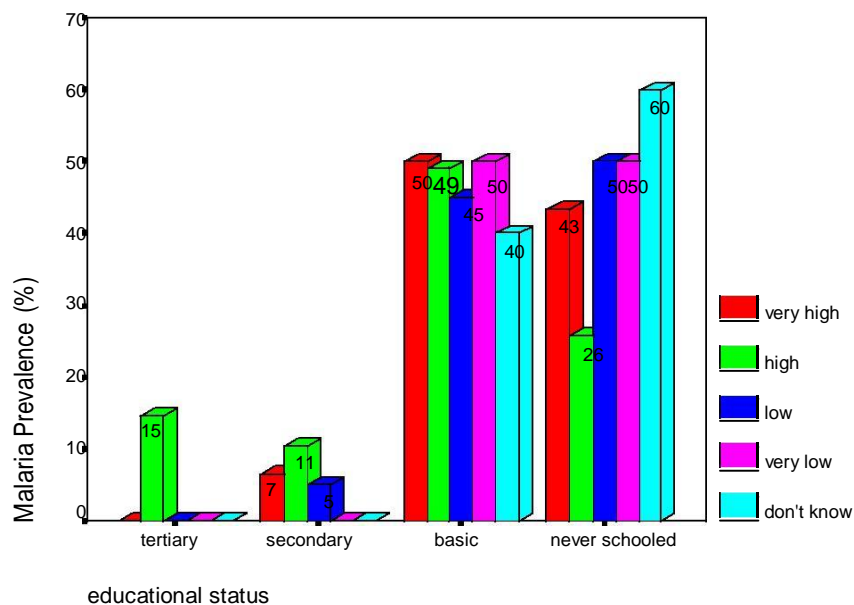


Figure 3. Educational levels and malaria prevalence

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 3 is a graphical representation of the relationship between educational levels and the incidence rate of malaria in the study area.

### Education, Whooping Cough and Diarrhoeal Diseases

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 rural 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 4 provides details of results on the relationship between education and whooping cough incidence in the study rural communities.

Thus, 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 immunizations 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,*



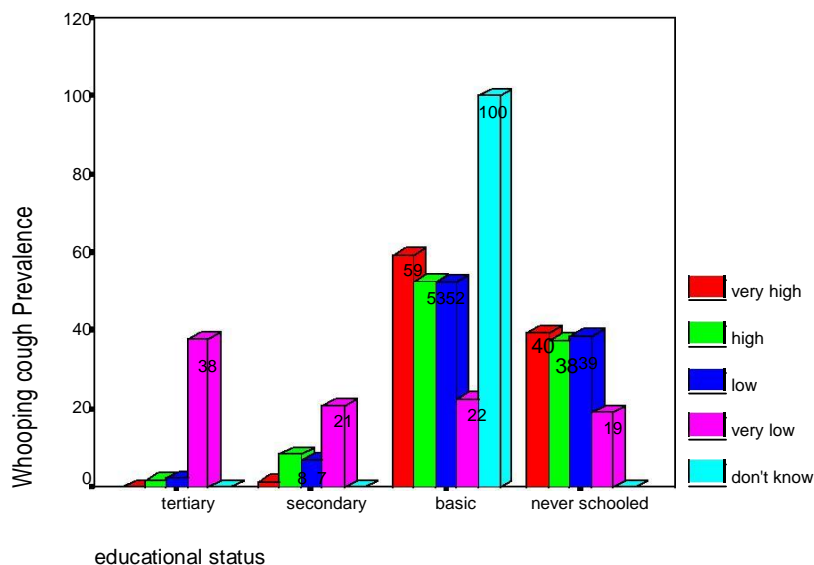


Figure 4. Educational levels and whooping cough prevalence

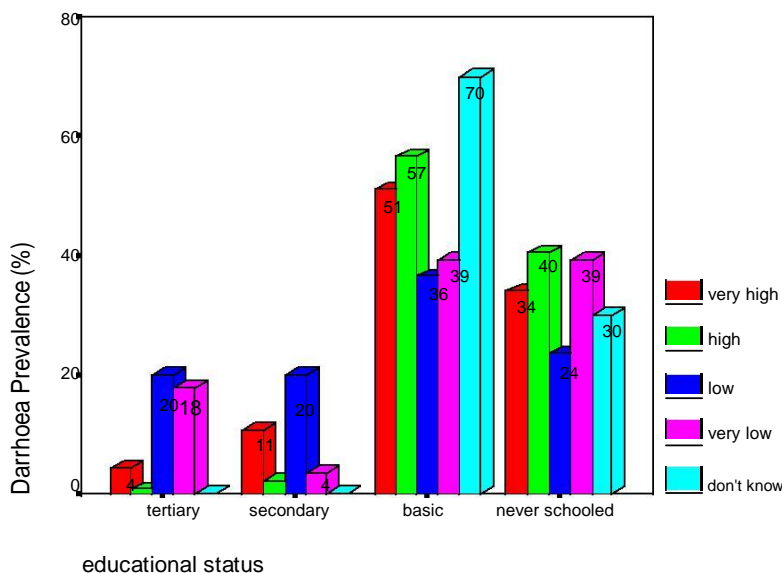


Figure 5. Educational levels and diarrhoeal prevalence

though whooping cough is common in our community” (In-depth Interview, November, 2008).

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, four 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 5.

The nature of the relationships found to exist between income and the prevalence of malaria, whooping cough

**Table 6.** Results Summary

Model	R	R Square	Adjusted R Square	Sig.
1	.526	.276	.274	.000

a Predictor (constant): household monthly income b  
 Dependent Variable: household health condition

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 rural 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 1.3, Table 2). 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.

**Bi-Variate Summary for Income and Disease Occurrence**

Having established a strong and significant association between education and income (see Table 3), the dual

dimensional poverty indicators for the study, the relationship between income inequalities and households' health conditions was further ascertained to assess and establish the strength of the relationship existing between poverty and health conditions of the rural households and how significant the impact of income levels was on health conditions of rural households. Income level was entered as the predictor whereas health condition of respondents was entered into the model as the dependent variable.

The results showed a strong correlation between income and health conditions of households in the rural communities. Thus, a proportionate increase in income would lead to a significant improvement in the health status of the rural households. Model Summaries and Significant Coefficients of results are shown in Table 6.

The strong relationship between income and health conditions confirms the initial results that heads of rural households with relatively higher income levels are more likely to meet the basic needs of the households to avert the occurrence of some of the commonest diseases in the rural communities compared to households with relatively lower income.

**CONCLUSION**

The poverty and health study indicates that the poor in the rural communities are more poorer in health, and factors including poor feeding habit, poor housing and health education as well as poor sanitation act as pathways through which low income and education of majority of rural households in the Amansie West District of Ghana increase the susceptibility of relatively poorer rural households to the most prevalent diseases in the district (Refer to table one). Thus, policies directed towards increasing income levels and improving educational levels of the rural households would directly influence the health conditions of rural households positively.

**REFERENCES**

Appiah KOA (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  
 AWDA (2004). Demographic Characteristics and Infrastructural distribution (Ghana: Amansie West District Profile 2004) pp. 12- 26  
 Ghana Living Standards Survey Four (GLSS 4) Report (Ghana: GSS, 2000) pp. 1-15

- Ghana Living Standards Survey Five (GLSS 5) Report ((Ghana: GSS, 2006) pp. 2-19
- GPRS (2003). Ghana poverty Reduction Strategy I (2003-2005). An Agenda for Growth and Poverty Reduction (Ghana: National Development Planning Commission, 2002) pp. 1-20 GPRS (2006). Ghana Poverty Reduction Strategy II (2006-2009): Growth and Poverty Reduction (Ghana: National Development Planning Commission, 2005) pp. 4 -15
- Ghana Statistical Service (1992). Ghana Living Standards Survey Two Report pp. 3-9
- Ghana Statistical Service (2000). Poverty trends in Ghana in the 1990's (Ghana: GSS, 2000) pp. 1-9
- Gordon D (2004). Eradicating Poverty in the 21st Century: When Will Social Justice Be Done (Inaugural Lecture by Prof. Dave Gordon, Bristol University 18th October, 2004)
- Haddad L (1999). Are Urban Poverty and Under nutrition Growing? Some Newly Assembled Evidence (Washington: FCND International Food Policy Research Institute) pp. 14-26
- Maxwell D (2000). Urban Livelihood And Food And Nutritional Security In Greater Accra, Ghana (Ghana: IFPRI Research Report- International Food Policy Research Institute) pp. 9-19
- May J (1998). Poverty and Inequality in South Africa; (Report for the Office of the Executive Deputy President and the Inter Ministerial Committee, South Africa) pp. 20-32
- Nayaran D (2000). Voices of the Poor: Can Any One Hear Us (USA: Oxford University Press) pp.1-3
- Nelson W (2008). Seminar Papers on the GPRS I and II and the MDG's (Ghana: National Development Planning Commission, 2007)
- Osmani SR (2003). Evolving views on Poverty Concepts, Assessment and Strategy Asian Development Bank Report, pp. 1-9
- Ostergaard V (1999). Gender, Health and Development. Letters on World Development, Vol. 18: 14-29
- Rowson M (2001). Poverty and Health. Student Br. Med. J. Vol. 9: 1-3
- Sachs JD (2005). The end of poverty: how we can make it happen in our time (USA: Penguin Press, 2005) pp. 20-25
- World Health Organization (1999). Poverty and Health (Director General's Report Executive Board 105<sup>th</sup> Session, 1999)