Macroeconomic Policies And Their Impact On Health In Sierra Leone: An Analysis Of The Prevalence Of Malaria, Malnutrition And Maternal Morality

Ambrose R. Jusu*

ABSTRACT

This study attempts to examine how changes in macroeconomic policies have shaped health outcomes in Sierra Leone, particularly with regard to malaria, malnutrition and maternal mortality in the post-war era. The study also examines how these health outcomes vary by income and geographical location.

Macroeconomic policies In Sierra Leone have tended to shape health outcomes and they have had an Impact on trends in household income levels and access to health facilities. The introduction of structural adjustment programs (SAPs) in the 1980s, which later were renamed poverty reduction strategy papers (PRSPs) has witnessed a major shift in macroeconomic policies. And these policy changes have tended to affect the health sector in a negative manner. In particular, the rollback on government expenditure on social services, health included, has led to a reduction in the population able to access health facilities.

INTRODUCTION

Health is extremely important to any society. While it brings the capacity for personal development and future economic security to the individual and families, it also forms the basis for productivity for a society as a whole.

The purpose of this study is to examine how changes in macroeconomic policies have shaped health outcomes particularly with regard to malaria, malnutrition and maternal mortality in post-war Sierra Leone. The study will also examine how these health outcomes vary by income and geographical location.

Recent studies have shown some direct relationship between malaria, malnutrition and maternal mortality on the one hand and income levels or poverty status, and geographical location on the other. However, in the absence of national studies verifying such relationships, this study deduces general trends in health in Sierra Leone, using national surveys conducted in 2008 and 2010. Accordingly, this study argues that a direct relationship exists between the prevalence of malaria, malnutrition and maternal mortality on the one hand, and such independent variables as income levels, and rural or urban location.

Studies have established that general health is affected by income levels. Accordingly, the poor are more likely than the non-poor to be ill. Moreover, income levels determine one's dietary patterns and living conditions both of which seem to have an impact on health outcomes. In the context of Sierra

* Ambrose R. Jusu-State University of New York at Farmingdale

Leone, this would mean that while illness is experienced both by the rural and urban populations, slightly higher percentages of low-income groups become ill than the higher income urban population.

Sierra Leone's health care system has for a long time been characterized by user fees. But in 2010, the government removed these fees for pregnant and lactating mothers and children under the age of five. This initiative has led to a tripling of the number of women giving birth in hospitals and the number of children being treated for malaria. It has also dramatically reduced the fatality rate for malaria in hospitals.

However, the introduction of economic reform programs popularly known as the Poverty Reduction Strategy Papers (PRSPs) has witnessed a massive shift in macroeconomic policies in Sierra Leone. And these policy changes have tended to affect the health sector in a negative manner. In particular, the rollback on government expenditure on social sectors, health included, has led to a reduction in the population able to access health facilities.

Studies have shown that in developing countries women are more likely than their male counterparts to be ill. A number of factors have been attributed to this trend, preeminent among them being the reproductive role of females. This puts them at greater risk of being ill than males. In Sierra Leone, the greater division of labor at the household level and the nutritional intake differences between men and women cause women to be in worse health than men.

For Sierra Leone, the prevalence of malaria and other diseases is affected by income levels, with people in high-income groups being less likely to have malaria than those in low-income groups. Moreover, overall, the prevalence of malaria is greater in rural than urban locations.

Compared with other regions of the world, the percentage of Africans living under $1 a day is the highest by WHO region. 42.6 percent of Africans survive on less than a dollar day. In South-East Asia, it is 38.4 percent, while in Western Pacific it is 16.0 percent. In Eastern Mediterranean, 11.0 percent of the population lives on less than $1 a day while in the Americas only 4.8 percent of the population lives on less than $1 a day (WHO, 2012).

Also, lower income groups in Africa and in Sierra Leone are more likely than higher income groups to have children less than 5 years who are malnourished. And malnutrition also varies by geographical location, with a higher prevalence in rural than urban areas.

Sierra Leone gained independence from Britain in 1961. However, the post-colonial trajectory of development has been characterized by dramatic economic decline and political instability. Since independence, Sierra Leone has had five military coups d'état and a brutal civil war that lasted almost eleven years. This war, which started in March 1991 and ended in January 2002 resulted in over 20,000 deaths.

In the 1960s, annual growth averaged 4 percent but this dropped to 3.5 percent in the 1970s. In the 1980s this figure further plummeted to 1.5 percent. This dismal economic picture was largely the result of misguided economic policies and economic mismanagement by successive national governments.

Like other developing countries striving for economic growth, Sierra Leone introduced a series of macroeconomic and structural reforms in the late 1980s. This was done in consultation with the country's

development partners, chiefly, the World Bank and the International Monetary Fund (IMF). These reforms, which were called structural adjustment programs (SAPs) advocated a neoliberal economic agenda that aimed at stabilizing the economy and restoring growth through the reduction of the budget deficit, liberalizing the exchange rate, and abolishing price controls. However, the programs were derailed when war broke out in 1991. The war led to economic collapse and between 1991 and 2000, Sierra Leone experienced negative growth rates.

With the economy in shambles, poverty increased thereby becoming more pervasive as warring factions refused to lay down their arms. The outcome of this was Sierra Leone slipping down to the bottom rungs of the UNDP Human Development Index. With pervasive poverty came a higher incidence of diseases, particularly HIV/AIDs, typhoid, malaria, tuberculosis and other communicable diseases.

The war ended in 2002. And the post-conflict era has been characterized by economic, social and political rebuilding, resulting from decades of economic mismanagement, wide-spread corruption and inefficient state control over economic and political activity. Although significant progress has been made especially in stabilizing the economy and removing many of the structural impediments to growth, overall, the implementation of macroeconomic reforms in the form of the PRSPs framework has not brought to sierra Leone the expected benefits of sustainable growth and human development.

The rest of this study will be divided as follows: Section II will present the study's objectives and methodology. Section III will review the literature on the impact of macroeconomic policies on health while section IV will analyze the poverty reduction strategy papers as they affect Sierra Leone. Section V will discuss the findings of the 2008 Sierra Leone demographic household survey and the 2010 nutritional situation in Sierra Leone as they relate to the health sector. Finally, Section VI will draw a conclusion.

II. OBJECTIVES AND METHODOLOGY

This study attempts to examine how changes in macroeconomic policies have shaped health outcomes in Sierra Leone in the post-war era. To achieve this objective, health literature covering the specific areas in health being investigated is reviewed. Additionally, to understand the impact of the PRSPs on health, the study utilizes selected data from two national surveys - the 2008 Sierra Leone Demographic and Health Survey (SLDHS) and the 2010 Report on the Nutritional Situation of Sierra Leone. The two national surveys, conducted at more or less the same time, investigated nearly the same issues (health, poverty status, geographical location, gender and other social aspects).

The SLDHS conducted in 2008 contains detailed information on the demographic, health, and social indicators that enables a measurement of progress in Sierra Leone. Data were generated from a nationally representative sample of 7,374 women aged 15-49 and 3,280 men aged 15-59.

The second data source, the Report on the Nutritional Situation in Sierra Leone, was conducted from June 16 to August 10, 2010. Data were collected from 8, 801 households and 14,027 children less than 5 years of age and 13,636 women of reproductive age from 9,228 households. The two datasets investigated the theme of poverty and a number of social issues of which health was one. They were

timely since they were conducted after the introduction of second PRSPs and as such contain information relative to the implementation of macroeconomic policies in the health sector. This study deduces general trends in health in Sierra Leone, using the surveys mentioned above.

III. LITERATURE REVIEW

Every country on the face of the earth needs a strong health care system. While it balances prevention and intervention strategies, a strong health care system also provides a good health care education to citizens and at the same time ensures that an active workforce of health care providers is maintained. Moreover, a good health care system ensures that there are sufficient resources to confront illness and/or disease. On the contrary, a weak health care system cannot ensure that there are sufficient resources to confront illness and/or disease.

In Africa, weak health care systems are associated with poverty. And extreme poverty, on the other hand, is classified as a disease in itself. Therefore, reducing poverty has become an international priority for quite some time.

For quite a long time, Africa's chief development partners have included the World Bank and the International Monetary Fund (IMF). Since these two institutions are deeply involved in global development, they provide technical, operational, and financial assistance to member countries. In recent years, Poverty Reduction Strategy Papers (PRSPs) have represented the initiative that the World Bank and the IMF have used for reducing the plight of the poor in developing countries.

PRSPs in health are important due to the many roles that they perform. According to Walford (2002), these roles include:

First, PRSPs bring poverty up the national agenda.

Second, a health sector with developed policies and strategies that are pro poor can benefit from the PRSP process in that it can open an opportunity for such a health sector to communicate these policies to central ministries and politicians in order to have them reflected in budget allocations.

Third, where there is no pro poor strategy in place in the health sector, the PRSP process can provide an opportunity to reopen such initiatives in health policy or budget allocations. This means that the PRSP process can provide a context for discussions relative to the allocation of funds for preventable diseases suffered by the poor.

Fourth, the PRSP process can provide the opportunity to discuss such vital issues to the health sector as low civil service salaries, the need for measures to attract qualified staff to work in poor rural areas or the case for allocating budget to such needy areas as sanitation.

Fifth, the PRSP process serves as a link between external development partners and national governments. This means that through the PRSP process and external development partners can coordinate their efforts while focusing and monitoring their support.

Finally, the PRSP process offers all interested parties the opportunity to agree on some key milestones and indicators relative to sector progress and priorities.

PRSPs in developing countries have their roots in structural adjustment programs (SAPs) that emerged from the World Bank and the International Monetary Fund (IMF). Concerned with the debt crisis of the 1980s, the World Bank and the IMF intervened to ensure that developing countries continued paying their debt by offering new loans to these countries with certain conditions.

Built on neoliberal economic theory, SAPs wanted to increase the efficiency of developing nations in global markets by advocating for deregulation, privatization, and withdrawal of the state from many areas of social services. It was argued at the time that privatization and deregulation will spur competition thereby eliminating bureaucratic red tape (Brunelli, 2007).

Moreover, proponents of SAPs argued that structurally adjusting economies would increase efficiency and productivity, reduce costs and thereby provide cheaper goods and services for consumers. According to them, as productivity continues to increase, citizens will start to experience higher standards of living. Consequently, the expansion of unhindered free markets will eventually eliminate poverty through the acceleration of growth and the elimination of waste.

But SAPs in many developing countries, especially in Africa brought macroeconomic changes that had immediate consequences that were negative. While the gap between the rich and the poor increased dramatically, unemployment levels rose in many African countries in the 1980s. As far as the health sector was concerned, there were fewer subsidies for health and health centers. This meant that individuals must purchase health care from the private sector (Brunelli, 2007).

The minimization of subsidies to health, led to drastic staff reductions in public health facilities. Additionally, there were less equipment, inadequate supplies and lower quality services. And the reduction in government health expenditure coupled with the bringing in of private provision and payments for services even gave birth to inequalities in the provision of health services. In many African countries, the rise in private practices created a two-tier system. There were those patients who could pay more and as a result, got better services and attended special clinics in hospitals. On the other hand, there were those who could not afford the charges and as a result, had limited access or no access at all to good health care service.

The drastic budget cuts to health care also decreased incomes, limited employment opportunities and eliminated food subsidies. Infrastructural development also suffered, thereby making it difficult to locate and afford treatment in many African countries. Consequently, the likelihood of contracting diseases increased.

It is also important to mention that SAPs ushered in the policy of ‘exports at all costs’ since developing countries could only earn foreign exchange earnings to pay off their debts through exports. This left little or no foreign exchange to purchase drugs and other imported medical supplies. Thus, across much of Africa, there were severe shortages of imported drugs thereby contributing immensely to the migration of skilled health workers.

Sierra Leone’s SAPs resembled other African government-creditor agreements. But with the economy worsening, Sierra Leone’s creditors emphasized that loans would be contingent on government

commitment to dismantle the public sector. To the creditors, the bloated public sector was seen as the main reason for inefficiency and unproductive spending. According to Reno (1996), revenue collections had fallen from 30 per cent of GNP in 1982 to about 20 per cent of a smaller 1992 GNP. Yet the austerity measures that accompanied SAPs led to mass dismissals, which destroyed state-owned enterprises.

In 1991, Sierra Leone's creditors supported the arrival of a German firm, Specialist Services International (SSI) to operate the country's ports. The introduction of foreign firms with virtually no political connections was deemed by creditors as the best prospect for Sierra Leone to eventually clear its debt arrears, restore fiscal solvency and eliminate corruption. However, war broke out in 1991 and with it brought mass destruction of property and lives.

Today, Sierra Leone ranks among the lowest in the world in health care. Compounding the problem is a lack of qualified staff and hospital funds. These problems have had dire outcomes. According to UNICEF, one in five children die before age five and one in eight women die from pregnancy-related complications. According to the IMF Country Report on Sierra Leone, "while 49 percent of the "food poor" and 37 percent of the "other poor" go to a nurse, only 26 percent of the non-poor also go to a nurse."

The poor in Sierra Leone have considerable problems with affording health service. While physical distance to health care facilities may be a constraint to some, with others, even if there is health service available, they simply cannot afford it.

Additionally, Sierra Leone has about three doctors per 100,000 people and there exists a concentration of doctors and other health personnel per capita in the Western Area where the capital, Freetown, is located. There is also a plurality of health service providers with the government accounting for 70 percent. However, a major problem confronting the health sector continues to be the exodus of health professionals out of the country.

Emigration can have a considerable impact especially when the workforce is already small. Sierra Leone with a relatively small workforce and inflows (training and immigration) can be disproportionately affected by outward flows. Added to emigration and the shortage of health professionals is the fact that many hospitals in the country lack running water and electricity. There are also insufficient generators, inadequate beds and inadequate medical equipment.

Although there is little or no evidence to establish a relationship between staffing levels, other human resources issues, access to services, quality of maternal health care and maternal health outcomes, studies have found that doctor, nurse and midwife densities were significantly related to maternal mortality rates, when per capita income, female literacy and absolute poverty were controlled for (Gerain, et al 2006).

Sierra Leone has the highest rate of child deaths in the world. The table below shows the ten African countries with the highest under five mortality rate.

Table 1. Top ten African countries with the highest under five mortality rate

COUNTRY	U5 MORTALITY RATE	HEALTH WORKERS PER 1000	% GOVT. HEALTH EXP.	# OF UNDER FIVE DEATHS
SIERRA LEONE	270	0.5	8	71,000
ANGOLA	260	1.4	4	206,000
NIGER	253	0.3	10	173,000
MALI	217	0.7	13	126,000
CHAD	209	0.5	10	101,000
EQ. GUINEA	206	0.8	7	4,000
DR CONGO	205	0.6	7	620,000
BURKINA FASO	204	0.5	15	131,000
GUINEA BISSAU	200	0.8	4	16,000
NIGERIA	191	2	4	1,129,000
TOTAL				**2,577,000**

SOURCE: World Vision: Africa facts and statistics.

Although Sierra Leone has the highest rate of child deaths, Nigeria accounts for the highest under-five children deaths in Africa. That number stands at 1,129,000 compared with Sierra Leone's 71,000. Additionally, Sierra Leone has the highest maternal mortality rate in Africa and in the world. The table below shows health and economic indicators for African countries with the highest maternal mortality rates.

Table 2. Health and economic indicators for African countries with highest mmr

COUNTRY	MMR	HW PER 1000	HEALTH AS A % GOV. EXP.
SIERRA LEONE	2100	0.5	8%
NIGER	1800	0.3	10%
CHAD	1500	0.5	10%
ANGOLA	1400	1.4	4%
SOMALIA	1400	0.2	-
RWANDA	1300	0.5	17%
LIBERIA	1200	0.3	20%
BURUNDI	1100	0.2	29%
DR CONGO	1100	0.6	7%
GUINEA BISSAU	1100	0.8	4%
MALAWI	1100	0.6	29%
NIGERIA	1100	2	4%

SOURCE: Compiled from World Vision: Africa facts and statistics.

Maternal deaths in Africa are directly caused mainly by hemorrhage, sepsis, eclampsia, and obstructed labor. In the face of these problems and taking into account the effects of poverty on access to health care in Sierra Leone, the government of Sierra Leone launched a free health care scheme in 2010 for some 1.5 million women and children. Under this scheme, health facilities were to provide free care to under- five children and pregnant and lactating women. However, reports from state hospitals and health clinics across the country intimate that there are severe shortages of drugs that should be supplied under the free health care program. This is due to practitioners diverting these drugs for private use. But despite these complex problems, UNICEF states that the free health care scheme is producing

positive results as the number of malaria consultations for under-fives has doubled since the scheme's initiation.

IV. THE POVERTY REDUCTION STRATEGY PAPERS

This section analyzes the adoption and implementation of the interim poverty reduction strategy papers (I-PRSP) of 2001 and the poverty reduction strategy papers (PRSPs) 2005 for Sierra Leone. The PRSP programs were to be financed with loans from the World Bank and the International Monetary Fund (IMF). Additionally, external donors were also expected to make funds available to the government.

The government of Sierra Leone prepared the interim poverty reduction strategy paper (I-PRSP) and submitted it to the World Bank and the IMF on June 2001. This document outlined the government's objectives, strategies, and programs for poverty reduction both in the transition period from the civil war and the medium term. In it was a vivid description of the pervasive extent of poverty in Sierra Leone and the role of the civil war in its intensification. While government reiterated its commitment to poverty reduction, it also outlined a monitoring and evaluation strategy.

Since the civil war was now winding down in 2001, the government did not only outline its commitment to ending the war but also to creating a peaceful environment that would allow people and goods to move freely.

In analyzing the transition from war to peace, the I-PRSP emphasized national security and good governance, relaunching the economy, and providing the most vulnerable groups with basic social services. While national security and good governance would call for the implementation of the disarmament, Demobilization and Reintegration (DDR) program, the relaunching and revival of the economy would recognize the maintenance of macroeconomic stability as a prerequisite for the attainment of sustainable and higher economic growth.

The I-PRSP allocated a significant amount of budgetary resources to fund poverty reduction activities especially in the social sector comprising of health, education, water and sanitation. The budgetary allocation to health was aimed at expanding maternal and child health care, the school health and immunization programs and for the purchase of drugs and medical equipment. In the education sector, government aimed at implementing the universal primary education program.

According to the IMF Country Report on Sierra Leone, as a result of the I-PRSP, there was a sustained recovery of the economy between 2001 and 2004. Real gross domestic product expanded by 5.4 percent in 2001 from 3.8 percent in 2000. RGDP further expanded by 6.3 percent in 2002. Also, a National Zero-prevalence Survey conducted by the Sierra Leone Statistics Office (SSL) and the US Centers for Disease Prevention and Control (CDC) in April 2002, showed that HIV prevalence nationally was 0.9 percent.

Following the end of the war in 2002 was a countrywide reconstruction and rehabilitation work. This spurred economic growth which resulted in an increase of real GDP by 27.5 percent in 2002 and 9.4 percent in 2003 (IMF Country Report, Sierra Leone, 2005). There was also broad recovery in agriculture,

mining, manufacturing, and construction and services sectors. Further, diamond exports grew as well as imports. The growth in imports led to a current account deficit.

The government adopted the full PRSP in 2005. This document was constructed around three pillars: Good Governance, Peace and Security; Food Security, Job Creation and Growth; and Human Development. These pillars were supported by a framework for implementation that included the following:

1. Mainstreaming poverty reduction efforts.
2. An inclusive participatory process that emphasized the active involvement of civil society, private and public sectors, and representatives of vulnerable groups.
3. Achieving transparency through a well-defined planning process that included more efficient coordination and prioritization.
4. The participation and cooperation of representatives of local governments, the NGOs and private sectors and donors.
5. Building partnerships during the course of the PRS implementation for the purpose of improving coordination and information sharing.

In addition to the foregoing, the 2005 PRSP contained a monitoring and evaluation component that established a monitoring and evaluation unit. This unit was staffed by a Monitoring and Evaluation Officer, poverty Data analyst and Two program Officers. In addition to its many functions, this unit also coordinated the collection and collation of all poverty related data and facilitated the analysis of such data.

In the health sector, the objective of government in the medium term was to reduce under five and maternal mortality rates by expanding access and quality to healthcare services. Under this initiative, government would construct and rehabilitate health facilities nationwide, train health workers and traditional birth attendants, expand immunization coverage, provide Insecticide Treated Bed Nets (ITNs) and address HIV/AIDS.

The interventions on the part of government led to significant reductions in infant under-five and maternal mortality rates. Additionally, access to healthcare increased from 40% to 70% between 2004 and 2005 (IMF Country Report, Sierra Leone, 2005). Access to ITNs among pregnant women rose by 8% while among children less than five years age it increased by 6%.

V. FINDINGS AND DISCUSSION BASED ON THE 2008 SIERRA LEONE DEMOGRAPHIC AND HEALTH SURVEY AND THE 2010 REPORT ON THE NUTRITIONAL SITUATION IN SIERRA LEONE.

Two national surveys that provided the much-needed national data that can be used to evaluate the general impact of PRSPs on health in Sierra Leone are the 2008 Sierra Leone Demographic and Health Survey and the 2010 Report on the Nutritional Situation in Sierra Leone.

HEALTH STATUS IN GENERAL

Based on the demographic and health survey, infant and under-five mortality rates have dropped by 26%. However infant and under-five mortality rates in Sierra Leone remain one of the highest in the world. One in every seven Sierra Leonean children dies before reaching the age of five.

Table 3

WEALTH QUINTILES

Percent distribution of the jure population by wealth quintiles according to residence and region, Sierra Leone 2008

	Wealth quintile						
Residence/region	Lowest	Second	Middle	Fourth	Highest	Total	Number of population
Residence							
Urban	2.0	4.4	9.2	28.4	56.0	100.0	14.104
Rural	28.8	27.6	25.3	15.9	2.3	100.0	28.701
Region							
Eastern	24.1	21.9	23.8	20.0	10.2	100.0	7,878
Northern	19.4	25.2	26.3	21.9	7.2	100.0	18,730
Southern	34.9	24.0	17.1	16.3	7.7	100.0	8,531
Western	0.7	0.9	3.9	19.5	75.0	100.0	7,667
Total	20.0	20.0	20.0	20.0	20.0	100.0	42,805

Source: SLDHS

The results of the SLDHS show a positive relationship between poverty status or income levels and the occurrence of illness. What this means is that there is higher incidence of illness among the poorest people. More than half of urban residents (56%) live in households that are in the highest quintile while only 2% of the rural population is in the highest quintile. Moreover, based on the above table, three out of four residents of the Western Region, where Freetown, the capital is located are in the highest quintile, while three in four residents of the other regions are in the three lowest quintiles.

In a country where rural areas have far less healthcare facilities than urban areas and with more urban dwellers belonging to the highest wealth quintile, poverty status or income levels determines the health outcomes of people. It follows that the income status of the population determines many of their socio-economic and environmental conditions.

Also, in a country where access to health care is still a problem, more mothers are now receiving antenatal care from a health professional (doctor, nurse, and midwife) than they are from a traditional midwife or a community health worker. Almost 87% of Sierra Leonean mothers have consultations with a doctor, nurse or midwife while only 5% receive antenatal care from a traditional midwife or a community health worker. 9% of the country's mothers receive no antenatal care.

Table 4. PROBLEMS IN ACCESSING HEALTH CARE

Percentage of women age 15-49 who reported that they have serious problems in accessing health care for themselves when they are sick, by type of problem, according to background characteristics, Sierra Leone 2008

	Problems in accessing health care		
Background characteristic	Getting permission to go for treatment	Getting money for treatment	Distance to health facility
Age			
15-19	11.9	76.8	49.2
20-34	7.9	80.0	54.0
35-49	5.9	81.8	53.1

Source: Compiled from SLDHS

Table 2 shows that a major problem of more than half (80%) of Sierra Leonean women in accessing health care for themselves is getting money for treatment. And about half of women (49 to 53%) have problems accessing health care due to the distance to the health facility.

Nor is the statistics for postnatal care is not encouraging. Only 38% of Sierra Leonean mothers receive such care within four hours of delivery. 20% receive postnatal care within two days of delivery, 5% within 3-41 days after delivery and 33% receive no such care at all. For the seven-year period preceding the SLDHS, there were 857 deaths per 100,000 births.

Life expectancy in Sierra Leone estimated at 47.5 years is one of the lowest in the world. Although this rate is associated with a heavy disease burden and high child and maternal morbidity and mortality, the underlying factors are preeminently pervasive poverty, high illiteracy rate and limited access to safe drinking water.

Sierra Leone has consistently ranked at the bottom of the Human Development Index and is still considered one of the poorest countries in the world. Poverty is pervasive and 60% of the population lives on less than $1.25 a day. Also, unemployment and illiteracy levels especially among youth are high.

At the level of the household, there are variations in poverty between urban and rural areas. The SLDHS shows that in rural settings, households in which the heads are primarily engaged in agriculture are more likely to be poor. But households in rural areas where the head has at least some secondary or post-secondary education are less likely to be poor. In urban areas, education has a strong impact on poverty as the increasing levels of education of the head of the household reduces the household's probability of being poor considerably.

Malaria is on a rise accounting for about 48% of outpatient attendances. According to the World Health Organization, malaria accounts for about 25% of mortality in children and under-fives.

Awareness of HIV/AIDS is relatively high among adults in Sierra Leone. In the 15-49 age category, 69% of women and 835 percent of men admitted to having some knowledge about HIV/AIDS. Also, within this age category, 1.5% of Sierra Leoneans are HIV positive while 1.7% of women are HIV positive.

MALARIA

For quite a long time, malaria has posed one of the most serious problems in Sierra Leone. According to the SLDHS, malaria accounts for over 40% of outpatient morbidity, with the most vulnerable groups being children under five years, pregnant women, refugees, and returnees.

Malaria also poses a serious problem in other West African countries. It is a leading cause of child death in Nigeria, accounting for roughly 250,000 child deaths. In Ghana, approximately 20,000 children die each year of malaria.

With civil war, the incidence of malaria only exacerbated as a substantial fraction of the population was displaced and much damage was done to the health care system.

The primary health intervention for reducing malaria transmission and morbidity in communities is ownership and use of mosquito nets.

According to the SLDHS, more than 37% of households in Sierra Leone own at least one insecticide-treated net (ITN), with households in the Southern Region recording the highest percentage of ownership – 45%. There is a higher concentration of ownership among wealthier households while poorer households owned less.

Pregnant women are more susceptible to malaria infection and low birth weights are often reported among children whose mothers are infected with malaria during pregnancy. This is because malaria can interfere with the maternal-foetus exchange. Government has adopted a strategy called Intermittent Preventive Treatment (IPT) whereby pregnant women are treated with sulphadoxine pyrimethamine (SP) also known as Fansidar. It is recommended that pregnant women receive two doses of IPT in the second and third trimesters, to reduce the risk of malaria infection. The survey results show that urban women (41%) are more likely to use anti-malarial drugs during pregnancy than rural women (31%)

Malaria manifests itself with fever and most of the fevers occur at home. Fever is most common among younger children. However, the proportion of children with fever differs little by urban-rural residence.

The results of the survey also show that there is higher prevalence of fever among children of more educated women and women in the higher wealth quintiles. This may be attributed to educated women more likely recognizing and reporting fever in their young children than women with less education and women in lower wealth quintiles.

MALNUTRITION

Malnutrition is a pressing major development challenge in Sierra Leone. According to the Report on the Nutritional Situation in Sierra Leone, all forms of malnutrition are high in the first two years of age. On the national level, 6.9% of children aged 6-59 months have Global Acute Malnutrition (GAM) and 0.9% suffers from Severe Acute Malnutrition (SAM).

There is a high rate of stunting among children, reflecting the existence of chronic malnutrition. Stunting or chronic malnutrition exists in 34.1% of children 6-59 months of age. And severe stunting exists in 9.5% of children countrywide. Moreover, 18.7% of children 6-59 months of age are underweight.

At the national level, 4.5% of women 15-49 years of age are obese, 13.4% are overweight and 9.2% are underweight. Malnutrition is associated with poverty levels with children of higher income groups suffering less from malnutrition than children of poor parents.

MATERNAL MORTALITY

Maternal mortality reveals women's overall access to health care and the responsiveness of the health care system to meet their needs. Knowledge of maternal mortality does not only help to identify the risks associated with pregnancy and childbearing but it also reveals, albeit indirectly, women's economic and social status.

According to the SLHDS, one in eight Sierra Leonean women risk dying during pregnancy or childbirth. This means that maternal mortality in Sierra Leone is one of the highest in the world. Many Sierra Leonean women even bleed to death after giving birth.

In Ghana, it is estimated that between 250,000 and 343,000 die each from complications related with pregnancy and childbirth. In Nigeria, one in 13 women die in childbirth.

In Sierra Leone, while many pregnant women die in their homes, some die on the way to hospital in taxis, on motorbikes or on foot. Moreover, a great number of the deliveries in Sierra Leone are not attended by a skilled birth attendant. Also, many deliveries are not carried out in health facilities.

VI. CONCLUSION

Macroeconomic policies in Sierra Leone have tended to shape health outcomes. They have also had an impact on trends in household income thereby influencing access to health facilities.

Sierra Leone introduced structural adjustment programs in the 1980s and twenty years later these programs became known as poverty reduction strategy programs. These programs have tended to affect the health sector directly since they precipitated a reduction in government expenditure on social programs which includes health.

Results of the Sierra Leone demographic household survey of 2008, and the report on the nutritional situation in Sierra Leone show that the impact of the PRSPs on Sierra Leone has been negative. They also show that a positive relationship exists between the prevalence of malaria, malnutrition and maternal mortality and poverty levels. In other words, lower income groups as opposed to higher income groups are more likely to become ill or have problems accessing health care facilities. Also, the prevalence of malaria, malnutrition and maternal mortality is influenced by rural and urban locations. Correspondingly, there is a higher incidence of malaria, malnutrition and maternal mortality in rural other than urban areas.

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