

Synergy of Poverty, Food Insecurity and Malnutrition

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Abstract: Africa is presently experiencing an increase in food insecurity and malnutrition despite the general worldwide promotion of food security. The security outlook in Africa is worrisome since Africa's population is expected to increase from 1.01 billion in 2009 to 2.00 billion in 2050 if current demographic conditions remain constant. Undernutrition reduces people's ability to work by draining their energy and weakening their immune system thus predisposing them to diseases, which in turn perpetuate poverty. Causes of food insecurity and malnutrition in Africa are diverse, multi-factorial and interlinked. Poverty and food shortage are the main catalysts of food insecurity in the world and they occur in vicious cycle. Poverty had been impacting negatively on food production, preservation and consumption. Africans do not have enough money to acquire adequate food for an active and healthy life. The increasing rate of unemployment since 1980s had weakened the purchasing power of the consumers in turn. The world has come to realize that chronic hunger is due to poverty. In Africa, there are many hungry people in food surplus areas due to reduced purchasing power. Malnutrition is a direct consequence of food insecurity while poverty is predictive of food insecurity and poor health status.

Keywords: Malnutrition; health status; food insecurity; poverty and undernutrition

I. Introduction

Millions of people worldwide suffer from hunger and undernutrition. Food insecurity has been implicated as the major contributory factor [1]. This condition exists when people lack sustainable physical or economic access to adequate, safe, nutritious, and socially acceptable food for a healthy and productive life. Food insecurity may be chronic, seasonal, or temporary and it may occur at the household, regional, or national level [2]. The first millennium development goal (MDG) set by the United Nations is to "eradicate extreme poverty and hunger". Our greatest responsibility as nutrition experts is to understand the ramifications of poverty, chronic hunger and food insecurity [3]. He also showed that food insecurity was complex and the paradox of food insecurity was that not only could it lead to undernutrition and recurring hunger, but also to overnutrition, which could also lead to overweight and obesity. According to [4], new estimates showed that progress in reducing hunger in the past 20 years had been better than previously believed, and that given renewed efforts, it may be possible to reach the MDG hunger target at the global level by 2015. However, the number of people suffering from chronic undernutrition is unacceptably high and eradication of hunger is still a major global challenge. The United Nations estimated that there are 840 million undernourished people in the world. The majority of the undernourished people (799 million) reside in the developing countries, most of which are on the continent of Africa and Asia [2].

In developing countries, the main causes of food insecurity include: poverty, war, civil conflicts and corruption. In addition to these are national policies that do not allow equal access to food for all, poor health status, low level of education, disaster etc. In United States, the primary cause of food insecurity is poverty [2]. Estimates have shown that by the year 2015, non communicable diseases associated with overnutrition will surpass undernutrition as the leading cause of death in low income communities. Food insecurity is predictive of poverty while poverty can lead to malnutrition and poor health status which will in turn perpetuate poverty. Therefore we need to take heed of the double burden of malnutrition caused by poverty, hunger, and food insecurity [3]. This is of paramount importance and should be communicated to current health practitioners, educators, extension workers, policy makers and future generations of nutrition students. This study reviewed the causes, effects and remedies of poverty, food insecurity and malnutrition.

II. Food Insecurity In Nigeria

Adequate food production is the most important component of social and economic justice. Even if a nation cannot build sky scrapers, it should be able to feed the people living in it, only then can it assume place of pride among nations. Nigeria is a country richly blessed with abundant natural and human resources that if properly managed can feed its people and export the surpluses to other countries, yet it is experiencing food insecurity. Cases of malnutrition and undernutrition are growing by the day. The food intake requirements of majority of Nigerians have fallen far below the international standard. Past effort at improving food supply through agricultural production has not yielded successful results. The programmes that were introduced only

helped to alienate the peasant farmers who are the major producers of food in Nigeria. Some of the companies that had something to do with food production include:

1. The national Grains Production Company.
2. National Root Crops Production Companies.
3. North-east, Western and National Livestock Production Companies.
4. The Nigerian National Shrimp Company.
5. The Nigerian National Fish Company.

These companies were set up by the federal Government in 1989 to participate in direct production of food. The major crops target includes maize, rice, millet, wheat, sorghum and cassava.

The establishment of 11 (eleven) River Basin Development Authorities was part of the federal Government efforts to develop river basins for meaningful agricultural production to make Nigeria self-sufficient in food production. Operation Feed the Nation (OFN) and Green Revolution were other short-lived national campaign launched to give agriculture a good image and to encourage land owners to take to farming not only as an occupation but also as a way of life. These programmes were more in favour of capital intensive and large scale commercial farmers who corruptly enriched themselves at the expense of poor peasant farmers [5].

2.1 The basic Causes of Food Insecurity

The basic causes of food insecurity are national food availability and the inability of people to access food due to poverty. [6] using child malnutrition as a proxy (along with descriptive controls for non-food determinants of malnutrition), found that there was little correlation between national food availabilities and food insecurity. The group of countries that exhibited the highest severity of food insecurity were those with high poverty and food surpluses (dietary energy). This is consistent with the view that poverty is the most widespread cause of food insecurity in 1990's.

2.2 The Underlying Causes of Food Insecurity

Drought and conflicts are the main factors that have exacerbated the problem of food production, distribution and access. High rates of population growth and poverty have also played a part within an already difficult environment of fragile ecosystems. The fact that almost 80% of the population of the countries of the region is rural and depends almost exclusively on agriculture for its consumption and needs, means that measures to address the problems of poverty and food insecurity must mainly be found within the agricultural sector.

2.3 Causes of Food Insecurity in African and Other Underdeveloped Countries

The majority of the severest food crises after the second half of the 20th century were caused by a combination of several factors. The common causes of food insecurity in African and other underdeveloped countries were:

2.3.1 Drought and other extreme weather events: The comparison of severe food crises in history reveals that all were preceded by drought or other extreme weather events. They resulted in poor or failed harvests which in turn resulted to food scarcity and high prices of the available food.

2.3.2 Pests, livestock diseases and other agricultural problems: In addition to extreme weather events, many failed harvests in African and other underdeveloped countries were also caused by pests such as desert locusts. Cattle diseases and other agricultural problems such as erosion, soil infertility, etc. also play a role in food insecurity.

2.3.3 Climate change: Some experts suggest that drought and extreme weather in regions affected by food crises in the recent decades could be a result of climate change, especially in the West and East Africa which have problems with recurrent extreme droughts.

2.3.4 Military conflicts: Wars and military conflicts worsen food insecurity in African and other underdeveloped countries. They may not be directly responsible for food crises but they exacerbate scarcity of food and often prevent the aid workers from reaching the most affected people.

2.3.5 Lack of emergency plans: History of the severest food crises showed that many countries were completely unprepared for a crisis and unable to resolve the situation without international aid.

2.3.6 Corruption and political instability: In spite of criticism lately, the international community has always send help in the form of food supplies and other means which saved millions of lives in the affected regions. However, the international aid often did not reach the most vulnerable populations due to a high level of corruption and political instability in many Third World countries.

2.3.7 Cash crops dependence: Many African and Third World governments encourage production of the so-called cash crops, the income from which is used to import food. As a result, countries which depend on cash crops are at high risk of food crisis because they do not produce enough food to feed the population.

2.3.8 AIDS: The disease which is a serious public health concern in the sub-Saharan Africa worsens food insecurity in two ways. Firstly, it reduces the available workforce in agriculture and secondly, it puts an additional burden on poor households.

2.3.9 Rapid population growth: Poor African and underdeveloped countries have the highest growth rate in the world which puts them at increased risk of food crises. For example, the population of Niger increased from 2.5 million to 15 million from 1950 to 2010. According to some estimation, Africa will produce enough food for only about a quarter populations by 2025 if the current growth rate will continue [7]

III Malnutrition, Poverty And Food Insecurity

Studies have shown that countries with high prevalence of undernutrition had a comparably high proportion of the population that struggles to survive on less than US one dollar per day [1]. While poverty is undoubtedly a cause of hunger, hunger can also be a cause of poverty. In fact, hunger often deprives, impoverish.

Researchers have discovered the relevance of using child malnutrition as poverty indicator. Child malnutrition as poverty indicator is conceptually appealing. Increasing health is seen as a dimension of poverty in its own right and child health known to have important long-term effects on productivity during adulthood. As children are the future of every country, their situation is always of concern to policy makers, their parents and the general public. Ensuring children's health is a universally supported goal of development [8]. Malnutrition has long been recognized as a consequence of poverty. It is widely accepted that higher rates of malnutrition will be found in areas with chronic widespread of poverty [9]. Malnutrition is the result of marginal dietary intake compounded by infection. In turn, marginal dietary intake is caused by household food insecurity, lack of clean water, lack of knowledge on good sanitation, and lack of alternative sources of income. It is also compounded by inadequate care, gender inequality, poor health services, and poor environment [8].

Income is not the sum of total of people's lives, but health status as reflects by level of malnutrition is. Good health condition is important precondition for escaping poverty and because improved health and sanitation contributes to growth, investment in people's health and nutrition status is fundamental to improving the general welfare of a country, promoting economic growth, and reducing poverty [10]. Meeting primary health care needs and nutritional requirements of children are fundamental to the achievement of sustainable development. In the United Kingdom and a number of western European countries about half of their economic growth achieved between 1790 and 1980 has been attributed to better nutrition and improved health and sanitation conditions as stated by Fugel 1994, cited in [8]

It is a well established fact that children are the future of tomorrow. Malnutrition in childhood is known to have important long-term effects on the work capacity and intellectual performance of adults. Health consequences of inadequate nutrition are numerous. It was estimated that nearly 30 % of infants, children, adolescents, adults and elderly in the developing world are suffering from one or more of the multiple forms of malnutrition, 49% of the 10million deaths among children less than 5years old each year in the developing world are associated with malnutrition, another 51% of them were associated with infections and other causes stated by WHO, 1999 cited in [8]

A practical advantage of using child malnutrition as a poverty indicator over income level is that this measure does not have to be adjusted for inflation and would not be constrained by any inadequacy of price data. Measure of the child nutritional status can help capture aspects of welfare, such as distribution within the household which are not adequately reflected in other indicators. Child malnutrition standards are applicable across culture and ethnicities [8]

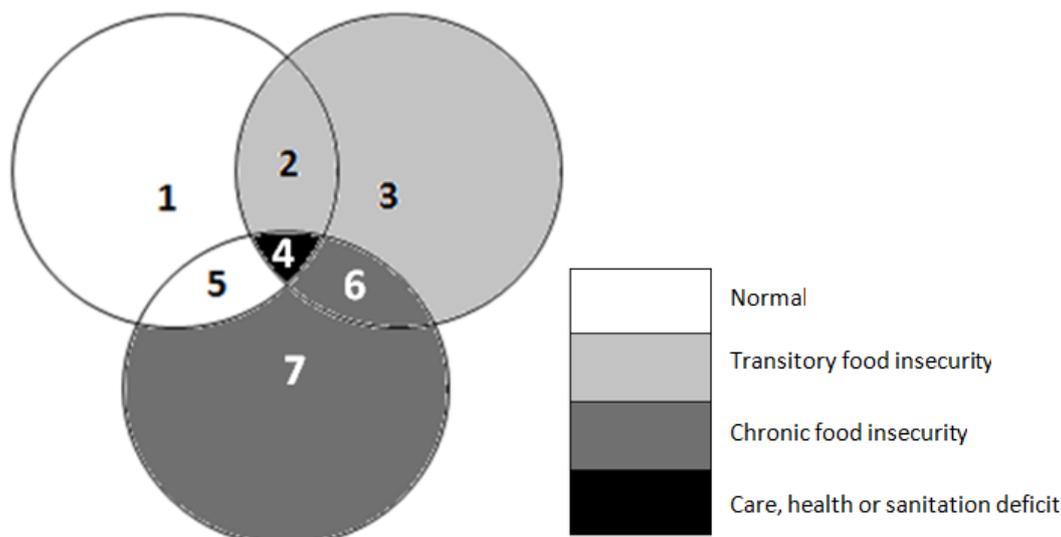
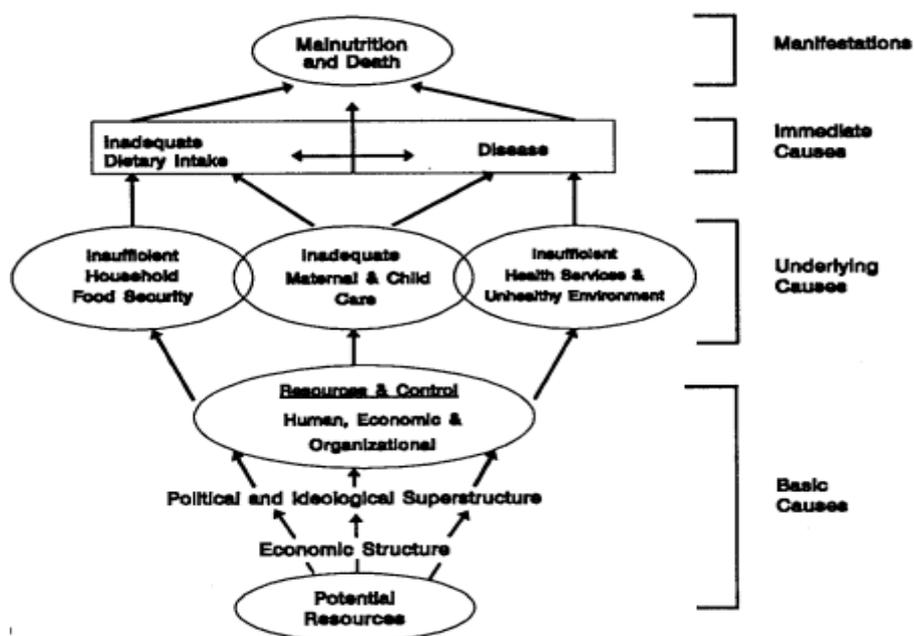


Figure1: Poverty, Vulnerability and Malnutrition: A Model of Food Insecurity

2.4 Causes of Malnutrition

Experts in Human nutrition have implicated poverty as one of the basic causes of malnutrition. Malnutrition results from a combination of inadequate dietary intake and disease. In turn, inadequate dietary intake is secondary to food insecurity, inadequate Maternal and Child care, poor health services and unhealthy environment, bad political and ideological superstructure and poor economic structure [11]



Source:[11]

Figure2: A conceptual framework on Causes of Malnutrition and Death.

2.5 Effects of Poverty, Food Insecurity and Malnutrition

Food insecurity results to stunted growth, increased risk of infection and disease. It also lowers the IQ scores, compromising their future income-earning potential and quality of life. While poverty is undoubtedly a cause of hunger, hunger can also be a cause of poverty. In fact, hunger often impoverishes people of the one valuable resource that they can call their own – the strength and skill to carry out productive work [12]

The researcher also discovered that hunger in childhood impairs both mental and physical growth, crippling capacity to learn in school and earn at work. Evidence from household survey in developing countries showed that at adulthood people with smaller and slimmer body earned lower wages in jobs involving physical labour.



Figure 3: Consequences of Hunger and Food Insecurity. Source: [2]

Food insecurity and malnutrition result in catastrophic amounts of human suffering. The World Health Organization estimated that approximately 60 percent of all childhood deaths in the developing world are associated with chronic hunger and malnutrition [13]. In developing countries, persistent malnutrition leaves children weak, vulnerable, and less able to fight such common childhood illnesses such as diarrhoea, acute respiratory infections, malaria, and measles. Even children who have mild to moderate malnutrition are at greater risk of dying from these common diseases. Malnourished children in the United States suffer from poorer health status, compromised immune systems and higher rates of illnesses such as colds, headaches, and fatigue. Adolescents and adults also suffer adverse consequences of food insecurity and malnutrition. Malnutrition can lead to decreased energy levels, delayed maturation, growth failure, impaired cognitive ability, diminished capacity to learn, decreased ability to resist infections and illnesses, shortened life expectancy, increased maternal mortality and low birth weight.

Food insecurity may also result in severe social, psychological and behavioural consequences. Food-insecure individuals may manifest feelings of alienation, powerlessness, stress and anxiety and they may experience reduced productivity, reduced work and school performance, and reduced income earnings. Household dynamics may become disrupted because of a preoccupation with obtaining food, which may lead to anger, pessimism, and irritability. Adverse consequences for children include: higher levels of aggressive or destructive behaviour, hyperactivity, anxiety, difficulty with social interactions (e.g., more withdrawn or socially disruptive), increased passivity, poorer overall school performance, increased school absences, and a greater need for mental health care services (e.g., for depression or suicidal behaviours).

To understand the magnitude of food insecurity, hunger, and malnutrition, one must consider both the continued rapid growth in world population and the number of individuals below the poverty line. In 1999 the world population reached 6 billion. The United Nations estimated that the world population will exceed 8 billion by 2025. In terms of poverty, the World Bank estimated that nearly 1.2 billion people live on less than one dollar a day, which is the internationally recognized standard for measuring poverty. Another 2.8 billion live on less than two dollars a day [14].

In addition to these progress-slowng conditions, the number of under-nourished people is actually growing in most developing regions. A few large countries have made significant gains, making the global picture appear more promising than it really is. China, Indonesia, Vietnam, Thailand, Nigeria, Ghana, and Peru have all made important gains in reducing food insecurity and hunger. However, in nearly fifty other countries, the number of undernourished people increased by almost 100 million between 1993 and 2003. The absolute numbers continue to rise as a result of rapid population growth, even though the proportion of undernourished people in most developing countries is actually decreasing [2].

Worldwide commitment to improve global food insecurity was demonstrated at the 1996 World Food Summit, where 186 countries pledged to reduce the number of hungry, food-insecure people in the world by 50 percent (to 400 million) by the year 2015. Progress toward this goal has been slow, with a decrease of only 2.5 million people a year since 1992 [15]. At the current pace, the goal will be reached more than one hundred years late. Despite slow progress, some innovative programs have been implemented around the globe to combat food insecurity and undernutrition. Examples of innovative program include: community gardens, farmers markets, community-supported sustainable agricultural programs, and food for work exchange

programs, farm to school initiatives, credit to poor households, income transfer schemes, and agricultural diversification programs.

Food insecurity remains a significant international problem, with developing regions of the world enduring most of the burden. Food insecurity results in considerable health, social, psychological, and behavioural consequences and is undeniably linked to poverty. Despite international commitment, the number of food insecure individuals remains unacceptably high.

IV Remedies to Food Insecurity, Poverty And Malnutrition

Food insecurity is a multi factorial problem; it needs to be tackled using multifaceted approach. A growing number of people are deprived of the fundamental right to food, which is essential for all other rights as well as for human existence itself [16]. He also opined that food and nutrition crisis has deepened in recent years, as increased food price volatility and global economic recession affected the poor. In a strategic agenda, economic growth alone cannot bring lasting solution to this malady. This is in agreement with [4] that economic growth takes time to reach the poor, and may not reach the poorest of the poor. Hence, reducing extreme price volatility, expanding social protection and child nutrition action is necessary for eliminating hunger as rapidly as possible. Policy makers should promote sustainable and innovative agricultural system. There is need for accurate and timely early warning of food crises. Women empowerment will also do a lot of good .A combination of these approaches will go a long way in reducing poverty and malnutrition, thus increase food security.

V Conclusion

The conceptual framework on the Causes of Malnutrition revealed that there is a synergistic relationship between Poverty, Food Insecurity and Malnutrition. Poverty leads to food insecurity, food insecurity leads to malnutrition and malnutrition invariably leads to poor health status and death. Therefore, we need to take heed of the double burden of malnutrition caused by poverty, hunger, and food insecurity. This is of paramount importance and should be communicated to current health practitioners, educators, extension workers, policy makers and future generations of nutrition students.

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