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Nutrition problems, policies and applicable strategies: Consequences and impact on health

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Abstract

This paper is a review of nutrition problems, policies, research, technologies and applicable strategies, and their Consequences and impact on Health. It attempts to underscore the importance of these issues to contemporary dialogue in matters of health, agriculture and other variables, but more importantly from a development perspective. Although these issues have been discussed over decades in the international literature, this review is significant because development issues have been paid scant reference to, by many developing countries. The paper argues that all these problems are preventable.

Keywords: Nutrition, Polices, Research, Technologies, Strategies, Malnutrition, Hunger, Population, Development

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1. Introduction

As far back as 1974, at the World Food Conference in Rome, it was stated that 500 million people in the world were underfed. Today, as things stand, it is observed that poverty, inequality and unemployment has increased in many developing countries, and the numbers are larger. This could be attributed to the all embracing reality that, world populations have increased substantially and that poverty has worsened since 1974, some four decades ago. Too little is known about the state of nutrition in both rich and poor countries, between the so – called developed and developing world. This nutrition problem is exacerbated by deficiencies in protein and energy, Iron, vitamin A and iodine. This is exemplified further in terms of morbidity due to malnutrition which encapsulates itself in stunted growth, kwashiorkor and marasmus, anemia, blindness, goiter, cretinism and many other disease conditions (Adams, 1980; Berg, 1973; Fomon, 1974; FAO / WHO, 1976). Vitamin A deficiency causes blindness and endemic goiter due to iodine deficiency. What is nutrition for? What is the contribution of nutrition to the prospects of development? The paper will therefore attempt to posit some answers in the course of the discussion and in terms of addressing the issues raised in the title of the paper.

2. National development in the wake of nutrition

Nutrition is a universal issue, problem and challenge to many developing nations throughout the world. It raises its head in almost all continents, but is most stark in Africa, Asia, Latin America and the West Indies. It affects a number of countries in the developing world and to this end South Africa is not exempt from the scourge of nutrition problems. These problems have persisted and have worsened in the 21st century. The problem has worsened despite the pace of modernization, the increased pace of development, so – called greater democracy in the ‘Third World’ and the myth of the concept of Africa rising, which is touted by academics, governments and business policy – makers, who justify the success of democracies in the developing nations because there is some increased participation in elections. Elections have also maintained the status quo in Africa, Asia and Latin America, in many instances, Today, it is a new type of colonialism through the consolidation of globalization, the extension of neoliberal policies and rampant capitalism that subjugates people and influences gullible governments.

The West in its pursuit of consolidating its influence has wreaked havoc in parts of the so – called “Third World”. It has negatively influenced the politics of Iraq, Iran, Libya, Angola, Pakistan, Afghanistan, Egypt, Tunisia, Algeria, Syria, Lebanon, Turkey, Sudan, Somalia and, is now raising its ugly head in Russia with the Crimean and Ukraine issues, which has the potential of changing the geopolitics of the world and, a host of other countries the world over. It has led to war and protracted insurgencies, at great monetary cost to the economies of these countries and has led to wanton destruction of innocent people’s lives. This has given rise to a dependency syndrome, the propping up of dictatorships, very serious socio – economic problems, health crises, the destruction of essential infrastructure required to run a nation, shortages of food, serious nutrition problems, the destruction of the education systems in these countries, a shortage of medical supplies and so

on; in fact the very tearing up of the social and economic fabric of these societies. All of this affects in reality all sectors of these societies and nations.

Core to these problems is the question of nutrition and the required and necessary development, in order to deal with this wanton degradation of human life. These issues have worsened due to diverse factors and, are also due to the economic recession which began in 2008 under the guise of Western opportunistic capitalism, the high prices of oil and gas and of manufactured goods from the industrialized countries, relative to the prices obtained for products exported from the developing countries. All of this is further exacerbated and tied up adverse weather conditions including man – made strife, which often leads to famine. It also leads to low levels of production, recession, high inflation, shortages in foreign currency in order to undertake business and buy sufficient goods, services and food. Loans and money borrowed by developing governments have to be paid by means of crippling interest payments. High levels of corruption in many developing countries, including South Africa is another important variable as the rich get richer and the poor live under the radar of the bread line. The failure of developing nations to emphasize and consolidate agricultural production and equitable food distribution as central goals to development is cardinal. In other words the status quo in terms of the vicious cycle of poverty and helplessness of poor people and the widening inequality with no work opportunities is an indictment to “first” and “third” world governments and, a greater indictment to capitalism in general. This is because poor people and generally poor countries have little control over their own destinies and this destiny is tied to poor governance and the neoliberal agendas of the capitalist classes and the capitulation to these forces by a host of governments in the developing world.

Increased food production and a reduction in human fertility must be considered as important variables in developing countries for purposes of development in general. It must be recognized by policy makers and the so- called “Third” world governments and their institutions that the lack of food production and overpopulation are not the main causes of hunger and malnutrition. The world at the moment produces sufficient food but the issue revolves around household poverty and in 1977, it was identified by (Lappe and Collins, 1977) that “during the period 1977 the world produced adequate food to feed 4.5 billion people and could feed 6 billion people by the year 2000.” What then is the problem today? There is no shortage of food today, but there is a failure to distribute the food properly and distribute it to the neediest. The issue is that governments must, as a policy imperative feed their populations a balanced diet and those that lack the necessary agricultural potential could and must use other means to earn the funds needed to purchase food imports. Developing countries must also invest in meaningful and scientific agricultural extension programmes, in order to improve agricultural productivity, and invest in measures that will curb population growth.

On the other hand malnutrition and under - nutrition are important parts of the complex, widespread problems of poverty and deprivation, which affect millions, perhaps the majority of people in the developing nations. What then is meant by under – nutrition and malnutrition? “Under – nutrition means the insufficient intake of calories or nutrients, for full bodily health with no physical or clinical evidence present. Malnutrition is defined as the inadequate intake of nutrients with clinical, biochemical, or other evidence” (Latham, 1972; Latham, McGandy and McCann, 1978). What then are the consequences of these phenomena?

“The downtrodden, the marginalized, the poor and the hungry, the malnourished are unable to live a normal life and are less likely to fulfill their potential as human beings and more importantly would not be able to contribute fully to the development of their countries” (Latham, 1984). The number of people in the 21st century is increasing more rapidly “than are services and goods, necessary to relieve malnutrition and poverty. It is also clear that economic gains as measured by Gross National Product (GNP), or industrial output, are not reflected in improvements in the quality of life of the majority of ordinary people. The gap between the rich and poor is widening” (Karodia, 2008). Malnutrition and common infections combine to pose an enormous problem and hazard to the health of the majority of the world’s population that lives in poverty. “These health hazards particularly threaten children less than five years of age, and in addition, many children succumb and die due to malnutrition and infectious disease. This therefore sees the birth of more children” (Scrimshaw, 1968). In this regard Scrimshaw (1968) postulates through his research as follows:

- Childhood mortality rates are high and malnutrition is a frequent primary or secondary cause of deaths in young children in developing countries.
- The children who live beyond 5 years of age are not mainly those who have escaped malnutrition or infectious diseases, but those who have survived these hazards.
- They seldom are left without permanent sequelae (after effects) or scars.
- They are often retarded in their physical, psychological, or behavioural development and do not function optimally as adults and possibly have a shortened life.
- There is a lack of environmental stimulation and a host of deprivations related to poverty.
- A major challenge to the health systems of developing nations and to their health workers, development economists, their governments, and international donor agencies is how to reduce the morbidity and mortality, and permanent sequelae that result from the synergism of malnutrition and infection.

Latham (1984) points out that the answer to some of these questions and highlighted issues is not “fancy hospitals such as those built in the capital cities and provincial centers of many developing countries, and, it does not lay in elaborate manufactured foods and expensive infants formulas. The need is not for over trained doctors nor for advanced food technology. A significant dent could be made, if affluent nations could summon up the resolve to make the reduction of deprivation a number – one goal and if the governments of the developing countries could accept this as a number one priority. Politicians, leaders and the bureaucracy must be persuaded that attention to these problems is not only desirable but, would have a political payoff and will gain them popular support.”

Leaders, politicians, the government bureaucracies, churches, civil society, non – governmental organizations, international donor agencies, foreign governments desirous in helping, academics, in fact the population at large must first by means of consultation discussion, must first decide what “development” really means. Planners and economists have tended to view “improved nutrition and health as welfare questions. It has been viewed in the past and this continues into the 21st century that, development is mainly industrialization and measured in terms of productive capacity and material output of a country. It is now clear that the classical patterns of development often contribute very little to the quality of life of the majority of citizens of any country and at times, aggravates the problems of the poor” (Karodia, 2008). We

now need to ask – What is the purpose of economic development and who is it for? “If improved health and better nutrition for people are not considered in development plans, is it really development? Agriculturalists need to consider what is the purpose of improved agriculture? Presumably it is mainly to produce more, better – quality food or more cash crops so that persons have increased incomes to purchase better diets and other essential goods to improve the quality of life” (Karodia, 2008). Governments in developing countries should support those projects that will support a large segment of the population, help reduce inequalities in income distribution. This will improve the nutrition, health and quality of life of those currently deprived. Labour intensive projects, in this regard are often more preferable to capital – intensive ones, and support for small farmers is more important than that to commercial and large – scale farmers, who can hold their own.

3. Policy proposals to improve nutrition and health

According to Reutlinger (1967); UN Handbook (1967, 1968 and 1969), Latham (1984) and Morley (1973) policy proposals to improve nutrition and health include:

- The emphasis throughout the world’s health systems and particularly in the developing world, healthcare services should be aimed and geared towards primary health care.
- Healthcare must be provided by auxiliary medical workers (persons with considerably less training than doctors), working in rural areas, scattered clinics, rather than a few doctors and a hierarchy of supporting staff in hospitals in larger cities and towns.
- Simple equipment is required and a limited range of medicines.
- The emphasis should be on preventive rather than curative medicine, in order to provide immunization services, providing maternal and child health services, including family planning services, nutrition programmes and direct local public health measures must be emphasized.
- The promotion of breast feeding.
- The monitoring of child growth.
- Oral rehydration for diarrhea.
- Expanded immunization programmes.
- The control of STDS and HIV / AIDS education.

Most authorities now accept that most of the malnutrition in the developing world is due mainly to inadequate intake of food and is not simply due to protein deficiency. There has been an overemphasis tendency in respect to the protein problem and too much stress is paid upon protein deficiencies with a neglect of the first goal of a food policy which should be geared towards satisfying the energy needs of the population. According to the FAO (1976)

An important lesson to be learnt is that commercial production of relatively expensive protein – rich foods, the amino acid fortification of cereal grains, the production of single – cell protein, and several other ventures that a few years ago were offered as panaceas for the world’s nutrition problems can only reduce the problem of protein – calorie malnutrition to a very small degree.

Genetic efforts to change by small amounts amino acid patterns of cereal grains are much less important, than increasing, the yields per hectare of these cereals and other food crops.

According to Latham (1984)

A modest increase in cereal, legume, and vegetable consumption will greatly reduce the prevalence of protein – calorie malnutrition and growth deficits in children in developing countries, especially if combined with control of infectious diseases. Vitamin A deficiency must be controlled.

The control of infectious diseases and the improvement of nutrition deserve very high priority in development plans and in assistance programmes to developing countries. All of this should be instituted together because they would be mutually reinforcing and more economical if provided in a coordinated manner, rather than separately. The increased production of food and its availability to the needy and most vulnerable should be an integral part of this strategy. Historical and epidemiological evidence suggests Karodia, (1998; 2008) that “reductions in infant and child mortality and improvements in health and nutritional status may be pre – requisites to successful birth spacing”. In the over – populated areas of the developing world, family planning must become a priority and family size must be controlled by government policy that defines the measures and rewards families for controlling population growth. The objective should be to control infectious disease, followed by improved nutrition and the provision of family planning services. These services are synergistic and each may contribute to the success of the other.

4. Importance of breastfeeding

Fomon (1974) and Rosa (1975) point out that “it is often assumed that the Western influence and Western technologies always contribute to development in poor countries. A specific example of a Western technology that has proved extremely harmful in many third world countries is the replacement of breastfeeding by bottle – feeding. The advantage of breast over bottle feeding include the ready availability and convenience of breastfeeding; the adequacy of nutrients in breast milk; the reduced likelihood that it will lead to infant obesity; the economic advantages for the family and the nation, the good fostered mother – child relationship; the immunity conferred by globulins and other anti infective constituents in breast milk; the reduction of developing diarrhea; and the contraceptive effect of breastfeeding” (Fomon, 1974; Greiner et al., 1974; Rosa, 1975). Latham (1984) indicates that “the wider spacing of children resulting from breastfeeding is perhaps having a greater influence on the rate of population increase than is the pill or IUD in many countries, often because they are not available to families or are improperly used”. Although breastfeeding has advantages, it is now recognized that for about two – thirds of the world’s population bottle – feeding of infants is highly undesirable. Bottle – feeding is responsible for a huge amount of childhood illness and for many deaths. Why is that bottle – feeding is such a serious public health problem for infants in developing countries and for infants of the poor throughout the world? (Jelliffe and Jelliffe, 1978; Greiner, Almoth and Latham, 1979). They identify the following issues:

- Over dilution that leads to marasmus.
- Contamination leads to diarrhea.

- Western influence.
- Medical advice.
- The breast as a sex symbol.
- Advertizing and marketing of products for bottle feeding.

It is therefore obvious and necessary that major efforts are now required and urgently needed to support and protect breast feeding where it is still widely practiced and to promote it where it has been replaced with alternative infant – feeding practices.

5. National food and nutrition policy

Governments and their health departments in the developing world that, food and nutrition policies need to be integrated into national development plans. These policies, although implemented in some countries, have been given little attention by most governments and South Africa is no exception. The general objectives of a food and nutrition policy should be to improve the quantity and quality of food eaten by the population and particularly poor people. Latham (1984) states that “in nutrition there exists the paradox that overconsumption of food or of certain dietary items also carries a risk to health. For example, consumption of food above the needs for energy expenditure leads to obesity, and high intakes of cholesterol and saturated fats increase the risk for heart disease. High consumption of salt contributes to high blood pressure. It is therefore obvious that an equitable distribution of food between the poor and the rich might improve the health of both groups of the population.” Therefore, a national food and nutrition policy should cover the nutritional implications of policies in three different areas:

- Food supply
- Food demand
- Biological utilization

5.1. Food supply

A country must have adequate food supply for purposes of nourishment for its population, in order to satisfy nutritional requirements. A fundamental strategy must be to increase food production. This is an agricultural question and therefore will not be discussed in this paper. Agricultural policy makers must be made aware of the nutritional needs of the population. Often there are areas in a country where land is not suitable for food crops. Many developing countries rely on food imports in order to maintain productive agriculture. The important point is the fact that nutritional implications of government policies related to expanded cash – crop production, is for governments to discourage the import of food and concentrate on home production. Another element is marketing, including transport and storage which must be simple as possible in terms of logistics, with a minimum involvement of intermediaries. Cooperatives are one mechanism that may benefit both producer and consumer. Post harvest losses require urgent attention also. Other factors besides food production and marketing that affect food supply are commercial food processing, industrialization, and the

policies related to import and export of food, that is, the international trade in food and may include donated food from multilateral or bilateral agreements.

5.2. Food demand

This is determined by per capita incomes and food prices. The poor are the most vulnerable to food deficits and malnutrition. Policies of developing countries governments should be aimed at increasing the purchasing power of families with low incomes, in order to improve their nutrition. Therefore, governments must increase employment, and better wages become components to a nutrition policy that must attempt to reduce inequality, in any developing country. In many poor countries the redistribution of land to benefit poor rural families is absolutely necessary. This is a stark reality in democratic South Africa but, the process has moved very slowly post democracy in 1994. In addition tax policies must ensure a fair distribution of wealth, if the objective of improving the nutrition of the poor is to be realized. Food prices affect supply and demand. If prices are low farmers get less for their produce, and if too low, they will not produce or sell. On the other hand, lower prices represent an increase in the purchasing power of the people. Given the protracted economic recession, governments even in normal times must seriously consider the possibilities of subsidizing the price of food prices. All of this would impact positively on nutrition of the population, other policies could include supplementary feeding, nutrition education, consumer guidance, and family planning and the improvement of maternal and child health.

5.3. Biological utilization

Biological utilization is seldom given recognition and consideration by planners, and is a major area of concern for health workers and nutritionists. Disease, which is a phenomenon in children in the developing world, due to fevers and poor appetites, common infections, raises the need for protein intake in order to avoid diarrhea or intestinal infections or because of high worm loads, affects nutritional requirements and, therefore, impair the proper utilization of nutrients. Nutrition policies should include the control of infectious and parasitic diseases, which are related to malnutrition. It should also include ecological factors related to health and nutrition, the improvement of health services available to the poor, aiming at cleanliness and food hygiene, good domestic supply of water, environmental sanitation, child spacing and health and nutrition education. Primary Healthcare (PHC) programmes should be emphasized and reoriented to serve the poor more adequately and the PHC programmes should become an imperative in the developing countries, with more than adequate monetary capabilities provided by governments.

6. Nutritional needs and wants

There has to be agreement among nutritionists on the needs and requirements of the most important nutrients. Often, it is found that if populations have adequate incomes they increase their consumption of animal products. This has a limited relationship to nutritional needs and causes major health problems for

the affluent. Obesity increases, so does heart disease, dental caries and hypertension. All of this therefore leads to imbalanced diets. Societies in both the first and third worlds are sedentary in nature and this gets worse with affluence. It's a question of calorie consumption. Animal feed must be reduced.

7. Conclusion

- Governments in general have exacerbated and contributed by their actions aggravated the malnutrition problem.
- Nutritional implications in terms of policies are often not considered by governments.
- All of this is exacerbated by price regulations, tax policies, wage levels, over attention to cash crops rather than food production, diversion of health budgets to large hospitals, rather than rural health units and preventive health services.
- Nutrition programmes generally do not reach the majority of the poor population and the vulnerable.
- Both work capacity and work output are influenced by nutrient intake and nutritional status of those who perform work.
- Childhood malnutrition affects the future capacity of individuals to perform work.
- Programmes to improve nutrition and health should form a cornerstone for human development.
- National development must be for the benefit of the majority of people and must be designed to improve their quality of life.

Developing nations and their governments have no option but to invest heavily in nutrition programmes, in order to improve the nation's health because the majority of people are vulnerable and poor. If this is done, then only can productivity of the nation improve and, this will thus secure development and the promotion of the general welfare. The issues discussed in this paper are preventable by means of sustained intervention by developing nations. Not much has improved since 1974. This is a matter of serious concern and therefore, sustained, coordinated, urgent and necessary intervention strategies are required by developing countries, in order to promote the general welfare of their vulnerable and poor citizens, in respect to nutrition policies and human nutrition in general.

Final note and acknowledgement

Although some references are not recent, the work of Latham and others is still relevant to current discourse as concerns nutrition. The author expresses his thanks to Cornell University for the use of some of the sources used in the preparation of this article. The author was a development research fellow at Cornell University, in 1989.

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