MALNUTRITION, HUMAN GROWTH AND DEVELOPMENT IN NIGERIA: A NEED FOR COMMUNITY ENGAGEMENT AND SOCIAL PROTECTION INTERVENTIONS

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Abstract  
Food is composed of substances or nutrients required for proper functioning, maintenance and growth of the body. Adequate intake of the various classes of food in their right proportions is essential for proper growth and healthy life. However, absence of food or inability to take improper diet and absolute deficiency or excess of one or more nutrients could lead to retardation of human growth and development. This study is an investigation of Malnutrition and Human Growth and Development in Nigeria: A Need for community Engagement and Social Protection Interventions. Empowerment theory was considered in analyzing the study. The study found that malnutrition interferes with human functions and may result to death. Malnutrition, especially in the infants have a serious debilitating effects on brain development and function since the infected infants has smaller head (brain) size and much lower intellectual development (lower I.Q). It was recommended that government should embark on continuing modernization of agricultural sector in order to accelerate surplus qualitative food requirement for human’s healthy development. There is need for nutritional society of Nigeria, the government agencies like national orientation agency and other related bodies to engage members of the community and educate them on proper nutrition. The study concludes that government at all levels should make efforts with a view to improving the socio-economic standard of the people about proper food intake or diet since poverty and ignorance about improper diet constitute the underlying causes of malnutrition in Nigeria.

Key Words: Malnutrition, Human Growth, Development, Community Engagement, Social Protection Interventions.

Introduction  
Hippocrates the father of medicine once said to his students “let food be your medicine and medicine be your food” and that “a wise man should consider that health is the greatest of all human blessings”. Thus, he often prescribed diet (food), water, fresh air and sunshine to his patients as essentials for recovery and maintenance of good health. Of course, good health is impossible without good nutrition and for good nutrition one needs a healthy, balanced diet. Food is composed of substances (nutrients) required for proper functioning, maintenance and growth of the body. The body requires a certain level of each for it to function properly. Adequate in-take of the various classes of food in their right proportions is essential for proper growth and healthy life Nutrition which refers to the various ingredients or the “combination of the processes
by which the living organism receives and utilizes the materials (food) necessary for the maintenance of their functions such as growth and the renewal of its component (Umoh, 2000). According to Obinna (2015):

Food security exists when all people at all times, have physical, social and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life. It is common knowledge that the condition of foods from the farms and handling by food processors are major determinants of nutritional status of a given society (p.35).

Proper nutrition is known to have played a major role in diseases prevention and treatment. These include such disorders as atherosclerosis, cardiovascular disorder, diabetes mellitus, certain anaemias, osteoporosis, poor wound healing, burns, some post-operative complications of surgery, inborn errors of metabolism, chronic renal and liver diseases, obesity, cancer, avitaminosis and HIV/AIDS (Ima, 2009). However, the inadequacy or over adequacy (excess nutrients) affects human beings in different ways. The prevalence of malnutrition and hunger is associated to many diseases such as kwashiorkor, marasmus, etc. According to Giddens (2010), hunger, malnutrition and famine are major global sources of poor health. Many people in the developing world appear to be on the brink of starvation, it has been estimated that 830 million people go hungry every day, 95 percent of them in developing countries” (p. 534).

Conceptual Clarity
For the purpose of this paper, the following key concepts will be clarified:

**Growth and Development:** Growth and development can be considered within the framework of the theory of evolution. In sociology and anthropology, evolution is traceable to the ideas of an English scholar, Herbert Spencer. Spencer conceived societal evolution in terms of movement from simple to complex or from homogeneous to heterogeneous. In Spencer’s view, evolution is the fundamental law, which emphasizes progress and it brings about structural differentiation and also specialization of functions.

In line with Spencer’s idea of evolution, growth can be defined as increase in size and weight of a structure. According to Charles *et al.* (2011), growth is an increase in amount of the whole or part or part of the organism. Growth involves an increase in height or weight. Growth is seen as a continuous and orderly process as human beings progress through a continuous, orderly sequence and change as they pass from one age level to another.

Development on the other hand is broader than growth. It is conceived as a process of organized growth involving an organized series of changes necessary for a structure to fulfill an essential function (Charles *et al.*, 2011). Development may be genetically controlled but it can be strongly influenced by the environment. This points to the fact that all human societies or species survive at the mercy of the environment. Human development starts from conception and continues throughout for several years after birth. Graig’s definition will be adopted for this study, Graig (1996) defined development as the changes over time in the structure, thought or behaviour of a person because of both biological and environmental influences.

**Malnutrition:** Malnutrition (also called malnourishment) is the absence, inadequate or excess of needed nutrients in the body. Umoh (2000) defined malnutrition as disease condition resulting from a sustained relative or absolute deficiency or excess of one or more nutrients. Malnutrition is a condition that occurs when people consistently do not consume or absorb the right amounts and types of food and essential nutrients. Globally, it contributes to nearly half of all child deaths – that is more than three million children each year (Adebowale, 2018). Malnutrition has remained a key contributor to infant and maternal mortality, poor cognitive development, and increased severity of diseases which adversely affect productivity in Nigeria.

**Theoretical Framework**

Julian Rappaport’s Empowerment Theory will be used in analyzing this study. Empowerment theory is construct that links individual strengths and competencies, natural helping systems, and proactive behaviours to social policy and social change (Rappaport, 1984). Empowerment is associated with a social
scienctist, Julian Rappaport (1981). The roots of empowerment theory extend to history and are linked to Marxist sociological theory. These sociological ideas have continued to be developed and refined through Neo-Marxist theory (also known as critical theory). According to Rappaport (1984), empowerment is a process: the mechanism by which people, organizations, and communities gain mastery over their lives. In a broader sense, the term empowerment refers to measures designed to increase the degree of autonomy and self-determination in people and in communities in order to enable them to represent their interests in a responsible and self-determined way, acting on their own authority.

Empowerment theory includes both processes and outcomes, suggesting that actions, activities, structures may be empowering, and that the outcome of such processes result in a level of being empowered (Swift & Levin, 1987). Empowerment theory connects individual wellbeing with the larger social and political environment, and assumes that people need opportunities to become active in community decision – making in order to improve their lives, organizations, and communities. People may develop a sense of empowerment even if wrong decisions are made because they may be empowered to develop a greater understanding of the decision making process, develop confidence to influence decisions that affect their lives, and work to make their concerns known.

In applying this theory to the problems of malnutrition affecting human growth and development and the need for community engagement and social protections interventions, empowerment model can be used by community health workers, nutritionist and other related bodies to help people in communities with beneficial information (knowledge) that can help improve their quality of food (balanced diet). This can be done by educating the community to unlearn most of the superstitious or cultural beliefs or ignorance about food taboos which prevent them from eating foods that are beneficial to the body or that can improve their nutritional value and prevent illnesses and diseases. Empowerment approach is also a corner stone in educating or engaging members of the community on how to help (improve) the land to produce more food that will improve their healthy growth and development of community members.

Causes of Malnutrition in Nigeria

There are many causes of malnutrition in Nigeria, some of the few causes include:

1. Ignorance of what a balance diet is, and the disadvantage of certain cultural practices can also affect people’s health. For example, some superstitious beliefs about food taboos such as denial of snails, which is a source of protein to pregnant mothers, on grounds that, it will cause excessive salivation in the baby after delivery and the denial of eggs to children on grounds that it will encourage them to steal would affect their health. Many children are malnourished because they do not get enough to eat. While some are malnourished because they eat a lot of starchy foods like corn, rice, cassava, or plantain, and not enough body-building and protective foods like milk, eggs, meat, beans, fruits, and vegetables (Werner et al, 1998). Moreso, in many areas there is a popular belief that a mother who eats plantain when pregnant will cause her child when born to have a sunken fontanel. Many ideas about diet during pregnancy and children are even more harmful, and forbid the mother most nutritious foods (Etobe, 2005: Werner et al, 1998). It is especially important that pregnant women and mothers of small children be well informed about their own and their babies health needs and they should make sure their children are eating the right foods and growing well. Good food is needed for a person to grow well, work hard, and stay healthy. Many common sicknesses come from not eating enough of the foods the body needs. A person who is weak or sick because he does not eat the right foods, or does not eat enough, is said to be poorly nourished or malnourished. He suffers from malnutrition. Health depends on many things, but above all it depends on whether people have enough to eat. Malnutrition is a major health concern in many countries because it contributes to a variety of health issues like stunted growth and poor immunity.

2. Population explosion, nutrition, lifestyle, environment and their disastrous consequences of drought, desertification, floods and starvation are some of the commonest effects of environmental problems that affect health, growth and development as well as socio-economic well-being in developing countries (Meremikwu, 1999). In developing countries, the population growth outstripped agricultural development, food supply and housing. The rate of communicable diseases and nutritional deficiency states is on the increase in those communities.
In terms of Nutrition and lifestyle, household food insecurity threatens growth and development of most communities in sub-Saharan Africa. Although, wars, natural disasters (drought of floods), population explosion and failure of food systems have been recognized as causes of hunger and starvation, the loss of basic entitlement to livelihood (e.g. cash, own labour, land or social security) as a result of poverty appears to be the major determinant of starvation and malnutrition. Inadequate intake of essential nutrients result in varying degrees of poor nutritional states such as kwashiorkor, vitamin A deficiency, and iron deficiency anemia (Meremikwu, 1999).

3. Another major threat is climate change, crops grown in an atmosphere of increased carbon dioxide (C0\textsubscript{2}) contain lower levels of protein, zinc and iron. Hundreds of millions of people could become more nutrient deficient as the climate changes. Increasingly the organic matter of soils could help grow food that add a buffer to these reductions. Soil and forest contribute to improve nutrition as well by planting more trees on farms, storing more carbon in soils, and improving crop – livestock interaction, we will not only fight climate change but also wage a stronger battle against malnutrition.

Werner \textit{et al} (1998) outlined many reasons why children suffer from poor nutrition as follows:

a) Mothers do not realize what foods are most important (for example, breast milk)
b) The family does not have enough money or land to produce the food it needs
c) A few rich persons control most of the land and the wealth
d) Parents have more children than they or their land can provide for, and keep having more
e) Fathers lose hope and spend the little money they have on drink
f) People do not look or plan ahead.

Werner \textit{et al} (1998) warned that a responsible community health worker or nutritionist does not wait for people to get sick. She tried to stop sickness before it starts and encourages people to take action now to protect their health and wellbeing in the future, since early treatment is a form of preventive medicine. A health worker can educate members of the community on how to help the land produce more. Most food come from the land. Land if used well can produce more food. Health workers need to know ways to help the land better feed the people now and in the future. Health programmes should try to work towards a balance between people and land through family planning or helping people have only the number of children they can feed or carter for (Werner \textit{et al}, 1998). The community’s wellbeing depends on the involvement not of one person, but of nearly everyone. Therefore, responsibility and knowledge must be shared. Health is more than not being sick. It is wellbeing: in body, mind, and community. People live best in healthy surroundings, in a place where they can trust each other, work together to meet daily needs, share in times of difficulty and plenty, and help each other learn and grow and live, each as fully as possible (Werner \textit{et al}, 1998).

Inadequate found allocations and releases for planned implementation work plan geared towards nutrition intervention, law preventive measures combatting malnutrition, lack of transparency of government to fund allocation, disbursement and judicious utilization are some of the factors that worsen the situation in Nigeria.

**Forms of Malnutrition**

These include:

1. **Starvation**: This means an almost absent or zero intake of food. Such conditions may occur during famine, war, drought and pestilence.

2. **Under-Nutrition**: This is a pathological condition resulting from the consumption of inadequate amounts of food over an extended period of time (Umo, 2000). Under-nutrition is common in under-developed countries including Nigeria.

3. **Specific Nutrients Deficiency**: It is a pathological condition that results from relative or complete absence of nutrient in the stable diet. For instance, endemic goiter due to iodine deficiency or iron deficiency anaemia.

4. **Nutrient Imbalance**: it is a disease state that results from a disproportion in the nutrient composition of the stable diet. The imbalance may or may not be linked with absolute deficiency of a nutrient.

5. **Over-Nutrition**: It is a disease state that results from consumption of excessive amount of food over an extended period of time. Over-nutrition is the main source of malnutrition in many developed countries.
It often results to a disease condition known as obesity. Obesity is the condition that exists when the body is overloaded with excessive fat. It may be defined as the presence of unusually large amounts of fats in the adipose tissues of the body. Obesity is a disease condition facing both developed and underdeveloped or developing countries of the world, although, it is more common in developed world. Over-eating is the main cause of obesity. The amount of food consumed each day provides more units of energy than the energy expected to maintain the body’s mechanism. This imbalance may result from over-consumption of energy dense foods, under expenditure of energy or more frequently from a combination of both. Other associated causes are over-indulgence in sweet foods such as cakes and chocolates, or starchy foods like bread and biscuits, as well as excessive or high fat intake. Age and sex may also be a causal factor, from puberty; females are more obese than males. Moreover, other associated causes are pregnancy, economic/social class, cultural factors, poor eating habit, reduced physical activity, genetic factors/family history and endocrine factors (some endocrine secretions can induce pathological appetite encouraging obesity, (Ima, 2009). Prevention may include: Reduction in energy intake especially from refined sugar and sweet, regular exercise to maintain appropriate weight, adoption of better eating habit that excludes eating in-between meals.

In Nigeria, it is acknowledged that malnutrition is the result of different processes in the society acting at various levels from individuals, household, community and the nation. Most of the advice about food is influenced by a number of taboos and traditions resulting in harmful effects of patients (Ima, 2009: Etobe, 2005). The major nutritional problems common in Nigeria are “protein energy malnutrition in addition to micronutrients deficiencies in iron, iodine and vitamin A (Umoh, 2000). The most vulnerable persons affected are the infants, young children, pregnant women, and the aged and poorer people in the society. According to World Food Programme, 200 million of the world’s hungry are children under the age of five who are underweight because they lack adequate food. The study further submitted that every year, hunger kills an estimated 12 million children.

**Types of Malnutrition in Nigeria**

1. **Kwashiorkor:** The type of disease condition which involves protein deficiency where energy intake may be adequate. Symptoms of kwashiorkor include growth failure, emaciation or wasting away of body tissues, oedema, swelling in the limbs, lack of interest in the environment, hair changes colour and texture, lack of skin pigmentation and frequent diarrhoea. Its treatment consists of a diet of dried skimmed milk, vegetable oil and other required ingredients of a balanced diet. Some people did not consume enough protein but are very quick to cut down on their protein intake because they have learnt that high protein diet can result to health problems.

2. **Marasmus:** This is a disease arising from a gross energy inadequacy. It is often characterized by severe loss of subcutaneous (skin) fat and gross muscle wasting which culminates in a high emaciated appearance of a wizened old men (Ima, 2009).

3. **Marasmic kwashiorkor:** Refers to the inter-medium cases, resulting in nutritional dwarfism in a majority of cases (Ima, 2009). The causative factors include poor diet (diet refers to what man eats). Poor diet can have an injurious impact on one’s health, causing deficiency diseases such as scurvy, beriberi and kwashiorkor and other health threatening conditions like obesity and metabolic syndrome and common chronic systemic diseases as cardiovascular disease, diabetes and osteoporosis. However, Ima (2009) contend that better nutrition means stronger immune system, less illness and better health. If people are healthy, they can engage in a meaningful economic activity that will enable them to break the cycles of both poverty and hunger. Other causes include infection, the spread and persistence of HIV/AIDS has contributed to the problem of food shortage and hunger, killing many working – age adults. According to the United Nations Food and Agricultural Association (UN, FAO, 2001) HIV/AIDS caused deaths in the ten African countries most afflicted by the epidemic, this will reduce the labour force by 26 percent by the year 2020. According to the report, the epidemic can be devastating to nutrition, food security and agricultural production, affecting the entire society’s ability to maintain and reproduce itself. Other causes may include ignorance, poverty, insufficient food production, uneven distribution of food, food sanitary conditions, overpopulations, large family size, disadvantage in birth order, poor living conditions, lack of birth control and lack of time by working class house wives.
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Nigeria ranks one of the countries with the highest prevalence rate of stunting, wasting and underweight under five children globally and leading country in sub-Saharan Africa (Owoseye, 2018). Owoseye (2018) further stated that underweight prevalence (children who are too thin for their age) increased from 19.4 percent to 31.5 percent, stunting prevalence (children who are too think for their height) increased marginally from 7.2 percent to 10.8 percent. If not checked, this will continue to impede the nation’s economic development. The effects of malnutrition are pervasive. Malnutrition normally interferes with all human functions and may result in death. The costs in human, social and economic terms are enormous. Malnutrition in infants has a serious debilitating effect on brain development and function. The infected infant has smaller head (brain) size and much lower intellectual achievement (Lower I.Q). Moreover, nutritional deficiencies of the B-complex vitamins, especially riboflavin, thiamin and niacin in adult man, have been shown to cause lack of concentration, quarrelsomeness, lacking in motivation, self-discipline, sociability and decisiveness. They are also sensitive to noise, irritable as individuals, aggressive, less humanitarian in outwork and less humorous, have low morale and are unable to sustain mental and physical effort (Umoh, 2009).

Moreover, two chronic nutritional diseases are associated with malnutrition. First, the diseases linked with malnutrition (protein-energy malnutrition (PEM) include, nutritional anaemia, osteopathies, goiter, caries, mycotoxicosis, hypo and avitaminosis, etc. According to Adebowale (2018), these conditions may affect individual’s function due to his/her ill-health. Second, diseases linked with over-nutrition or over nourishment; these could result from wide use of industriously prepared foods and especially high consumption of refined sugar, meat, salt, fats and other processed foods. Diseases arising from these may include obesity, diabetis, atherosclerosis with ischemic heart disease (IHD), uromic diathesis with nephrolithiasis and arthropathy, cholelithiasis, khyperproteinemias, metabolic osteopathies, cancer of the colon and chronic constipation with diverticulosis (Umoh, 2009).

Furthermore, the consequences of iron deficiency (malnutrition) may also include growth retardation, low birth, pre-natal mortality, reduced growth in children, weaknesses and tiredness, decreased physical capacity and work performance in adolescents and adults, it may also leads to lowered immune status, increase morbidity from infection, impaired cognitive performance and delayed psychomotor development (Ima, 2009). Poor nutrition is one of the common causes of infertility. In some women poor nutrition may lower the chance of becoming pregnant as nutritional lack may cause the unformed baby (embryo) to die, perhaps before the mother even knows she is pregnant (Werner, Thuman, Maxwell & Pearson, 1998). Able pregnant women or women who have had miscarriages should get enough nutritious food and use iodized salt.

Poor nutrition during pregnancy causes weakness and anemia in the mother and increases the risk of her dying during or after childbirth. It is also a cause of miscarriage, or of baby being born dead, too small, or defective (Werner et al, 1998). In addition, poor nutrition weakens the body’s ability to resist all kinds of diseases, especially infections. Poor nourished children are much more likely to get severe diarrhea, and to die from it, than children who are well nourished. Measles is especially dangerous in children who are malnourished. Tuberculosis is more common, and gets worse more rapidly, in those who are malnourished. Cirrhosis of the liver, which comes in part from drinking too much alcohol, is common and worse in persons who are poorly nourished. Even minor problems like the common cold are often worse and lasts longer in persons who are poorly nourished (Werner et al, 1998). Davies et al (2014) hinted that:

Many households in low income countries also have limited access to domestic water supplies, often spending dozens of hours per weeks hauling small volumes of water from distant sources for their drinking, cooking, and washing needs. Inadequate water supply and sanitation serves as key contributors to the spread of diarrheal disease, which in turn limits people’s ability to absorb calories, protein, and essential micro nutrients. The malnutrition resulting from repeated or prolonged diarrheal illness profoundly compromises the human immune system, and can accelerate the progression of other diseases such as HIV/AIDS. A
pernicious cycle arises, in which the physical impacts and medical costs of malnutrition and frequent illness reduce labour productivity and farm output, limit household income, and prevent individuals from making biological use of the food they are able to obtain (p.180).

Again, Werner et al (1998), revealed that poor nutrition is the most common cause of many health problems including: (1) failure of a child to grow or gain weight normally, (2) slowness in walking, talking, or thinking. No wonder, there is a saying that “is what you eat that you think”. (3) Big bellies, thin arms and legs (4) common illnesses and infections that last longer, are more severe, and more often cause death. (5) Lack of energy, child is sad and does not play (6) swelling of feet, face, and hands, often with sores or marks on the skin (7) thinning, straightening, or loss of hair, or loss of its color and shine (8) poor vision at night, dryness of eyes. The above health problems caused by nutrition are common among children. However, in anyone it involves: (1) weakness and tiredness (2) loss of appetite (3) anemia (4) sores in the corners of the mouth (5) painful or sore tongue (6) burning or numbness of the feet.

Conclusion and Recommendations

It is imperative that adequate and proper in-take of the various classes of food in tier right proportion be taken for proper growth and healthy development. The absence of food or inability to take proper diet and absolute deficiency or excesses of one or more nutrients causes tremendous effects on human growth and development in the sense that malnutrition interferes with human functions and result to death. Malnutrition, especially among infants is found to be associated with serious debilitating effects on the brain development and function. The infected infants have smaller head (brain) size and much lower intellectual development (lower I.Q) among other things. There is therefore urgent need for government at all levels to make concerted efforts with a view to improving the socio-economic standard of the people and educating them about proper nutrient since poverty and ignorance about food intake constitute the underlying causes of malnutrition in Nigeria. 

1. Nutritional Society of Nigeria or other related agencies must educate members of the public on proper nutrition. This will enable people to learn more about themselves and their health status and use the knowledge to improve on their health. 
2. People must avoid making hasty, ignorant and drastic decisions on nutrient intake and food choice.
3. Government must embark on continuing modernization of the agricultural sector. This will go a long way to accelerate surplus qualitative food provision for man’s healthy development.
4. People should be given orientation and education on the art of good eating and good lifestyle including the importance of a balanced and healthful diet. With a well-balanced diet, one enjoys good health, has a high working capacity, a good resistance to disease and stress and lives longer.
5. Efforts at controlling malnutrition should be geared towards a general improvement of the socio-economic standard of the people since they often constitute the underlying causes of malnutrition disorder. Such measures should incorporate nutritional education, environmental sanitation, personal hygiene, birth control, adequate breastfeeding, appropriate supplementary as well as improved weaning practices.
6. Efforts must be made to prevent malnutrition in children. This can be done by improving on the nutritional status of pregnant women. After birth and for the first four months of life, breast milk should be the main or only infant diet.
7. Better farming methods such as using irrigation, contour ditches, alley cropping, rotation of crops, breeding of fish, beekeeping and farming, gardens beside the home should be encouraged

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