UNIJERPS
Unizik Journal of Educational Research and Policy Studies VOL.9;
https://unijerps.org
2021 Impact Factor: 5.641; 2020 Impact Factor: 5.355.
July-December, 2021
Indexing and Impact Factor URL: http://sjifactor.com/passport.php?id=21363

EFFECTS OF NUTRITION ON THE GROWTH AND DEVELOPMENT OF CHILDREN BETWEEN 0-6 YEARS OF AGE IN THE COVID-19 ERA

Dr. Adaeze Oguegbu
Liberty University, Virginia, USA
aoguegbu@liberty.edu

ABSTRACT
Feeding is one of the characteristics of living things. It is the process of eating or drinking substances into the body not just to stay a life but to lead a healthy life. Food generally is of different types and the functions they perform in the body system vary. This implies that every individual needs varieties of different classes of food for optimal growth and development. This is more essential for growth and development from conception to the age between 0-6years because during this period, the children are undergoing critical stages of their growth and development and needed good nutrition to aid such. Any malfunction or retardation encountered at this period could cause some irremediable consequences in the children's life even at an old stage. This explains why good balanced diet is required by the children so that they can grow normally and be competent enough not only in facing the challenges of life but also assist in the national growth and development. In view of the importance of good nutrition, this paper delves into the concept of nutrition, mental health and wellbeing of the children for healthier tomorrow. It is suggested that nutrition education be taught in schools, exposed to parents and other care-givers to acquaint them with the dangers of poor nutrition and revert their mind on the effect of nutrition on the mental health and wellbeing of the children to reduce to the bares minimum the child mortality rate rampant in the country.

Keywords: Nutrition, Mental Health, Well Being, Growth and Development.

Introduction

Food has always been one of the requirements for the survival of any living organism with mankind not an exception. Feeding is the eating or ingestion of food basically for the provision of nutrients to the body for growth and development as well as energy. Food is therefore what is ingested into the body while feeding is the process of eating the food. It is one of the basic necessities of life. People do all manner of jobs in other to put food on the table. This is why food is inevitable in human life. In as much as every living soul eats food, there is noticeably varying degrees of growth and development in all the people that eat food. One would have expected uniform growth and development but the reverse is the case. The reason being that the type of food one eats determines the rate of growth and development. This is why some people are tall, short, fat, thin and so on. It is truism that hereditary plays some part in the growth and development of an individual but the type of food plays a greater part in that direction. This is evinced from the evolution of man.

Nutrition is the ability to eat right. There are different classes of food but the ability to select those that inspire good health and personal wellbeing is known as nutrition or balance diet. Nutrition promotes human growth and development which is the increase in both physical and psychological dimension in all human being. Sharma (2017) described nutrition as the study of the effects of food and drink we take into our body in relation to balanced diet that nourishes the body, repairs worn out tissues and provides energy to the body. Boutayeb (2010) reaffirmed that children who suffer from malnutrition are exposed to communicable diseases which hampers participatory schooling. Balanced diet is the selection of all the necessary food nutrients in the right proportion. Good nutrition invigorates healthy living and barricades infectious diseases while poor nutrition exposes one to communicable diseases, retarded growth and development as well as some psychological problems such as mental health issues.

Apparently, nutrition in children is very paramount as it could affect their mental health which is detrimental to their entire wellbeing. Just like every individual requires good nutrition for overall development of the body, there are set of people that require it more than the others due to their susceptibility and fragile nature these group of people include but not limited to pregnant women, lactating and nursing mothers and children (Ogwudire-Chukwudire, 2004). The scholar stressed that exceptional nutrition is needed at this critical time to facilitate standard progression and upkeep. When the children are not fed appropriate diet both in quantity and quality, the children could suffer some ailments that could affect them mentally and/or eventual death. Most parents are crippled in providing balanced diet to their children owing to poverty as a result give them anything food which could lead to anaemia. This is the reason there are lots of infant mortality among low socio-economic families. In the same vein, Nwankwo, (2007) &Ogbebor (nd) while discussing the external factors that affect learning and intellectual development, mentioned deleterious prenatal environment which according to the scholars included poor nutrition.

Concept of Nutrition

Nutrition deals with the types of food we eat or drink. It goes further to look at the good nutrition when the food or drink is with a reasonable range both in quality and quantity. When the amount taken is not proportionate, it amounts to poor nutrition which is hazardous to good health. Following the above avowal, Ogwudire-Chukwudire (2004) citing Stare and McWilliams (1977) asserted that nutrition is the study of different types of food eaten by man and the functions of food in the body. Obviously, each food type has its own nutritional value which performs distinct function in the body metabolism as well as wellbeing of the individual depending on the amount of combination of them in a correct manner.

Mental Health

This is referred to as the state of well-being of an individual. According to U.S. Department of Health and Human Services (2020) mental health is the overall psychological, physical and social wellbeing of an individual which in turn reflects in the way the individual reasons, perceives issues and behaves. It further determines the scope of stress management capacities. The stability of mental health is determinant on the nutrition of the individual as mental health is very crucial at all stages of human life. Improper feeding has been identified as one of the causes of mental health problems. This issue was rightly observed by Ugwu & Amadi (2011) when the scholars succinctly put that many Nigerians could not afford good nutrition due to increased rate of poverty level which has forced many to live below poverty level and this could result to stress (Amadi, 2011) and/or other mental health challenges which negates good academic performance. Invariably, good nutrition and/or balanced diet makes one healthy, active, robust and energetic thus positions the recipient for enhanced academic performance in school. Since poor socio-economic condition could lead to stress and anxiety emanating from malnutrition which is a mental health challenge, it is worthwhile to delve into mental health problems and project its dangers to human health and life in general.

Mental Health Problems

This is an unstable health condition which could be as a result of poor medical routine, insufficient sleep, malnutrition, neglect of the warning signs and so on. Mayo Clinic (2019) buttressed the fore mentioned view point by explaining that mental health is the kind of disorder that affect the reasoning ability and behaviours. The scholar went further to give examples of mental illness to include depression, anxiety disorders, schizophrenia, eating disorders and addictive behaviours. This mental illness is capable of ruining ones entire life when not dictated on time and solution sought sequel to this, there is absolute need to be conversant with the symptoms so as to nip it from the bud quite on time. Mental Health Disorders in Children include anxiety disorders, depression, attention deficit

hyperactivity disorder (ADHD). The resultant is effect is low educational achievement, greater involvement with the criminal act among others.

Warning Signs of Mental Health Conditions

Mental health conditions could be assisted to adjust to normal life when dictated at the earlier stage this is why Dryden-Edwards (2020) in her mental illness in children poured out some of the symptoms to include;

1. Poor academic performance
2. Insistent tedium
3. Frequent complain of headaches and stomach cramps
4. Hallucination
5. Insomnia
6. Sleeping too much
7. Behaviours returning to those of a younger age like bedwetting, throwing tantrums and becoming clingy
8. Noncompliant or aggressive behaviours and
9. More risk-taking behaviours and/or showing less concern for their own safety.

Classes of Food

Good nutrition fortifies the body system's immunity against some ailments. It helps to make a healthy living when subjected to balance diet. Balanced diet is the food that contains all the classes of food in a proper proportion. This is the reason it is necessary to ascertain the classes of food according to the nutrient it contains. Oma (2020) espoused that there are six classes of food namely;

1. Carbohydrates
2. Fats and oil
3. Protein
4. Vitamins
5. Mineral
6. Water

The scholar stressed that carbohydrates is a combination of carbon, hydrogen and oxygen which is responsible for the supply of energy to the body to function. Foods that contain carbohydrates are referred to as energy given food examples are yam, maize, sugar, cassava, potatoes, oat millet, ripe plantain, rice, bread and many more. Deficiency of carbohydrates in children cause marasmus, reduces functions of the nervous system and lack of energy for carry on with life activities.

Ferreira (2020) identified two groups of nutrients namely macronutrients and micronutrients. Macronutrients are those foods that need to be eaten in large quantity which is essential for body building blocks of the diet and these are protein, carbohydrates and fat. They equally provide energy the body needs to function properly. On the other hand, micronutrients are vitamins and minerals which are needed to be taken in small quantity.

Protein is the kind of food nutrient that are available in both plants and animals for instance, it is obtained from meant, beans, egg, fish, snails etc. it aids growth and development in children. It is also responsible for building new tissues and repairing of worn out tissues in adults. It also facilitates the formation of enzymes and hormones in the body. Lack of protein causes kwashiorkor, retarded growth and development as well as anaemia.

Fats and oil; fats come basically from animals while plants beget oil. Fats and oil could be sourced from vegetable, groundnut, palm fruits etc. These nutrients supply heat and energy to the body, fat store and transfer vitamin A, D, E and K. Fat foods sustain hunger because they do not easily digest. They also help in the smoothness of the skin. Lack of it causes dryness of the skin, lack of energy and malfunctioning of the body.

Mineral Salt is needed in the body for normal development and regulation of the body metabolism. Foods that contain mineral salt include green vegetables, eggs, liver, beans, sea food, calcium, fruits, coconuts etc. Mineral salt makes for healthy growth and formation of strong bone and teeth, formation of haemoglobin, blood clothing and proper functioning of the thyroid gland. Lack of it results to weak bone and teeth, tiredness, goitre, anaemia, muscle cramp and so on.

Vitamins are important nutrients necessary for body maintenance and good health. Vitamins

are of two types; water soluble vitamin (B and c) and Fat soluble vitamin (vitamins A, D, E, and K). Sources of vitamins include carrots, liver, fish, vegetable, butter, egg, palm oil etc. Vitamin inspires growth, formation of teeth and bones, good vision and good skin and glowing hair. Deficiency of this vitamin results to poor vision, night blindness, unhealthy skin and hair and digestive issues.

Water is the components of hydrogen and water. It plays a major function in digestion and absorption, regulations of body temperature, reproduction, transportation of food, oxygen and other chemical matters in the body. It also improves brain function (Ferreira, (2020).) Lack of water in the body gives rise to dehydration and its attendant malfunctioning of the entire body system.

Good nutrition begets proper growth and development in any living organism. This is why it is very crucial to determine the meaning of growth and development. Correspondingly, Encyclopaedia .com (2019) described human growth and development as the increase in the size of a child and development as the process by which the child develops their psychomotor skills. The scholar recognized four stages of human grow and development. As under listed;

1. Infancy; from birth to weaning
2. Childhood: from weaning to the end of brain growth
3. Juvenile: from the end of childhood to adolescence
4. Adolescence: from the start of growth spurt at puberty until sexual maturity.

In his own view point, Balasundaram & Avulakunta(2021) perceived growth and development on the context of childhood development and defined growth as an irreversible constant increase in size and development as a growth in psychomotor capacity and therefore identified the stages in human growth and development as follows;

a) Fetal stage;
b) Postnatal stage;

The postnatal stage is further subdivided into the following:

i. Infancy (neonate and up to one year age)
ii. Toddler (one to five years of age)
iii. Childhood (three to eleven years)- early childhood is from three to eight years old, and middle childhood is from nine-eleven years old.
iv. Adolescence or teenage (from 12-18years old)
v. Adulthood

The scholars while listen factors that affect growth and development, listed nutrition which is the bane of this paper. According to them, malnutrition plays a detrimental role in the process of growth and development in the following ways:

- ✓ Deficiency of minerals distort growth and development
- ✓ Iron deficiency affects psychomotor
- ✓ Zinc deficiency slows down growth and development.
- ✓ The diet in early life could lead to obesity in later life. Early protein intake helps to accelerate growth and development in children.

Principles of Growth and Development of a Child

On another dimension, Bhargava (nd) acknowledged seven principles of growth and development as here under listed:

a) The principle of common direction of growth/development; the head of the embryo develops its shape first and before other parts and does not change so much after birth.
b) The principle of common direction of growth/development; this is the principle of continuity which implies that the life of an individual is divided into infancy (from birth to five years), later childhood (from five to twelve years), adolescence (from twelve to eighteen years and beyond).
c) The principle of sequential development; growth and development occur in systematic order in which case it comes one after the other. The child sits first before

standing, teething also follows the same sequence and many others.

d) The principle of maturation and readiness: Natures first mature the child's muscles and nerves needed to carry out some function. Persuasion no matter what level could make a child perform a task the child is not ready and matured for.

e) The principle of developmental pace; Infancy is a period of accelerated growth. During the pre-school period, the growth is slacked which is known as the period of decelerated growth. Even at this period, there are still noticeable changes in the body which include mental, affection and emotional. The onset of adolescence witnessed a spurt of growth in height which is evinced by accelerated growth before it tappers off to adult level.

f) The principle of individual differences; this is hinged on the genetic and environmental factors. Children pick up at different stages of their life some faster than the others, be it growing of teeth, sitting, walking and others aspects. During puberty, some develop more than the others both for boys and girls.

g) Differing rates of growth; different aspects of growth do not maintain uniform pace of development all the time. All lot of energy is being utilized at this stage and as such may delay the baby who is battling with acquiring new words. Academic achievement could also be affected because of the rate of energy exerted while attaining some developmental stages during adolescence. Parts of the body grow at different period of development.

Importance of Child Development

The period of early childhood development is marked as the most important period of life this is imperative as children need total support from their families to reach their full potentials. They need good nutrition to attain greater height among others. The first three years after birth, there is rapid mental growth and development as the child's brain creates complex neural pathways at an unprecedented speed. By six years, the brain has developed to 90% of adult size.

Good early childhood development will have a direct positive impact on a child's long-term health outcomes and will improve future opportunities, school attainment and even earning potentials. It is a period of great opportunity but a critical period owing to the frail nature of the children. Adverse conditions in the child's environment could jeopardize the child's realization of their full potentials. Adverse effects to child development in the first years of life can have life-long consequences and can negatively impact on school readiness and learning potentials, mental and physical health as an adult, resilience to stress and resolving resources and inter-generational poverty. However, recovery is possible with appropriate intervention and support. Investment in child development policies and programmes will result in long-term returns, as children with adequate support in their early years are healthier, better educated and more likely to contribute to society and the global economy.

How to Support Healthy Child Development

A critical factor in child development is that children receive nurturing care. Nurturing care ensures a child's environment is focused on their needs, health, nutrition, safety, emotional support and social interaction. Nurturing care is what the infant's brain expects and depends upon for healthy development. World Health Organization (WHO, 2020) enunciated five key areas namely;

- Good health; parents owe their children good health through encouragement and protection from home accidents and imbibe in them the habit of hygiene practices. The child's emotional state must be guided adequately by showing love and affection to the child.

- Adequate Nutrition: essential micronutrients are needed for a child's brain and body to develop both during a mother's pregnancy and in the early period after birth. Essential nutrients may include proteins and fats to help the body grow and vitamin A to build the child's immune system.
- Responsive care giving; Observation and response to a child's physical. Psychological and emotional needs are important for a child's health, learning and social relationships.
- Security and safety: young children are incredibly vulnerable to numerous threats within the environment. Children who are not made to feel safe and secure by a parent can withdraw socially and act fearful of adults and other children.
- Opportunities for early learning: learning begins from birth, not just when a child starts to attend nursery, pre-school or school. This early learning will help a child develop motor coordination, social competence, resilience, creativity and learning potentials. Opportunities for early learning are promoted through play, communication and stimulation from other children and adults.

Conclusion

Given the critical importance of enabling children achieve their full growth and developmental potentials, it is very crucial to avail them all the necessary prerequisites especially on good nutrition. This stand to inspire, invigorate and stimulate vibrant, intelligent and psychologically sound individual whose proactive nature aids boost the national economy for sustainable development of our dear country.

Suggestions

From the above study, the following suggestions were made;

1. The expectant mothers should be given adequate nutrition education so as to enable them eat good balanced diet so as to equip the baby with all the necessary nutrients needed for optimal growth and development.
2. Parents should also be sensitized on the required nutrition for their babies at every stage of development.
3. Good home environment also accelerate growth and development and as such parents should ensure that impending dangers are kept away from children.
4. Children require affection for emotional development and as such should be shown love, care and sense of belongingness to build trust and confidence in them.

References

Amadi, G.N. (2011). Human tress and management: A realistic approach. Port Harcourt. Pam unique publishing coy. Ltd.

BhargavaRRohit (n.d) Growth and Development of a child: Top 7 principles. www.youratriclelibrary.com

Balasundaram, P. &Avulakunta, I.D. (2021).Human growth and development. www.ncbi.nlm.hih.gov/book/N...

Boutayeb, A. (2010). The burden of communicable and non-communicable diseases in developing countries. www.ncbi.nih.gov/pmc/art...

Dryden-Edwards, R. (2020). Mental illness in children. www.medicinenet.com/mental...

Ferreira, M. (2020). 6 essential nutrients and why your body needs them. www.healthline.com/health/food...

Encyclopedia.com (2019).Human growth and development. www.encyclopedia.com/medicine...

Mayo Clinic Staff (2019).Mental illness.www.mayoclinic.org/diseases-co...

Nwankwo, O.C. (2007). Psychology of learning: The human perspective. Port Harcourt, Pam unique publishing company.

Ogbebor, G.G. (n.d), Educational Psychology. Agbor, College of education press.

Ogwudire-Chukwudire, H.U.C. (2004). Educational psychology: Human growth and development. Owerri, Udebiuwa press Nigeria.

Oma (2020). Food: Meaning and classes. www.tansicollege.edu.ng/content/

Sharma, M. (2017). What is nutrition? www.schoolhealth.com

Ugwu, C.J. & Amadi, G.N. (2011). Reducing infant mortality rate: Through attitudinal change and preventive behaviours. Nigeria, TNDPRESS.

U.S. Department of Health and Human Services (2020). What is mental health? www.mentalhealth.gov/basics/

WHO (2020).Improving early childhood development. www.who.int/publication/i/item...

UNIJERPS