

SOCIO-ECONOMIC AND BEHAVIOURAL FACTORS OF CHILD STUNTING

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Abstract:

Undernutrition in childhood is the most common type worldwide and is known as stunting or linear growth failure. The question of whether children who are stunted before the age of 24 months can catch up in terms of growth and cognitive development in later life is still up for debate. The most undernourished children in the world live in India. India likewise represents more than one-fifth of worldwide youngster passings and its portion on the planet's absolute weight of kid underweight surpasses 36% (UNICEF, 2011). India's undernutrition rates are among the highest in the world and even exceed those of some sub-Saharan African nations with lower growth rates and lower incomes. By identifying children with low weight-for-age Z-score (WAZ) and height-for-age (HAZ) in pediatric primary health care clinics and enrolling them in a national nutritional program that operates at clinic sites and in the community, effective nutrition supplementation and follow-up can be achieved.

Keywords:- undernutrition, children, growth, Functions.

Introduction

Malnutrition is a condition characterized by inadequate or excessive intake of nutrients, an imbalance of essential nutrients, or poor nutrient utilization. Undernutrition, overweight, and obesity, as well as diet-related noncommunicable diseases, constitute the double burden of malnutrition. There are four main manifestations of undernutrition: wasting, stunting, being underweight, and lacking in micronutrients.

Low weight-to-height is the definition of waste. It can be a sign of recent and significant weight loss, but it can also last a long time. It typically occurs when a person has been sick frequently or for an extended period of time and has not eaten enough nutritious food. If not treated properly, waste in children is linked to a higher risk of death. Low height for age is what stunting is. It is caused by chronic or recurrent malnutrition, usually brought on by poverty, poor nutrition and health of the mother, frequent illness, and/or inadequate infant feeding and care. Children who are stunted are unable to reach their full physical and mental potential. Low weight-for-age is the definition of underweight. Underweight children may be wasted, stunted, or both.

A lack of vitamins and minerals that the body needs to produce enzymes, hormones, and other substances for growth and development is known as a micronutrient deficiency.

Children suffer irreversible mental and physical harm as a result of stunting. A child who is stunted is too short for their age, does not fully develop, and stunting is a sign of chronic

malnutrition during the most important growth and development stages in early life. It is defined as the proportion of children between the ages of 0 and 59 months whose height for age falls below the WHO Child Growth Standards' median by minus two standard deviations (for moderate and severe stunting) or minus three standard deviations (for severe stunting).

A symptom of persistent malnutrition, stunting affects 35% of children under the age of five in India. Nearly half of all child deaths worldwide are thought to be caused by stunting and other forms of malnutrition. (CNNS 2016–18) Stunting is linked to a brain that is still developing, which has long-term negative effects such as reduced mental and learning capacity, lower earnings, and an increased risk of future nutrition-related chronic diseases like diabetes, hypertension, and obesity.

India still has the highest number of stunted children in the world—40.6 million children—representing one-third of the global total of stunted children under the age of five, despite the country's impressive economic growth. Source: Stunting begins when an adolescent girl who later becomes a mother is undernourished and anemic, and it gets worse when infant diets are poor and sanitation and hygiene are poor. (NFHS3 2005–2006, CNNS 2016–18) By the age of two, it is impossible to undo.

Stunting negatively affects school attendance and performance. This, in turn, can reduce later adult income-generation. Undernutrition reduces economic advancement due to losses in productivity, poorer cognition and poorer educational outcomes.

From 48% in 2006 to 35% in 2018, a relative 20% reduction in child stunting has been observed in India. According to JME (2018), 40.6 million children in India are stunted today, despite an impressive decline. (CNNS 2016–18) The country is responsible for nearly a third of the global burden of childhood stunting, and there are significant disparities between and within states.

Over half of India's stunted children live in just four states: Bihar, Madhya Pradesh, Maharashtra, and Uttar Pradesh. Additionally, Scheduled Tribes and Scheduled Castes have higher rates of stunting (42% and 39%, respectively). Source: In the poorest households, infant and child care practices, hygiene, and a lack of food security are the immediate and underlying causes of stunting. It is often determined in the womb by a mother's social status and education level, and it is inseparably linked to reproductive and maternal nutrition. Factors include traditional beliefs about what an adolescent girl should eat and how well she should be cared for during pregnancy and breastfeeding. In the past ten years, complementary feeding practices have worsened while exclusive breastfeeding practices have improved.

Poverty is not a clear cause of stunting as there are stunted children even among the richest households.

Even when families have access to nutritious food young children are not given a nutrient dense diet and only half of mothers nurse their children below six months of age. A lack of clean water, sanitation and hygiene practices that lead to illnesses and life-threatening diseases like diarrhoea are also responsible for up to 50 per cent of all child malnutrition. (Source: World Health Organization, Geneva, 2008).

Problems such as stunting, which are often invisible, need to be made visible, so that families and communities can take action.



In cooperation with the Government, UNICEF's large-scale programming is focusing on stopping stunting, especially in marginalized groups by reducing and preventing malnutrition overall.

The government's efforts to reduce child stunting benefit greatly from UNICEF's technical assistance in implementing high-quality services for women and children and in generating demand for those services by promoting healthy eating, child feeding, and caring practices. Strengthening the Village Health and Nutrition Days as a community-based platform for providing mothers and young children with health, hygiene, and nutrition services is an important strategy. Additionally, the program will enhance Anganwadis' water, sanitation, and hygiene services.

Endeavors are likewise being guided towards empowering admittance to quality fundamental maternal and kid wellbeing administrations, including talented birth participation, fundamental infant wellbeing, early inception of breastfeeding, selective breastfeeding during the initial a half year and inoculation.

The launch of the National Nutrition Mission known as POSHAN (PM Overarching Scheme for Holistic Nourishment) Abhiyaan, of which we are a key implementing partner, was made possible by UNICEF's success in advocating for State Nutrition Missions.

The Prime Minister's POSHAN Abhiyaan initiative, which was launched in March 2018, aims to improve the nutritional status of children aged 0 to 6 and pregnant and breastfeeding mothers. It aims to reduce childhood stunting from 38.5 percent (below 5 years old) to 29.3 percent over three years (2018 to 2020) using a life cycle approach.

To achieve the Sustainable Development Goals and the national and regional targets for malnutrition, it is essential to reduce stunting rates.

We know how to end stunting and other forms of undernutrition. There are proven solutions that India implements today to improve nutrition for all – solutions that can boost development and help break the cycle. Together we can and must stop stunting.

Malnutrition

In 2018, hindering impacted an expected 21.9% or 149 million kids younger than 5 years, while squandering impacted 7.3% or 49 million youngsters younger than 5 years. Undernutrition is linked to about 45% of deaths among children under the age of 5. Most of these things happen in countries with low or middle incomes. At the same time, rates of childhood obesity and overweight are rising in these same nations. One or more forms of malnutrition affect every nation on the planet. One of the most significant challenges facing global health is the fight against all forms of malnutrition.

Malnutrition affects women, infants, children, and adolescents most frequently. The best possible start in life can be achieved with long-term benefits by maximizing nutrition early on, including the 1000 days between conception and a child's second birthday.

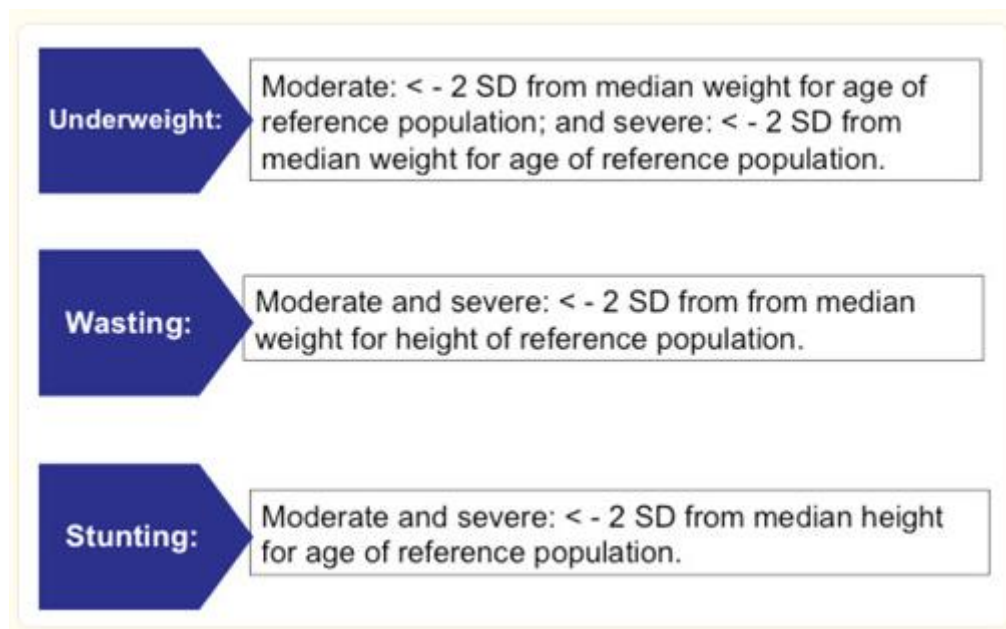
Malnutrition and the risk of it are exacerbated by poverty. Different types of malnutrition are more likely to affect poor people. Malnutrition can perpetuate a cycle of poverty and illness by driving up healthcare costs, lowering productivity, and slowing economic growth.

As part of the Sustainable Development Goals, WHO collaborates with Member States and partners to achieve the objective of eradicating all forms of malnutrition by 2030. Securing universal access to

healthy diets and effective nutrition interventions from sustainable and resilient food systems is essential to achieving this objective.

To this end, the World Health Organization (WHO) creates evidence-based guidance for the implementation of nutrition-promoting policies worldwide. The World Health Assembly resolution 65.6 of 2012 provides the framework for this work: Comprehensive nutrition for the mother, infant, and young child implementation plan. Additionally, it contributes to the 2016–2025 United Nations Decade of Action on Nutrition. In addition, achieving the diet-related goals of the Global Action Plan for the Prevention and Control of Noncommunicable Diseases (2013–2020), the Global Strategy for Women's, Children's, and Adolescents' Health (2016–2030), and the Sustainable Development Goals (SDGs) of the 2030 Agenda are dependent on efforts to eradicate malnutrition.

Stunting is a process that can affect a child's development from the time they are born until the third or fourth year of life, when both the mother and the child's diet are crucial to their growth. The percentage of children whose height-to-age ratio falls below minus two standard deviations for moderate stunting and minus three standard deviations for severe stunting from the WHO Child Growth Standards' median is considered stunting. Similarly, if a child's length or height falls below 3 standard deviations from the WHO child growth standards median for the same age and sex, the child is considered severely stunted. The tendency to be too thin for one's height, also known as weight-for-height, is what is meant by the term "wasting." Stunting is a sign of chronic malnutrition, and its effects are largely irreversible, in contrast to wasting, which is the result of an acute and significant lack of food and/or disease. Underweight, or low weight for age, incorporates kids under 5 with low weight for level (squandering) and low level for age (hindering) and thought about an intermediary marker for undernutrition on the off chance that information on squandering isn't accessible.



“Growth problems” is a broad phrase used to describe various causes and effects of conditions relating to your child’s insufficient growth.

- About 3 to 5 percent of children are considered to be short, meaning that their heights are below the 3rd or 5th percentiles on a growth chart. Many of these children have one or more short parent, and only a few will have a specific and treatable medical growth problem.
- A growth problem may be clear at birth, if your child is abnormally small for his age. Or, it may surface if he remains underdeveloped compared to his peers.
- A child is considered to show “growth delay” when he is small for his age, but grows for a longer period of time compared to other children, often reaching a normal height.

Here at Boston Children's Hospital, growth problems are treated through our Division of Endocrinology — through a multidisciplinary program that provides comprehensive diagnosis, treatment, and management for patients with growth disorders and other disorders associated with the endocrine system.

We evaluate children with poor growth, improve their overall nutrition, and promote healthful eating habits.

How is “normal” growth defined?

Measured in height, “normal” growth is described as growth of:

- 0 to 12 months: about 10 inches. Growth during this phase is primarily a function of nutrition.
- 1 to 2 years: about 5 inches. From the age of 1, hormonal factors play an increasingly important role in your child's growth.
- 2 to 3 years: about 3 1/2 inches a year
- 3 years to puberty: about 2 inches a year. There is minimal difference in growth seen in boys and girls until puberty, which results in an average height difference of 4 to 5 inches between the sexes.

What are the symptoms of a growth problem?

The primary symptom that may indicate a growth problem is when a child grows less than 2 inches a year after his second birthday. Other symptoms may include:

- slow development of physical skills, such as rolling over, sitting up, standing, and walking
- delayed social and mental skills
- delayed development of secondary sexual characteristics in adolescence

What causes growth problems?

Growth problems can be caused by a number of factors, including genetics, hormonal disorders, systemic illnesses, and poor absorption of food. Causes of growth problems usually fall into the following categories:

- constitutional growth delay, also referred to as delayed puberty;
- familial short stature, a tendency to inherit a short stature (shortness). This condition causes a child to reach puberty later than usual while still growing normally. The majority of these kids usually end up being about the same height as their parents.

Malnutrition and illnesses that affect the digestive tract, kidneys, heart, or lungs are both examples of systemic or chronic illnesses. A child can't get as tall as she could because she is always undernourished; This is usually prevented or corrected by eating a well-balanced diet. Around the world, the most common reason for growth failure is malnutrition.

endocrine (hormone) diseases like diabetes or a lack of thyroid hormones, which are necessary for normal bone growth, and syndromes (genetic disorders) are all examples of severe stress. Cushing's syndrome, Turner syndrome, Down syndrome, Noonan syndrome, Russell-Silver syndrome, and Prader-Willi syndrome may all have growth issues.

- a lack of growth hormone The pituitary gland, a small gland at the base of the brain, which secretes growth hormone, is affected in a child with this growth disorder.
- problems in the tissues where growth occurs that are congenital (present at birth) • intrauterine growth restriction (IUGR). The slow growth of a fetus within the uterus is the cause of this condition. Due to his short stature, the baby is born with a shorter length and weight than normal.
- abnormal chromosomes Having too many or too few chromosomes can have negative effects on health and growth.
- abnormalities in the skeleton There are in excess of 50 bone sicknesses that influence level and development, large numbers of which are hereditary. Achondroplasia, a form of dwarfism in which a child's arms and legs are shorter than their body length, is the most common. Typically, the head is large, and the trunk is normal in size.
- puberty at an early age. This growth disorder is characterized by an early onset of adolescence, when a child is tall for his age at first, but growth stops at an early age due to rapid bone maturation, and the child may grow to be short as an adult.
- inherited conditions There are a few genetic conditions that cause tall people to also have other health problems.
- Irresponsible. The term "idiopathic" refers to a number of growth disorders for which there is no known cause.

Growth Problems |Diagnosis & Treatments

How can my child's doctor tell if she has a growth problem?

Diagnosis of a growth problem must be made by your child's physician, and the method will depend on your child's symptoms. In addition to a complete medical history, physical examination, and asking about the heights and any health problems of the child's relatives, diagnostic tests may include:

- observation of your child's health and growth over a period of time
- blood tests (to rule out hormone, chromosomal, or other disorders associated with growth failure)
- a scan of the pituitary gland, which produces and regulates growth hormones (to detect abnormalities)

- an x-ray of your child's hand or wrist (to compare bone development with height and chronological age and determine growth potential)

It's important for growth problems to be diagnosed early, since the earlier the diagnosis, the more effective treatment may be.

What treatments are available for growth problems?

The growth problem may be alleviated by treating the medical condition that is causing it. The most effective treatment for your child will be determined by the doctor, which typically entails hormone replacement therapy. Injections may be part of your child's treatment plan on a daily or weekly basis.

Fortunately, this treatment frequently results in significant and comforting growth. Children with growth hormone deficiency gain an average of 4 inches during the first year of therapy, whereas children with other growth disorders gain slightly less.

Your child may experience feelings of insecurities or self-consciousness as a result of growth issues; if necessary, we can connect you with mental health professionals to assist with these feelings.

How safe is growth hormone therapy?

While there are many potential side effects, researchers generally agree that treatment with human growth hormone is safe and effective. In 1985, the U.S. Food and Drug Administration (FDA) approved a biosynthetic growth hormone, thus:

- eliminating the risk of disease transmission from human growth hormone (previously, the only source of this hormone had been from the pituitary glands of the deceased)
- creating an unlimited supply of the hormone.

Conclusion

It makes it abundantly clear that child malnutrition is a social construct rather than merely an economic issue. Only in regions with lower and higher stunting rates do children from non-poor families have a lower risk of stunting. Depending on the social and demographic context of the region, the nature of the factors that contribute to child stunting varies greatly across our country. In almost all parts of India, mothers who receive antenatal care at the right time can significantly reduce the number of stunted children. This chapter employs bivariate probit analysis to demonstrate that, despite the fact that the marginal effect is greatest in the most vulnerable set of states, timely initiation of basic maternal care can contribute to the partial resolution of the issue of child malnourishment.

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