

# Effects of Malnutrition –A Social Work Perspective

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## Abstract

Malnutrition is a term used to refer to any condition in which the body does not receive enough nutrients for proper function. According to the World Health Organization (WHO), malnutrition is the greatest single threat to global public health. The leading causes of death in children under 5 years are pre-term birth complications, pneumonia, diarrhea, malaria and about 45% of all child deaths are linked to malnutrition. The National Family Health Survey carried out in 2005 to 2006 results- child malnutrition rates in India is disproportionately high. Poor nutrition in the first 1,000 days of a child's life can also lead to stunted growth, which is irreversible and associated with impaired cognitive ability and reduced school and work performance. Some of the major causes for malnutrition in India are Economic inequality, poor sanitation and mother's lack of proper knowledge in feeding children. The present scenario of globalization in the area of economic growth, health and nutrition indicates that the country is undergoing rapid socioeconomic, demographic, nutritional and health transitions. Unfortunately under-nutrition continues to be persistently high in India and remains a challenge. Some of the major short term adverse effects of malnutrition are recurring illness, weakness, delayed physical and mental development, irritability, poor appetite, low weight for age, etc. and the Long-term adverse effects are stunting or short height for age, poor learning ability, poor performance at school and poor general health. All of which reflect in poor working capacity, resulting in low income. Stunting in girls can have effects on child bearing; resulting in low birth weight babies. The aim of the study is to explain the effects of malnutrition through secondary sources. The role of social worker to combat the malnutrition will be described in detail in full length paper.

**Keywords:** Nutrition, effects, health, child, Malnutrition

## 1. Introduction

Healthy children builds healthy nation. Well-nourished children perform better in school, grow into healthy adults and in turn give their children a better start in life. Child deaths are hurtful and it gets worse when it occurs due to preventable deceases. The WHO stated that 5.9 million children under the age of 5 years died in 2015. Leading causes of death in children under 5 years are preterm birth complications, pneumonia, diarrhoea and malaria. About 45% of all child deaths are linked to malnutrition; this puts children at greater risk of dying from preventable common infections, increases the frequency and severity of such infections, and contributes to delayed recovery. The UNICEF have confirmed that the poor nutrition in the first 1,000 days of a child's life can also lead to stunted growth, which is irreversible and associated with impaired cognitive ability and reduced school and work performance.

According to the 2011 Hunger and Malnutrition survey conducted by the Nandi Foundation, 42 percent of Indian children under five years old are underweight - almost double the rate of sub-Saharan Africa. Following to the survey the Ex-Prime Minister Manmohan Singh of India have expressed that "the unacceptably high levels of child malnutrition are a national shame".

### 1.1.1. Understanding malnutrition:

According to WHO "Malnutrition refers to deficiencies, excesses or imbalances in a person's intake of nutrients. The nutritional status of the child is described in terms of Anthropometry of Body measurement. Malnutrition covers 2 broad groups of conditions. One is 'undernutrition'- which includes stunting -low height for age, wasting - low weight for height, underweight -low weight for age and micronutrient deficiencies -a lack of important vitamins and minerals. The other is overweight". Although there are two broad categories Malnutrition is often used to specifically refer to undernutrition where an individual is not getting enough calories, protein, or micronutrients. If undernutrition occurs during pregnancy, or before two years of age, it may result in permanent problems with physical and mental development.

## 2. Review of Literature:

Malnutrition is defined as "Lack of proper nutrition, caused by not having enough to eat, not eating enough of the right things, or being unable to use the food that one does eat"- Oxford dictionary. There may be socio-cultural factors or change of life style and food habits of children that can affect both nutrient intake and needs - Spear, 1996. It is evident from a large number of studies that there is a linkage between the health and nutritional

status of children and educational outcomes (Behrman, 1996; Pollitt, 1990). Multicenter growth Reference Study (MGRS)18. WHO classification is the current accepted diagnostic criteria for under nutrition. This criterion was developed following the multicentre growth reference study (MGRS). Children from six countries Brazil, Ghana, India, Norway, Oman and United States America (USA) were recruited for this prospective study. At the end of this study, WHO came up with standard cut off points for all three parameters of under nutrition namely stunting, wasting and under weight.

“Infant and young child feeding practices in particular continue to be a serious challenge to reduce malnutrition among children. In spite of unprecedented economic growth, improvements in childhood nutritional status in India over the last decade have been slow. The status of various aspects of nutrition among children points towards urgent need to take the call for aggressive awareness campaigns along with improved health care facilities with special privileges for the weaker sections of the society” (Social Statistics Division, Ministry of statistics and program Implementation, GOI, 2012. Pg:61).

Children are vulnerable to malnutrition from conception. Pregnant women who are undernourished are more likely to have low birth weight babies who, in turn, are susceptible to developmental delays. These early deficits sustained with post-natal malnutrition often result in diminished cognitive functioning. Malnourished children are also more prone to illness. By the time they reach school-age, they have a much lower potential to lean compared to their well-nourished peers. Deficiency of micronutrients, such as iron, iodine, zinc and vitamin A, in a child’s early years may result in a lower attention span, decreased ability to concentrate and poor memory. Anaemia resulting from deficiency of iron is known to have a severe impact on the cognitive development of children (Grantham-McGregor, 1995).

A review of such studies examining the relationship between mental development and severe malnutrition concluded that school-age children who suffered from early childhood malnutrition generally have poorer IQ levels, cognitive function, school achievement and greater behavioral problems than matched controls, and to lesser extent siblings. The disadvantage was found to last at least until adolescence (Grantham-McGregor, 1995). Recent research shows that the period from pregnancy to 24 months is the most critical period and hence offers a window of opportunity for the delivery of nutrition interventions. If proper nutrition interventions are not delivered to children before the age of 24 months, they could suffer irreversible damage into their adult life and to subsequent generations (The Lancet, 2008).

NFHS-3 data shows fairly large differences among children in rural and urban areas in malnutrition among stunted, wasted and underweight. Children from rural area suffer high than urban. Research evidence from a variety of studies in different countries establishes that malnutrition in the early stages of development produces a detrimental effect on the mental development of children and thus negatively impacts their learning capacities, which in turn are likely to affect school performance in late childhood. Different types of malnutrition interact with one another as well as other environmental and social factors to have a powerful detrimental effect on children’s cognitive development and ability to learn.

### 3. Malnutrition Worldwide:

The key findings of UNICEF, WHO and World Bank group Joint child malnutrition Report – 2016 estimates the following status

POPULATION	STUNTED - Height for age	WASTED – Weight for height	UNDER WEIGHT
667Million Children – Under 5 years	159 Million	50 Million	20 Million

The report also mentioned that the malnutrition level is proportionately high in the developing countries. Thus the World leaders of SDG has aimed to End all form of Malnutrition by 2030.

The finding of NHFS – 4 of India denotes

POPULATION	STUNTED - Height for age	WASTED – Weight for height	UNDER WEIGHT
12.4crore – Under 5 years	5 crore- 38%	2.6 crore- 21%	4.4 crore- 35%

The Report finds that the malnutrition level is high in the Rural area than the urban context.

#### 3.1.1. Causes of Malnutrition

Malnutrition is caused by a multitude of the factors. Causes of malnutrition have its spheres in medical, social, economical and political. UNICEF classified these causes into the hierarchy and provided frame work for better understanding. (Figure 1.4). The Basic Causes includes Social, Economic, political, Lack of capital, financial, human, physical, social and natural. The Underlying causes are Income Poverty such Employment, dwelling, assets, remittances, pensions, transfers etc.. which leads to Household insecurity, Inadequate care, Unhealthy household environment and lack of health services. The immediate causes are Inadequate dietary intake and disease which would leads to short term consequences of Mortality, morbidity and disability. The long term

consequences are Adult size, intellectual ability, low economic productivity, less reproductive performance, Metabolic and Cardio vascular disease.

This classification is very useful in creating hierarchical model for under nutrition. Irrespective of basic and underlying causes there are only 2 immediate causes of malnutrition such as diseases and inadequate dietary intake.

### 3.1.2. *Signs and Symptoms of Malnutrition Includes:*

- Loss of weight
- Breathing difficulties, a higher risk of respiratory failure
- The total number of some types of white blood cells falls; consequently, the immune system is weakened, increasing the risk of infections.
- Longer healing times for infections, illness & wounds.
- Skin may become thin, dry, inelastic, pale, and cold
- Eventually, as fat in the face is lost, the cheeks look hollow and the eyes sunken
- Hair becomes dry and sparse, falling out easily
- Severe malnutrition may lead to unresponsiveness (stupor)
- If calorie deficiency continues for long enough, there may be heart, liver and respiratory failure

Children who are severely malnourished typically experience slow behavioral and intellectual development, which may lead to intellectual disabilities. Even when treated, undernutrition may have long-term effects in children, with impairments in mental function and digestive problems persisting - in some cases for the rest of their lives.

### 3.1.3. *Effects of Malnutrition:*

#### Impact of Malnutrition on Health and Development

Malnourished children experience developmental delays, weight-loss and illness as a result of inadequate intake of protein, calories and other nutrients.

### 3.1.4 *Chronic malnutrition*

- Stunting – (too short for age) an indicator of the long-term effects of nutrition deficiency.
- Children <5 yrs particularly affected.

### 3.1.5. *Short term implications:*

- Growth faltering and weight loss with associated micronutrient deficiencies.
- Increases susceptibility to disease & infection.
- Delayed physical and mental development

### 3.1.6. *Longer term effects:*

- Impaired physical & mental development.
- Poor learning ability
- poor performance at school and poor general health
- Consequences of stunting increase the demands on medical, public health and food assistance in crisis situations.

### 3.1.7. *Chronic & Acute*

- Underweight
- A combination of wasting and stunting.

### 3.1.8. *Acute malnutrition*

- Wasting – (weight for height) often an indicator of the current or recent situation.
- Wasting results high mortality rate.
- Poses more severe health risks than chronic malnutrition leading to weight loss and specific micronutrient deficiencies – resulting in impairment of bodily functions esp. resistance to disease.
- Increased levels of acute malnutrition in a population result in increased illness and death. These consequences often characterize nutrition emergencies and famine situations.

### 3.1.9. *Severe Acute Malnutrition (SAM)*

As severity increases these adaptations prevent body's ability to respond top infections such Marasmus, Kwashiorkor, Marasmic-kwashiorkor – a combination of both

- Marasmus – severe weight loss leaving skin and bones alone.
- Kwashiorkor – bloated appearance due to water accumulation (oedema)
- Marasmic-kwashiorkor – a combination of both. All the three leads to frequent infections with minimal signs and leads child to the pathetic situation.

### 3.1.10. *Cognitive Implications:*

Malnutrition negatively effects brain development causing delays in motor and cognitive development, such as:

- Attention deficit disorder
- Impaired school performance

- Decreased IQ scores
- Memory deficiency
- Learning disabilities
- Reduced social skills
- Reduced language development
- Reduced problem-solving abilities

#### 4. Programs of Government of India:

The Ministry of Women and Child Development has come up with several schemes deciding the norms of child nutrition. These are:

- National Guidelines on Infants and Young Child Feeding - guidelines emphasize the importance of breast feeding
- National Nutrition Policy - monitoring the nutrition levels across the country and sensitizing government machinery on the need for good nutrition and prevention of malnutrition. Also includes the Food and Nutrition Board, which develops posters, audio jingles and video spots for disseminating correct facts about breastfeeding and complementary feeding.
- The Integrated Child Development Services Scheme - providing services to pre-school children in an integrated manner so as to ensure proper growth and development of children in rural, tribal and slum areas.
- Udisha - train child care workers across the country. Its scope reaches as far as remote villages.
- National Policy for Children- lays down that the State shall provide adequate services towards children, both before and after birth and during the growing stages for their full physical, mental and social development.
- National Charter for Children emphasizes Government of India's commitment to children's rights to survival, health and nutrition, standard of living, play and leisure, early childhood care, education, protection of the girl child, empowering adolescents, equality, life and liberty, name and nationality, freedom of expression, freedom of association and peaceful assembly, the right to a family and the right to be protected from economic exploitation and all forms of abuse.
- National Plan of Action for Children includes goals, objectives, strategies and activities for improving the nutritional status of children, reducing Infant Mortality Rate, increasing enrolment ratio, reducing dropout rates, universalisation of primary education and increasing coverage for immunization.

#### 5. The Role of Social Worker:

##### 5.1.1. Educator:

- Reaching out to Malnourished families, pregnant women, mothers, caregivers, adolescent girls, teachers, opinion leaders and the community at large.
- Creating awareness about nutritional challenges, the importance of optimal nutrition and creating an enabling environment to mobilize communities to prevent malnutrition.

##### 5.1.2. Facilitator:

- Social workers to provide families of Malnutrition with trusted information and resources to help them better understand their child's condition and help them plan for and take care of their child.
- Being a partner with families to advocate for their child – in and outside the hospital. Social workers work with a patient support as liaison to connect families to other families with the same problem and a facilitator for the better utilization of available services.

##### 5.1.3. Researcher:

- Less number of researches were been done in the area of malnutrition. Conducting more number of scientific researches and disseminates knowledge in the area of malnutrition. Finding and giving suggestions for practice interventions thus enhance the effectiveness of social work practice.

##### 5.1.4. Advocate:

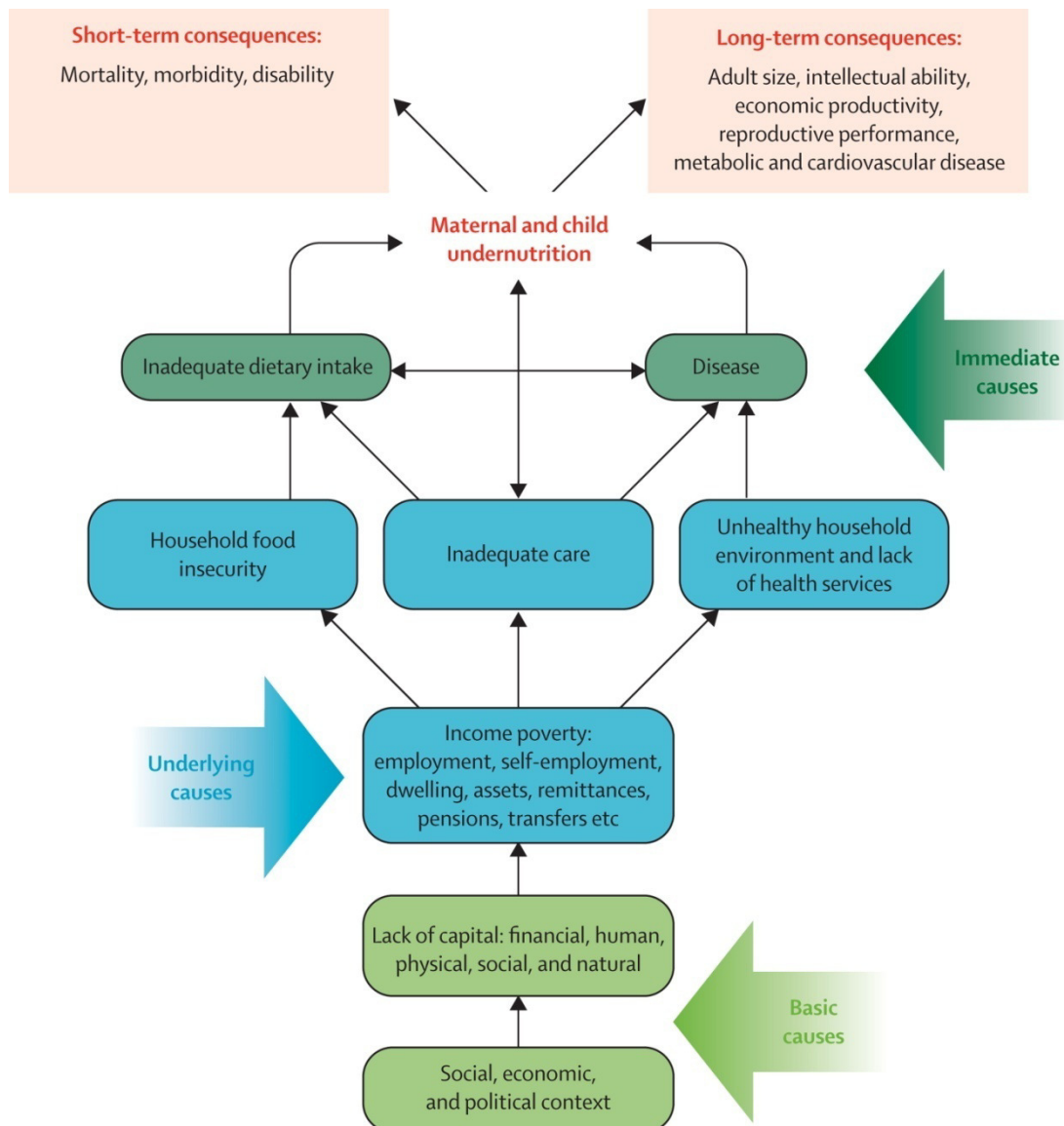
- To be a champions for the rights of Malnourished children families and speaks on behalf them to combat the issue. The UNICEF's Global Nutrition Report -2016 has mentioned in their report that "Even the influential Indian state nutrition missions are inconsistent about setting nutrition targets.
- Networking with other stakeholders (GOs & NGOs) in different areas of expertise to maximize the advocacy level to combat Malnutrition.
- Involvement in the government strategies to develop policies, laws as well as implementation: Social workers should be involved in the formulation of policies and laws with regard Minimizing Malnutrition.

## 6. Conclusion

The present scenario of globalization in the area of economic growth, health and nutrition indicates that the country is undergoing rapid socioeconomic, demographic, nutritional and health transitions. Unfortunately under nutrition continues to be persistently high in India and remains a challenge. The brightest nation depends upon the healthy children. Physical and cognitive development primarily held upon the nutrient intake of mother. A number of investigators have analyzed the NFHS data on child malnutrition to understand the determinants of malnutrition (Radhakrishnan & Ravi, 2004a; Ramakrishnan et al, 1999; Mishra & Retherford, 2000; Nair, 2007). Using NFHS-2 data, a multivariate analysis of the effects of selected demographic and socio-economic factors on child malnutrition by Mishra et al (1999) indicates that the strongest predictors of child malnutrition are a child's age, the child's birth order, the mother's education and the household's standard of living. Thus the Targeted interventions should be designed to reduce prevalence of LBW in addition to improving mother's education on intake of Nutrient and feeding practices and improve other socio-demographic conditions. Bringing changes in National level target settings for the reduction of Malnutrition. The professional social worker plays primary role in the screening, sensitizing, counseling, networking and brings changes for the healthy nation.

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Under nutrition framework (UNICEF) (Figure 1.4)