

## Measuring Poverty through Child Malnutrition A Study With Special Reference To Arumbavur Village At Perambalur District

N.Arunkumar<sup>1</sup> & Dr.A.Hidhayathulla<sup>2</sup>

<sup>1</sup> Ph.D Research Scholar (RGNF-SRF), Department of Economics, Jamal Mohamed College, Tiruchirappalli, Tamilnadu, India.

<sup>2</sup>Associate Professor, Department of Economics, Jamal Mohamed College, Tiruchirappalli, Tamilnadu, India.

---

**Abstract:** Malnutrition is identified by a weight for height indicator within a given population, or by a measurement of a child's mid-upper arm circumference (MUAC). If dietary deficiencies are persistent, children will stop growing and become stunted (low height for one's age). This is referred to as chronic malnutrition. If they experience weight loss or 'wasting' (low weight for one's height), they are described as suffering from acute malnutrition. India's ICDS scheme The Integrated Child Development Scheme is perhaps the largest of all food and supplementation programmes in the world and was set up as an institutional response to the problem of malnutrition in India. Initiated in 1975, the ICDS was mandated with improving the health and nutrition status of children up to the age of six by providing supplementary food and by coordinating with state health departments to ensure delivery of required health inputs. Under the ICDS, cooked food is provided to children through anganwadi (community) centre's. One centre is provided for a population of 1000 (700 in the case of tribal areas). Fifty million children aged six and below are covered under this Rs.45 billion outreach programme. There has been much research on the benefit of micronutrient replacement and the promotion of breastfeeding as ways to prevent malnutrition and its complications in children. The study found the income level is lesser than national average. Even though there is a minimum availability of nutritious food to children's, majority of them are found to be malnourished.

**Keywords:** Poverty Measurement, Body Mass Index, Chronic Energy Deficiency, Malnutrition.

---

### I. Introduction

An estimated forty per cent of the world's severely malnourished children under five live are found to be in India. This is a shameful stain on a country that, with China will be one of the great economic powerhouses of the coming century. India has made huge strides in the past decades in warding off the spectre of famine. The Green Revolution should have gone a long way to tackling child malnutrition, Norman Borlaug's creation of dwarf spring wheat strains in the 1960s meant that India could feed itself at last. Better farming techniques and food security policies have made mass starvation a thing of the past. Yet the problem of child malnutrition remains critical, and the reasons it deserves concerted attention are many. Besides the obvious moral obligation to protect the weakest in society, the economic cost to India is – and will be – staggering, and the global food crisis this year can only be significantly worsening the problem. Moreover, statistics from as recently as 2006 may well underestimate the problem, as rampant food price inflation takes its toll on many millions of Indian families. So why are levels of child malnutrition so shamefully high in India? What are the contributing factors? What possible solutions exist? 47 percent of India's children below the age of three years are malnourished (underweight). The World Bank puts the number – probably conservatively – at 60 million. This is out of a global estimated total of 146 million. 47 percent of Indian children under five are categorised as moderately or severely malnourished. South Asia has the highest rates – and by far the largest number – of malnourished children in the world. The UN ranks India in the bottom quartile of countries by under-1 infant mortality (the 53<sup>rd</sup> highest), and under-5 child mortality (78 deaths per 1000 live births). According to the 2008 CIA fact book, 32 babies out of every 1,000 born alive die before their first birthday at least half of Indian infant deaths are related to malnutrition, often associated with infectious diseases. Malnutrition impedes motor, sensory, cognitive and social development, so malnourished children will be less likely to benefit from schooling, and will consequently have lower income as adults. The most damaging effects of under-nutrition occur during pregnancy and the first two years of a child's life. These damages are irreversible, making dealing with malnutrition in the first two year crucially important. A close reading of available statistics shows the problem to be far from uniform.

### Meaning

Poor nutrition caused by an insufficient, over sufficient or poorly balanced diet or by a medical condition, such as chronic diarrhea, resulting in inadequate digestion or utilization of foods. Malnutrition is the condition that results from taking an unbalanced diet in which certain nutrients are lacking, in excess (too high

an intake), or in the wrong proportions. A number of different nutrition disorders may arise, depending on which nutrients are under or overabundant in the diet. In most of the world, malnutrition is present the form of under nutrition, which is caused by a diet lacking adequate calories and protein

### **Definition of Malnutrition**

Malnutrition is the condition that develops when the body does not get the right amount of the vitamins, minerals, and other nutrients it needs to maintain healthy tissues and organ function

### **Statement Of The Problem**

India is home to the greatest population of severely malnourished children in the world. Four hundred million children suffer daily, which is a greater problem than in Sub-Saharan Africa. Childhood malnutrition is a massive crisis caused by a combination of factors including inadequate or inappropriate food intake, childhood diseases, harmful childcare practices, and improper care during illness: all contributing to poor health and millions of deaths annually. It affects growth potential and the risk of mortality and morbidity in later years of life. Substantial improvements have been made in health and well being since India's independence in 1947 but still more than half of all children under the age of four are malnourished, 30 percent of newborns are significantly underweight, and 60 percent of women are anemic. The early years of life are the most crucial because it is when the body develops the most mentally and physically and is most vulnerable to disease and illness. The children of India are malnourished because of factors attributed to overpopulation, poverty, and destruction of the environment, lack of education, gender inequality, and inaccessible medical care. Poverty is a major cause of malnourishment because it limits the amount of food available to children causing wasting and a lack of vitamins, minerals and nutritional value leading to stunting and low weight. Overpopulation is a serious problem linked to competition for food, shelter and medical care and leads to malnutrition amongst children, especially in rural areas where access to medical care and food is limited. The population of India has increased from a billion people by 16 million annually escalating the severity of malnourishment and poverty. The environment is affected by pollution of the air, water and land causing problems with food growth, sanitation and illnesses spread through the air and water. A deficiency in the amount of food leaves millions starving, many of whom are children, unable to change their situation. Lack of education is a serious predicament resulting in malnourishment because many are illiterate and unknowledgeable about nutrition, family planning, breast-feeding and parenting. Gender inequality places women, the primary care givers of their children, at a lower social status than men and causes them to suffer more because they are last to eat and considered less important continuing the cycle of poverty and malnourishment. Availability of medical care and immunizations are limited to children diminishing their health. All these factors contribute to the devastating amount of malnourished children in India and assistance from the government and international organizations is crucial if this dilemma is to be improved. This paper will focus on the extent of childhood malnourishment in India and what can be done to create sustainable solutions.

### **Objectives:**

- To analyse child malnutrition in Arumbavur Village.
- To study the socio economic background of the household in Arumbavur Village in relation to child nutrition.

## **II. Methodology:**

The present study is concerned with the infant malnutrition in Arumbavur Village, Perambalur District. Therefore the study relies on primary data. From Arumbavur 115 respondent were taken as sample. The data were collected through detailed interview schedule method. Secondary data relating to the statistical profile of the village were also collected from the records of panchayath union office.

### **Statistical Tools:**

Table was used to present the results precisely. Average and standard deviation were used to analyze the results. Body Mass Index was used to analyse the malnourishment.

### **Hypothesis:**

There is no difference between percentage of national malnourished children and percentage of malnourished in the study area.

The national percentage of malnourished children is 43 percentages as commented by Former Prime Minister Dr. Manmohan Singh the percentage of malnourished as observed from BMI computed for children in the study area is 81.74%. Since the study area malnourished percentage of children is greater than the national percentage the null hypothesis is rejected. Therefore, it is concluded that the study area Arumbavur has higher

number of underweight and underweight children which is higher than the national level estimate. The following tables contains percentage of children below this standard age and gender specific (BMI) the age and gender specific standard (BMI) was calculated using the formula.

$BMI = \text{Weight in kg} / \text{Height in m}^2$

The age and gender specific standard height and weights, were listed by ICMR its stand for (Indian council for Medical Research) for Indian Children using this height and weights. The bench mark BMIs were computed the observed BMI of the children in the study area were compared with the bench mark BMI in order to find the percentage of children who are malnourished.

### **Period Of Study**

The study covers for six months period from August 2014 to January 2015. The details of infant malnutrition were collected during the month of October.

### **III. Limitations**

- The study attempts to analyses the infant malnutrition based on discussion of the result of sample survey consisting of only 115 respondent .Therefore the conclusion should be generalized to the universe with due caution .
- The study Measured Child Malnutrition by estimating BMI only, therefore the limitation of BMI is also applicable to this study.

### **Scope Of Study:**

- This study has collected details on socio economic background like income asset possessed basic amenities in relation to those required for attaining appropriate nutritional levels.
- The study also focused the physical measures like Height and Weight to preciously measure the attainment of nutritional levels.

### **Importance Of Study:**

India has the highest number of people below poverty line in the world about 400 million children are affected by malnutrition. Former Prime Minister Dr.Monmohan Singh himself has admitted child malnutrition as a shame on face of India .The malnutrition among children has many dangerous consequences studying the magnitude of child malnutrition will help the policy makers to understand the depth of the problems. It will also give valuable input for effective policy decision to remove child malnutrition.

### **IV. Summary Of Findings:**

#### **Major findings of the study**

- 39 percentages of children are aged 0.1 to 2 years old.
- In the study area children are fed mother's milk up to 13 months. The average period of mother feeding is 6.7 months.
- Only 19.1 percent of children are going to anganwadis.
- Majority of respondent earn annual income of Rs.10000 to 50,000.
- The percentage of BPL family in the study area is 96.5%.
- 97 percentage of children in study area fed with mother milk
- After weaning 72 percentages of children are bottle fed.
- 67 percentage of the respondent household own two-wheelers.
- Toilet facility is not available for 68 percent of the respondent household.
- Drainage facilities are not available in 72.2 percentage of in household the study area.
- The respondent families have to walk 23 meters an on average for bringing water.
- Majority of the family belong to the size of 3-6 family members.
- Rice and rice based food items are the main food of the children in the study area as observed from the details of current week food fed to the children.
- The majority of the children belong to 30 to 40 cm height.
- People in the study area live in concrete and tiled house.
- The majority of the household in the study area earn their livelihood from unorganized sector.
- 53 percent of sample household do not have LPG connection
- Medical facility is available in study area.
- Cow milk is the usual drink of 90 percent of children in the study area.
- Nutrition supplement food like ragi, and pulses are given to 63 percent of children.
- All the household are living in own house.
- Most children are fed also with packaged nutrition products.

- The study area is well connected with neighboring urban area.
- School facility available in study area.
- Pipe line water supplied by the local government is main sources of water supply in the study area.
- Street light provided in the study area.
- On the day of survey 80 percent of children were found to have fed rice.
- The weight of 57 percent of the children is 3-8 kg. The average weight of study area children is 2-2.3 kg.

## V. Suggestion

The Anganwadis worker may create awareness among the breast feeding mothers regarding scientific ways of prolonging the mother milk feeding period. This would help to overcome the problem of child malnutrition. They may also create awareness regarding feeding of boiled vegetables to the children in order to tackle the child malnutrition.

## VI. Conclusion

The household in the Arumbavur are poor, though majority of them live in own house, their houses lack the basic sanitation amenities like toilet, and drainage. Their annual income is also less than 50,000/- per annum. However they are able to provide nutritious food like ragi and pulses to their children. They also feed rice and cow milk after weaning mother's milk beyond the average month of 6.7 months. Despite this the children in the study area are underweight and below the standard age specific height. Therefore, the study concludes that in the context of the data used the children in the Arumbavur Village are Malnourished.

## References:

- [1]. Barun Kanjilal et.al (2010) Nutritional status of children in India: household socio-economic condition as the contextual determinant, *International Journal for Equity in Health* 2010, 9:19 pp.
- [2]. Peter Svedberg (2007) CHILD MALNUTRITION IN INDIA AND CHINA, 2020 FOCUS BRIEF on the World's Poor and Hungry People.
- [3]. Sam Mendelson et.al (2008) Child malnutrition in India: Why does it persist?
- [4]. Simon Blake et.al (2009) starting strong: Early childhood development in India.
- [5]. A.K. Shiva Kumar: Child malnutrition: Myths and solutions - 2- <http://www.littlemag.com/hunger/shiv2.html>
- [6]. Joachim von Braun and Eugenio Díaz-Bonilla (2008) GLOBALIZATION OF FOOD AND AGRICULTURE AND THE POOR, IFPRI issue Brief 52 • September 2008.
- [7]. Médecins Sans Frontières (2008) Treating Malnutrition: We can do it, but where is the will to act?

## Keywords Reference:

- [8]. An end to world hunger: Hope for the future.
- [9]. Anemia. (2008). Retrieved March 26, 2008.
- [10]. Cretinism. (2008, March 31). Retrieved April 3, 2008.
- [11]. Glossitis. (2008, March 23). Retrieved April 6, 2008.
- [12]. Haile, M. (2005). Weather patterns, food security, and humanitarian response in sub-Saharan Africa. *Philosophical Transactions of the Royal Society, B*, Retrieved January 30, 2008.
- [13]. Hepatomegaly, (2008, March 27). Retrieved April 6, 2008.
- [14]. Hyper pigmentation. (2008, February 27). Retrieved April 6, 2008.
- [15]. In pictures: Somali drought. *BBC News*, Retrieved March 25, 2008.
- [16]. Malnutrition. Retrieved February 10, 2008.
- [17]. Malnutrition Faces Nations. *The Science Newsletter*, 74, Retrieved February 10, 2008.
- [18]. Rickets. (2008, April 2). Retrieved April 6, 2008, from Wikipedia: The Free Encyclopedia Web site: <http://en.wikipedia.org/wiki/Rickets>.
- [19]. Sagebohan, A. (2004). Roundtable to Discuss Africa's Nutrition Situation. Retrieved January 21, 2008, from Press Release.
- [20]. San Martin, N. (2006). Hunger's harm. *Children of the Americas* Retrieved March 25, 2008.
- [21]. Sapp, M. (2007, March 11), Poor infrastructure undermines food safety in West Africa. Retrieved March 22, 2008.
- [22]. Thyroid hormone. (2008, April 3). Retrieved April 6, 2008.
- [23]. Tufty, B. (1953, June 15). Half the world is hungry. *The Science news Letter*, 83, Retrieved January 30, 2008.

## Webilography:

- [24]. [www.equityhealthj.com](http://www.equityhealthj.com)
- [25]. [www.who.int/nutgrowthdb](http://www.who.int/nutgrowthdb)
- [26]. [www.who.int/nutgrowthdb](http://www.who.int/nutgrowthdb)
- [27]. [www.ifpri.org](http://www.ifpri.org)
- [28]. [www.censusindia.gov.in](http://www.censusindia.gov.in)
- [29]. [www.mobile.latimes.com](http://www.mobile.latimes.com)
- [30]. [www.mobile.latimes.com](http://www.mobile.latimes.com)
- [31]. [www.littlemag.com/hunger](http://www.littlemag.com/hunger)
- [32]. [www.unicef.org](http://www.unicef.org)
- [33]. [www.un.org/esa/population/publications](http://www.un.org/esa/population/publications)
- [34]. [www.cia.gov/library/publications](http://www.cia.gov/library/publications)
- [35]. [www.jstor.org.libezp.lib.lsu.edu](http://www.jstor.org.libezp.lib.lsu.edu)