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CONCERN FOR NUTRITIONAL ENTITLEMENTS IN INDIA

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ABSTRACT

Malnutrition has been one of the enduring enigmas of contemporary India. Despite years of rapid economic growth, child malnutrition rates remained unchanged for years. After years of stasis, there seems to be some sign of progress in India's battle against malnutrition, although malnutrition rates remain high. While poverty is not the only cause of malnutrition, it is an important cause, not just because poor people may lack adequate food but also because the poor often have less time and resources to care for their children. The right of every individual to have sufficient food to preserve him from hunger, undernourishment and malnutrition is recognised, but is nevertheless far from being satisfied. Hunger and undernourishment assail large sections of the population in India. This persistence a number of problems. Women's nutrition affects a wide range of health and social issues, including economic development, poverty reduction, work-capacity, physical and mental development, pregnancy outcomes, family care, and household food security. *Undernutrition* is generally caused by inadequate diet and chronic infection, and is attributable to inseparable direct, indirect and basic causes. Direct causes of undernutrition include productivity loss by physical weakness and illness due to inadequate dietary intake. Indirect consequences are insufficient household food security, physical and cognitive stunting, compromised schooling, and increased healthcare cost or inadequate health care services. Human, financial and technical resources are the potential basic causes in development of undernutrition. With this background the present paper highlights the problems of food security and concern for nutritional entitlements in the Indian context. The present paper suggests that we must attack on the basic, underlying and immediate causes of malnutrition. We have to address the potential resources, economic structure, political and ideological superstructure of the society for the betterment of nutrition position. Last but not the least; we should surely ensure the education for women as it enhances women's status and power, which in turn leads to improved self and child nourishment.

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INTRODUCTION

Undernutrition is generally caused by inadequate diet and chronic infection, and is attributable to inseparable direct, indirect and basic causes. Maternal and child undernutrition – too few nutrients to sustain growth and development – contributes to 3.5 million deaths each year and is responsible for about 11 percent of the total global disease burden (Bhutta, 2008). As adults, malnutrition in women can cause thinness, lethargy, heart disease, hypertension, anaemia or diabetes. Direct causes of undernutrition include productivity loss by physical weakness and illness due to inadequate dietary intake. Indirect consequences are insufficient household food security,

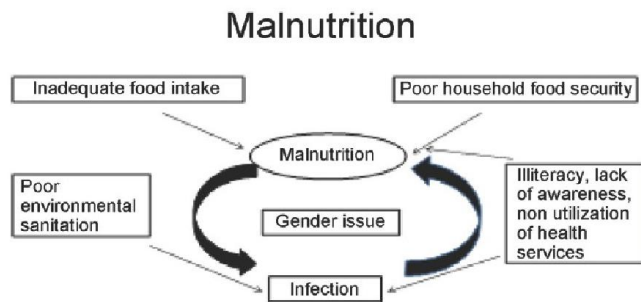
physical and cognitive stunting, compromised schooling, and increased healthcare cost or inadequate health care services. Human, financial and technical resources are the potential basic causes in development of undernutrition. Following flow diagram shows the causes of malnutrition.

Defining Food Requirements

Food intake can only be assessed in relation to requirements. Requirements are of various kinds: energy, protein, vitamin and mineral. These requirements must be determined to assess the individual intake needed, and also to calculate whether the population's present food level is adequate. Nutritional standards are defined in terms of physical needs in relation to growth, body maintenance and activity. It should be stressed that while the psychological requirement for any of these

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purpose can be quite accurately measured, nutritional standards usually incorporate subjective elements. They attempt to specify desirable nutritional levels and therefore embody views as to what physical attainments (especially those concerning activity) are deemed at least minimally appropriate. These together with other characteristics, as well as changes in objective measurements have led to a variety of standards measurements have led to a variety of standards being proposed at different places and times.



Flow Diagram. 1

(A) Energy Requirements

The FAO and the WHO have endeavoured to work out a method for assessing energy requirements which would be applicable throughout the world. It is thus possible to calculate the energy requirements for a given individual (his characteristics such as age, sex, weight and level of activity being determined), and even for a population, although account must be taken of the interaction between the different nutrients.

(B) Protein Requirements

Assessment of protein needs is much more critical. Protein standards have been established on a physiological basis, which means essentially the minimum level to ensure nitrogen balance under laboratory conditions. They take account of weight, age, sex and also of the quality of the proteins. A safe level of protein intake has been defined¹. For adults the levels the requirements of protein were 0.71 g/kg/day (man or women) in 1965 defined by FAO/WHO. The FAO / WHO Report of 1973 emphasises that "all estimates of protein requirements are valid only when energy requirements are fully met. When the total energy intake is inadequate, some dietary protein is used for energy and is not available to satisfy protein needs.

(C) Lipid Requirements

The quantity of lipids in the diet need not represent 30% of the calorie intake, as in most of the developed countries ; it should, however, represent at least 10% and if possible 20% of the total K-calories. This lipid provides K-calories and liposoluble vitamins, and care should be taken to see that they

¹Safe level of protein intake: quantity needed to cover physiological requirements and maintain the health of nearly all people in a specific group. This health level equals the average physiological level of an adult in good health, plus 30% to take account of individuals variations in needs. Calorie requirements, FAO nutritional studies No 15, FAO 1957 p 69, Para 6.5.

also provide essential fatty acids, particularly linoleic acid (sometimes classified among the vitamins: vitamin F). Special emphasis must be laid on the lipid requirements, because certain diets in developing countries are very poor in them; enrichment of diets with lipids would make it possible to cover the need for essential fatty acids, and above all to improve the calorie position in some cases.

Earlier Studies on Nutrition

Tremoliers, (1973), Bour (1975) studies about the calories that have a decisive influence on the utilisation of protein but according to them this is a very complex subject. Protein balance is attainable with calorie levels much below requirements on condition that they exceed 1000K or better still 1500K. Habichat and Butz (1977) believed that poor families make optimal use of their scarce food resources. Utsa Patnaik (2007) argued that rapid growth has been accompanied by rural deflation, resulting in levered rural incomes, particularly at the bottom and hence little agreement on the meaning of the reduction in per capita consumption of calories. Deaton and Dreze (2005) find that there has been a decline in per capita consumption of calories and other key nutrients such as nutrient for which there is an unambiguous increase in per capita consumption is fat. Mazumdar and Sarkar (2007) examined that there was an increase of average real per capita consumption of the bottom two quintiles of more than 10 percent of each. Viswanathan and Meenakshi (2007) calculated from 1999-2000 data that there is a positive expenditure elasticity of energy intake "especially among the poor and among poorer regions". Anil Deollikar and Amarnath Dubey (2008) stressed that there is a definite change in the distribution of calorie consumption between expenditure classes – with the middle to top classes substantially reduction calorie consumption, while it has remained stagment at the bottom. They also argued that there is a definite decrease in the calorie from cereals – showing a diversification of the rural diet. Chand (2007) concern was for food production stems from food grains being considered to be of paramount significance for household food and nutritional security, the reason being that cereals and pulses are staples foods and there are no perfect substitutes for them. Again Chand and Kumar (2006) pointed out that food grains are also the cheapest source of energy compared to other foods and are indispensable for the food security of low income classes.

Nutritional Concern

Food supplies were the heart of the early concerns about population growth and lack of food is still a very real concern. The gravest aspect of the poverty of some parts of India is the prevalence of undernourishment and its attendant toll in mortality, morbidity and lethargy. Our studies show it is extremely difficult to determine food "requirements" and equally hard to assets actual food intake in many parts of India, especially in Uttar Pradesh, Bihar and Odhisa. Under nutrition is mainly a consequence of poverty and a lack of effective demand. Increasing food production is not a remedy unless it involves greater productivity or is accompanied by redistribution, measures. But in India with a preponderantly rural population, agricultural development will necessarily be a main avenue as an enlarged local food supply.

Analysing Food Security and Food Supply

Food supplies are dependent on food security. Food supplies were at the heart of the early concerns about population growth and lack of food is still a very real concern. The gravest aspect of the poverty real of some parts of the least developed world is the prevalence of undernourishment and its attendant toll in mortality, morbidity and lethargy. In the 1970's, food security was understood as the "availability at all times of adequate world food supply of basic foodstuffs..." (UN 1975) But, the 1981 publication of Amartya Sen's poverty and Famines: An Essay on Entitlement and Deprivation brought forward a new understanding of the problem of hunger or for security. Rather than just the 'availability' of food, Sen emphasised 'access' to food through what he called 'entitlements' – a combination of what one can produce, exchange in the market plus state or other socially provided supplies. What Sen posited is that availability or supply of food does not itself create entitlements for food. In a sense, Sen's concept of entitlements is similar to Keynes' notion of 'effective demand'. Both entitlement and effective demand are quite different from need. Since Keynes was dealing with a fully capitalist market economy, with only two classes, employers and workers, all effective demand was related to monetary income. But Sen is dealing with a 'mixed economy' with at least three classes, employers, workers and peasants or other own account producers. For those who produce food, part if not all, of their entitlements is due to their own production. This portion of the consumption of food is not mediated by the market; consequently, this is not captured by the market – based notion of effective demand. Food, of course, is not an end in itself. Food is consumed for nutrition. Instead of focusing attention on the commodity, one can look at the objective for which food is consumed, that is providing nutrition for the body. The purpose of nutrition itself is not just to survive, but to lead a healthy and meaningful life – to be in the state one wants to be (well being) and to do the various things one wants to do. In order to deal with food security, it is not sufficient to pay attention to food alone, but also access to, at least, clean water and sanitation, which affect the ability to absorb food, or turn consumption of food into nutrition. Hence, they can be seen as components of elementary well-being needed to lead a healthy and meaningful life. Generally food security at the household level depends on a combination of three factors – the ability of the household to access required food, knowledge of nutritional content and the desired quantities of different foods and access to clean drinking water and sanitation. What an individual within household can consume or access depends on the individuals' entitlements in the total household food basket. Entitlements draw attention to the conditions under which people access food, whether from direct production (or exchange with nature), market exchange (income from either goods produced or wage labour) and social security measures.

Entitlement point to the fact that hunger is situated within poverty, or rather associated with extreme poverty, as a result of which adequate entitlements to food. Thus, the elimination of hunger is first landmark in reducing poverty. Capabilities are a combination of two factors- status of well being (like being well nourished, being healthy and so on) and activities (achieving self respect, or being socially integrated).

Incidence of Malnutrition on Requirements

(1) Interdependence of the Variable: Health; Nutrition

Cross –effects between the two variables, health and nutrition are two kinds: under – nourishment or deficient nutrition reduces the resistance of the organism, which becomes more easily infected, but conversely a poor state of health (parasitism, fever, malaria) influences the nutritional state particularly anaemia). Requirements vary with physiological condition, market changes are caused by serious disorders (fever, traumas, surgical operations....). As regards chronic complaints (parasitosis, malaria), further research is needed to ascertain the changes in requirements. This again demonstrates the importance of clinical investigations, to enable specific intakes to be properly assessed.

(2) Nutrition – infection relationship ; infant mortality

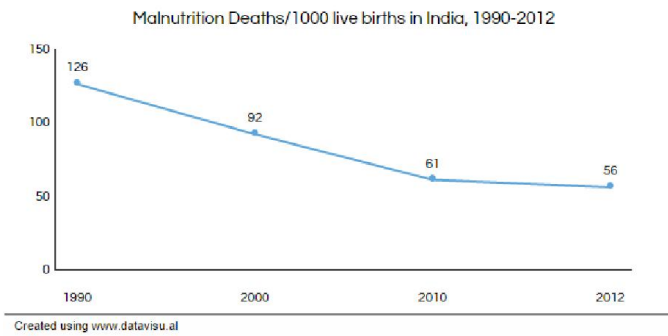
It has already been demonstrated that most infections adversely affect the nutritional state. Even slight infections increase the urinary nitrogen losses. Infection and fever reduces appetite and food tolerance, the serious diarrhoeas which often occur in sick children (intestinal infections) reduces nitrogen absorption. Infection also affects vitamin and mineral metabolism. Acute diarrhoea disturb calcium and phosphorus metabolism. Similarly, protein deficiency have an aggravating affect on infectious diseases (Scrimshaw, Taylor and Garden, 1971). The child in a developing country whose diet is deficient in protein during the weaning period is often a victim of this aggravation, which causes a high mortality rate from certain sickness (diarrhoea, measles...). Serious underfeeding is also synergetic with most infections. At a period of food scarcity or famine, illness and death is more common among children. Vitamin A deficiency reduces resistance to infection and severe deficiency may cause blindness. Few data exists on this deficiency among young children in various part of underdeveloped world (mostly in Africa), certain types of diet which do not include milk and are mainly based on pap made from tubers or cereals, tend to be poor in vitamin A. In India the problem is a serious proportion.

Three factors are involved in infectious diseases: the pathogenic agent, the host and the environment. There are multiple interactions between these three factors. On the one hand, infection affects nutrition; on the other hand, nutritional deficiency clearly reduces the invalids' resistance to infection and its consequences.

The Food Problem and Malnutrition

One of the best nutritional indicators is mortality in the 1-4 age groups, in all developing countries. It is in fact infants 12 to 36 months old who are most severely affected by malnutrition. Improved medical coverage in the towns (including treatment of acute malnutrition) has a clear effect on this mortality.

But the fact that child mortality rates are distinctly higher in rural than in urban areas proves that, at present, the rural population in developing countries suffers more from undernourishment and malnutrition than the urban population.



Graph 1.

At national level the calorie coverage is insufficient, or barely sufficient. In India even for the average here is clearly an overall deficit, according to the FAO norm. Malnutrition deaths are even high today (56 per thousand in 2012) in India though it has been decreased since 1990 (Graph 1).

Table 1. Mean per capita consumption of calorie, protein and Fats (per day)

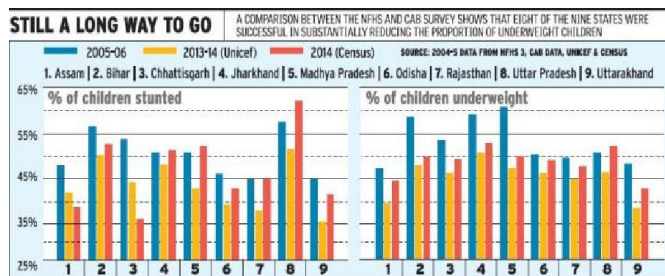
Year	Round	Calorie(KC)		Protein(gm)		Fat (gm)	
		Rural	Urban	Rural	Urban	Rural	Urban
1983	38	2240	2070	63.5	58.1	27.1	37.1
1987-88	43	2233	2095	63.2	58.6	28.3	39.3
1993-94	50	2153	2073	60.3	57.7	31.1	41.9
1999-	55	2148	2155	59.1	58.4	36	49.6
2000-	56	2083	2027	56.8	55.3	34.6	46.1
2001-	57	2018	1982	54.8	54.2	33.6	46.1
2003	59	2106	2020	58	55.5	36.4	46.7
2004-05	61	2047	2021	55.8	55.4	35.4	47.4
2011-12	68	2099	2058	69.7	68.1	51.4	64.2

Calculated from NSS, Data

Table 1 indicates mean per capita consumption of calorie, protein and Fats (per day) in the various round of NSSO. It shows that in India mean per capita consumption of the nutritional contents decreases over the time in both rural and urban areas.

Mixed Picture in India

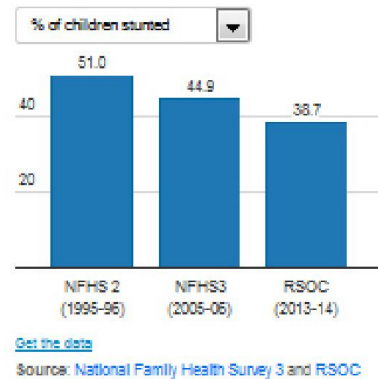
New official data on nutrition in India’s nine poorest states has shown that while most states have successfully reduced the number of underweight children over the last decade, their record in reducing child stunting has been more mixed. While Bihar and Uttarakhand improved in all indicators, Uttar Pradesh got worse on all (findings of the clinical, Anthropometric and Bio-chemical (CAB) survey, 2014).



Graph 2.

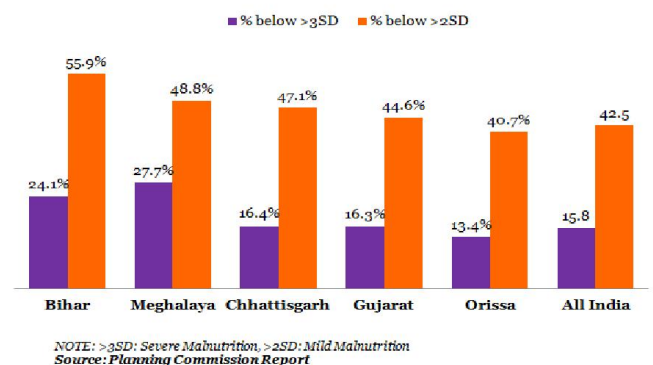
A comparison between the NFHS and the CAB shows that eight of the nine States were successful in substantially reducing the proportion of underweight children; Uttar Pradesh was the only State, where the proportion actually rose slightly over the last decade (Graph 2). The RSOC’s findings on other child anthropometric indicators like child wasting (weight for height more than two standard deviations below the expected) and child stunting (height for age more than two standard deviations below the expected) are far more optimistic than the CAB’s. While the RSOC found improvements in all CAG States on child stunting, the CAB finds that only five States — Assam, Bihar, Chhattisgarh, Odisha and Uttarakhand — improved. On child wasting, only four — Bihar, Jharkhand, Madhya Pradesh and Uttarakhand — improved. The CAB confirms the RSOC’s finding that while girls were more likely than boys to be underweight in 2005-2006, boys were slightly more likely to be underweight as of 2014.

Malnutrition Trends In India



Graph 3

States With Worst Malnutrition Figures



Graph 4.

A nationwide survey called the Rapid Survey on Children (RSOC), conducted by the ministry of women and child development in 2013-14 in league with Unicef, showed that the proportion of underweight children in India was 29.4%, and that of stunted children 38.7%. While these figures indicate high levels of under-nutrition, they show a marked improvement over what the last nationwide survey, the

National Family Health Survey (NFHS), had reported in 2005-06: the ratio of underweight children at 42.5%, and the ratio of stunted children at 48%. While the aggregate figures were reported by the government to the International Food Policy Research Institute (IFPRI) last year, leading to a dramatic improvement in India's rank on the hunger index released annually by the institute, the ministry did not publish any details relating to the survey for a year after it was completed.

Table 3. Correlation between Micronutrient intakes and under nutrition and Mortality Status

	Under 5 Mortality	Underweight Children	Vitamin intake	Iron Intake
Under 5 Mortality	1.00	0.714**	-0.501**	-0.523**
Underweight Children		1.00	-0.227	-0.450*
Vitamin intake			1.00	0.555**
Iron Intake				1.00

** Correlation significant at 0.01 level

*Correlation significant at 0.5 level

Source: Food security Atlas of Rural India: An overview, Institute for Human Development, 2011, Chapter III.

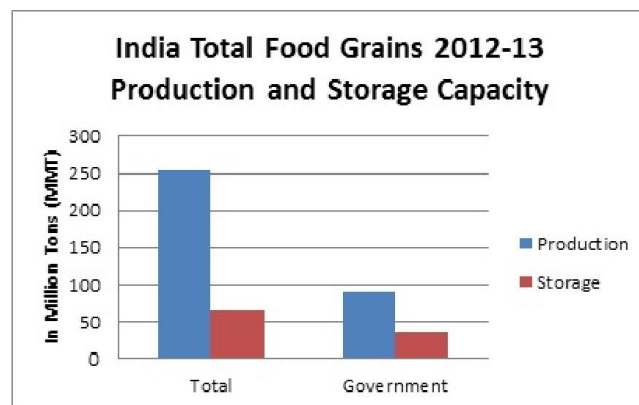
A Statistical analysis of the NFHS-3 data across states reveals a significant negative correlation between micro nutrient intake and proportion of underweight children and under five mortality, implying thereby that an increased intake of micro nutrients, i.e., high food security, significantly reduces the risk of under nutrition, which in turn, contributes to reduction in under – five mortality (Table 3)

Food Supply and Distribution

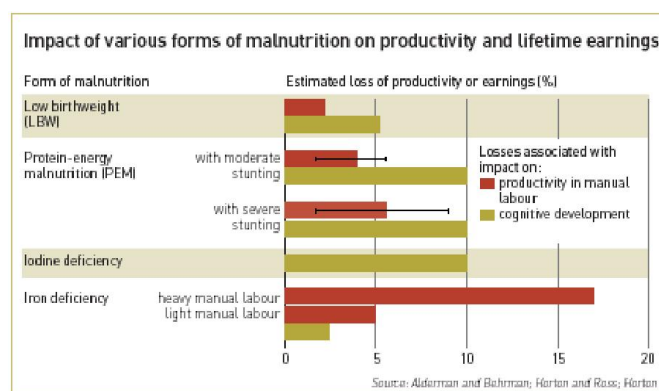
As is obvious, what matters for the extent of nutritional deficiency is not only the overall supply position but its distribution, by region, by individuals and over time. If countries are in overall deficit, there is bound to be extensive under nutrition, but as already noted, this is also frequently the case for countries in surplus. The equality of land distribution may affect such availability: the most unequal are land holdings; the more likely it may be that food surpluses are sold beyond the reach of nearly persons in need. Undoubtedly the greatest difficulty in estimating the extent of under nutrition arises from the fact that most data is only in average form, without details of distribution. Since individuals differ in nutritional needs depending on age, sex, stature and activity. Graph 5 shows the deficit of total production and storage capacity in India. This is the main reason behind misdistribution in India which effects the supply side and ultimately to nutritional entitlements.

Nutrition level and Income

Few studies (UN world food conference) show that calorie intake decreases with income. In India it was estimated that in 1971 Indians would have to spend 26 rupees per head per month in a small town, and 47 rupee in a large town, to feed themselves satisfactorily. According to estimates by the Indian Govt. 30 to 40 percent of the population do not have incomes allowing them to reach this essential minimum (poverty line). This affects the productivity and lifetimes earnings.



Graph 5.



Graph 6.

Graph 6 shows the impact of various forms of malnutrition on productivity and lifetime earnings.

Conclusion

The collection of basic data must be improved. This data are generally lacking particularly in those countries and regions which are the poorest and the most affected by malnutrition. The scarcity of data is unfortunately just one more consequences of under-development and its attendant lack of personnel, roads, transportation and other facilities for data collection. As a priority, it is necessary to identify the individual areas affected by undernourishment and malnutrition, and the causes of those, in order to be able to provide relief to those who are suffering. In most countries more research is needed to identify the most cost-effective indicators.

REFERENCES

- Bhutta Z, Ahmed T, Black RE, Cousens S, Dewey K, Giugliani E, et al. 2008. What works? Interventions for maternal and child undernutrition and survival. *Lancet*, 371:417-40.
- Chand, Ramesh and P Kumar 2006. "Country case study : India", in trade Reforms and Food Security, Horman Thomas (ed.), Rome : food and Agriculture Organisation of the United nations.
- Chand, Ramesh 2007. "Demand for food grains", *Economic and political Weekly*, 42(52), December 29-January 4 pp 10-13.

- Deaton, Angus & Jean Dreze 2008. "Nutrition in India: Facts and Interpretations". Working papers 1071, Princeton University, Woodrow Wilson school of public and International Affairs; Research program in Development Studies.
- Deolalikar, Anil and Amaresh Dubey 2008. Presentation on 'changes in calorie consumption in India', at NCAER Seminar on Human Development in India, New Delhi.
- Habicht, E.G. and Butz, in R. Rideker (ed.) Population and Development : The search for selective intervention and development, Jhan Hopkins University Press, 1979.
- Mazumdar and Sarkar, 2007. "Globalisation, labour Markets and Inequality in India, Routledge Studies in the Growth Economies of Asia, Routledge, IDRC.
- Patnaik, Utsa 2007. 'Neoliberalism and Rural Poverty in India', Economic and political weekly, 42(30), July 28, pp 3132-3150.
- Sen, Amartya 1981. "Poverty and Famines: An Essay on Entitlement and Deprivation", Oxford Publications.
- Vishwanathan and Meenakshi, 2007. "Changing Pattern of Under nutrition in India: a Comparative Analysis Across Regions", Research paper No. 2006/118, October 2006, WIDER Research paper Series, World Institute for Development Economies Research (UNU –WIDER), Helsinki.
