Chapter-6

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Eradication of hunger and malnutrition has remained a broad goal of public policy. In spite of its widespread acceptance and commitment stated in the millennium goal, the world position as revealed by monitoring world agencies indicates persistence of this problem across the world. In India malnutrition is still one of the major challenges for formulation of appropriate policies for tackling this problem. Government policies aimed at ensuring food security and good nutritional status require constant evaluation and reformation of policies in view of making them more effective and making it reaches to the real beneficiaries. The present study is an attempt to assess some of the major programmes such as the TPDS, MDM, ICDS in terms of their impact on nutritional status at individual level. Major findings of this endeavor are presented in the first part of this chapter. The second part of this chapter is concerned with drawing policy implications for making existing safety network more efficient and productive.

Findings

Chapter one defines hunger and malnutrition which are the most devastating problems worldwide as they are inextricably linked with poverty. It also discusses the socio-economic perspective and socio-economic conditions of the problem. Various strategies for combating hunger have been analysed.
Major findings of Chapter 1 are as follows:

- The definition, concept and measurement of hunger and malnutrition are discussed in. It shows that the concept of hunger has continually evolved over the time. In the earlier times, unavailability of food stuff at the time of physical sensation of desiring to eat was generally perceived as hunger, implying shortage of supply of food grains at macro level. Hence, increasing production of food grains was focused in public policies for combating the problem in developing countries.

- The entitlement thesis as propounded by Sen has stressed that inability of a person to access food because of low purchasing power is the main cause of hunger. Thus availability and accessibility of food grains has become the basis of conceptualizing hunger. Later researches point out the fact that absorption of food by the body is also an important ingredient of ensuring food security because nutritional needs required for physical and mental health for sustainable period of time is the ultimate objective for maintaining a healthy life. Therefore, currently the concept of food security implying the state of freedom from hunger incorporates availability, accessibility and stability of required food grains as basic conditions and hunger is viewed as inability of a person to have sufficient food to develop to a productive, active and healthy life.

- Changing approaches regarding conceptualization of hunger have influenced the measurement of hunger. At present various agencies and researchers measure reckon different aspects of
hunger using different measurement techniques. The Food and Agriculture Organization (FAO) of the United Nations estimates the prevalence of undernourishment at the global level. It also assesses food insecurity by using the household expenditure surveys. Anthropometric survey data is being used for measuring the nutritional status. Though all these methods have certain demerits/pitfalls, they represent the general scenario of food and nutrition insecurity at global level.

- As far as the prevalence of malnutrition at global level is concerned, it is still very high. The State of Food Insecurity in the world, 2012 estimated that almost 870 million people were chronically malnourished in 2010-12. A vast majority lives in developing countries where almost 15 per cent of the population is estimated to be under-nourished. The results imply that more committed efforts are required to make the world free from hunger.

- It is also a realized fact that malnutrition in the form of under-nutrition, micronutrient deficiencies, over-weight and obesity - imposes unacceptably high economic and social costs on countries at all income levels. Public policy expenditure aimed at reducing hunger and malnutrition should be treated as productive as it reduces the cost of malnutrition.

- The causes of malnutrition are complex. Behavior patterns, socio-economic conditions, level of education and awareness, living conditions, quality of water and sanitation etc., are major
determinants of nutritional status. This phenomena calls for multipronged coordinated strategy for combating the problem of hunger.

The situation of malnourishment and the policies and programmes aimed at ensuring food security in India have been reviewed in Chapter 2. Major findings are as follows:

- In-spite of planned efforts made for eradication of hunger and malnutrition during the last 65 years, a large majority of population still lacks access to balanced food. FAO estimates indicate that 17.5 per cent of population is still under-nourished (2010-12). Availability and accessibility of balanced food is a matter of concern for evolving an appropriate strategy for agricultural growth and food security.

- Malnutrition is regarded as a major threat to social and economic development in the XI Five Year Plan because it increases damage to future generations through further retardation. The rate of malnutrition has not declined much over the last decade and a half. In 1998-99 (NFHS-2) it was 47 per cent and in 2005-06 (NFHS-3) it was found to be 46 per cent. There was hardly any change over a period in which the economy registered a growth of 6 per cent per annum. This implies that economic growth does not have a major impact on eradication of malnutrition in India.

- Nearly half of India's children under 3 are malnourished. India has the largest number of children in the world who are malnourished. It reflects the weakness of the existing safety network in terms of
programmes like the TPDS, ICDS, MDM and Public Health System.

- There is considerable heterogeneity across Indian states (and even within states), districts and villages in relation to food and nutrition insecurity. Even in states like Madhya Pradesh that have performed well in economic terms, high levels of hunger persist. This implies that economic growth alone cannot lead to food and nutrition security. In fact specific policy interventions are needed for ensuring food security.

- NSSO data shows that per capita calories from cereals have declined over the last decade. Spending more on items like housing and shelter, health, education, transport etc., has affected affordability of sufficient nutritious food. This poses a serious concern for strategic planning for ensuring food security. It requires effective control over inflationary trends.

- As far as existing programmes are concerned, latest evaluation studies show that more than 50 per cent of subsidized grains do not reach the target group through PDS. Implementation of TPDS is full of errors in execution and exclusion. FPs are not viable, leakages and diversions exist in the system and irregular delivery of quota and FPs. Likewise the overall impact of ICDS and MDM on malnutrition is very limited due to meagre allocation of budgetary resources, shortage of staff, faulty project design, irregular supply of food and medicines and lack of community participation. All these facts require serious thinking for making
the system productive and efficient. All modifications in these programmes till date have not yielded the expected results. This calls for multi level reforms in India. To conclude, it can be said that growth along with subsidiary programmes targeting those who are most vulnerable and in need has not yielded the desired outcome and has been unable to resolve the problem of hunger and malnutrition in India.

Chapter 3 is concerned with reviewing the progress of implementation of TPDS, ICDS and MDM in the state of Rajasthan. Main findings are as follows:

- In spite of faster growth in recent years, Rajasthan is still a socially and economically backward state. Scarcity of water, recurrent droughts, odd climatic and geographical conditions, poor resource base, low rate of literacy particularly amongst women, volatile agricultural economy etc., are special features of the state which call for attention for food and nutritional security.

- India State Hunger Index published by International Food Policy Research Institute (2008) which captures three interlinked dimensions of hunger – inadequate food consumption, child underweight and child mortality which exhibits that the position of Rajasthan is 7th in this regard. The overall hunger index of the state at 20.99 per cent is quite alarming and it indicates an urgent need of inclusive growth and targeted strategies to ensure food sufficiency, reduction in child mortality rate and improvement of child nutrition in the state.
• The HUNGaMA report (2011) which covered 10 districts of Rajasthan estimated that 42 per cent of children below 5 are under-weight and 59 per cent are stunted. School health programme (2010-11) data also exhibit poor health status of school going children. About 28.73 per cent children were found anemic implying severe problems of under-nutrition among students.

• Per capita agricultural production in Rajasthan has been in a state of flux over the years in various districts. For example, in Ajmer district it remained 23 kg. in the year 2002-03 it went up to 185.52 kg. in the year 2003-04 but again declined sharply in the year 2005-06 coming down to 50.2 kg.

• Likewise in the year 2008-09 the per capita production remained 1111.39 kg. in Hanumangarh and on the other side it was 93.74 kg. in Dungarpur district. Because of such types of varying agricultural trends the state has remained a food insecure state. Public intervention is the only hope at the time of drought and famine.

• In Rajasthan a total of 24112 (2011-12) fair price shops are operational through which essential commodities are made available to targeted groups. However, district-wise analysis of population served per fair price shop indicates wide differences among districts. In Alwar district, 375 persons on an average are served by a fair price shop whereas in Jaisalmer 2135 persons are catered to by one fair price shop.
• The performance of the state in utilizing the allocation of wheat for PDS and MDM remained satisfactory during the period of study. More than 95 per cent allocations were utilized for distribution among BPL families and cooking meals in schools. However, decreasing enrolment of students in MDM schools shows that MDM is not a sufficient condition for keeping children in schools, rather it is the quality of education that is more important.

• In the state, the total expenditure on ICDS activities has continuously increased from the year 2005-06 to 2010-11. As far as realization of targets is concerned, the performance has not remained satisfactory. In the year 2011-12 only 67.79 per cent targeted families were benefitted by the programme.

• To conclude public intervention for ensuring food security in terms of availing two square meals has remained successful to a large extent. However, widespread malnutrition requires serious attention for making the system most suitable for quality food and good health.

Chapter 4 is concerned with identifying socio-economic characteristics of the units surveyed. Major findings are as follows:

• District level analysis reveals that overall position of Jaipur district in per capita net domestic product and human development index has remained above the average of the state as a whole and relatively better among districts but household data shows wide variation in the income and human development indicators
implying existence of inequalities in the distribution of income and assets. This fact highlights the need to incorporate household level information for chalking out appropriate strategy for alleviation of hunger and malnutrition. In other words micro-perspectives are more important in understanding and tackling the problem of hunger and malnutrition. This also calls for framing anti-hunger policies in the framework of region-specific characteristics in place of existing uniform pattern of guidelines adopted in governmental policy initiatives and programmes.

- In spite of efforts made to achieve the target of hundred percent literacy, the literacy rates of selected villages ranges from 54.26 to 61.98 per cent as per data of Census 2011. The position of female literacy is still a matter of concern as in Patan village it is still 39.79 per cent. The selected wards of Jaipur city are better in terms of literacy rate; with Ward No. 57 at 68.19 and Ward No. 28 at 85.84. This indicates a wide gap between rural and urban areas of the districts. As far as data at the household level is concerned, a very wide variation was found in this regard from one ward to the other.

- At household level the adequacy and quality of housing is measured on the basis of availability of dwelling rooms, type of kitchen, bathing and latrine facilities, drainage connectivity accessibility of drinking water, means of lighting and fuel, hygienic conditions like ventilation, cleanliness and pollution-free environment. It has been found that out of 380 selected households only 23 (6.1%) have adequate residential facilities,
42.9 per cent families are still living in very inadequate premises lacking basic facilities.

- Source-wise data of drinking water indicates that 45.06 per cent families are getting water from hand pumps or local sources like community tanks, wells etc., where quality of water is not ensured. High TDS and fluoride in water is a general problem in selected sample areas for the study. This shows that availing safe drinking water is still a major policy concern if we want to ensure nutritional security in the country. Along with water, lack of sanitation facility and practices in 81.8 per cent households was observed during the survey. All these facts indicate low quality of life ultimately reflected as widespread malnourishment.

- Position of ownership of assets indicates wide inequalities at household level. 24.08 per cent households do not possess agricultural land in the villages. There are only 10.47 per cent families which have more that 5 hectares. 4.2 per cent of total households have only one asset like television or mobile, Fan, television and mobile were found in 34.5 per cent households. 6.1 per cent possess motor cycles and only 1.6 per cent households have a car.

- As far as per capita income is concerned, it also indicates wide inequalities in households. 11 out of 380 families, earn less than Rs. 2000 per person. Other 30 families, were found to be earning more than Rs. 15,000.
• Analysis of consumption patterns and per capita dietary expenditure indicate that in general a few families are cautious and aware of nutritional requirements. Though a lot of families are consuming less because of income constraints, yet there are others, whose income is sufficient but they are spending a small part of income on nutritional food. Table 4.19 exhibits this trend. Growing tendency to acquire assets like mobile, television, motor cycle etc. with rising income is adversely affecting the expenditure on food and health. In prosperous sections of the society malnourishment is traded off with prestige needs.

• Information relating to the education level of the head of the family shows that almost 21.5 per cent families are currently managed by illiterate heads. In 10.5 per cent families female literacy is found to be more than 75 per cent where as in 35.3 per cent families it is less than 25 per cent. As far as total literacy across household is concerned, it also exhibits wide variation. Factual position of socio-economic conditions of families surveyed shows that poverty, low literacy and education level, poor living conditions, poor health, irrational decision making, lack of motivation to change etc., are associated phenomenon which are prevalent in almost one-third households. Hence strategy against hunger in such conditions requires a multi-pronged approach which can eliminate the roots of the problems.
Attempts have been made in chapter 5 to identify factors determining malnutrition along with policy implication. Main findings of this chapter are as follows:

- Cross-tabulation of nutritional status with other socio-economic variables shows that inhabitation locations, per capita income, PDC category, caste, housing conditions, water availability, accessibility of sanitation, asset holding, size of family, educational level of the Head of the family, female literacy, total literacy and per capita dietary expenditure are found associated with nutritional status of families. The Chi-Square test is applied to test the association of these variables with nutritional status to test the significance of association. To conclude, malnutrition at household level is affected by socio-economic conditions of households.

- Regression analysis is attempted to identify factors that explain variation in malnutrition position of families shows that:

  - change in total literacy across households is the single most important variable which explains 57.3 per cent variation of health status among families;
  
  - total literacy and adequate housing explain nearly 72 per cent variation in health status; and

- asset ownership, per capita income, water facility, PDS category are also crucial factors. Education level of the head of the family, per capita dietary expenditure and location of residence are other
important variables which explain variation in the health of families.

Analysis of perception of people related to the existing system of food and nutritional security shows that:

- Out of 182 respondents from rural areas 63 (34.6%) expressed that food grains supply in PDS and services provided in ICDS are regular in terms of delivery to households. 91 respondents (50.0%) expressed that supplies are frequently irregular. Rest 15.4 per cent opined that supplies are regular. In urban sample 40.2 per respondents expressed their views that supplies of food grains and services are regular. 37.6 percent respondents of urban areas were of the view that supplies were "frequently irregular." 21.2 per cent respondents were found dissatisfied with irregular supply system in PDS and ICDS. On an average 38 per cent respondents were found satisfied with the existing system. Rest 62 per cent expressed dissatisfaction. These figures call for improvement in delivery mechanism of PDS and ICDS.

- 54.4 per cent respondents from rural areas have opined that the quality of articles and services provided by Governmental programmes is average. 39.0 per cent respondents felt that it is of poor and very poor quality. 51.3 per cent of urban respondents found the quality to be average. 36.1 per cent respondents were found dissatisfied with the quality of articles and services provided under various programmes. Overall 52.8 per cent found articles and services rendered by programmes to be of "average quality." This implies need to implement strategies for
improvement in the quality of articles and services provided to people.

- Total 213 respondents out of 371 (57.4%) are of the view that existing safety network is either partially sufficient or not sufficient. 158 respondents are of the opinion that sufficient system exists for ensuring food and nutritional security. There is no significant difference in the opinion of rural and urban respondents. In terms of expectation 57 per cent people expect more governmental assistance.

- 52.6 per cent respondents felt that the existing system is partially corrupt. 128 (34.5%) expressed the opinion that existing system is totally corrupt and hence does not produce expected results. Only 6.7 per cent respondents have the opinion that existing system is fair and transparent.

As far as policy implications of these results are concerned, it can be noted that:

- Merely creating provision of entitlement for getting fixed amount of food grains and food supplement making health and nutritional services available at village level is not a sufficient condition for ensuring nutritional security of households, their proper utilization by families is rather more important. Illiteracy in the surveyed area is the main determining factor causing malnutrition. On the one side lack of awareness because of illiteracy is depriving families from getting proper benefits of programmes designed for their upliftment, on the other side, it is also responsible for
existence of poor parenting and child rearing practices, decisions of early marriages and conception, improper decisions relating to health and malnutrition, gender biases in child rearing and allocations of eatable among members of family and so on. There is a critical need to make the present education system efficient and productive for long lasting changes in behavioral modes of people. For short term strategy, concerted efforts for creation of awareness is the way by which utilization of existing safety network can be ensured. Innovative ways to extend awareness and education of females need to be pursued in policies designed for alleviation of malnutrition. Health and nutrition should be incorporated in teaching courses of all levels. Awakening of mind towards health and nutritional consciousness may help persons make right decisions about investment of time and resources for healthy life. Positive relationship between female literacy and nutritional status of children shows that more concerted efforts are needed for increasing the female literacy rate. It is important to increase nutritional knowledge of people and improve their diets via nutritional education programmes. Public health agencies should develop simplified food labeling systems based on health effects. Parenting and child rearing skills need to be taught to females prior to the birth of the first child. Parenting skills can be taught as a part of school-based curriculum.

- Adequate housing, asset holding, per capita income and per capita dietary expenditure are economic factors which are significant determinants of nutritional status of households. It implies that poverty and income inequalities are making a vicious circle of
malnutrition. For breaking the poverty trap it is essential that growth with equity policies be implemented effectively. Income generation at household level can only be ensured by way of creating sufficient employment opportunities at grass-root level. Area specific policies of agricultural, industrial and service sector growth are the need of hour. In spite of the stated objective growth in plans, the poor strata of the society is still deprived of economic growth. Hence redesigning of pro-poor economic policies of hunger in coming years is essential. Strategies that increase the income of the poor are the most sustainable means of improving food security. Agricultural growth is critically important for reducing hunger and nutrition. However, nutritional goals are to be incorporated in the design of agricultural policies and projects. Special attention is needed for the most vulnerable groups involved in or affected by the agricultural income particularly small and marginal farmers, landless labourers and casual workers in the programmes of land reforms. Nutritional objectives are to be highlighted in the extension activities of agricultural education. Policy makers need to ensure higher intakes of dairy products as well as fruit and vegetables. Such interventions include schemes for increasing milk and meat production and distributing improved varieties of seeds for enhancing the vitamin and mineral content of staple foods and vegetables. The benefits of such interventions are likely to reach large number of individuals and in the long run, will improve aggregate indicators of health such as life expectancy.
• Lack of safe drinking water in surveyed area is one of the factors of malnourishment. As absorption of food is affected by the quality of food, it is needed to ensure availability of safe drinking water at household level. More public expenditure for drinking water projects, along with effective management and proper staffing can ensure water availability and accessibility at grass-root level, and

• Existing system does help the poor and vulnerable sections of the society in terms of availing food grains and other services which fulfill the needs to some extent. However, for making the system more efficient and productive, effective monitoring and supervision is the need. For correcting malpractices in the system the initiatives taken as adoption of IT enabled components are to be implemented effectively. ICDS, MDM and TPDS have potential but they do not create an integrated and comprehensive nutritional safety network so they have not addressed the nutritional problems effectively. Coordinated implementation of these programmes can make them effective in terms of ensuring nutritional security. Food security and Nutritional security which are the main objectives of Governmental TPDS, ICDS and MDM have still not resulted in expected outcomes for making them effective and productive. Transparency in execution of modalities is the need of the hour. Problem of inclusion and exclusion, leakages and wastage can be removed by way of using e-governance in operation and management activities. Gaps in convergence between the services offered by different departments to tackle under-nutrition, especially at the grassroots
level are required to be slugged. Enormous resources are invested towards reduction of malnutrition. However, the impact can best be described as limited. Hence for improving output gaps in staffing, capacities are to be developed to implement programmes effectively. Malnutrition is caused not only by inadequate food but also by inadequate health services and poor environmental conditions. Nutrition policy should be an integral part of health policy, coordinated at grass-root level.

- The involvement and participation of the population in the battle against hunger is a necessary condition for success. It can be achieved by way of creating awareness so that effort can be made to convince them about solution to this problem. Effort is also to be made towards mobilization of the masses and effective empowering of the poor.

- It is also useful jointly to assess the costs of various interventions as the formulation of policies would benefit from long-term considerations. For example, poor sanitation increases the transmission of bacterial diseases and entails nutrient loss via sicknesses. Policy makers also need to take a long-term view of the health benefits for cleaning up the environment. Better waste disposal methods can be devised relatively cheaply in the short run. The need lies for greater investments in sanitation, water projects and hygiene to improve public health.

- Multidisciplinary analyses are useful for the formulation of food, education and health policies since they take into account diverse
findings and suggestions

factors affecting child development. In contrast, focusing on a limited set of factors can lead to sub-optimal resource allocation, since important variables analyzed in other disciplines may be missing from the empirical models. Overall the formulation of efficacious food policies for the poor requires the incorporation of evidence from various sources, including randomized controlled trials, household surveys and macro-economic analyses.

Conclusion

Malnutrition is a multi faceted problem which cannot be solved through raising income and catering to the needs of the poor through programmes and superficial measures of redistribution of resources. Expansion of employment opportunities and consequent increase in purchasing power of the vulnerable population is a long-term solution to the problem of hunger and malnutrition. The cultural and educational deprivation, poor health, inadequate sanitation, lack of safe drinking water, economic backwardness are to be fought with targeted strategy.

Once this is done, there is a much better chance of having a real and lasting impact. In case immediate causes of malnutrition are to be improved, there is need for political determination and directed structural change in policies.