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The Current National Nutrition Scene: Areas of Concern

C. Gopalan

As one who has had a ring-side view of the nutrition scene in India for over sixty years now, I have been witness to the remarkable changes it has undergone. In the 1940s, when I started on my professional career, India was a veritable museum of frank, florid nutritional deficiency diseases. Beri Beri (wet and dry) was widespread in the eastern seaboard of the country and was responsible for considerable mortality and morbidity. Classical pellagra was common among jowar (sorghum) eaters in the Deccan. Kwashiorkor and keratomalacia were major public health problems in children, especially, in the southern and eastern parts of the country. Pendulous goitres and osteomalacia were common in the sub-Himalayan regions. Severe anaemia arising from iron deficiency, aggravated by malaria and hookworm infestation, was a major public health problem. There were also frequent large-scale famines arising from acute food shortage, the Bengal famine in which the causalties exceeded those suffered by the Allies in World War II being a notable example. Around the 1960s too, India was threatened with acute food shortage and there were dire neo-Malthusian predictions of imminent catastrophe.

It is to the credit of India's scientists and policy-makers that these formidable problems were successfully overcome. By the late 1970s, the nutritional deficiency diseases mentioned above had ceased to be major health problems. Thanks to the advent of the Green Revolution, the threatened acute food shortage did not materialise. Infant and child mortality had declined and life expectancy had increased. These remarkable successes were achieved without the use of fanciful imported remedies. Thus, beri beri was conquered, but NOT by distribution of Vitamin B1 tablets; pellagra was overcome, but NOT by distributing nicotinic acid tablets. Keratomalacia most certainly was eliminated as a public health problem, but NOT by administering massive doses of synthetic vitamin A; kwashiorkor was overcome, but NOT by the use of 'fish protein concentrates' that were being vigorously pushed by foreign commercial agencies. These striking successes were achieved by improving the diets of the people, using locally available traditional foods and by improved health care. These successes are particularly remarkable because they were achieved at a time when the country was experiencing severe national economic constraints. By the 1980s, there was reason to hope that we were well on our way to eliminating all forms of malnutrition. Unfortunately, these expectations have not been fulfilled.

Present Areas of Concern

- In recent years, we have had impressive success on the macro-economic front. Economic constraints at the national level are no longer the problem they were in earlier years. Yet, it is a sad fact that this impressive success on the macro-economic front has not been significantly reflected in improved nutritional status in the vast bulk of our population. The "trickle down effect", which is often talked about has apparently not been operative. The resultant widening disparity between the affluent and the non-affluent sections of the population is not conducive either to the improvement of the nutritional status of the poor or to the building of a harmonious and healthy society. This is a matter that should engage the attention of our policy makers and economists.

- In the ultimate analysis, the nutritional status of our population will largely depend on the nutritive quality of diets in individual households across the country. Balanced diets based on a judicious combination of a range of foods will ensure such nutritive quality. Today, the range of foods in use in households has narrowed considerably. Millets have gone out of fashion even in the households of poor and lower middle class. The intake of pulses, which is important from the point of view of ensuring the protein and micronutrient quality of vegetarian diets, has unfortunately declined in the diets not only of the poor but also of the affluent. Despite the impressive statistics relating to production of vegetables and fruits, the actual intake of vegetables and fruits in households has not shown any significant rise. As a result, the nutritive quality of our household diets is under serious threat.

- We have also not made impressive gains with regard to maternal and child health. We have had some moderate

CONTENTS

success with regard to reduction in infant and child mortality. I have repeatedly drawn attention to the fact that "child survival" does not necessarily mean "child health"[1]. There is quite a distance to travel between mere 'child survival' and satisfactory 'child health'. Unfortunately, the distance remains untravelled.

More than 30 per cent of our children today are stunted and suffer from growth failure. Anaemia is still a major problem, especially, among pregnant women. As many as, 25-35 per cent of all children are of low birth weight. This has been the case for over two decades. It is possible that the strategies that we have formulated to combat these problems are not being effectively implemented at the ground level. It seems more likely, however, that the strategies that we currently follow to combat these problems are inadequate and require careful scrutiny and revision.

Thus, we have not made any significant dent on the problem of stunting and growth failure in early childhood. It is possible that this is partly because our present strategy does not take into account the possible role of vitamin D deficiency as an important factor contributing to growth failure. As was pointed out in an earlier publication[1], the Vitamin D content in the breast milk of poor Indian mothers is low; and infants and children hardly have adequate exposure to sunlight because they are confined within their dingy homes. Their calcium intake is also low.

With regard to control of anaemia, we are relying exclusively on administering iron and folic acid to counteract the problem. Extensive field studies have shown that in approximately 10-18 per cent of the cases of anaemia, iron and folate administration alone does not result in satisfactory elevation of haemoglobin levels. There is a need to look into possible factor (s), additional to iron and folate that may be involved in building iron into haemoglobin. It is extremely important that research designed to improve the current strategies for combating growth failure and anaemia receive high priority and are pursued with a sense of urgency.

● Even at present, millions of our poor are escaping from the poverty trap and are joining the ranks of the lower middle class. But apparently this escape from poverty does not ensure them good nutritional status. Many persons born in poverty and acquiring affluence in adulthood suffer from obesity. They are eventual victims of chronic diseases. The link between intra uterine growth retardation and undernutrition in childhood on the one hand, and the escalation in the incidence of chronic degenerative diseases on the other, requires to be carefully elucidated. It is this link that underscores the need for a life-cycle approach towards ensuring good nutritional status.

● The current escalation in the incidence of childhood obesity is possibly due to changing life-styles and dietary practices in households. Instead of traditional wholesome diets based on high-fibre cereals, fruits, vegetables and milk, junk foods and sugary soft drinks seem to figure in the diets of children. Parents, who are themselves following undesirable dietary practices are apparently unable to check the faulty dietary habits in their children.

● While we have not yet solved the problems of undernutrition in children, we are now being faced with an escalation in the incidence of nutrition-related degenerative diseases in the adult population. Type II diabetes mellitus now ranks as a major public health problem. This increase in incidence must be the result of deleterious changes in lifestyle (lack of adequate physical activity) and faulty dietary practices, which are a feature of "developmental transition".

Pulses are essential for ensuring the protein quality of cereal-based vegetarian diets, because they are important sources of the valuable amino acid, lysine. The importance of lysine in ensuring the quality and functioning of muscles, and the role of muscle in fat/glucose metabolism and in combating insulin resistance are now being increasingly recognized. These aspects have been discussed in an earlier issue of this Bulletin[2]. It is possible that the current steep escalation in the incidence of type 2 diabetes mellitus in the Indian population is at least partly related to the relative lack of physical exercise, and inadequate intake of pulses, leading to poor muscle quality. A reduction in skeletal muscle mass in relation to fat and depletion in muscle quality could contribute to dyslipidemia and insulin resistance. These considerations will strongly argue in favour of high-priority programmes designed to increase the intake of pulses in cereal-based vegetarian Indian diets.

● An important aspect in the present stage of our national development, with a major impact on the nutritional status of our population, has not received adequate attention. Globalisation, urbanisation and the consequent changes in the occupational patterns of the people, and the mass media, especially TV, are contributing to a change in the value systems of our people, and this is being reflected in their dietary habits. There are aggressive campaigns being launched by pharmaceutical agencies and multinational corporations designed to promote the increasing use of synthetic nutrients. Unfortunately, these campaigns have successfully co-opted the support of some politicians and policy makers. There is, unfortunately, no well-structured and well-targeted national nutrition education programme based on scientific principles, national interests, and community welfare, beamed to different sections of the society, which will help to resist these deleterious forces. Such well-targeted programmes must be carried out through the school system and through parent-teacher associations, women's groups and other community grass-roots organizations. The chain of Home Science colleges with Departments of Food and Nutrition, as well as the Departments of Preventive Medicine in our medical colleges should be enlisted in this important national effort. Every state should have a Nutrition Education Bureau to disseminate useful and practical information regarding wholesome diets for households. The "battle for the minds of people" today is clearly as important as the battle against poverty. If we fail to promote wholesome dietary habits among our people through well-targeted education programmes, escape from poverty will not guarantee good nutrition. We will be leaving the field open for commercial exploitation of malnutrition.

● The Government of India has instituted several major national programmes with nutrition components. These programs are now very well funded. But unless the basic defects with regard to the implementation of these programmes are addressed, satisfactory results cannot be expected. In many of these programmes, supplementary feeding figures as a major item[3]. Problems of