Infant and Young Child Undernutrition

Where Lie the Solutions?

Malnutrition among children occurs almost entirely during the first two years of life and is virtually irreversible after that. Food interventions at schools are unlikely to address infant feeding and young child malnutrition as they cater to older children, who in fact suffer from malnutrition since they are young. The solutions to the problem emerge from a clearer distinction between hunger and malnutrition and the knowledge that child malnutrition is directly associated with inappropriate feeding practices. This requires a shift in thinking, from food-based approaches towards feeding behaviour change.

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Infant and young child malnutrition has profound negative consequences on the health and development of a child and thus of society. In India, a whopping 2.42 million children under the age of five die annually. There are 60 million underweight children under the age of five. Most of these deaths are associated with infant and young child malnutrition. Worse, the survivors are not able to develop to their full potential. Malnutrition deaths in Maharashtra, astonishingly highlighted by the media, are no exception. Child malnutrition contributes to more deaths than any other health condition, globally accounting for or contributing to about six million of the 10.9 million deaths of under-five children each year [*Lancet* 2003a]. We should also know that malnutrition among children occurs almost entirely during first two years of life and is virtually irreversible after that. Obviously, it tremendously impacts development outcomes, as more than 90 per cent of the brain actually develops during first two years. It impairs cognitive development, intelligence, strength, energy and productivity. The loss of social capital is tremendous, even amongst the survivors. The negative impact it has on programmes like polio eradication makes it more serious. In spite of these costs to the nation, workable solutions to this problem are yet to be found.

These solutions include increased spending on infant and young child nutrition during the first 24 months when malnutrition is frequent and disturbs the very foundation of life and development. Thus, evidence based and proven solutions do exist. They emerge from a clearer distinction between 'hunger' and 'malnutrition' and the knowledge that child malnutrition is directly associated with inappropriate feeding practices. This requires a shift in thinking from 'food-based' approaches towards 'family-based' feeding behaviour change.

Decisions on how much to invest on infant and young child nutrition and development must now be taken. The basis of this was laid down at Copenhagen, in May 2004, when eight of the world's distinguished economists (three of them Nobel laureates) gathered to set priorities among a series of proposals to confront 10 global challenges. The experts were to address the challenges and answer the question, 'What would be the best ways of advancing global welfare, and particularly the welfare of developing countries, supposing that an additional $50 billion of resources were at governments' disposal?' These challenges included hunger and malnutrition, particularly child malnutrition. The experts examined 30 proposals and then ranked them in descending order of desirability, creating what is now known as the "Copenhagen Consensus 2004". The highest priority was given to HIV/AIDS and policies to attack hunger and malnutrition followed close behind. Additional spending on infant and child nutrition, and reducing the prevalence of low birth-weight, were among the top 17 projects accepted by the expert group.

Towards a Clearer Distinction

Hunger and malnutrition are both scandalous problems that demand solutions. Malnutrition is more often due to the lack of care or poor health rather than the lack of food. Providing food to hungry people is important but is unlikely to reduce the worst forms of child malnutrition. The main source of confusion is that while a lack of food can cause both hunger and malnutrition, malnutrition can be and is often caused by other things as well. At the Copenhagen Consensus, the expert paper on hunger and malnutrition noted though low income poverty is a significant determinant of child undernutrition, almost half of the cross country variation in the prevalence of child stunting is not explained by differences in per capita income. In Jamaica, for example, only 4.4 per cent of children are stunted, while 25-30 per cent are stunted in Albania, Peru, and the Philippines; countries in the same per capita income bracket. While there are no easy solutions, in light of the current evidence, we need to take a fresh look at the problem and find innovative answers other than the old hackneyed economic formula: 'just eliminate poverty'! The simplistic view that economic growth will automatically eliminate or reduce malnutrition has long been discredited. Rather, the view that nutrition is critical to economic growth and development, including human development, is now gaining ground. Addressing 'food security' should thus include children right from birth to two years.

Unfortunately, very few of our policy and programme managers understand infant and young child malnutrition. The media carries the same confusion. Hunger, according to its traditional Oxford dictionary definition is 'an uneasy sensation, exhausted condition, caused by want of food'. But mostly hunger is used as an alternative, even a proxy, for malnutrition and undernutrition. This confusion is avoidable but needs careful understanding. When the term hunger is used instead of malnutrition, it sometimes leads to an emphasis on actions that are largely food and agriculture based. Yet malnutrition in young children is frequently not a problem of food availability and access to food. It is often due to the lack of optimal breastfeeding during the first two years,

particularly the lack of exclusive breastfeeding during the first six months. Frequent childhood illnesses such as diarrhoea and respiratory infections, chronic diseases such as helminth infections, inadequate caring practices, and poor appetite contribute to malnutrition significantly.

Recent malnutrition deaths in Maharashtra caught attention both in print and electronic media. This made it abundantly clear how well the media and others who are responsible understand malnutrition. As one of the officers in Maharashtra, waiting to receive Arjun Singh, said on NDTV on July 15, "We will ask for allocation of higher than Re 1 for supplementary food for each child and more buildings for anganwadi centres". The health director of the state Salunke said, "We have brought down the mortality rate from 70 per 1,000 in 1971 to 45. The root cause of malnutrition has to be tackled by other departments, like food and civil supplies." Programmes aimed at food supplies, which often go to elder children, cannot be expected to solve this problem as this is like locking the stable after the horses have fled. When the nature of the problem is not fully understood, we seek solutions where they do not exist.

Understanding Child Malnutrition

It is important to know that child malnutrition is intimately related to inappropriate infant and young child feeding practices and occurs entirely during the first two years. There is a global as well national understanding on this association and its risk. The government of India's 10th Five-Year Plan [GoI 2002:337] document notes, "As a result of these faulty infant feeding habits, there is [a] steep increase in the prevalence of undernutrition from 11.9 per cent at less than six months, to 58.5 per cent in the 12-23 months age." And this percentage does not change much after two years (see the figure). Similarly the WHO and UNICEF developed the 'Global Strategy for Infant and Young Child Feeding', which has been adopted through resolution 55.25 of the 55th World Health Assembly in 2001. It clearly defines the problem as:

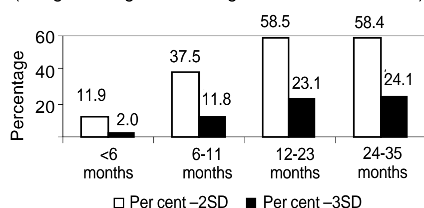
> Malnutrition has been responsible, directly or indirectly, for 60 per cent of the 10.9 million deaths annually among children under five. Well over two-thirds of these deaths, which are often associated with inappropriate feeding practices, occur during the first year of life.

Looking at India's situation, the infant mortality rate (IMR) is around 65 and under-five mortality rate (U-5MR) is around 95 per 1,000 born. Nearly 1.6 million of the 2.4 million under-five child deaths, die during the first year alone. And this happens year after year. Can this be called a silent tragedy? The late James P Grant of UNICEF called it "Three Bhopals every day of the year" and no one seems to notice! Most of these deaths are preventable; but how?

Can We Save these Children?

In February 2003, researchers from several institutions met in Bellaagio [*Lancet* 2003b], Italy, to define what could be done to save the lives of approximately six million children who die annually from preventable causes. This expert group published its findings and recommendations a year ago, which show that at least one proven and practical intervention is available for preventing or treating each

Figure: Prevalence of Undernutrition
(Weight for Age Percentage below –2 SD/–3 SD)



main cause of death among children younger than five years. If all these interventions were universally available, then something like 63 per cent of child deaths would be prevented. In other words, the interventions needed to achieve the UN mandated millennium development goal of reducing child mortality by two-thirds by 2015 are available, but they are not being delivered to the mothers and children who need them. The group did an exercise to determine how many children could be saved from death if the current coverage levels of interventions were increased to universal coverage. According to the analysis, breastfeeding was identified as the single most effective preventive intervention, which could prevent 13 to 16 per cent of all childhood deaths in India. Adequate complementary feeding between 6 to 24 months could prevent an additional 6 per cent of all such deaths.

Solutions Lie in First Two Years

The commonly held assumption is that food insecurity is the sole or even primary cause of malnutrition. School feeding programmes have been going on for more than four decades; these cater to the needs of older children, who in fact suffer from malnutrition since they are young. Supplementary nutrition is distributed among younger children also. India's famous Integrated Child Development Services (ICDS) programme has been sustained for 25 years and has been successful in many ways but has not made a significant dent in child malnutrition. It is because critical elements of care and education are missing as noted by the Tenth Plan document "child care and nutrition education of the mother is poor or non-existent" [GoI 2002:342]. Perhaps this is because these inputs require skill development of grass roots workers, and are time-intensive; you cannot just buy them!

Thus, undernutrition is important in its own right and deserves special attention but should not be confused with hunger or food insecurity or micronutrient deficiencies (especially vitamin A, iodine and iron) which are highly prevalent among mothers, infants and young children, with often irreversible consequences. Clearly, direct nutrition interventions before two years of age, including those to improve maternal nutritional status are therefore essential. These are critical to human development and so cannot be ignored.

First, among proven cost-effective direct nutrition interventions are efforts to assure every child receives exclusive breastfeeding for the first six months, adequate and appropriate complementary feeding along with continued breastfeeding after six months to two years or beyond. It should be known to all concerned that only 40 per cent of babies under the age of six months are exclusively breastfed, ideally this percentage should be 90-100 per cent. The Tenth Five-Year Plan sets state specific targets to improving optimal breastfeeding practices, and considers it most critical to reduce the prevalence of undernutrition and at the same time notes that it does not require additional spending [GoI 2002:360]. It is here that we need to take some positive and forward looking decisions; we can continue putting money into buying and distributing food, and in providing skills to frontline workers to counsel families on optimal feeding practices aiming at behaviour change. It would be interesting to find out how much we spend each year on food and how much on skill building and education in this sector.

Ensuring good breastfeeding practices contributes to poverty reduction. It has huge economic value. In 1993, it was estimated, "The net value of human milk currently being produced is about Rs 6,500 crore..." [Gupta and Rohde 1993]. Viewed from the perspective of an individual, the costs of artificial feeding are substantial Rs 450 is required each month to feed a healthy infant. Artificial feeding thus impacts an individuals daily spending and possible spending on the treatment of diseases. Thus it perpetuates poverty. Poor mothers who must work are particularly vulnerable and employment conditions often do not allow young infants to accompany mothers. Worse yet, the public misperception that bottle-feeding is modern and better must be more aggressively countered. Most communities need to be mobilised to understand the needs of women. Nutritionists agree that poor infant care and feeding should be at the top of the action list but much more than 'enabling conditions' are needed. Being vague and non-specific does not help to achieve the kind of behaviour change needed in communities.

If we continue to believe that malnutrition can be eliminated mainly by attention to agriculture and food availability; it might not happen or take a very long time. It is critical that all decision-makers, policy and programme persons appreciate that while lack of food can cause hunger and malnutrition, the latter can have other causes that are vitally important and need to be addressed.

Food interventions in schools, besides providing meals for students could potentially be a place where pre-school children could receive food, or where it could be supplied for families to take home. To base nutritional interventions in schools overshadows present evidence-based strategies to reduce malnutrition, many of which currently enjoy much professional consensus. Most importantly, school feeding is highly unlikely to address infant feeding and young child malnutrition. The emphasis on 'food supply' is understandable but unfortunately ineffective; it too often goes to older children. Although school feeding may be an effective educational intervention, evidence that it improves the health and nutritional status of school children is weak, and evidence for its impact on child underweight and nutritional status of other family members is non-existent [Allen and Gillespie 2001].

Moving Forward

School feeding and other supplementary feeding programmes may continue, but interventions that aim at a notable reduction in infant and child malnutrition should receive greater emphasis and more resources. Most agree that largely behaviour change interventions are required to improve the nutritional status of pre-school children, especially in the first two years of life. It would be alarming if we fail to attend to such direct and cost saving actions to improve infant health and development. Benefits of such direct interventions during the first two years of life are proven, affordable and sustainable.

The global strategy for infant and young child feeding, which was adopted at the World Health Assembly by consensus calls upon member states to act urgently to achieve improvement in infant and young child feeding practices. The costs of further non-action are virtually unaffordable in nation building. Spending on infant and young child nutrition especially on improving infant and young child feeding

should be treated as an investment pillar for improved health and development outcomes as well as poverty reduction. According to the strategy:

> Inappropriate feeding practices and their consequences are major obstacle[s] to sustainable socio-economic development and poverty reduction. Governments will be unsuccessful in the efforts to accelerate economic development in any significant long-term sense until optimal child growth and development, especially through appropriate feeding practices, are ensured.

The focus on agricultural production, marketing and economic development in leading to a trickle down effect on poverty reduction has long been proven a failure. While the underlying determinants like poverty and poor health services will take time to show improvements and may continue to be tackled in a systematic way, children under the age of two cannot wait. Children are young saplings in the garden of life; to ignore and abandon them is worse than demolishing a temple, mosque or church. It is indeed self-destructive. Children make up nearly half of our citizenry – they are the ones who will soon vote, work and sustain our country. They deserve a decent start and a healthy future. It is high time to relook at child malnutrition; the answers are before us – let us act on them.

Key Actions

The Planning Commission is about to undertake a mid-term review and it would be ideal to find out if exclusive breastfeeding for the first six months is on the rise or fall. Recently, Punjab was declared number one state in *India Today*'s conclave, but it is ironical that 29 per cent of its children under the age of three are underweight and 40 per cent are stunted. Only 36.3 per cent of babies are exclusively breastfed during the first three months. Clearly the issue is not food or hunger here. The criteria for assessing the performance of states, apart from other indicators, should include how many babies are underweight below the age of two years and how many are exclusively breastfed during the first six months.

The Mumbai High Court had to direct the Maharashtra government to take immediate measures to combat the alleged malnutrition deaths. It seems that further decisions are being taken to enhance the 'food' component, however to ensure that the right steps are taken to increase spending on infant and young child nutrition, debates should happen at the state and at the National Advisory Council level.

While the prime minister is conscious that no life should be lost because of the lack of care, and the finance minister is in the process of developing the country's poverty reduction strategy papers (PRSPs), it is imperative to address the issues outlined above. We continue to hear that the lack of resources do not allow for adequate attention to infant and young child health and development. If this is true, both the prime minister and finance minister should find resources, without a conflict of interest for this vastly ignored area of human development. Maybe another cess for infant and young child nutrition, health and development could be considered. The challenges of taxation and price rises will continue to haunt us, but children need our attention. It is unfortunate that children's health and development is currently divided between two ministries; why can we not create one ministry to deal with this when we can have one on NRI affairs. EPW

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