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Review Article

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Impact of infant & young child feeding & caring practices on nutritional status & health

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The exclusive breast feeding rates in India at 6 months is about 46 per cent. At 6-8 months only 54 per cent of breast fed and 75 per cent of non breast fed infants are initiated into complimentary feeds. At the start of the second year of life only about 42 per cent of infants receive the recommended appropriate foods at appropriate frequency. There is evidence to suggest that the persistent undernutrition in the country is associated with these inadequate feeding practices prevalent in the country. Experiences from several studies suggest that household level behavioural changes could be achieved by using appropriate behaviour change communication principles, change agents specially trained to address some of these issues, consistent messages, multiple channels to saturate population coverage and engaging communities in a participatory manner and encouraging their ownership of such interventions.

Key words Breast feeding - complimentary feeding - counselling - infant feeding

The most recent estimates of the global burden of malnutrition in under 5 children are that 178 million (one-third of all children) are stunted, 112 million are underweight, 55 million are wasted (19 million having severe acute malnutrition) and 13 million children are born each year with intrauterine growth retardation¹. Together they account for 21 per cent of all under-5 deaths. Besides increased risk of mortality and morbidity, recent reviews have also provided compelling evidence for links between stunting and reduced cognition and economic productivity, trans-generational effects resulting in small babies, and increased risk of childhood undernutrition – when accompanied by rapid weight gain- with chronic diseases such as high blood pressure, metabolic and cardiovascular disorders. There is, therefore, sufficient reason to both prevent and appropriately manage

malnutrition in early childhood if both the short-and long-term consequences are to be avoided.

In the causal matrix of undernutrition, an important underlying determinant is care provided to the child. There is increasing awareness that cultural and behavioural practices with regard to child rearing practices influence child nutrition. This review is intended to focus on this determinant of undernutrition and its role in nutritional programmes.

Child care practices and impact on nutrition

The key care practices that could impact on child nutrition include care of pregnant and lactating mothers, breast feeding and feeding young children, care of children during illness, psychosocial care of children, food preparation and storage, and hygiene². However, these practices are to a large extent,

dependent or modified by availability of resources to the caregiver for its implementation. These resources include knowledge and beliefs about child rearing, the health and nutritional status of the care provider, control of resources and/or autonomy for child care (these include decision making role and employment of caregiver), workload and time constraints for providing child care and social support (these include availability of alternate caregivers, sharing of workload, father's role in child care and community support).

The growth and nutritional outcomes of children is dependent on a complex relationship between the intrinsic characteristics of the child and the competence of the mother in providing child care. Zeitlin *et al*³ proposed that healthy, adaptable children may grow well and thrive even in the absence of good care, while extremely good care is required for the smallest and weakest children (low birth weight, those with poor appetites).

The impact of child care practices on child nutrition is demonstrated from a study in Accra. A composite child care index (for children 4 months or older) was created using traditional feeding practices, caregivers-child interaction and preventive health seeking behaviour as its main domains. It was observed that poor care was associated with significantly higher prevalence of stunted and underweight children, while care index did not influence prevalence of wasting amongst children⁴. It was also observed that good care practices were more important for mothers with less education for better nutritional status of their children.

Practices that improve child growth

Table summarizes the evidence for practices that improve growth in children. Exclusive breast feeding up to 4 months has strong evidence for its growth promoting effect. Feeding styles, caregiver's attitude and food consumption also promote growth.

The current status of feeding practices in India that promote child growth as cited by the National Family Health Survey-3 (2005-2006)⁵ is rather dismal. Early initiation of breast feeding is reported in about a third of births, prelacteal feeds are administered in over half the infants and exclusive breast feeding in infants less than six months is a little under 50 per cent. Data with respect to complimentary feeding suggest that about 50-60 per cent children have timely introduction of complimentary foods but good feeding practices are reported in just about 50 per cent of children at 12-24 months of age⁵.

Table. Infant and child feeding practices that promote growth in children

Practices	Strong evidence for better growth	Possible evidence for better growth
<i>Early breast feeding practices:</i>		
• Early initiation of breast feeds	-	+
• No prelacteal feeds	+	-
• Exclusive breast feed till 4 months	+	-
<i>Feeding styles:</i>		
• Supervised self feeding	-	-
• Feeding on regular schedule	-	+
• Child happy at meal time	-	+
<i>Caregiver attitude:</i>		
• Positive, non-confrontational	-	+
<i>Food intake:</i>		
• Frequent intake of staples	+	-
• Low intake of milk/milk products	-	+
• Fruits	-	+

Improving child care practices

It is generally believed that interventions to improve child rearing and feeding practices must begin soon after birth of the child. In a randomized controlled trial from Nepal⁶ it was noted that educational interventions at birth and 3 months post-partum had no impact on infant feeding or care. However, counselling mothers of infants older than 6 months appears to improve feeding practices. In a community based nutritional intervention study in rural Bangladesh⁷, it was noted that when volunteers taught mothers how to provide complimentary feeding to their infants (especially use of simple, affordable energy enriched complimentary foods), over a 5 month period significant weight gain was noted amongst these children.

There have been several positive deviance approach projects implemented in India with the objective of improving child feeding and rearing practices. Some notable projects have been those targeted to assist ICDS projects in Rajasthan, Uttar Pradesh and West Bengal, and UNICEF assisted Dular Project in Jharkhand. The key features of these interventions have been household level counselling usually by an additional community level resource worker, community participation, group meetings, and regular weighing of children. However, while all studies demonstrated a small change in child care and feeding practices, the impact on nutritional status was only marginal.

Bhandari *et al*⁸ observed that there were number of opportunities for improving children feeding practices for better nutrition and care. These included sick child visits to physicians, immunization and weighing sessions, and home visits by community health workers. The study observed that in most of these visits counselling opportunities were missed. They also observed that it was worst with sick child visits to physicians (<3% counselled) and for the rest, counselling was noted in 30-45 per cent.

Conclusions

Improvement in child care and feeding practices could positively impact nutritional status of children. These interventions need to be at the household level using positive deviance approach and behavioural change communication strategies. It may be necessary to invest in community level change agents to facilitate the process especially in an already overburdened health system. Contact opportunities with children must be used for counselling, multiple communication channels need to be used to saturate the population with consistent messages on child care and feeding.

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