CHAPTER I

INTRODUCTION
CHAPTER – 1

INTRODUCTION

Infancy, the first twelve months, in the life of an individual, is very critical and unique. Fast growth characterized by increased body size is accompanied simultaneously with acceleration in such developmental domains as mental, social and emotional. Eighty percent of brain development takes place during this period. Any setback in health and nutritional status during this period can cause irreversible damage lasting a whole lifetime.

In the early stages of infancy the child is completely dependent on its mother for breast milk, which is the best food. The WHO guidelines (1998) state that breastfeeding should be initiated immediately after birth and most infants should receive only breast milk till six months of age, following which breastfeeding should continue with other foods till two years of age. The introduction of complementary food is an important event in the life of an infant. From a liquid diet of human origin the infant progresses to an externally prepared liquid or semi solid diet of man made or animal origin. The infant also learns to ‘eat differently’ with the help of an external feeding device. Thus the infant gets introduced to other foods as well as to different methods of feeding.

Feeding the infant is a skilled and time-consuming activity. The mother or caregiver needs time and patience in handling the infant. Unlike breastfeeding, complementary feeding requires preparation. The diet has to be soft, bland, nutritious and various food items have to be introduced gradually, such that at one year of age the infant eats practically all the foods consumed by the family. Successful breastfeeding coupled with the timely and successful introduction of nutritionally adequate complementary foods is important for the infant’s nutritional well-being and in the prevention of malnutrition.
The role of feeding practices needs to be studied in depth to understand the etiology of malnutrition in infancy. Infant feeding practices can be divided into two distinct categories, namely, the period when breast milk alone is given and the period when other foods are introduced along with breast milk. In the eighties a great deal of concern was generated over the decline in the rate of breastfeeding (Wallia et al. 1987) which was attributed to the aggressive marketing strategies of the manufacturers of infant food. Concern was expressed about the impact of the bottle on the breast (Awasthi et al. 1991).

The medical profession swung into action and after a great deal of lobbying and activism was successful in getting the Infant Milk Substitutes, Feeding Bottles and Infant Foods (Regulation of Production, Supply and Distribution) Act passed in 1992. The Act was formulated to prevent promotion and sale of infant foods through advertisements.

Several campaigns were mounted to promote breastfeeding. Gupta and Rohde (1993) calculated the economic value of mothers’ milk to family and society and reported that it was far cheaper for mothers to breastfeed their infants by remaining at home rather than opting for economic work and substituting breast milk with infant milk substitutes. By this time interest in the subject was evinced from other quarters, particularly women’s groups and activists.

Krishnaraj (1993) raised objection to the above observations on the ground that the assumption that mothers are lured by the availability of substitutes and their promotion which alone made them give up breastfeeding was erroneous. A large number of women had to support themselves and their families, through economic activities due to inadequate household income. There were no facilities for combining work with breastfeeding. According to Krishnaraj (ibid) breastfeeding should be considered as women’s issue.
Swaminathan (1993) argued that attempts to promote breastfeeding through laws and policies (by restricting artificial feeding) without social support measures were unfair to both mother and child. A large number of malnourished Indian mothers may have ceased to breastfeed not out of perversity but due to poor lactation. A study conducted by the Nutrition Foundation of India (Gopujkar et al. 1984) on the lactation performance of poor mothers in the urban, peri-urban and rural areas of Mumbai, Kolkatta and Chennai revealed that the lactation performance of mothers of Kolkatta was distinctly poorer to those of their counterparts in Mumbai and Chennai, judged on the basis of their inability to exclusively breastfeed their infants up to four months. The poor nutritional status of the mothers of Kolkatta was thought to be the causal factor in their poor lactation performance.

The arguments and counter arguments on the supposed decline of breastfeeding led to a number of studies being conducted in India on breastfeeding. Gopujkar et al. (ibid) opine that the furore created by the advent of infant food has actually done a service to the cause of infancy, which was hitherto a neglected area. Practically all studies show breastfeeding to be universal in India, the problem being its exclusivity.

On the other hand prolonged breastfeeding without timely introduction of complementary food is as undesirable as early initiation. When compared to breastfeeding issues, complementary feeding has not attracted much attention. Unlike breastfeeding which is universal there is a large variation in complementary feeding practices in different states of India, but just as breastfeeding is conditioned by constraints due to work status and time availability of mothers (Gillespie, 1997).

Lingam and Mankad (2001) on reviewing the research on breastfeeding and infant feeding practices identified three types of flaws namely, epistemological, inadequate analysis and
unimpressive discussions and recommendations. Lack of clear-cut definitions and inadequate sample profiling with little or no correlation to findings were major lacunae. The analysis was often gender blind. Though the mother was the focal point of the process of childbirth and rearing, there was no understanding of the problems and limitations faced by her. The importance of lactation on the child’s health was recognised while its effect on the mother’s health is ignored. There was no attempt to understand the mother’s behaviour in the context of her environment, her role and status in the family and society, her access to income and healthcare facilities and the support structures available.

The quantitative findings are given importance over the qualitative analysis. While the study and conclusions are consistent with the objectives, the objectives themselves have serious shortcomings. Studies on practices in a given community have not sought reasons for the existence or adoption of such practices by way of probing into the sociological factors. Findings when compared with those of other studies are mere statements with no attempt at analysis for any similarities or differences.

If lack of gender focus in most of the research studies on infant feeding practices is a drawback, there is equally less emphasis on the period of infancy. Most research studies on young children have considered the period of 0-6 or 0-3 years together with no separate focus on infancy, which is distinctly different from the rest of the period and is the most critical. Research in infancy is mainly concerned with Infant Mortality Rate (IMR) and Low Birth Weight (LBW) since IMR was a major problem in the last century and LBW at 33% (Gopalan, 1998) is a major public health problem in India today.
According to Gopalan (ibid) in the last century the problem was one of survival of infants. Infant mortality was a major concern of many developing countries. Action to reduce infant mortality was initiated on several fronts, namely, control of infections, availability of medical facilities to expectant mothers and institutionalization of births (UNICEF, 1981). In India IMR decreased from 146 per thousand children in 1967 to 67 in 2002 (UNICEF, 2004). Gopalan (1998) observes that if the last century was a battle for survival there is now an increased pool of survivors, who, though not showing severe signs of malnutrition such as marasmus or kwashiorkar, nevertheless exhibit a high degree of stunting.

Of the two parameters, used to describe a child’s nutritional status, namely, wasting and stunting, the latter is by far the more serious since it indicates deprivation of food over a long period of time. According to Beaton (1990) what matters is not being stunted, but becoming stunted, thereby implying that the focus should be on the environment in which stunting occurs. Stunting peaks during the second year of life and has its origin in infancy (i.e) within the first twelve months of birth.

According to the findings of National Family Health Survey (‘98-’99) about 47% of children under three years of age in India are underweight, 46% stunted, and 16% wasted. Both policy makers and nutritionists consider this situation as a major public health problem. Chronic energy deficit in a nearly similar proportion, (38%) of adults, suggests perpetration of childhood malnutrition into adulthood (NNMB, 2002). Trends in mild to moderate malnutrition for under five children in rural India have been 71.3% in 1974-79, 63.9% in ‘88-‘90 and 61% in ‘93-‘94 (WHO, 1997) respectively and do not show as steep a decline as IMR.

Childhood malnutrition is not new to India but what is of great concern is the fact that it is one of the issues on which large resources have been spent over a period of time with very limited results (Jonsson, 1997).
India ranks 54th in the world with regard to nutritional status of children under five (UNICEF, 2003), despite the Integrated Child Development Programme (ICDS) having started as far back as 1975 to specifically address the health, nutritional and educational needs of children from the ante-natal period to six years after birth.

Notwithstanding the paucity of research and desegregated data for infancy, the importance of linking feeding practices with growth is being increasingly recognised. In the context of low birth weight (LBW) infants, while there is information on the causes and outcome of low birth weight very little is known about how LBW children are raised, fed and cared for and the constraints faced by the mother. While exclusive breastfeeding for the first six months is being advocated by WHO, the NCHS reference standards used for assessing infants’ nutritional status, are themselves under revision since they are based on formula fed infants.

Anandiah and Choe (2000) on analysing the relationship between feeding practices and nutritional status, using NFHS 1 data, argue that in India breastfeeding with supplementation is more beneficial than exclusive breastfeeding for infants below six months, an observation that is contradictory to WHO norms. They give three possible explanations in favour of their hypothesis. First, supplementary food given to infants, might be more hygienically prepared than what is generally assumed. Some mothers, especially in high mortality states may have inadequate breast milk and hence the infants may need supplementation. Finally those infants in poor health may be less active and undemanding due to which they may receive only breast milk. According to Lingam and Mankad (2001) though the observations are debatable, it is nevertheless unfortunate that the challenge to the norms has not generated a dialogue.
The above issues as well as a review of literature indicated the following gaps in the existing information:

- In general studies on infant feeding practices are child-centered and lack depth in analyzing issues from a mother’s standpoint. Most studies refer to the mothers’ situation as ‘underlying circumstances’ without actual scrutiny of details.

- The attention and focus of most of the work in childhood malnutrition go under the broad heading of ‘under fives’ or ‘under threes’ and there is very little disaggregated data on infancy, the most critical period as far as onset of malnutrition is concerned.

- There are few studies linking infant feeding practices with the growth of infants, while there is no dearth of materials on practices per se.

The above observations gave rise to the following research questions:

♦ What are the feeding practices of mothers of infants belonging to underprivileged sections of the society across twelve months of age?

♦ What variables influence the feeding practices of mothers?

♦ What support mechanisms exist for helping mothers to feed their infants?

♦ What is the nutritional status of those infants in relation to the practices of their mothers?

The present study was undertaken to answer the above questions with focus on two issues. One was on the variables that affect infant feeding practices and their influence on the
practices themselves. The other was on studying the influence of the observed practices on the nutritional status of the infants. The variables affecting feeding practices were identified through review of literature.

A cross sectional design was chosen to net the diversity of practices of mothers across months of age of infants. The rationale of this exercise was to look at the issue of infant feeding and its influence on the nutritional status of infants holistically from a biological and social standpoint. The study has used the technique of interview and focus group discussion. Subjectivity is inevitable in any interview system though it can be kept to a minimum, which has been taken care of. It was confined to only one season (ie) pre monsoon period and therefore cannot throw light on seasonal changes if any on practices. The objectives were:

1. To identify and study the variables that influence infant feeding practices.

2. To understand the role of these variables in influencing the breastfeeding and complementary feeding practices of mothers of infants (one to twelve months of age).

3. To assess the nutritional status of infants through anthropometry and analyze the influence of the feeding practices on the anthropometric status of infants.

Terms used in the study were defined at the outset (Table 1.1). With regard to infant feeding practices the definitions issued by WHO in 1991 were used. For infant milk substitutes and infant food the definitions issued by the Government of India (1992) were used.
Table 1.1. Definitions of terms

<table>
<thead>
<tr>
<th>Terms</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Exclusive breastfeeding</strong></td>
<td>The infant has received only breast milk from his/her mother or a wet nurse, or expressed breast milk and no other liquids or solids with the exception of drops or syrups consisting of vitamins, mineral supplements or medicines.</td>
</tr>
<tr>
<td><strong>Predominant breastfeeding</strong></td>
<td>The infant’s predominant source of nourishment has been breast milk. However, the infant may also have received water and water-based drinks (sweetened and flavoured water, tes, infusions, etc) fruit juice; Oral Rehydration Salts (ORS) solutions; drop and syrup forms of vitamins, minerals and medicines; and ritual fluids (in limited quantities). With the exception of fruit juice and sugar-water, no food-based fluid is allowed under this definition.</td>
</tr>
<tr>
<td><strong>Full Breastfeeding</strong></td>
<td>Exclusive breastfeeding and predominant breastfeeding together constitute full breastfeeding.</td>
</tr>
<tr>
<td><strong>Complementary feeding</strong></td>
<td>The child has received both breast milk and solid (or semi-solid) food. Any food or liquid including non-human milk.</td>
</tr>
<tr>
<td><strong>Bottle-feeding</strong></td>
<td>The child has received liquid or semi-solid food from a bottle with a nipple or teat. Infants receiving breast milk in a bottle are also included here.</td>
</tr>
<tr>
<td><strong>Infant milk substitute (IMS)</strong></td>
<td>Means any commercially marketed or represented food being used as a partial or total replacement for mother’s milk, whether or not it is suitable for such replacement.</td>
</tr>
<tr>
<td><strong>Infant food</strong></td>
<td>Means any food (by whatever name called) being marketed or otherwise represented as a complement to mother’s milk to meet the growing nutritional needs of the infant after the age of four months.</td>
</tr>
<tr>
<td><strong>Nuclear family</strong></td>
<td>Defined as a woman living with her spouse and biological or adopted children.</td>
</tr>
<tr>
<td><strong>Extended family</strong></td>
<td>Defined as a woman living with her spouse and biological or adopted children along with other family members, natal or marital.</td>
</tr>
</tbody>
</table>
Table 1.1. Definitions of terms (cont.)

<table>
<thead>
<tr>
<th><strong>Domestic work</strong></th>
<th>Includes activities such as cooking, cleaning, washing, tending to cattle, fetching water, shopping, care of the sick and elderly and other activities involved in maintenance and upkeep of the household. These activities may be carried out within or outside the home.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Childcare work</strong></td>
<td>Refers to care of older children other than the study child.</td>
</tr>
<tr>
<td><strong>Economic work</strong></td>
<td>Refers to any activity performed for the sake of monetary return, which may be carried out within or outside the home, continuously or with breaks.</td>
</tr>
<tr>
<td><strong>Support structures</strong></td>
<td>Defined as those, which have the potential to offer any form of support, such as cash, kind, or physical support, to the mother without negatively impairing the practices.</td>
</tr>
<tr>
<td><strong>Stunted</strong></td>
<td>Defined as inadequate height-for-age, stunted simply means a state wherein the skeletal growth has slowed down (Sachdev and Choudhury 1995). It represents accumulated consequences for retarded growth and is frequently associated with poor overall economic conditions, especially mild to moderate, chronic or repeated infections, as well as inadequate nutrient intake.</td>
</tr>
<tr>
<td><strong>Wasted</strong></td>
<td>Defined as inadequate weight-for-height, it implies a deficit in tissue and fat mass compared with the amount expected in a child of same height or length and may result from failure to gain weight or from actual weight loss (Sachdev and Choudhury, ibid). It represents recent assault on the nutritional status.</td>
</tr>
</tbody>
</table>