

LACTATION, BREAST-FEEDING SUPPLEMENTATION AND NUTRITION

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Background: Breast-feeding and proper weaning methods are very important to cover the milestones of life and to achieve good nutritional status under five. The proper lactation, feeding and supplementation methods must be adopted to achieve this goal. In Pakistan a lot of agencies have been working on this. It is included in the daily effort of every doctor and medic to achieve this goal. Methods: This study was done to know the results of our efforts in Oghi Pakistan. A Hospital based study on 10 children/mothers was conducted. The children were randomly selected from the best E.P.I. center of Oghi. The mothers were interviewed after explaining them the purpose of the study. The questionnaire was filled and questions were explained in local language for the convenience of mother. The parameters studied and questions asked included age, sex, weight, height, first feed, age at weaning, type of milk, and type of weaning food. Results: The results were found satisfactory due to the hard work of workers of UNICEF, Health department of NWFP and better when compared to other areas of the province.

INTRODUCTION

There is no possible doubt and everybody being in the world agrees, that the best possible food for a baby is its mother's milk. Nothing has as yet been invented that provides a satisfactory substitute. Statistic have been collected to show that the death rate among artificially fed babies is much greater than among breast-fed babies.

When a baby's only source of food is mother's milk, this has to meet energy needs. Human milk provides about 290 KJ (70 kcal)/100 g. Energy needs depend on body weight and is estimated to vary from 500 to below 420 kJ (100 to 120 kcal)/kg declining as age advances. Each of these figures is subject to wide variation. Whitehead, using the best available figures, estimates that healthy infants at 2.4 and 6 months need about 780-880 and 1000 ml of milk daily. A mother can have expected to produce about 800 ml daily but again yields very greatly. These figures indicate that most mothers, but not all, could meet the needs of their baby at 4 months but only a minority at 6 months. They support the practice of advising mothers to start supplementary feeding when their baby is between 3 and 4 months old.²

In many communities, mostly in tropical countries, it is the custom to feed infants solely at the breast for much longer. Water-low has shown that in some of these countries growth rate is the same of the first four months as for babies in the U.K but thereafter falls below markedly. This, he says, poses the suckling's dilemma. If an infant is not given supplements at the age of 4 months, there is a risk of under-nourishment. On the other hand, in communities where levels of hygiene are usually low giving supplements greatly increases the risk of

attacks of gastroenteritis, a major cause of ill health and infant mortality. There is no general answer to this

dilemma. Advice has to be tempered to the circumstances of individual mothers in communities in which they live.⁷

In some communities it is the custom for mothers to continue to suckle their children until they are 2 years of age or more. This is not always to be condemned and there are two possible benefits. Although the child may get little milk from the breast, this may be a valuable addition, especially of quality protein, to the food that is gets from a poor family diet. Further prolonged sucking tends to inhibit ovulation. Although a far from reliable method of contraception, the practice does lead to long intervals between pregnancies, in poor countries this is of great benefit to the health of mothers, to their families and to the community in general.⁴

There are no physiological constraints that determine when a baby should be weaned from the breast or bottle. Mother usually find it convenient to do so when the baby is about 6 months old. Weaning should be gradual but is usually completed within seven to 14 days. During this period the infant has to learn to drink cow's milk from a cup and to become accustomed to more solid foods of greater verity.

Where safe cow's milk is not available, breast feeding should be continued much longer. Many poor women continue to suckle their children for two years or more and as already described, this prolonged lactation may benefit the child and possible the mother because of no ovulation.

Weaning foods are considered those that are used during the transitional period which is started with complementary breast-feeding, or formula with semi-solids or solids and which finishes when the child receives a completely table food diet. Complementary feeding does not act as a substitute for the breast as it does not condition lessening of the frequency of

sucking. The process of weaning is along one during which the contribution of calories comes from other nutrients that are not breast milk or formula; this process has great geographical and cultural variations. In some societies it is extended over years.²

The first few years are very important for the development of the child, for it is during this period that the pattern of growth of the child is established. During these years, feeding is an important subject for any parent. What to feed? How to feed? How much to feed? All of these haunt the parents, particularly the few mother at various stages. There is no dearth of literature in medical books on this subject but very little of this knowledge trickles down to general public. The importance of first feed, breast milk age of weaning and weaning foods are all very essential pieces of information. We conducted a small survey in E.P.I. setting, to evaluate the knowledge and prevalent trends of infant feeding in our population.⁸

MATERIALS AND METHODS

Ten children were randomly selected from an E.P.I. center giving best results from Oghi, N.W.F.P (Tehsil Headquarter Hospital). A questionnaire was prepared and 10 mothers with children aging between four and eight months were selected at random, from the E.P.I. centre.

The mothers were interviewed after explaining them the purpose of the study. The questionnaire was filled and questions were explained in local language for the convenience of mother. The parameters studied and questions asked included age, sex, weight, height, First Feed, Age at weaning, Type of Milk, and Type of weaning food.

The results were compiled and analyzed after completion of the survey.

RESULTS

The results of this study are summarized in tables I- 7.

Table-1: Body mass index of children

Children	B.M.I
1	15.38
2	17.79
3	18.18
4	19.51
5	21.3
6	21.62
7	16.52
8	20.83
9	23.41
10	13.88

Table-2: First feed given to child after birth

Honey	Nil
Water	Nil
Breast Milk	100%

Table-3: Type of milk given to child

Exclusively Breast-Fed	100%
Cow's Milk	20%
Formula Milk	Nil
Mixed Milk	20%

Table-4: Age of Weaning

No Weaning	50%
Weaning/4 Months	30%
Weaning/5 Months	10%
Weaning/6 Months	10%

Table-5: First weaning food

No food given	50%
Cow's Milk	10%
Cereals	10%
Homemade food	10%
Fruits	30%

Table-6: Name of foods being given now

Banana	30%
Cereals	20%
Apple	30%
Homemade semi solid food	10%
Cow's Milk	10%

Table-7: Results of nutritional status

Average	20%
Standard Weight	40%
Small for age	40%

DISCUSSION

Peasant women, like all mammals, lactate “With nae bother all” to use a common Scottish term of speech. For them it is a part of life and a natural experience which gives emotional satisfaction. Urban life and the acquisition of wealth each bring distractions and for many women make lactation difficult and sometime distasteful. The decline in breast feeding has been marked. In the decade 1960-70 no more than 15 percent of infants in Scotland got a significant amount of breast milk, and this figure probably applied to most European and North American communities and to the wealthy in Africa and Asia. It is probable, that in some countries this decline has stopped and may even have been reversed. Thus in 1980 in Great Britain 65 percent of babies were put to the breast after birth, 41 percent were being breast fed at 6 weeks and 26 percent at 04 months; a baby’s chance of being breast fed was greater the higher the social class of its mother and the longer here period of full-time education. Breast feeding practices in many other countries are reviewed in a WHO report.

A major report on infant feeding in India was published. It is based on interviews with 4296 mothers with infants under 1 year of age. The mother lived in rural areas, small towns and big cities; some were very poor and a few had ample means and could live well. The majority fed their infants in the traditional manner with prolonged breast feeding and without the use of commercial milk formulas and infant foods. There are now widely available and being used on small scale by both rich and poor mothers. The report is of value outside India because it gives a picture of a country in transition and discusses both the dangers and benefits that arise when these new foods are first introduced.

The reasons given by British mothers for stopping breast feeding prematurely were insufficient milk, pain in the breasts or nipples and that breast feeding takes too long. Psychological and social factors underlie these personal explanations. Successful lactation depends on effective ejection of milk. Sensory receptors in the nipple when stimulated by a suckling infant send impulses up the spinal cord to the hypothalamus. There they trigger the release from the posterior pituitary gland of oxytocin. Oxytocin circulating in the blood stimulates myoepithelial cells in the alveoli of the breast and milk is then ejected.

This suckling reflex like most neuroendocrine mechanisms is markedly affected by emotions and other psychological factors.

Lactation is effective and pleasurable when a mother is relaxed and free from worry. Worries about domestic, social and personal problems inhibit the flow of milk and are the main cause of failure to lactate satisfactorily.

It is uncommon for an organic disorder to be responsible. Local conditions such as cracked and infected nipples, mastitis or breast abscess, if severe, may make it necessary to stop. With most generalized diseases a mother, unless she is seriously ill, can continue to lactate and this is usually best for her baby. Lactation is an art and in common with other domestic arts the necessary know-how was traditionally transferred from one generation of women to another in the home. Where there are fewer babies and many of them are bottle fed, knowledge of the art becomes less wide-spread. Many mothers now require instruction from the health service, during the lying in period from an attendant midwife and later from a health visitor in her home or at a clinic. Advice is also often given in women's magazines and on radio and television programmes. For those who have to give such advice two small books, one from London and one from Oslo and a report from the SST are recommended. Parents self-help groups are being formed. By focusing attention on the mother rather than the baby, they enhance her confidence and sense of self-worth.

In Pakistan breast feeding project is working, their work is published quarterly in magazines and hospitals are mainly focused to make them baby friendly hospital, where mothers are educated about breast feeding and nutrition.

Breast-feeding provides a baby with its natural nourishment and helps to promote the bonding of mother and infant, so important in development of the young in all mammals. It is also cheap, clean and safe. For these reasons health authorities everywhere advocate it strongly. However, many millions of adult men and women in the world today had little or no breast milk and do not appear to be less healthy than those who had it. Bottle feeding is an acceptable alternative to breast milk provided three conditions are met. There are that the mother has the economy to purchase sufficient of the milk preparation. Education and intelligence to follow instructions for making up the preparation and facilities in the home for making up the preparation and washing the utensil in a clean room and with safe water. When, as in many communities throughout the world. These conditions are not met, a mother's decision to give up the breast and use a bottle is all too often a death sentence for her baby. Most mothers do not produce enough milk to meet fully the needs of their infants for growth when they are about four months old. Then supplements should be started. Many mothers now a

days give them earlier. This is not necessary if the baby is gaining weight normally. When a mother is in doubt about whether her milk yield is sufficient, she may test weight her baby before and after a feed without changing the napkin. As milk yield is apt to vary greatly throughout the day, it is best to test weight all feeds over 24 hours. This is much easier with modern electronic balances. A daily yield of 500 ml is satisfactory and sufficient for the baby at first and this should rise slowly to 700-800 ml. But babies need also vary greatly; some grow well on 600 ml or even less and others require more than 800 ml before they are 4 months old.

The first solid food is usually a cereal gruel. This can be soon followed by minces, boiled vegetables and stewed fruit. It is not necessary to sieve the food, but hard particles should be removed. Preparations of supplements in the home is time-consuming and mothers can use the many baby foods prepared by food manufacturers, readily available in shops. It is unnecessary and probably unwise to give these preparations before the age of 2 months. Immature kidneys may not be able to deal with an extra sodium load, arising from the salt that many of them contain. It is also possible that early introduction of cereals containing gluten may make a predisposed infant more likely to develop colic disease, a condition which appears to be becoming more prevalent.

Where manufactured infant foods are not available or mothers cannot afford to buy them, as in most present communities in the tropics, supplements can be made up in the home using locally available foods. A small monograph by Cameron and Hofvander indicates how this can be done and contains much other good practical advice on infant feeding.

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