

WEANING; KNOWLEDGE & PRACTICES

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ABSTRACT... Objective: To evaluate the awareness & practices regarding weaning in lactating mothers of infants. **Design:** A cross sectional descriptive study. **Setting:** At pediatrics OPD in Ghurki Trust Teaching hospital, Lahore. **Period:** From October to December 2007. **Methodology:** A non probability convenience sampling was done to collect data from 50 mothers who were attending out patient department along with their infants on a pre-formed questionnaire. After gathering, data was analyzed & presented in the form of tables & graphs. **Results:** In the present study, 66% mothers were in the age group of 20-29 years, all were house wives, 34 % were matriculate and 72% lived in joint family system, Mean age of weaning was 4-6 months in more than 64 % of the sample. Among the women interviewed, 44% used home-made weaning diets, 30% used mixture of homemade and commercially prepared diets, while 16% used only commercially prepared diets. Breast feeding was continued during and after weaning, by 64% of respondents along with weaning diets. **Conclusion:** Mothers need to be educated about the importance of weaning, the recommended age of weaning and about the types of weaning food. This can be achieved by using lady health workers and lady health visitors and the mass media. Importance of continued breast feeding with weaning diet should be emphasized upon.

INTRODUCTION

Weaning is defined as the introduction of foods other than breast milk into an infant's diet, while slowly reducing breast-feeding¹. Exclusive breast-feeding for the first 4-6 months is the WHO's recommended method for full-term infants by healthy, well-nourished mothers. Weaning is to commence then onwards². Breast-feeding should also be prolonged, up to two years as recommended by WHO & UNICEF³. It is usually observed

that significant emphasis is placed by the mothers on the beginning of the weaning period, but there are no added physiological, psychological economic or nutritional

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advantages of early weaning⁴. Delayed weaning can lead to serious health complications for the infants because after 6 months of age, breast milk alone is not sufficient, both in quantity and quality, to meet the nutritional requirements of the child - especially for energy and micronutrients. Breast milk is notably insufficient in iron, zinc and vitamin A requirement of the nursing baby³.

Protein Energy Malnutrition (PEM) is reported to show an association with delayed weaning too, which is comprised of predominant neurological manifestations⁵. Bottle-feeding being an early alternative to breast-feeding has its own adverse effects which are seen to be more profound in under-developed countries. These include increased susceptibility to diarrhea and other GIT infections, allergic tendency and dental caries. Also the IMR as seen in Pakistan is estimated to be 4.5 times higher in bottle-fed infants as compared to breast-fed infants⁶. More recently, researchers have demonstrated that extended breast-feeding was related to a 30% reduction of risk for pre-menopausal breast cancer⁷.

Factors affecting weaning practices vary according to the socio-economic stratification of the population and include education, customs, beliefs and taboos³. They not only vary from person to person but also vary according to the difference in region. In USA, the average age of weaning was between 2.5-3 years. The most common reason for the beginning of weaning was said to be "child-led" and that it was accomplished gradually. Extended nursing was found to be uncommon⁷. In Kuwait, breast-feeding has been gradually replaced by artificial feeding immediately after birth. The rate of breast-feeding was 26.1% and that of bottle-feeding was 41.9%. Humanized milk was more commonly used than full cream powdered milk. Between the ages of three and five months, 56% of the infants were given fruit juices and more than half of them received cereal products in the form of biscuits and cerelac⁸. Study of weaning in Ethiopia has shown its early commencement, the median age being 3 months. Working mothers and better income mothers had a higher chance of early weaning than housewives and poor income mothers. The most common and frequently used foods for child weaning were adult diet (ingera, kitta and bread), followed by

porridge-gruel and egg. Also, feeding was infrequent and the consumption of vegetables and fruit were rare⁴. In Pakistan, according to the National Nutrition Survey, 68% of children between 7-9 months of age consumed no other food than milk and even among 12-17 month olds, 30-50% received no semi-solids or solids. Introduction of solid foods was found to be even later in the rural areas of Pakistan⁹. In communities undergoing social changes, the incidence and duration of breast-feeding decreased whereas bottle-feeding and solid-feeding (weaning) are introduced earlier. The pattern of supplementary (commercialized) feeding during the first two years of life is increasingly recognized as important determinants of malnutrition³. During the complementary feeding period, children require foods that are soft, hygienic and energy- and nutrient-dense to meet their high nutritional requirements. Moreover, weaning foods in developing countries are usually prepared under un-hygienic conditions using water from unprotected sources thus exposing the child to weaning diarrhea. This presents a dilemma to both mother and infant; to wean or not to wean, which is termed the "weanling's dilemma". Exactly when to wean, how to wean and what to wean with is a subject that has pre-occupied mothers and scientists alike, for a long time². The present study was conducted to assess the mean age of introducing weaning food, the types of weaning food administered and the continuation of breast feeding and source of information regarding weaning practices.

METHODOLOGY

A cross sectional descriptive study was conducted at pediatrics OPD in Ghurki Trust Teaching hospital, Lahore. A non probability convenience sampling technique was used to collect data from 50 mothers who had children, below 2 years of age. The weaning practices were considered for the youngest child. A structured questionnaire was administered to collect data from October to November 2007. Data was entered and analyzed by using SPSS version 11. Descriptive statistics was determined in terms of percentages.

RESULTS

The socio demographic profile of 50 mothers is presented in Table I.

Table-I. Socio-Demographic Profile of 50 Mothers

Socio-Demographic Profile	No of pts	%age
Age in years		
20-29	33	66%
30-39	13	26%
40-49	4	8%
Education		
Illiterate	21	42%
Primary	7	14%
Middle	2	4%
Matric	17	34%
Intermediate or more	3	6%
Number of Children		
1-2	35	70%
3-4	9	18%
5-6	6	12%
Monthly Family Income (Rupees)		
< 3000	6	12%
3000 – 5000	24	48%
6000 – 10,000	13	26%
> 10,000	7	14%

As seen in Table I, most respondents belonged to age group of 20-29 years (66%), while 26% were in age group 30-39 years. Regarding, educational status of mothers, 42% were illiterate, 14 % were primary pass, 4% were middle pass and 34% were matriculate.

Regarding parity, around 28% of women had one child, 42% of women had two children, and 30% had three or more children.

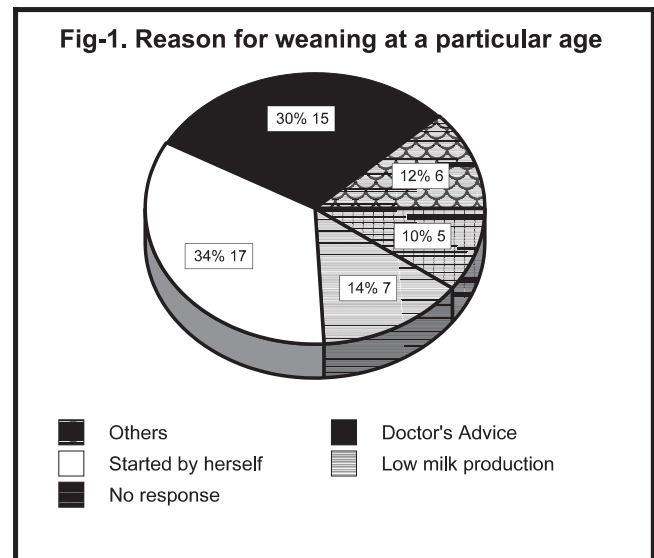
When inquired about monthly family income, 48% had income between Rs. 3000-500, 40% had an income of more than Rs 6000 per month, with 12% earning less than 3000 a month and 14% earning more than 10,000.

All mothers were housewives. Response about

occupational status of fathers revealed that 19 fathers (38%) worked on daily wages, 13(26%) had business of their own, 12(24%) were regularly employed and 6(12%) could not specify their means of earning. It was seen that 36 respondents (72%) lived in joint family system while 14 of them (28%) lived in nuclear family system. When inquired about the age of the youngest child, 13 mothers (26%) had their youngest child belonging to age group 23-24 months, 6 of them (12%) had children between ages of 17-18 months and 13 mothers (46%) had children who were less than 12 months of age. Out of the youngest children, 35 (70%) were males and 15 (30%) were females.

The age in months at which solid food was added to the diet of the children under study was also probed into. Twenty one babies (42%) had addition of solid food to diet at 5-6 months of age, 16 of them (32%) started weaning diet above 6 months of age, 7 children (14%) were weaned at 3-4 months and 1 child (2%) was given solid food at 1-2 months of age. Five children (10%) have not been weaned yet.

Figure 1 gives the reasons for weaning at a particular age.



Thirty four percent of mothers decided on their own about the age of weaning of their child, 30% did so in accordance with a doctor's advice. Low breast milk

production was the reason given for weaning by 14% of mothers and other reasons quoted by 6 respondents (12%) to commence weaning of their children were advice by relatives and LHVs and inspiration by media. Five respondents did not respond to this query.

When the respondents were asked about the type of diets used for weaning, 44% said that they used homemade diets, 30% used mixture of homemade and commercially prepared diets, and only commercially prepared diets were used by 16% of mothers. As seen in Table II, the most commonly used weaning foods were rice (64%), milk (50%), eggs (42%), chappati (36%) and fruits (34%).

Table-II. Food items given at weaning

Food	No of pts	%age
Bread	11	22%
Chappati	18	36%
Rice	32	64%
Legumes	7	14%
Eggs	21	42%
Milk	25	50%
Meat	7	14%
Fish	2	4%
Chicken	7	14%
Fruit	17	34%
Vegetables	9	18%
Butter	1	2%
Oils	3	6%
Ghee	3	6%
Honey	7	14%

Breast feeding during weaning was continued by 32 women (64%) and was discontinued by 13 respondents (26%).

DISCUSSION

Feeding practices during infancy are important

determinants of future physical and mental well being. Inappropriate weaning practices in terms of low nutrient density and high bulk of weaning food are well known problems worldwide. Early introduction of solid diet and unhygienic practices predispose infants to malnutrition, growth retardation, infection and high mortality^{10,11}. In a national nutritional survey it is shown that 68% of the children between 7-9 months consume no other food than milk. In Balochistan the reported age of starting semi solid food to child is around 8 months¹¹. The incidence and duration of breast feeding is decreased where as bottles and solid feeding are introduced earlier¹³.

The first part of our study concentrated on the mean age of weaning and socio-demographic factors that potentially influenced the practice of weaning. The present study revealed that the mean age at which weaning was introduced is between 4 to 6 months, which is in accordance with the WHO criteria and recommendations for weaning practices¹.

This finding is contrary to the results of a research carried out on weaning practices in peri-urban, low socioeconomic groups¹⁴ in which the weaning onset period in majority (29% the highest percentage) was over 6 months. It was further observed in the present study that the majority of mothers (66%) were between 20-29 years old. No one was below 19 years and less than 8% were above the age of 40 years. Out of all the mothers interviewed, the majority was not well educated, 60% were below matriculation, and 34% of the mothers were matriculate. In a similar study carried out in Kuwait about 71.5 % of mothers were illiterate or below matriculation in qualification and it correlated with the fact that mothers with lower educational status tended to delay weaning to their children till 6 months or more⁸. The present study also revealed that all respondents were housewives and 60% of husbands of the respondents earned Rs 5000 per month or less. Out of them, 6 earned less than Rs. 3000. A study conducted in Ethiopia inferred that mothers from a better economic status had 2.2 times of better chance of early weaning at the recommended age as compared to the mothers from poor families. A similar co-relation was present between mothers who were working women

and the onset age of weaning amongst their children. Mothers who worked outside their homes, had a 3.3 times better chance of weaning earlier⁴. In the present study, 77% of the mothers was living in joint family system. It can be closely related to another finding in this study that 62% of the mothers had at least 6 or more household members living with them. Among respondents, 70% had no more than 2 children and the remaining 30% had 3-6 children and 46% of mothers had their youngest child below 12 months of age.

Another part of our research focused upon the weaning practices. It was interesting to note that about 34% of mothers started giving semi-solid food to their child based upon their own maternal perception and instincts. Jalil et al reported that 50% of the poor urban population starts weaning because of the perception of insufficient milk supply¹⁵. This finding is supported by another research carried out in America in which 63.5% reason for weaning was explored in the youngest child. Weaning was reported to be child led⁷. In the present study, 30% of mothers sought doctor's advice for weaning. This finding is contrary to the fact revealed in a Glasgow based research, in which 55% of the women received formal information about weaning, from a health visitor¹⁶. In the present study rice was given the greatest preference as a weaning diet (64%), followed by milk (50%), egg (42%), chapatti (34%) and fruits (32%). In addition to that Ghee and butter turned out to be the least popular weaning foods. Cultural differences in weaning practices are observed worldwide, though low income groups use starchy food more than high protein diet. A comparable study conducted in Africa, showed that the most popular weaning food was cooked banana (96%), followed by cow's milk, maize porridge, millet porridge and potatoes as other dietary sources for weaning². These findings were also supported by a research conducted on aboriginal infants and children¹⁷. Another study conducted in west Africa showed that people from lower socio economic group seldom feed meat, eggs or fish to their infants not only because of socio economic factor but social taboos and ignorance are added factors¹⁸. In the present study, 44% of the women introduced weaning food to their child that was homemade, 30% used both homemade and commercial

food while only 16% relied solely on commercial foods. This is similar to the finding of the study in Kuwait which revealed 63.5% of the mothers introduced homemade weaning food while only 19% relied upon commercial preparations⁸. Regardless of age of onset of weaning, the present study highlighted that 64% of women continued to breast feed their child with weaning, however 26% of mothers bottle-fed their children. Other local studies have revealed, that bottle feeding is not only used to give milk but they are also used to give semi solid cereals as well¹⁹. As a result, bottle feeding is now a socially and culturally accepted norm in Pakistan²⁰.

CONCLUSION / RECOMMENDATION

Mothers need to be educated about the importance of weaning, the recommended age of weaning and about the types of weaning food. This can be achieved by using lady health workers and lady health visitors and the mass media. It is recommended that nutritional education program should be reactivated to promote breast-feeding and weaning practices in mothers. The program should target all mothers, especially the ones having their first babies and the working mothers. It should concentrate not only on the promotion of breast-feeding after delivery but also on extending its duration to two years. The period of weaning prescribed by the WHO should be recommended and emphasized upon, along with the benefits of adhering to it and the disadvantages of early and delayed weaning.

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