

**Original Article**

# Evaluation of Maternal Knowledge and Practices Regarding Breastfeeding and Weaning

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## ABSTRACT

**Objectives:** To evaluate the maternal knowledge and its practical application regarding breastfeeding and weaning their children.

**Place and duration of Study:** The study was conducted at Paediatrics Department of Madina Teaching Hospital, Sargodha road, Faisalabad, in 6 months period starting from April, 10 to September, 10.

**Patients and Methods:** Hundred women attending the pediatric OPD having children between 8 months to 2 years of age were included. A questionnaire was prepared evaluating maternal knowledge and their practical application. Physical examination of the child including growth parameters and signs of nutritional deficiencies was recorded. The data was analyzed statistically by using SPSS version 17 using chi-square as test of statistics. P value <0.05 was considered significant.

**Results:** Most of the mothers participating in the study belonged to rural area, were poor socioeconomically, lived in joint family system and had low literacy rate. Sixty one percent women knew that breastfeeding should be started immediately but only 35% of children were given breast milk as their first feed. Majority of the people (65%) still believe strongly in prelacteals including arq, ghutti and honey. Most of the mothers had appropriate knowledge regarding duration of breast feeding and weaning, but their kids were still malnourished (p value=0.046). Large family size and inappropriate weaning knowledge had direct relationship with malnutrition and there was a strong correlation between anemia and delayed weaning.

**Conclusion:** Majority of our mothers belonging to lower class have awareness of nutritional needs of their kids but cant practice that adequately due to lack of resources and misconcepts about enriched foods.

**Key words:** Maternal knowledge, breast feeding, weaning

## INTRODUCTION

The nutritional status of a large population of Pakistan is unsatisfactory and among them children and women population is at a greater risk. Malnutrition is a major underlying factor for many fatal illnesses in children including diarrhea, pneumonia, meningitis, tuberculosis and septicemia etc. Malnutrition also leads to certain micro and macronutrient deficiencies resulting in serious consequences in the child like visual problems, rickets, growth failure and developmental delay.

Epidemiologic research shows that human milk and breastfeeding of infants provides advantages in terms of general health, growth and development. Breastfeeding significantly decreases the risk of a large number of acute and chronic diseases. In addition to reducing childhood infections, breastfeeding may also protect against sudden infant death syndrome, insulin-dependent diabetes mellitus, Crohns disease, ulcerative colitis, lymphoma, allergic diseases and other chronic digestive diseases.<sup>1,2,3</sup> Breastfeeding has also been related to possible enhancement of cognitive development.<sup>4,5</sup>

Exclusive breast feed is sufficient for the baby only up till 6 months of age. After this age the baby needs complementary semisolid foods as well to meet the

daily energy requirements.<sup>6</sup> During the weaning period children are prone to suffer from nutrient deficiencies. Lack of mothers knowledge regarding weaning diets and the eating habits of the child are the major factors that contribute to this problem.

Malnutrition and micronutrient deficiencies during the weaning period are reported from Pakistan and many other developing countries.<sup>7</sup> The prevention can be achieved by complementary feeding i.e. the addition of energy through non-human milk and semisolid or solid foods to children diet as described by WHO.<sup>8,9</sup>

There are certain risk factors for primary malnutrition including low socioeconomic status, low literacy status of parents especially mother, maternal age, family size and spacing, inadequate feeding practices and eating habits of the child.<sup>6</sup> These risk factors need to be identified earlier in order to improve the situation of nutritional status in Pakistan.

Mothers who are educated nutritionally can bring up their children in a healthy manner and thus the incidence of malnutrition leading to infant mortality and morbidity can be decreased in an effective way. In most of the rural areas of our country the nutritional knowledge of mothers regarding feeding the baby, weaning diets and breastfeeding is quite low. It needs to

be focused and evaluated so that situation may be improved.

## PATIENTS AND METHODS

This was an out patient department based cross sectional study conducted at Madina Teaching Hospital. One hundred women attending the pediatric OPD having children between 8 months to 2 years of age were included in the study. Most of these children were suffering from some acute illness like diarrhea or sore throat. The children who attended the OPD with some chronic illnesses like tuberculosis, congenital heart diseases, cerebral palsy and chronic malabsorptive syndromes were excluded from the study.

A questionnaire was prepared evaluating maternal knowledge and the practical application of their knowledge regarding breastfeeding, prelacteals and weaning. The women answers were recorded on the proforma. This session was followed by general physical examination of the child assessing his or her growth parameters, signs of nutritional deficiencies including rickets and anemia if present. The data was tabulated and analyzed statistically by SPSS version 17 using chi-square as test of statistics. P value <0.05 was considered significant.

The variables in the study were; age and sex of children, maternal age, parity, parents' education, family system, socioeconomic status, source of information for mothers, different prelacteals and weaning foods.

## RESULTS

Our study results highlighted the knowledge of mothers regarding the nourishment of their children including breastfeeding, weaning diets and their ability to practice that knowledge over their kids.

One hundred children were included in the study with almost equal sex distribution. Minimum age was 8 months, maximum age was 24 months, and mean age was 14.6 months  $\pm$  5.34 SD. Most of the mothers participating in the study belonged to rural area (60%), while 40 % to urban area. Fifty five percent mothers were below 25 years of age and 45 % were more than 25 years. Socioeconomic status was lower in most of the participating mothers i.e., 82% and 18 % of them belonged to lower middle class. Majority of the attending families lived in joint family system. The literacy status was low in most of the families both for fathers and mothers. (Table 2).

Sixty one percent women knew that breastfeeding should be started immediately, 3% thought that breastfeeding should be started within 12 hours and 36% believed that breastfeeding should be started after

24 hours of age including 2<sup>nd</sup> or 3<sup>rd</sup> day. (table 3). Even after knowing that breastfeeding should be started immediately, only 35% of children were given breast milk as their first feed. (Table 3), the reason being immediately in postpartum phase, the relatives and grand mothers are responsible to look after the new born. Majority of the people (65%) still believe strongly in prelacteals including arq, ghutti and honey. (Table3). Most of the mothers had appropriate knowledge regarding duration of breast feeding, age of weaning and weaning diets. (Table 2), but these mothers were not able to practice that knowledge (p value = 0.072).

The elderly people including paternal and maternal grand mothers are the main source of information for mothers, while health professionals and media play a very little role in educating the people (Table 2).

Only 27% of our patients had weight and height appropriate for their age and remaining 73% were malnourished (p value=0.046). Large family size and inappropriate weaning knowledge had direct relationship with malnutrition. 82% of the children who participated in the study were anemic and there was a strong correlation between anemia and delayed weaning.

**Table 1: Demographic Characteristics of Participating Children and their Parents N=100**

| Characteristics          | Count |
|--------------------------|-------|
| Gender                   | 51    |
| Male                     | 49    |
| Female                   |       |
| Residence                |       |
| Rural                    | 60    |
| Urban                    | 40    |
| Maternal age             |       |
| <25 yr                   | 55    |
| >25 yr                   | 45    |
| Family system            |       |
| Joint                    | 61    |
| Nuclear                  | 39    |
| Socio economic status    |       |
| Lower                    | 82    |
| Lower middle             | 18    |
| Parity                   |       |
| $\leq 3$                 | 79    |
| >3                       | 21    |
| Father's literacy status |       |
| Illiterate & <Matric     | 69    |
| >Matric                  | 31    |
| Mother's literacy status |       |
| Illiterate & <Matric     | 80    |
| Matric                   | 20    |

**Table 2: Knowledge of Mothers Regarding Breast Feeding and Weaning Practices N=100**

| Knowledge                                  | Variable            | Count |
|--------------------------------------------|---------------------|-------|
| First food to be given                     | breast milk         | 56    |
|                                            | arq                 | 26    |
|                                            | honey               | 10    |
|                                            | ghutti              | 08    |
| For how long the child should be breastfed | 6 months            | 4     |
|                                            | 1 year              | 3     |
|                                            | 2 years & above     | 93    |
| Age of weaning                             | 4-6 months          | 89    |
|                                            | 1 year              | 7     |
|                                            | not known           | 4     |
| Weaning foods to be given                  | Appropriate         | 79    |
|                                            | Inappropriate       | 21    |
| Source of information for mother           | Elderly in house    | 78    |
|                                            | Health professional | 14    |
|                                            | media               | 4     |
|                                            | Husband             | 3     |
|                                            | No knowledge        | 1     |

**Table 3: Comparison Between Knowledge and Practice of Breastfeeding Initiation**

| Knowledge of onset of breastfeeding |              | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------------------------------------|--------------|-----------|---------|---------------|--------------------|
| Valid                               | Immediate    | 61        | 61.0    | 61.0          | 61.0               |
|                                     | 12 hrs       | 3         | 3.0     | 3.0           | 64.0               |
|                                     | after 24 hrs | 36        | 36.0    | 36.0          | 100.0              |
|                                     | Total        | 100       | 100.0   | 100.0         |                    |

| First food given to baby |              | Frequency | Percent | Valid Percent | Cumulative Percent |
|--------------------------|--------------|-----------|---------|---------------|--------------------|
| Valid                    | Arq          | 39        | 39.0    | 39.0          | 39.0               |
|                          | Ghutti       | 7         | 7.0     | 7.0           | 46.0               |
|                          | formula milk | 8         | 8.0     | 8.0           | 54.0               |
|                          | breast milk  | 35        | 35.0    | 35.0          | 89.0               |
|                          | Honey        | 11        | 11.0    | 11.0          | 100.0              |
| Total                    |              | 100       | 100.0   | 100.0         |                    |

## DISCUSSION

The study raises few very important issues regarding the nutritional status of the infants and younger children. Maternal knowledge regarding initiating the breastfeeding is not up to the mark and most of the mothers, even after having appropriate knowledge regarding the nutritional requirement of their kids, are unable to practice that because of cultural issues or non affordability.

Colostrum cleans the stomach and gives nourishment to the baby. It provides important antibodies to the baby. Bottle feeding is regarded as a major risk factor for common childhood illnesses like diarrhea and upper respiratory infections, which are major causes of infant mortality.<sup>10,11</sup> Breast milk is free from contamination and is sufficient for almost all healthy babies during the first 4-6 months. Prelacteal feeds like arq, ghutti, honey, water and animal milk /formula milk should not be given. They not only decrease the mother's milk supply but also can be a source of infection. In our study only 35% of children were given breast milk as their first feed, remaining were started with prelacteals.

Human milk is the preferred feeding for all infants, including healthy full term infants, premature and sick newborns.<sup>12</sup> The important components of breast feeding promotion include prenatal support, hospital management and subsequent pediatric and maternal visits.<sup>13,14,15,16</sup> Therefore, health professionals should have the necessary knowledge and skills for managing the different stages of lactation, to communicate the health message to the community.

Early weaning, at 4-6 months of age was noted in about 89% of the cases and 79% of the mothers had appropriate knowledge regarding weaning diets. Despite these findings the nutritional status of most of the children in our study was not up to the mark. The contributing factors were poor socioeconomic status, joint family system and food fads. According to the data, the most common home made food given to baby was khichri, and other commonly given foods were rusk, biscuits and sometimes bread. In contrast, dalya (wheat porridge) and suji (derivative of wheat) were used less commonly. The enriched foods including eggs and meat were used very rarely; same is true for fruits and vegetables. This is in contrast to the developed countries where all types of fruit are a popular infant food during weaning. These findings were comparable with a similar study conducted by Khatak AM et al in 2007.<sup>17</sup>

High protein foods are quite expensive in Pakistan; their lack of use could be ascribed to the non affordability of the family. Most of the families live in joint system where mother is always over burdened with household work and usually not able to spend appropriate time for feeding the child. The elderly

people in house are one of the major sources of information and have strong influence on decision making regarding child feeding. Some high caloric foods like eggs and meat are considered hot, especially by the elderly people and few things like bananas are avoided as they are considered cold. Such misconcepts regarding different foods also need a lot of attention, as they play a major role towards malnutrition.

Another important thing that we noticed in our study was extensive use of tea in about 80% of children. Most of the mothers and grandmothers believed that doodh Patti (tea mixed with milk) should be given to kids instead of pure milk, as it has good digestive properties and also prevents respiratory tract infections. They started tea as early as neonatal age group and most of the kids are given tea routinely by one year of age. The hazards of tea include its content of tannic acid, which impairs iron absorption. Tea also reduces the appetite; hence, its use should be strongly discouraged.<sup>16,18</sup>

Delayed and inappropriate weaning is a risk factor for nutritional rickets, anemia and other micronutrient deficiency. Our study shows that only 27% of patients had height and weight appropriate for age, their mothers had appropriate weaning practices and low parity. Large family size and inappropriate weaning practices were the major contributing factors towards malnutrition. Similarly anemia was also associated with delayed weaning. Infrequent feeding, also reported in other studies in developing countries, results in less intake of food with reduced total calories per day leading to growth alteration and under nutrition.<sup>19,20</sup>

## CONCLUSION

Majority of our mothers belonging to lower and lower middle socioeconomic status, have awareness of breast feeding and nutritional requirements of their children but are unable to practice that adequately due to lack of resources. In addition, the decision regarding feeding of children is influenced greatly by the grand mothers in our families, so they also need to be focused while educating the mothers. Media and health care workers should improve their role in promoting the breast feeding and nutritional knowledge among general population. Poverty is still a big limitation in improving the situation.

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