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# BREAST FEEDING OUTCOME;
## EFFECT OF PRELACTEAL FEEDING: A CROSS-SECTIONAL SURVEY

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**ABSTARCT… Objectives:** To determine the prevalence of prelacteal feeding among mothers of Pakistan and to find out the various concepts behind this practice and fundamentally to establish the association of prelacteal feeding with breastfeeding outcomes. **Background:** In Pakistan, many efforts have been done to emphasize the nutritional importance and adequacy of breast milk for the newborns. Despite such efforts, it has been witnessed on multiple occasions that prior to the commencement of breastfeeding, prelacteal feeds are introduced by the mothers to their young ones. Prelacteal feed (PLF) are food supplements that are given to newborns orally. **Design:** Qualitative, descriptive, cross sectional Survey. **Setting:** The Lady Dufferin Hospital (LDH) and Jinnah Medical College hospital (JMCH). **Methods:** Study includes 400 Mothers including young mothers and data was collected with use of a pre-assessed authenticated questionnaire. **Results**: A large group of, both educated and uneducated, mothers knew about PLF administration (90.5%). Out of these, 70% mothers routinely give prelacteal feeds, with readymade ghutti and honey being the most widely used supplements, 19.5% and 37.2% respectively .However their reasons for doing so differed significantly. Family tradition (27.8%) and religious credence (21.8%) are the most popular reasons for practicing prelacteal feeding. The other minor reasons are breast milk insufficiency, prevention of dehydration, hypoglycaemia, preparation of the gastrointestinal tract for digestion and to quench thirst. However, majority of the subjects were aware of the benefits of breastfeeding and 99% mothers breastfed their children. **Conclusions**: Regardless of the fact that mothers understand the significance of breast milk, most mothers routinely and unnecessarily give prelacteal feeds. Therefore, mothers should be discouraged for the unsafely administration of prelacteal feeds and re-emphasized about the importance and nutritional adequecy of breastfeeding.

**Key words:** Prelacteal feeds; breast feeding; prevalence

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## INTRODUCTION

Breast milk has been, for a long time, idealized for new born babies. Especially, when given exclusively, during the first 6 months of a baby's life, it helps in ample growth and development, and lessens infant morbidity and mortality.[1,2] As part of a common practice, in many cultures particularly Hindu and Muslims, however, for many years, babies are introduced with other substances to drink within the first days of life.[3] These fluids that are given orally to the baby prior to the establishment of lactation are called prelacteal feeds (PLF). PLF includes honey, brown sugar from sugar cane, ghee (clarified butter)[4], dates, and ghutti (gripe water).

The essence of practicing prelacteal feeding in the Muslim and Hindu belief does not have any medical basis, but it is just a mere custom performed symbolic for the transference of virtuous qualities into the young one. The Muslims perform a ritual known as Tahneek, which is basically the introduction, of any food or drink to the baby before commencing breastfeeding. Commonly, a softened date is scoured into the child's palate by an esteemed member of the family. The philosophy behind this practice is the perspective that the child will pursue the analogous characteristics of that family member. The foundation of this ceremony lies in the Hadith (teachings of the Prophet used to exemplify Muslim behavior). In ancient Arab, when a baby

was born the Prophet used to act out Tahneek. However, the sole purpose of this practice was familiarizing the baby with the sweetness from the date or honey rather than supplementing breast milk. In addition, the numerous other rationalizations among Muslims for administering PLFs includes perceived benefits such as cleansing the stomach, relieving aches and allowing easy passage of stools. Facilitation and improvement of the sucking reflex of the baby is considered a major advantage of PLF. Additional reasons include; promotion of rapid growth, keeping the mouth and throat moist and soothing the baby until the true milk arrives.

Similarly, Hindus perform a ritual known as Jatakarma or Suwarna Prashan Samskar, in which a newborn is embraced into the family. According to this ritual, the name of the Hindu God "OM" is written on the baby's tongue with jaggery (brown sugar) dipped in ghee. This traditional act is performed by one of the family members with righteous qualities, which, again, symbolizes the transcendence of his qualities to the newborn.

On the other contrary, these beliefs are refuted by the recent studies. Literature has outlined some of the deleterious effects of PLF including failure of proper lactation, early deprivation of breast feeding and watery stools.[5] Consequently, UNICEF- WHO declared such practices unsafe and sometimes dangerous for the newborn, unless medically indicated.[6] Studies have also stressed on the fact health workers play an important role in emphasizing adoption of proper breast feeding practices by mothers.[7]

In view of the above mentioned incongruent norms, this study aims to determine the percentage of mothers who routinely give PLF and explore their reasons for doing so. Furthermore, we aimed to find out whether the infants receiving PLF, subsequently, had successful breastfeeding or not.

## SUBJECTS AND METHOD

The Lady Dufferin Hospital is the largest maternity hospital in Karachi. Women of all socio-economic backgrounds come to this hospital including, educated and uneducated. The study took place in 2012, it was a survey done using questionnaires. A sample size of 400 was taken. A team of 5 trained members approached the subjects and the object of the study was explained to them. The subjects got enrolled in the study, entirely due to self-inclination.

The survey was carried out by means of pre-assessed authenticated questionnaire. It has two components; the first part seeked participant's general information such as age, religion, secular qualification and number of children. The second part of the questionnaire focused on specific areas dealing with the administration of PLF (which food) and the reasons behind it. Each questionnaire was designed to be completed in 5-10 min and consisted of closed ended questions.

Reponses and other variables were coded, entered into a computer and analyzed using SPSS Version17. Frequency distribution was calculated for each variable. Analysis of the data established there was no consistent bias or pattern posed by non-response to individual questions.

Chi-square analysis with 95% confidence interval was performed to determine the significance of the association of each response variable with the various groups of the study

## RESULTS

400 questionnaires were filled, making a response rate of 100%. Women of all socio-economic statuses were included randomly, mostly, from LDH and JMCH. The age of most mothers fell into 21-30years (143 mothers; 36.2%).389 of the 400 women, were Muslims (97.2%). Majority of the mothers were educated (81.8%).

Of the 400 mother, 362 knew about PLF (90.2%) while the remaining minority (9.5%) mothers did not know about this practice. Out of those, who had a concept of PLF 280 administered PLF (70%) while the rest did not (119 mothers; 29.8%).Reasons for the administration of PLF fell into three main groups .These were:

1. Due to Family tradition(27.8%) and Religious ritual (21.8%) - these were the most popular reasons given;
2. Medical advantages (35.2%) - these were a group of reasons comprising mainly breast milk insufficiency, improve suckling of the baby, others include; ruling out intestinal obstruction and to stimulating the baby's appetite;
3. Non-medical benefits (31.4%)-these included cleansing and preparing the baby's gastrointestinal tract for digestion, to quench thirst, flush the bladder,to provide variety in the baby's diet and because colostrums is thought to be too strong for the baby.

| Reasons for PLF administration | | Frequency (%) |
|---|---|---|
| 1. | Religious Ritual | 21.8 |
| 2. | Family tradition | 27.8 |
| 3. | Medical benefits | 35.2 |
| 4. | Non-medical benefits | 31.2 |

Table-I. Reasons for PLF administration

The foods which were most commonly administrated were, honey (37.2%); administrated by 149 mothers and readymade ghutti (19.5%); administered by 78 mothers. 51% women did not continue giving PLF along with breastfeed and 25.5% women continued giving PLF. The rest of the women were young mothers and had just delivered their babies, therefore, were rendered not applicable for this question. Practically all mothers (99.7%) felt breast-feeding was very important and were breastfeeding. This belief cut across age, sex, religion or tribe, and there was no significant difference between the groups. The majority of mothers; 247 (71.8%) started breast-feeding immediately after birth. The rest began until periods of time varying from several hours after birth until the third day of life. As most mothers had the awareness of the benefits of breast-feeding, 284 of the 400 mothers (71%) wished to breastfed considering it ideal for her child. 36 mothers (9%) did it on their family's advice while another 36 (9%) did it on the doctor's advice. A minority of them; 11mothers (2.8%) and 16 mothers (4%) breast fed because they think giving top feed is difficult, as well as ,expensive and due to multiple reasons, as mentioned above, respectively. (Figure-1)

201 mothers (50.2%) fed their baby upto 13-24 months.117 mothers (29.2%) fed until 7-12 months the rest of the 40 mothers (10%) fed upto1-6 months and a remaining minority; 35 mothers (8.8%) fed upto 25-30 months. Majority of the mothers; 167(41.8%) agreed that PLF does improve the suckling and facilitates the baby to take the breast feed easily while 100 mothers (25%) disagreed.338 mothers(84.5%) did not face any difficulty in breast feeding while a small proportion of mothers ; 60(15%) actually faced difficulty.On the other hand, 294 (73.5%) mothers did not give any supplementery feed to their baby, other than breast milk, upto 6 months, while a minority of 105 (26.2%)admininstered supplemetery feeds in first 6 months.

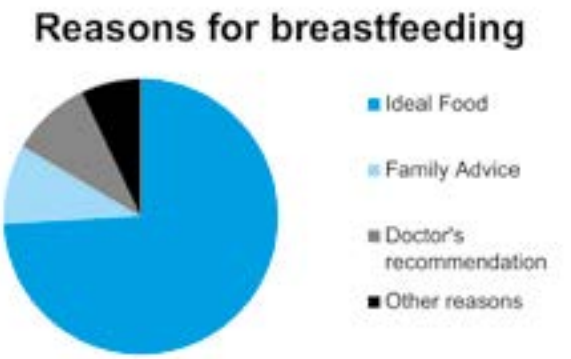


Figure-1. Reasons for breastfeeding

## DISCUSSION

This is quite unfortunate that despite most mothers do feel that breast-feeding is very essential, a tremendously huge group of them still introduce PLF to their young ones. This is a despair trend as administration of PLF has been shown to subside period of breast-feeding, an upsurge in occurrence of diarrhea and increased death rates in infants.[1] Other studies also report that mothers, in other parts of the world also prescribe PLF routinely.[2]

All over the globe, mothers rationalize the continuum of this trend differently. Most of them however do not even have a medical justification behind practicing administration of PLF and

give PLF either in pursuit of their family tradition or religious faith. There are other various vague concepts that are prevalent among mothers such as the perceived inadequate breast milk secretion, preparing the newborn gut for digestion development of hypoglycemia (low blood sugar levels) in the child relying solely on breast milk, relieving baby's thirst and ruling out GI obstruction. Surprisingly, many healthcare professionals including nurses, lady healthcare workers and doctors promote PLF administration based on such irrational ideas.[3] Hossain, in one study, discovered that PLF administration in rural Egypt was significantly associated with birth attendants who had received modern training.[4] At one time, in order to prevent low blood sugar levels in the newborn, in various parts of the world, glucose water and formula milk were offered to the baby by the medical staff.[5] On the contrary, putting the baby earlier to breast and feeding on demand confer a protective effect on the development of hypoglycemia, as evidenced by many studies.[6] Still some of the doctors encourage PLF administration for the prevention of dehydration and neonatal jaundice. Yet, even in hot weather, no additional water is needed for most babies.[7] In addition, the risk of hyperbilirubinaema (elevated bilirubin levels), can be reduced by frequent suckling about the sixth day of life.[8] Therefore, most of the times a jaundiced baby relying entirely on breast milk, generally, does not require extra glucose and most babies do not become dehydrated even without the use of PLF.

One matter that has been highlighted, in a study, which has clinical importance for validation of giving PLF is the perceived breast milk insufficiency by mothers. This is the reason given by both mothers and healthcare providers for PLF administration.[9]

Yet, there are other studies that support the fact, contrary the former assumption that if mothers start breastfeeding early and put the child to breast as much as he demands then this, in turn, will enhance milk in sufficient amounts.[10]

Although, in this study, most mothers initiated breast feeding immediately after delivery and fed their children frequently on the baby's demand, they still felt the need for prelacteal feeding. There is a chance that mothers are unaware of the former techniques that they can employ for enhancing breast milk production. Unfortunately, by prescribing PLF routinely, mothers are likely to harness this inappropriate and undesired maternal attitude in the community at large. In South India, doctors play a significant role in influencing mothers about whether to supplement breast-feeds with formula feeds.[11] Further, almost half of the mothers believed in late onset of feeding. Late initiation of feeds is commonly practiced in Nigeria[12] and is associated with PLF administration.[13] Thus it is possible that the mothers adopt such practices only due to prevailing practices in the community and do not, themselves, understand the necessity of this trend. However, most of their reasons for giving PLF have no scientific basis. Reasons such as satisfying thirst and cleansing the gut are orthodox ideas and are entirely non-scientific. Studies have shown that even in hot countries most babies do not need extra water.[14]

Our study concluded that prelacteal feeding is commonly and routinely practiced by mothers belonging from different socio-economic, demographic and religious genres, most often, without a valid medical justification. These findings highlight the fact that women from all cadres (educated and uneducated) needs to be reinforced and trained in successful breast-feeding practices. The habitual administration of PLF should be discharged and should be declared unnecessary and harmful, particularly by healthcare personnel. Misconceptions including milk insufficiency should not be generalized as an excuse for adopting PLF administration and young and inexperienced mothers should receive teaching and training enhance milk flow by simple techniques. There is thus a need for promotion of breast-feeding. These needs have been recognized by researchers in various parts of the world.[15]

However, it should be noted that this study was

limited to a very small sample size and mainly from LDH and JMCH. It may not be representative of the responses of the, more civilized and educated genera of women, who are the working part of the population and who are representative of the community at large.

## CONCLUSION

In our study subjects who were selected from LDH and JMCH, mainly, there was a high prevalence of breast feeding (as majority of the subjects appear to be literate; 81.8%), with 50.2% continuing till 2 years of age and 29.9% upto 1 year of age. Majority of the mothers; 71% breastfed due to self-desire only 9% were influenced by their family or on doctor's advice. Prevalence of PLF or use of ghutti is 70% with honey being administered 37.2% and readymade ghutti 19.5%.The reasons for breastfeeding and PLF administration are summarized as follows in diagram 1 and table-I, respectively.

One significant finding is that, althought, administration of PLF or ghutti is directly associated with Islam. Only 21.8% of our 97.2% Muslim subjects administered ghutti for religious reasons.

Conclusively, most mothers routinely and unnecessarily give prelacteal feeds, despite of knowing the importance of breast milk. Therefore, mothers should be emphasized about the unsafely administration of prelacteal feeds and importance of breastfeeding.



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*"I am responsible for what I say, I am not responsible for what you understand."*

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## AUTHORSHIP AND CONTRIBUTION DECLARATION

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| 1 | Dr. Farida Karim Chagan | Original research work and data collection | |
| 2 | Dr. Sidra Malik Fayyaz | Statistical analysis of data | |
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