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Research Article

**BREAST FEEDING PRACTICES OF MOTHERS:
A HOSPITAL BASED STUDY**

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Abstract:

Background: There is a decline in proper breast-feeding practices in Pakistan. Majority of the women do not give exclusive breast feed to their children and waste colostrum. The objective of this study was to assess practices of exclusive breast feeding among mothers of under 5-year children attending a tertiary care hospital outpatient.

Methodology: A cross sectional study was carried out on 258 mothers, who presented to Gynecological and Obstetrical OPD or ward and had at least one child between the age of 1 to 5. Questions regarding their demographic profile and breast-feeding practices were asked.

Results: 221/250(88.4%) women had breast fed their children and 29/250 (11.6%) had not. Among them 110/250 (44%) practiced exclusive breast feeding and the rest either used formula milk or cow's milk along with breast milk. Only 41/250 (16%) women had given colostrum to their children, 153/250 (61%) had given Ghurti (a traditional pre-lacteal feed, mainly honey). Women who were uniparous, housewives, lived in joint families, belonged to middle class families and had vaginal mode of delivery had better breast-feeding practices than others. When grading and categorization of breast-feeding practices were done 41/250 (18.5%) had excellent practice, 69/250 (31%) had good and 111/250 (50%) had poor practice.

Conclusion: The study emphasizes that there is a need to improve exclusive breast feeding and colostrum giving practices.

Keywords: Breast feeding, exclusive feeding, colostrum.

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INTRODUCTION:

The health of an infant depends on the diet and feed given to him from the first day.

(1) Breast milk is the primary source of nutrition for infants before they can eat and digest solid materials. Per WHO from birth to 6 months of age child should be given exclusive breast feed. Exclusive breast feed means giving only breast milk, not including any sort of liquid, solid or semi-solid material except medication and vitamin drops. Breast milk contains fats, proteins, carbohydrates (lactose) and minerals, its energy content is 60-70 kcal/ 100 ml. It contains all the essential nutrients required by a child up to 6 months of age. It has anti-inflammatory and antibiotic properties that provide protection to child against infections like polio, respiratory syncytial virus, sudden infant death syndrome, otitis media, UTI and neonatal septicemia. (2) The initial first hour is ideal time to start breast feeding, 22% of infant deaths can be prevented by giving colostrum during that time. (3) In Pakistan 53 infants out of 1000 live births die due to diarrhea, respiratory infections and malnutrition. This is due to lack or delay in breast feeding because the longer the delay, the higher the rates of diseases and infant death go. (4) Breast milk is also beneficial for the health of mother. It acts as natural contraceptive for 2 years, as it releases oxytocin that prevents ovulation and provides protection against ovarian and breast cancer. Despite of all these beneficial effects and uses, rates of exclusive breast-feeding practices and knowledge about breast feeding is very low.

Breast feeding practices and attitudes are affected by the social and cultural traditions, family background, socioeconomic status, gravidity, parity, education and occupation of mother. (5) Previous studies show that our country has the lowest exclusive breast-feeding rates in South Asia. Only 32% of children get exclusive breast feed up to 6 months of age and 42% mothers use formula milk for their children (6) which doesn't fulfill the required nutritional demand and doesn't provide protection against diseases. There is a stigma associated with breast feeding that it effects the beauty and health of mother and doesn't fulfill child's nutritional requirements. This is due to advertisement of formula milks and lack of awareness among women. (7) Social believes also affect breast feeding practices, females from upper class and those who have a job find it difficult to breast feed their children. In case of delivery by C section, the hospital staff keeps the neonate for 24hrs that results in delay in initiation of breast feeding and wasting of colostrum. (7) The reason to give formula milk is to provide rest to the mother and give her time to adjust but once the newborn is given formula milk, it is difficult for mother to initiate breast

feeding. Hospital staff, especially doctors don't counsel new mothers about the benefits of breast feeding and recommend formula milk that further decreases the practice. This study is designed to assess the breast-feeding practices of mothers and it will help to construct a way to improve the exclusive breast-feeding knowledge, attitude and practice.

METHODOLOGY:

A cross sectional study was conducted on mothers who had at least one under 5 child presenting to Gynecological and Obstetrical OPD or wards of Shaikh Zayed Hospital, Lahore. Only youngest under 5 children were included in study to overcome recall bias. Considering the number of women presenting to OPD per year and the number of mothers among them, with confidence level of 95% and 5% chance of error, a sample size of 258 was calculated using WHO sample size calculator. Data was collected from May 1st to 30th 2017 from the women presenting to hospital. A self-structured questionnaire was piloted to assess the ease of administration and understanding of questions on 5 mothers and then questions were modified accordingly. The data of these 5 women was not included in the study. Confidentiality and privacy was ensured. Verbal informed consent was properly taken and all ethical issues were taken into consideration. Proposal was ethically reviewed. Questionnaires were filled by researcher-administration method. It had 20 items that covered the required demographic variables including age, type of family, education, socioeconomic status, occupation, residence, gravidity and parity. Questions regarding breast feeding practices about all the children including type (exclusive, along with formula milk or cow's milk) prelacteal feed, time, duration and frequency were asked. Total 250 forms were correctly filled and 8 of them were discarded due to incomplete data.

The Statistical Package for Social Sciences Software (IBM SPSS version 23) was used for data processing and analysis.

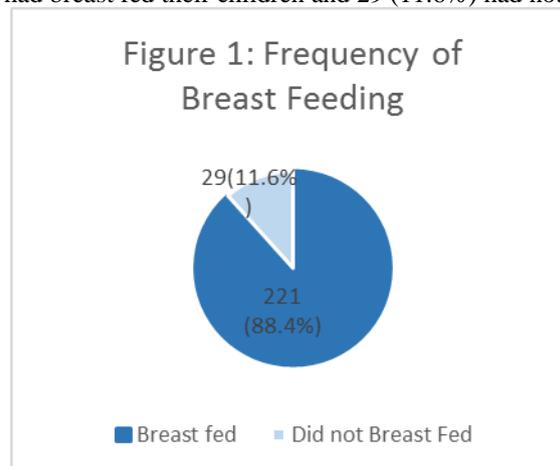
RESULTS:

We analyzed the data and found that the age of mothers ranges from 18 to 40, most of them lied between the ages 26 to 30, 87/250 (34.8%). Among them 28/250 (11.2%) were illeterate while 58/250 (23.2%) were graduates. 86.4% of the mothers were housewives. 200/250 (80%) of the mothers belonged to urban settings. Majority of the mothers 151/250 (60.4%) hailed from joint families and most of the mothers belonged to lower middle-class family 170/250 (68%). 225/250 (90%) mothers had 4 or less children while only 25/250 (10%) had 5 or more children.

Table 1: Sociodemographic profile of mothers

Variables		Frequency (n=250)	Percentage (%)
<i>Age</i>	18 to 25	29	11.6
	26 to 30	87	34.8
	31 to 35	69	27.6
	36 and above	65	26
<i>Type of Family</i>	Nuclear	99	39.6
	Joint	151	60.4
<i>Socioeconomic Status</i>	Lower Class	75	30
	Middle Class	170	68
	Upper Class	5	2
<i>Education</i>	Illiterate	28	11.2
	Secondary	26	10.4
	Matric	57	22.8
	Intermediate	36	14.4
	Graduate	58	23.2
	Masters	45	18
<i>Occupation</i>	Housewife	215	86
	Private Sector	19	7.6
	Govt. Sector	16	5.4
<i>Residence</i>	Rural	50	20
	Urban	200	80
<i>Gravidity</i>	4 or less	225	90
	4 5 or more	25	10

The primary objective of the research was to find out the number of women who had breast fed their children. Out of 250 mothers, 221 (88.4%) had breast fed their children and 29 (11.6%) had not.



This showed that majority of the women had breast fed their children. Mostly mothers initiate breast feeding but fail to carry out in the proper way. In order to assess the breast feeding practices of mothers various questions were asked related to their children and their practices regarding feeding. What was the gestational age of the child, 229/250

(91.6%) were term and 16/250 (6.4%) were pre-term, what was the mode of delivery, 154/250 (61.6%) were vaginal and 96/250 (38.4%) were caesarean. When did the mother start breast feeding her child, 34/250 (15%) mothers started at once, 125/250 (56%) started after 2-24 hrs later and 40/250 (18%) after 48 hours . What was the

frequency of feeding, 130/250 (58.8%) fed their child on demand, 70/250 (31.6%) fed regularly and 23/250 (10.4%) randomly. The time after which she switched to the other side, 63/250 (28.5%) switched after 10 mins, 134/250 (60.6%) after 10 to 20 mins and 18/250 (8.1%) after emptying. What was the total duration of breast feeding in months, 28/250 (10.8%) breast fed for less than 6 months, 61/250 (27.6%) for 6 to 12 months, 66/250 (29.8%) for 12 to 18 months and 68/250 (30.7%) for up to 24 months. And what was the age at the start of

weaning, 121/250 (48.4%) mothers started weaning at 3 to 5 months, 123/250 (49.2%) at 6 to 8 months and 6/250 (2.4%) after 9 months. The factors like the time at which breast feed was first started, the frequency with which breast feed is given, total breast-feeding duration and age of weaning are the measures and parameters used to assess the practice of mothers. The mothers who have good knowledge and attitude have better practice than those who don't have.

Table 2: Breast feeding practice of women

Variables	Frequency (250)	Percentage (%)
<i>Gestational Age</i>	Term	229
	Pre-Term	16
	Post-Term	5
<i>Mode of Delivery</i>	Vaginal C- Section	154 96
		61.6 38.4
<i>Start of Breast feeding</i>	Immediately	34
	2-24 hours	125
	24-48 hours	22
	More than 48 hours	40
<i>Frequency of feeding</i>	On Demand	130
	Regularly	70
	Randomly	23
<i>Switching to the other side</i>	Up to 10 mins	63
	10-20 mins	134
	20-30 mins	8
	After emptying	18
<i>Total duration of breast feeding</i>	Less than 6 months	28
	6 to 12 months	61
	12 to 18 months	66
	18 months to 24month	68
<i>Start of Weaning (In months)</i>	3 to 5	121
	6 to 8	123
	9 to 11	6

After analyzing the data regarding breast feeding practices of mothers, 3 gradings were constructed, based on the criteria of pre-lacteal feed and type of feed given up to 6 months. Those mothers who gave colostrum and then exclusive breast feed for 6 months, were categorized to be having Excellent practice. The mothers who gave formula milk, water or ghurti as pre-lacteal feed and then exclusive breast milk for 6 months were categorized in Good Practice. While those mothers who didn't give

colostrum or exclusive breast feed were said to be having Poor practice. This categorization helped to analyze the number and percentages of women following the standard recommended practices and those who were not. Data analyses showed that 41 (18.5%) women had excellent breast-feeding practice, 69 (31.2%) had good practice and 111 (50.3%) women had poor breast feeding practice. The data shows that half of the women had poor

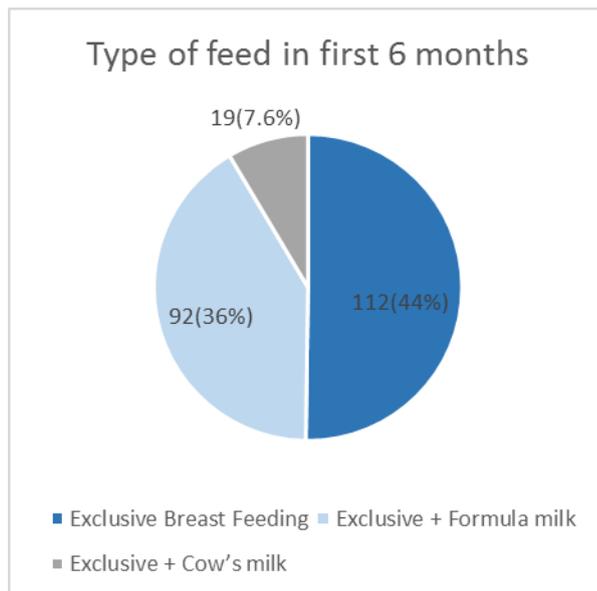
practice regarding breast feeding. Figure 2: Grading of Breast Feeding Practices



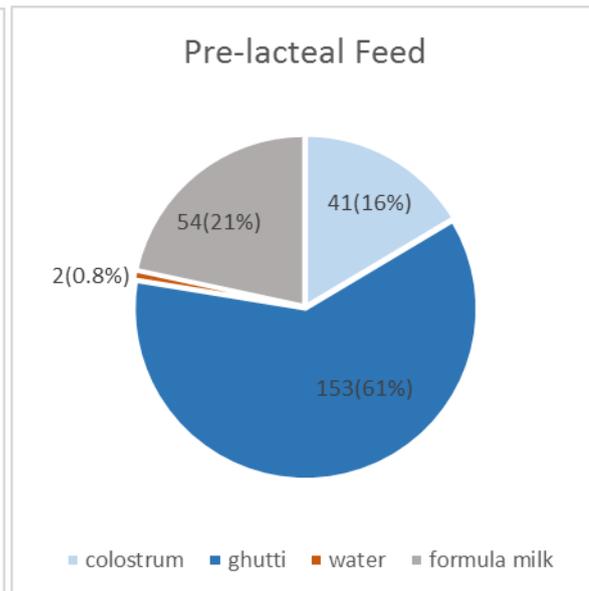
The type of feed was categorized as exclusive breast feeding, breast milk along with formula and breast milk along with cow's milk. The analysis of data showed that 112/250 (44%) practiced exclusive breast feed, 92/250 (36%) gave breast feed along with formula milk and 19/250 (7.6%) with cow's milk.

The pre-lacteal feed is important for the health of child, ghurti, water or formula milk must not be given but only 41 (16%) mothers gave colostrum to their children.

Graph 3: Type of Feed



Graph 4: Pre-lacteal Feed



To find any association between breast feeding practice and demographic data, age of mother and parity were compared with exclusive breast-feeding practice.

67/250 (26.8%) mothers were uniparous (having only 1 child), out of which 22/67 (32.8%) gave exclusive breast feed to their children. 183/250 (73.2%) mothers were multiparous (having more than 1 child), 90/183 (49%) gave exclusive feed. 116/250 (46.4%) mothers were less than 30 years old, among which 75/116 (64.6%) gave exclusive breast feed and 97/250 (38.8%) were more than 30 years old, among which 37/97 (38%) gave exclusive feed. Chi-

square test is applied and p value of less than 0.05 is significant showing that parity has symptomatic significance while age of mother is insignificant.

		Exclusive Breast Fed their child			p-Value
		YES	NO	Total	
Parity	Uniparous	22	45	67	0.04
	Multiparous	90	93	183	
Age of mother				250	0.06
	Less than 30	51	65	116	
	More than 30	61	73	134	
	Total	112	138	250	

DISCUSSION:

Good nutrition is required for proper growth, health and development of child. (8) Breast feeding has short term and long-term beneficial effects on health of both child and mother. It is important that the child gets breast milk in his first 6 months of life and mothers have all the information about its beneficial effects.

Majority of the mothers in Pakistan initiate breast feeding, our research showed that out of the sample, 88.4% women had breast fed their children while only 11.6% women had not. In all other traditional societies majority of women chose to breast feed during the first year of infant's life. (9) Most of the women considered breast milk to be the best source of nutrition for their children but the importance of exclusive breast feed is not known by many. An important factor for not using breast milk exclusively was that it is inadequate for child's caloric demand. In most societies rates of exclusive breast feeding are low and mothers mostly use formula milk along with breast milk. This is due to lack of awareness; some women say that their lactation is less and the quantity of milk is not up to infant's requirement. The children born with Caesarian section are not handed over to the mothers immediately and are given formula milk initially, this also results in a decrease in rates of exclusive feeding, as mothers find it difficult to give breast milk after that. (7)

Glucose (in any form) must be given within an hour of birth to prevent hypoglycemia, which causes permanent brain damage. In Pakistan, most people, about 153/250 (61%), give ghurti. This is not a good practice as it may become the cause of neonatal tetanus if hygienic measures are not taken in account. Most of the elderly people play an influential role in the matter of pre-lacteal feed given to the child, as grandparents want to be the first to

give ghurti to neonate. (10) Per Sunnah honey or mashed date should be applied to palate.

Only 41/250 (16%) women gave colostrum to their children. Most of the mother's waste it and consider it to be harmful and full of 'pus' because of its yellow color. They discard the initial "yellow milk" and give clean white milk that comes after that. (11) Colostrum must be given within first few hours of birth because after that, it gets replaced by breast milk. A mother said that she had caesarian section done and could not even hold and see her child until the third day. Due to which she could neither give colostrum nor breast feed to her child as the hospital staff had already put newborn on formula milk. Another mother said that her lactation wasn't started until the second day of the child birth and it was normal white in color. Thus, due to lack of awareness among mothers and mistakes of hospital staff, majority of the infants fail to receive colostrum.

The time of initiation of breast feed is extremely important. It must be started within the first hour of child's birth. (12) When the neonate sucks nipple, the breast milk erupts reflexively. Suckling the nipple cause oxytocin to release from posterior pituitary that results in release of milk. The greater the delay in breast feeding initiation the less is the secretion of breast milk. (13) 34/250 (15.3%) mothers started breast feeding immediately, 125/250 (56.5%) within 24 hours and 62/250 (27%) after 24 hours.

The frequency with which breast milk is given also plays important role in infant's growth. Infant must be given feed within an interval of 2 hours to maintain the glucose level.

Majority of the mother, 130/250 (58%) gave milk on child's demand meaning when the infant cried. 70/250 (31.6%) women fed their child two hourly.

Longer delay between the feeds is dangerous for infant's health. Milk is the only source of glucose for him and it is digested, absorbed and metabolized immediately. Hypoglycemia can occur if there is a long delay between feeds and longer hypoglycemic episodes cause brain damage and retarded mental function.

The secretion of breast milk also depends upon the time for which the infant takes feed from one breast. Switching must be done within 15-20 minutes to prevent full emptying of one breast. If the child's need is fulfilled and milk is still present breast pump must be used to prevent the leaking and wasting. 63/250 (28.5%) women fed from one side till 10 minutes, 134/250 (60.6%) switched after 10 to 20 minutes and 18/250 (8.1%) after emptying.

28/250 (10.8%) mothers gave breast feed for less than 6 months, 61/250 (27.6%) women for 6 to 12 months, 66/250 (29.8%) for 12 to 18 months and 68/250 (30.7%) for 2 whole years. Semi-solid food and other liquids must be started when the child is 4 to 6 months old because at this age, his nutritional demands cannot be fulfilled by milk alone. (3) The age of weaning is extremely important, delay in it causes malnourishment and developmental and growth defects resulting in thin, lean and malnourished child. 121/250 (48.4%) women started weaning at the age of 4 to 6 months and 123/250 (49.2%) started at 7 to 9 months.

Cross tab of exclusive breast feed with parity (number of children) showed a p value of less than 0.05 indicating symptomatic significance., while age of mother was asymptomatic with a p value of 0.06. Previous studies show that breast feeding practices of women depend upon the knowledge and information provided to them in pre-natal hospital studies. (14) All these factors give as an idea about the breast-feeding practices of women and provide information on the lacking parts which can be improved by proper awareness and education.

CONCLUSION:

The study emphasizes on the need to improve breast feeding practices of women. Exclusive breast-feeding rates are low in our country and many women waste colostrum. Health education must be provided to community. Doctors and hospital staff should provide demonstrations on correct way of breast feeding and counsel the new mothers about the benefits of exclusive breast feeding.

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