

Breastfeeding Knowledge, Attitude and Practices of New-Mothers Presenting in Obstetrical Out-Patient Department

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ABSTRACT

Background: Exclusive breastfeeding (EBF) with colostrum feeding improves the survival of the newborns. This varies with the time of initiation of breast-feeding, its duration and the age of weaning. Knowledge of breast feeding, attitude of mothers and their practices varies with many factors among populations. **Objective:** (1) To determine the prevalence of exclusive breastfeeding practice among mothers of infants 0–6 months of age presenting in obstetrical out-patient department. (2) To assess the level of knowledge, attitude and practices of new-mothers regarding breastfeeding presenting in obstetrical out-patient department. **Study Design:** Cross-sectional study. **Settings:** Department of Obstetrics & Gynecology, Faisalabad Medical University, Faisalabad Pakistan. **Duration:** One month from August 01, 2020. **Methodology:** All new mothers of healthy infants 0–6 months old born between 37 and 42 gestation weeks attending the obstetrics OPD were included in the study. A detailed history was taken from all mothers. Parity, current age of infant, weight, height, BMI, BMI category, educational status, exclusive breastfeeding (EBF) and any pre-lacteal feed given, was noted. The independent variables for the study were maternal knowledge and attitudes towards EBF. 15 questions for assessment of knowledge and 12 for maternal attitude were used. **Results:** Among these 100 women, 66% (n=66) were currently feeding their newborns, but only 17% (n=17) of the total 100 women were practicing exclusive-breast-feeding. 95% were having good and above average knowledge regarding breast feeding practices. Still only half of the mothers had a positive attitude towards breast feeding; only 66% of the women were practicing breast feeding. Among educated mother 47.6% had a positive attitude toward breast feeding. Mothers with knowledge of breast-feeding above average/good were of 25 years or above age group. **Conclusion:** Education of the mothers can be linked to their high knowledge but is not significantly associated with their positive attitudes. Positive campaigns are required focusing not only un-educated young mothers, but also involving young educated primiparous women. Women should be encouraged from the first pregnancy regarding exclusive breast feeding and colostrum feeding, without the use of any pre-lacteal feeds, whatever the mode of delivery is.

Keywords: Breast feeding, Exclusive breast feeding, EBF, Mother feeding, Colostrum, KAP study.

INTRODUCTION

Mother feed is an ideal diet of an infant till six months of age. Exclusive breastfeeding (EBF) is defined as “giving mother’s milk to infant without inclusion of water, juice, non-human milk or any food (with exception of vitamins, minerals or medicines if needed) up till six months of age”.¹

Exclusive breastfeeding (EBF) for the first six months of life is beneficial for the growth and development of the baby. These children have more chances of survival as compared to those children who are not breastfed or exclusively breast feed in the neonatal period and early infancy. EBF infants and children have around 6 times more survival than the other group of children. Important factors determining this beneficial effect of include the

time of start of breast-feeding, duration of EBF, duration age of weaning and duration of predominant breast feed.² Breastfeeding improves immunity in the infant body and helps in physical and mental health, thus improving the infant morbidity and mortality. These infants and children have less chances of development of non-communicable diseases. As per recommendations of the WHO, the initiation of breastfeeding should be within the first 60 mins of birth, EBF should be continued till the first 6 months of life and semi-solid feeds after 6 months of age.^{3,4}

The initial feed after the delivery, Colostrum is rich source of antibodies, proteins and essential fatty acids. These are helpful in prevention of infections in early days of life. Globally, one third of less-than-five-year mortality

is caused by malnutrition and among these malnourished children 2/3rd usually dies before their first birthday.⁵ Apart from the benefits to the infant, mother breast feeding their children, also have benefits for themselves. These include natural contraception, prevention of postpartum depression, breast & ovarian cancers.⁵

Eram U, et al reported that in their study, 55.7% of mothers practiced exclusive breast feeding while 44.2% did not practice. 97.1% of mothers gave colostrum and did not discard. Most of the mothers knew the advantages of breast-feeding. 90% of mothers knew about weaning time and 91.4% of mothers knew that breast feeding could be continued even after weaning.²

As there is paucity of robust data from our local district, Faisalabad regarding maternal knowledge, attitude and practice about breastfeeding, our study was to highlight the issues prevailing regarding breast feeding, as well as the aspects that need to be targeted to improve breast feeding practices. Keeping in view the significance of optimal breastfeeding and weaning practices in child's overall survival rate, this cross-sectional study was carried out in a tertiary care hospital in Faisalabad, with the objective to determine the prevalence of exclusive breast feeding among new-mothers coming for follow-up and to assess knowledge, attitude and infant breast-feeding practices of these mothers. The objective of this study was:

(1) To determine the prevalence of exclusive breastfeeding practice among mothers of infants 0-6 months of age. (2) To assess the level of knowledge on breastfeeding among new-mothers and to assess the attitude, beliefs and practice of the new-mothers on breastfeeding.

METHODOLOGY

Study Design: Cross-sectional study.

Settings: Department of Obstetrics & Gynecology, Faisalabad Medical University, Faisalabad Pakistan.

Duration: One month from August 01, 2020.

Sample Technique: Non-probability consecutive sampling.

Sample Size: Sample Size of 100 was calculated using WHO sample size calculator, with a confidence level of 95% and absolute precision of 10% and expected prevalence of EBF in mothers presenting in OPD P of 55.7%.¹

Inclusion Criteria: All new mothers of healthy infants 0-6 months old born between 37 and 42 gestation weeks attending the obstetrics OPD were included in the study.

Exclusion Criteria: Mothers with medical conditions or those on medications in which breastfeeding was contraindicated, mothers of infants diagnosed with serious congenital malformations in which breastfeeding was contraindicated, mothers of infants with major birth defects such as congenital heart disease, cleft lip/cleft

palate and Down syndrome, mothers of preterm babies, and multiple gestations were excluded from the study.

Data Collection Procedure: EBF or Exclusive Breastfeeding was defined as giving an infant nothing else apart from breast milk. Post-lacteal feed was as any food except mother's breast milk given to a newborn after the initiation of breastfeeding. Predominant breastfeeding was defined as breastfeeding a child, along with small amounts of water or water-based drinks. Neither food-based fluids, nor solid food, nor non-human milk were allowed under this definition.

Knowledge of breast feeding was defined as an individual's familiarity of information or awareness and understanding of exclusive breastfeeding. Attitude was defined as an individual's thinking or feeling towards exclusive breastfeeding as well as preconceived ideas that an individual has towards it, this can either be positive or negative attitude.

A detailed history was taken from all mothers. Parity, current age of infant, weight, height, BMI, BMI category, educational status, exclusive breastfeeding (EBF) and any pre-lacteal feed given, was noted. The independent variables for the study were maternal knowledge and attitudes towards EBF.

Maternal knowledge was tested by 15 questions covering various aspects of breastfeeding. Maternal knowledge score was computed as follows; a correct response scored one (1) and incorrect responses was scored zero (0). The total possible score was 15. Those mothers who scored less than 5 out of 15 was categorized as having poor knowledge, those who scored 6-10 was considered as having moderate knowledge and those who scored 10 and above was categorized as having high knowledge.

Maternal attitudes and beliefs towards breast feeding were determined by responses to 12 questions. Each correct (positive attitude) response was awarded a score of 1 whereas an incorrect (negative attitude) response was a score of zero (0). The total possible score for correct responses for all aspects of attitudes tested was 12. (higher the maternal attitude score, the more positive the attitude towards breastfeeding). Those mothers who scored less than 6 was categorized as having poor attitudes, those who scored 6 to 9 had moderate attitudes and those who scored above 9 had positive attitudes.

Data Analysis: Data analysis done using Statistical Package for Social Sciences (SPSS) version 20.0 was expressed using frequencies, percentages, means and standard deviation. Frequency of EBF current practice, degree of knowledge, and attitudes/belief was seen. The quantitative data was represented as their mean \pm SD. t-test was used see the statistical significance of the differences of quantitative data primiparous and multiparous women taking p-value of < 0.05 was used as the criterion for statistical significance.

RESULTS

In this study Performa were filled after an interview regarding the topic under study, following the inclusion and exclusion criteria. Knowledge, attitude and practices of the regarding breast feeding and exclusive breast feeding.

The mean age, weight and height of the mothers included in the study were 29.2 + 3.60 years, 60.17 + 9.29 kg and 5.24 + 0.2 feet. Mean of the variable, current age of the infant at the time of the interview was 9.64 + 5.6 months. One third of these mothers were primi and remaining two third were multipara. The frequency of the primipara females was 32% (n=32) in our study, and rest were multipara 68% (n=68).

Among these 100 women, 66% (n=66) were currently feeding their new-born infants. And but only 17% (n=17) of the total 100 women were practicing or practiced exclusive-breast-feeding till first 6 months of life of their infants. Among the 66 women currently feeding their infants, only 16.7% (n=11) mothers were practicing EBF, rest of the mothers 82.3% (n=55) were giving their infants some other feeds along with mother feed like formula milk, cow or goat milk.

Table below shows the details of all the variables affecting knowledge, attitude and practice of breast feeding. Most of the mothers in our study group were multipara and were having normal weight or were overweight. More than half of the mothers under study were educated, and common mode of delivery was lower segment caesarean section. Around 90% of the patients initiated feeding their new-borns within 24 hours of delivery. 75% of the mothers reported the use of formula feed as pre-lacteal feed after the birth.

Among the mother under study, 95% were having good and above average knowledge regarding breast feeding practices. Still only half of the mothers had a positive attitude towards breast feeding; only 66% of the women were practicing breast feeding.

Data of the outcome variable was stratified according to the effect modifiers like age, parity, educational level, mode of delivery. The breastfeeding practice was not significantly affected by the mode of delivery, age of the mother, nutritional status of the mother and knowledge level of the mother (p value was not < 0.05). The difference of breastfeeding practice was statistically significant when stratified for educational status and parity of the mother. (p value < 0.05)

Data regarding the knowledge of breast feeding was stratified for age, parity, educational level and mode of delivery but the difference of knowledge of these mothers was not statistically significant. Knowledge regarding breast feeding was not significantly affected by the age, parity and mode of delivery. But the difference was significant with educational status of the mother. Knowledge, regarding breast feeding, of the mothers with higher level of education was also high.

Data regarding attitude of the mothers toward breast feeding was also stratified for age, parity, educational level, mode of delivery and knowledge level. Attitude of the mothers was not affected by age, parity, mode of delivery and even educational status. Among total women 84% were having intermediate and above educational status, and among these 84 women, only 40 women (47.6%) had a positive attitude toward breast feeding.

Mothers with knowledge of breast-feeding above average/good were of 25 years or above age group. Most of the mothers with a positive / average attitude towards breast feeding were multipara (68%) and above 25 years of age (88%).

Table 1: Showing details of the descriptive qualitative variables in the study

Variable		%			%
Parity	Primipara	32	Multipara	68	
	Nutritional status				
	Under-weight	6	Over-weight	33	
	Normal	54	Obese	7	
Educational status	Bachelor	57	Secondary school	8	
	Intermediate	27	Middle School	4	
	No education	4			
Mode of delivery	SVD	42			
	LSCS	58			
First feed initiated after birth	Within 1 hour	47	> 24 hours	7	
	1 to <24 hour	46			
Pre-lacteal feed given	Boiled water	4	Glucose water	7	
	Formula feed	75	Honey	11	
	Nothing	3			
Knowledge score	Mean ± SD		13 ± 1.6		
Level of knowledge	High / Good	95	Average	5	
Attitude toward breast feeding	Positive	47	Average	50	
	Negative	3			
Attitude score	Mean ± SD		9.2 ± 1.6		
Breast feeding practice	Yes	66	No	34	
Exclusive breast feeding till 6 months	Yes	17	No	83	

Table 2: Showing mean and standard deviations of all the quantitative variables in the study (n = 100)

	Range	Minimum	Maximum	Mean	Std. Deviation
Age	18	20	38	29.16	3.603
Mother weight	42	44	86	60.17	9.292
Mother height in cm	27	147	174	157.27	5.709
Mother BMI	19	17	35	24.41	4.014
Knowledge score	9	6	15	13.05	1.648
Attitude score	7	5	12	9.20	1.608
Infant age	22	2	24	9.62	5.606

Table 3: Showing the percentage of mothers with their answers to the questions asked in the study

Knowledge Questions	Agreed (%)	Disagreed (%)
Breast milk should be the baby's first feed after birth	97	3
Baby should be breastfed within first one hour of birth	98	2
Colostrum should not be wasted; should be given to the baby	97	3
Breast milk alone is sufficient for first 6 months of life	84	16
Breast feeding protects mother from pregnancy	100	0
Semi-solid type of foods should be started at the age of 6 months	96	4
Mothers can feed their children during pregnancy	59	41
A baby should be breast fed on demand	90	10
Lactating mother should take healthy food to improve secretion of milk	100	0
During breastfeeding the mother should sit comfortably	97	3
During breastfeeding the mother should maintain eye to eye contact and talk with the baby	22	78
Wash each breast with warm water before breast feeding	91	9
Awakening the baby while breastfeeding	47	53
Burping should be done after each feed	94	6
Breast feeding should be continued Up to 2 years	95	5
Attitude Questions		
Exclusive breast feeding is beneficial for the infant	85	15
Exclusive breast feeding is influenced by the age of mother of the infant	20	80
Father of the infant should be involved in decision regarding EBF	28	72
Animal milk is suitable for a new born baby	6	94
Breast milk alone is inadequate for babies 2 months or older	28	72
Formula feeding is better choice for working mothers	33	67
Breastfed babies are healthier than fed babies	85	15
Breast milk is more easily digested than formula	88	12
Infant's survival is dependent on water along with breast milk	13	87
Number of times a mother has given birth will influence her ability to EBF	42	58
Formula is as healthy for an infant as breast milk	33	67
Formula feeding is the better choice if the mother plans to go back to work	74	26

DISCUSSION

Breastfeeding significantly reduces infant morbidity and mortality. It has a role in the physical and immunological development of an infant by providing protection against infections and non-communicable disease. As per recommendations of the WHO, the initiation of breastfeeding should be within the first 60 mins of birth, EBF should be continued till the first 6 months of life and semi-solid feeds after 6 months of age.^{3,4}

In a local study done, mothers were asked regarding breast feeding practices after the birth of their babies. They reported that around 35% mothers gave pre-lacteal feed, 14% discarded the initial feed (colostrum). More than 90% of the mothers had full knowledge regarding the pros- and cons of exclusive breast feeding. However, the awareness of positive feedback relationship of milk production and sucking was lacking and breast feeding was considered to cause weakness in mothers. Most of the mothers had adequate knowledge regarding the pros- and cons- of breast feeding in comparison to bottle feeding; still majority of them were practicing the opposite; these results also corresponded with the results of our KAP study.⁶

Rehman R, et al reported that reported that among the mothers interviewed regarding the knowledge of breast feeding; only 25% were educated, and had some idea of exclusive breastfeeding. More than 50% mothers knew that breast feeding should be continued for 2 years. 80-90% was aware of its benefits like protection from infections and natural contraception. Most of the results were similar to our study. It was reported that the knowledge and practice of breast feeding was not significantly associated with the education level of mother.⁷

Regarding knowledge and attitude of mothers toward colostrum, Sohail J, et al reported after a study on around 400 nursing mothers in which data was collected through interviews, 70% nursing women were aware of the advantages of colostrum while 30% were not having any clue about it. Among these mothers around 72% women offered colostrum to their children while rest of the mothers, around 28% wasted considering it infected fluid leading to diarrhea. Around 75% of the mothers gave honey as a pre-lacteal feed. In this study, 28% practiced first hour breast-feeding.⁸ In our study, 97% mothers were of the opinion that colostrum should be fed to the newborn babies; but around 75% mother gave formula feed as pre-lacteal feed and later along with the colostrum feed.

In another local study, around 84% mothers knew that mother's milk is best for infants, similar to our study results. Around 40% believed that breast feed is a complete diet and easily digested, this was believed by 88% of the women in our study. Similar to our study, this study showed a significant association of literacy rate or educational level of mothers with the knowledge

regarding breast feeding. Around 60% mothers showed a positive attitude of mother feed and it was significant among educated mothers, which was different from our study results. Even more than half of the educated mothers were not practicing exclusive breast feeding for their newborns.⁹

In a local study, it was reported that around 60% mothers were asked to feed their infants and rest 40% were advised formula milk by the healthcare professionals. Most of these women were aware of colostrum feeding. More than 90% were aware of the duration of feeding and weaning age. In our study on women 98% were aware of the early initiation of the mother feed, 97% were aware of benefits of colostrum and 96% were aware of the start of weaning should be at 6 months of age. Although mothers were having adequate knowledge, still EBF was practiced by one third of the mothers in the study population; rest of the mothers practiced mixed type of feeding till 1 year of age. More than half of the mothers gave pre-lacteal feed mostly honey. In this study, initiation of mother feeding was significantly associated with the mode-of-delivery, $p < 0.05$. But in our study, positive attitude of the mothers toward breast feeding was not affected by the mode of delivery. Most common pre-lacteal feed in our survey was formula feed.¹⁰

In our study, around 47% of the women started feeding their newborns within 1 hour of birth. Ahmed K, et al reported in their study that around 60% females initiate feeding practice just after delivery. Weaning at 6 months was practiced mostly by the working women as compared to non-working women.¹¹

In our study, 95% mothers were having high knowledge. Kitiyu P, et al reported that the mean knowledge score was 9.12 ± 1.2 out of possible maximum of 11 (77% high knowledge, 1.1% low knowledge) after delivery. Similarly, more than half (52%) of mothers believed that stated that infants should be put to breast immediately after safe delivery. Majority (95.6%) of the mothers also knew that infants should always be breast fed on demand. Eleven percent (10.9%) of the study participants did not know that infants should be exclusively breast fed for the first six months of their live. However, 98.9% of the study participants knew that the best time to introduce complementary feeding was after six months of child's age. About one third (56.7%) did not know what they can do to increase their breast milk production.¹² Most of these results are similar to the results seen in our KAP study.

A study was done regarding breast feeding in the universities and other educational institutions of the city. Result of this survey reported that the 60% of these women had excellent level of knowledge and 70% had a positive attitude but still only 34% women practiced breast feeding.¹³ Among the mothers in our study, 95% were having good and above average knowledge regarding breast feeding practices. Still only half of the

mothers had a positive attitude towards breast feeding; only 66% of the women were practising breast feeding.

With this discussion on the knowledge, attitude and practices of mothers regarding exclusive breast feeding and breast feeding, it is clear that education of the mothers can be linked to their high knowledge but is not significantly associated with their positive attitudes. Multiparity and mature age (age more than 25 years) was associated with positive attitude and practice. Mothers with more than one children and age above 25 years were practicing breast feeding more than others. Still the percentage of women practicing exclusive breast feeding (EBF) among all the educated women with more than adequate knowledge of breast feeding, EBF was practiced by only 17% of the mother in the study. Positive campaigns are required focusing not only un-educated young mothers, but also involving young educated primiparous women.

CONCLUSION

Education of the mothers can be linked to their high knowledge but is not significantly associated with their positive attitudes. Positive campaigns are required focusing not only un-educated young mothers, but also involving young educated primiparous women. Women should be encouraged from the first pregnancy regarding exclusive breast feeding and colostrum feeding, without the use of any pre-lacteal feeds, whatever the mode of delivery is.

LIMITATIONS

Small sample sizes, lesser number of mothers with poor educational status are the major limitations in this study. A large population or multiple KAP studies should be done in different hospitals focusing the professional / working and non-professional / non-working mothers along with poor illiterate women along with women of good socioeconomic status.

SUGGESTIONS / RECOMMENDATIONS

Women should be encouraged from the first pregnancy regarding exclusive breast feeding and colostrum feeding, without the use of any pre-lacteal feeds, whatever the mode of delivery is. Formula feed or any kind of pre-lacteal feeds should not be offered to young primiparous women and should be discouraged. Young women, both educated and uneducated, need awareness regarding the chemistry of colostrum and should be encouraged regarding colostrum feeding.

CONFLICT OF INTEREST / DISCLOSURE

Authors declare no conflict of interest among them.

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