

Assess The Level of Knowledge, Attitude and Practice Among Mothers About Colostrum Feeding

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ABSTRACT

Background and Objectives: Colostrum is crucial for maintaining new born health supporting their growth and development and preventing infections. It contains more nutrients than mature breast milk, such as vitamin A and E, carotenoids, protein, and minerals, but less glucose and urea. Additionally, colostrum contains a high amount of carbohydrates, sodium chloride, and less lipids and potassium than mature milk.

METHODOLOGY: : A cross – sectional study was conducted at gynae and OPD departments of Ali Fatima hospital Lahore. A simple random sampling technique was used to recruit 160 participants. The data was analyzed by SPSS version 20. For continues variable frequency and percentage were computed.

RESULTS: The overall prevalence of knowledge, attitude and practice was 81%, 66%, and 65%. 38.1% Mothers believed that it colostrum can causes illness, 39% culture were the reason of colostrum avoidance. Honey and non-human milk were commonest pre lacteal feeding.

CONCLUSION: The knowledge was very high on the other hand attitude and practice of colostrum feeding was very low. So, the health education system should promote the practice of colostrum feeding and should develop positive attitude towards colostrum feeding.

KEYWORDS: Knowledge, Attitude, Mothers, Colostrum, Feeding

INTRODUCTION

Breastfeeding is an important public health strategy for reducing infant, child and maternal morbidity and mortality, and control health care costs(1) Breast milk is secreted by the woman after birth and had three different stages: colostrum, transitional milk and mature milk (2) Early breastfeeding initiation (provision of breast milks to infants immediately/within one hour of birth is beneficial to both the mother and the child and ensures that the infant receives the protective milk, colostrum. Early breastfeeding protects the newborn from diseases, promotes bonding between the mother and her newborn, aids in the production of regular breast milk, and aids in the contraction of the uterus, reducing postpartum hemorrhage. (4)

The initial milk that mammals' mammary glands secrete during the third trimester of pregnancy, right before delivery, and for three to four days afterward is called colostrum. and is accessible to the baby right

away after

birth. It has less glucose and urea than mature breast milk, but more nutrients such protein, minerals, carotenoids, and vitamins A and E. Furthermore, compared to mature milk, colostrum has fewer lipids and potassium and more carbs and salt chloride. (3) It is also the first vaccine that requires a "warm chain" created by mother-infant contact. It is secreted in very small amounts (30-100 ml), so mothers must be informed that this small amount of colostrum is sufficient for the infant and should not be denied. Colostrum is widely regarded as the ideal first food for infants.(5)

Newborns have a premature digestive system that is well suited to the low- volume concentrated form of colostrum's nutrient supply system. Colostrum's laxative effect promotes the passage of the baby's first stool, meconium. This aids in the removal of excess bilirubin, which is produced in large quantities during

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pregnancy and contributes to the prevention of jaundice. It contains immunoglobulins such as IgA, IgG, and IgM. Lactoferrin, lysozyme, lactoperoxidase, complement, and proline-rich peptide are also immune components of colostrum (PRP).

PRP aids in the treatment of various viral infections such as herpes viruses and HIV.(6) Many studies show that feeding colostrum to a newborn reduces the risk

various infections caused by bacteria, viruses, fungi, and protozoa. By prolonging the postpartum infertile period, helping the mother restore her pregestational weight, and reducing her chance of breast and ovarian cancer, it also improves her health.(7)

Colostrum can also influence cell growth, differentiation, and function. Colostrum avoidance is the failure to feed the newborn baby the first, thick, and yellowish milk. Squeezing out and throwing, pumping and discarding are all part of the practice Despite WHO and UNICEF recommendations to begin colostrum feeding within the first hour of birth, a greater number of mothers were avoiding feeding it to their infants (8). Unfortunately, due to various societal myths and misconceptions, colostrum feeding is not given to newborns. Colostrum is also a laxative which helps the baby to pass meconium (the first sticky black stool). Colostrum is therefore the perfect first food for newborns. (9)

Colostrum feeding has been linked to a lower risk of otitis media, gastroenteritis, respiratory illness, necrotizing enterocolitis, obesity, and hypertension. Despite of this fact colostrum is discarded as unclean and bad for the infant's health. In our country, ghutty, honey, sugar water, glucose, and mishri water were mistakenly feed as six pre-lacteal feeds. The infant mortality rate (74 deaths/1000 live births) means that one in every 14 infants in Pakistan die before reaching one year of age, implying that one child dies from communicable diseases every minute. Evidence suggests that avoiding colostrum is most common in developing countries (10)

Every day, up to 4,000 infants and young children die around the world because they do not receive colostrum within the first hour after birth In 2016, UNICEF global databases show that rates of early initiation of colostrum feeding are extremely low, with rates of initiation of colostrum feeding around 17% in Eastern Europe and Central Asian countries and 33% in Asia Pacific

(11) Colostrum avoidance has also a negative association with optimal breastfeeding practices (12)

In many areas of Pakistan colostrum avoidance is still

practiced. A study done in Pakistan showed that 51 % of mothers give supplemental feed before six months of age. This practice is more prevalent in mothers without formal education, new mothers, and those who had home deliveries (13)

METHODOLOGY

Study design:

A simple descriptive cross-sectional study was conducted

Setting:

Gynae and OPD departments of Ali Fatima Hospital Lahore.

Duration of study:

4 months from November to May 2023

Source of data:

Data is obtained from google scholar, PubMed, ncbi, HTML, research gate.

Target population:

Study population will be women from age ≥ 18 years.

Sample size:

Accessible sample size was 160

Sampling technique:

A convenient sampling technique will be used.

Inclusion criteria:

All postnatal mothers who attended OPD and those who are admitted in Gynae ward at Ali Fatima Hospital Lahore.

Exclusion criteria:

- o Women's who are chronically ill.
- o Those mothers who refuse to participate on the study.
- o Mothers who have still birth child.
- o Women's who are at the age of menopause.
- o Mother who are unable to speak or hear.

Data collection tool:

Structured questionnaire will be used.

Data Analysis:

SPSS software version 20 will be used and descriptive statistics will be calculated.

RESULTS

A total 160 women were interviewed in this study making a 100% response rate. The mean age of participants were 20-35 years. About 45% respondent belonged to the age of less than 20years, 39.5% respondent belongs to the age group of 20-34 years, only 15.6% respondent belonged to the age group of more than 35years. About 20% respondent are illiterate

people, 18% people are primary pass and 10.6% respondents are middle pass 30% respondent belonged to matric pass 15.6% people belonged to 15.6% and 5.6% people belonged to master's pass. 81.3% respondent belonged to Muslims so 0.6% respondents belonged to rural areas. About 51.9% mothers are housewives, 0.6% mothers belonged to government employee, 94.4% mothers belonged to private employee, 5.6% mothers are belonged to daily labor. About 87.5% women are married, only 9.4% mothers are divorced and only 3.1% mothers are widow. The living arrangement of respondent's women's who were living alone is 15%, living with husband 60% women's and living with family about 40%. Regarding higher level of partner education is 10.6% and 20.6% partners belong to primary level of education. Regarding monthly income 33.8% women can earn >20000, and 35% can earn >30000.

Table 1: Sociodemographic characteristics of participants

Variables	Category	Frequency	Percent(100%)
Age	<20	72	45
	20 - 34	63	39.4
	>35	25	15.6
Mothers' education	Illiterate	32	20
	Primary	29	18.1
	Middle	17	10.6
	Matric	48	30
	Graduation	25	15.6
	Master and higher	9	5.6

About 58% mothers had only one child. 72.5% of women had Antenatal care ANC follow-up. About 63% of women were counseled about early breastfeeding during antenatal care follow-up. Around 80.6% deliveries were in the hospitals and 51.9% cesarean section occur. After delivery only 73.1% women's visit the hospital for postnatal care.

Table 2: Utilization of maternal health care services

Variable	Category	Frequency	Percent (100%)
Parity	Primigravida	93	58.1
	Multipara	67	41.9
Antenatal care visit	Yes	115	71.9
	No	43	26.9
Number of ANC visits(N=156)	One time	60	37.5
	Two times	33	20.6
	Tree times	25	15.6
	Four times	42	26.3
Counseling about colostrumfeeding during ANC visit (N=156)	Yes	100	62.5
	No	59	36.9
Place of delivery	Health institution	129	80.6
	Home	31	19.4
Mode of delivery	Cesarean section	82	51.3
	Vaginal delivery	77	48.1

More than half of 61.9% of mothers have heard about colostrum feeding. Health provider 62.5% was the main source of information about colostrum feeding. Around 50% women knows about colostrum is the best nutrition for new born. About 51.2% mothers' knowledge about colostrum is yellow, thick and sticky. The time of initiation of the first breast milk with one hour is 38.8%, within six hour of birth 20.6%%

women's, within 24hours of birth 18.1%, and 22.5% mothers not about breastfeed. Days of colostrum will stay for 1 day only 38.1% women's, stay for 2 days 37.5%, stay for 3 days 18.8%, colostrum will stay more than 3 days 5.6%.

Table 3: Knowledge of colostrum feeding among mothers

Variable	Category	Frequency	Percent
Have you ever heard about Colostrum feeding?	Yes	99	61.9
	No	61	38.1
Source of information	Health care provider	100	62.5
	Health extension	49	30.6
	Workers		
	Mass Media (TV/ Radio)	11	6.9
Colostrum is the best nutrition for the newborn.	Yes	81	50.6
	No	29	18.1
	I don't know	49	30.6
Colostrum is thick, sticky, and yellowish.	Yes	82	51.3
	No	25	15.6
	I don't know	52	32.5
	Within six hours of Birth	31	19.4
	After 24 hours of birth	26	16.3
	I don't know	34	21.3
Day's colostrum will stay	For 1 day	61	38.1
	For 2 days	60	37.5
	For 3 days	29	18.1
	More than 3 days	9	5.6

About 38.1% women's believe that baby don't like colostrum breast milk, about 38.1% women's believe that colostrum cause diarrhea for an infant ,34.4% women believe that colostrum make the baby sick 43.8% mothers believe that colostrum is the dirty part of the breast feed, 41.9% women's agree on colostrum milk is difficult to digest, 42.5% mothers agree colostrum necessary to discard, 39.4% women agree colostrum is forbidden in culture, 36.9% women's believe that colostrum impairs growth and development.

Table 4: Attitude of mothers towards colostrum feeding

Variables	Agree, n(%)	Disagree, n(%)	Neutral, n(%)
Baby's do not like colostrum breast milk.	61(38.1)	60(37.5)	39(24.4)
Colostrum causes diarrhea for an infant.	61(38.1)	69 (43.1)	30 (18.8)
Colostrum makes the baby sick.	55(34.4)	69 (43.1)	36 (22.5)
Colostrum is a dirty part of milk.	69 (43.1)	66(41.3)	24 (15)
Colostrum milk is difficult to digest.	67 (41.9)	64 (40)	29 (18.1)
Necessary to discard colostrum.	68(42.5)	62 (38.8)	30 (18.8)
Colostrum is forbidden in culture.	63(39.4)	68 (42.5)	29 (18.1)
Colostrum impairs growth and development.	59 (36.9)	73 (45.6)	28 (17.5)

This study indicated that 65% of mothers feed colostrum for their baby within first three days. Of these 48.1% of them initiated feeding immediately within one hour and 11.9% of them started after 24 hours. Believe that colostrum feeding cause abdominal pain and diarrhea 4.4% and culture 8.8% were the main reason for avoidance colostrum feeding. Butter and no-human milk were the commonest Prelacteal feedings.

Table 4: Attitude of mothers towards colostrum feeding

Variable	Category	Frequency	Percent
Have you fed colostrum for your baby within the first three days of birth?	Yes	104	65
	No	56	35
Initiation of first breast milk	Within one hour	77	48.1
	Within six hours	64	40
	After 24 hours	19	11.9
Reasons for not feeding colostrum	Medical reason	69	43.1
	The baby can't suck	39	24.4
	Breast can't secrete	31	19.4
	Cause abdominal pain and diarrhea	7	4.4
	Culture	14	8.8
Prelacteal feeding	Yes	149	93.1
	No	10	6.3
If yes, what did you give the baby?	Non-human milk	20	12.5
	Honey	115	71.9
	Butter	10	6.3
	Plain water	9	5.6
	Water with sugar	6	3.8

DISCUSSION

In this study 81%, 66%, and 65% of mothers had good knowledge, favorable attitude, and good practice of colostrum feeding, respectively. The main reason of colostrum avoidance were a believe that colostrum feeding cause abdominal pain, diarrhea and culture. About 71.9% of mothers initiate Prelacteal feedings, honey and non-human milk were the commonest Prelacteal feeding. According to the results of current studies, mean age and mean monthly family income of pregnant mothers was 27+5 years and 14847 ± 4000 (PKR). Colostrum feeding and Prelacteal give, majority of mothers 81 (77.1%) were housewives, 45 (42.9%) were illiterate, 32 (30.55%) had four children and 57 (54.3%) belonged to urban areas, 80 (76.2%) mothers had heard about colostrum feeding 48 (45.7%) got information from family and friends, 45 (42.9%) thought that colostrum was a nutritious milk, and 77 (73.3%) did Prelacteal feeding. 43(41%) did colostrum feeding after 24 hours. 18 (40%) mothers told colostrum is nutritious milk and 20 (35%) mothers belonging to urban areas did colostrum feeding within first hour after delivery. A total 721 mothers approach out of which 566 failing in inclusion criteria of study. Out of these 566 mothers 468 has responded to this study questionnaire, however only 384 have completely responding to this study questionnaire.

The major reason for not participation and incomplete participation were family restrictions, time constraints and unexpected distance (attending) phone calls, physician calls for consultation and crying of children). Total 384 nursing mothers participated in study. Each district contributed around 33% participants. The socio-demographic variables of the study were district of residence, age and education of nursing mothers, number of children and place of delivery of last child. that among total participants, 72% (n=277) nursing

mothers stated breast leaking (colostrum) as a kind of milk that is beneficial for child health. Among the total participants, around 70% (n=269) nursing mothers had knowledge about health benefits of colostrum on child health. About 68% (n=262) mothers responded that they received guidance about the benefits of colostrum feeding from the healthcare professionals (60%) and family (8%). The participants of this study were also questioned on initiation of breast-feeding. Out of total participants 28% (109/384) initiated breastfeeding within an hour. On asking for the reason of delay of initiation of breastfeeding, nursing mothers responded that it was due to family (22%) followed by advice of healthcare professional (6%). Out of 28% (n=107) nursing mothers who discarded colostrum believed that colostrum as non-milk and non-nutritious (84%) and causing diarrhea (13%). However, there were practices of different pre-lacteal feeding to babies, association among colostrum feeding and discarding with socio-demographic & another factor

The cross tabulation of participants' responses had shown statistically significant results having p-value <0.05. That indicates the colostrum discarding is associated with district, age, education, number of children, place of delivery of last child, breastfeeding initiation time and with pre-lacteal feeding. Six hundred twenty-one (621) mothers of children aged less than six months participated. The prevalence of colostrum avoidance was 14.5%. The multivariate analysis indicated that home delivery giving birth through cesarean section, no participation in an antenatal care group, poor knowledge of mothers about colostrum, and poor attitude of mothers towards colostrum were important predictors of colostrum avoidance practice.

CONCLUSION

Findings of this studies indicated that the knowledge of mothers is higher than attitude and practice. The mothers have good knowledge about colostrum feeding but they don't practice it. It also specifies that health care providers are the main source of information about colostrum feeding that early initiation of breast feeding, ANC visits, counselling about colostrum feeding, postnatal visits, history of baby illness all were linked with their level of knowledge, attitude and practice.

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Substantial contribution to the conception, design of the work.

Amina Kainat: Survey and design of the work. Data collection. SPSS computing tool.

Kanwal Zubair: Drafting for approval of the final version to be published

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