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Knowledge and Attitude of Primigravida Mothers on Colostrums Feeding

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ABSTRACT

Introduction: The mammary glands release colostrum, the first type of breast milk, after giving birth. It is rich in nutrients, antibodies, and antioxidants that help a newborn baby's immune system develop. After your baby is born, it transforms into breast milk within two to four days. Colostrum is thicker and too much yellow than traditional breast milk. ***Aim:*** The aim of the study was to assess the knowledge and attitude regarding colostrum feeding among primigravida mothers with a view to develop an information booklet at GGSMC & Hospital, District Faridkot, Punjab. ***Material and Method:*** Quantitative research approach with descriptive research design was used in this study. 100 primigravida mothers were selected through convenient sampling technique. ***Tool:*** Data collection was done by using tool that consists of Socio demographic sheet, Self structured interview schedule to assess knowledge and Likert scale to assess attitude. ***Result:*** The study reveals that 45% primigravida mothers have Poor knowledge, 45% primigravida mothers have Good knowledge and 10% primigravida mothers have Excellent knowledge regarding colostrum feeding and 6% primigravida mothers have positive attitude and 94% primigravida mothers have negative attitude regarding colostrum feeding. There was no association between knowledge and attitude regarding colostrum feeding among primigravida mothers (P=0.145). ***Conclusion:*** This study shows that half of mothers have good knowledge and half of mothers have poor knowledge regarding colostrum feeding and majority of primigravida mothers have negative attitude regarding colostrum feeding. There was no association between knowledge and attitude regarding colostrum feeding among primigravida mothers (P=0.145).

Introduction

The first milk, or "colostrum," is a yellow fluid that the breasts secrete during the second half of pregnancy and for a few days (3–4) following birth before the arrival of regular breast milk. A primary type of milk is called colostrum.This milk is produced by mammary glands immediately after the delivery. This milk contains antibodies to protect the newborn against disease and infection, and immune and growth factors and other bioactive that help to activate a newborn's immune system[1, 2]. The immune constituents are depicted in **figure1** .

First milk is the best food for newborns and is generally regarded as the ideal first food for infants. A suggested routine for expressing and storing colostrum during pregnancy also offers advice to the mother about the importance of skin-to-skin contact during the first 24 hours to maximize long-term breast milk production[3].Giving babies colostrum reduces their risk of infection (including bacterial, viral, fungal, and protozoa infections). In addition to helping mothers regain their pre-pregnancy weight and lower their risk of breast and ovarian cancer, it also prolongs the postpartum infertile period[4, 5]. Colostrum feeding reduces risk of otitis media, gastroenteritis, and respiratory illness, necrotizing enterocolitis, obesity and hypertension[6, 7].

In the developing countries the rate of communicable diseases is high, timely provision of colostrum is reducing diarrheal disease in the neonates[8, 9]. The study conducted in India on timely initiation of breastfeeding is recognized as the first and vital step toward reducing mortality in infants and children under-five years of age. It has the potential to prevent 16−22% of neonatal deaths with immediate breast-

-feeding after birth[10, 11].

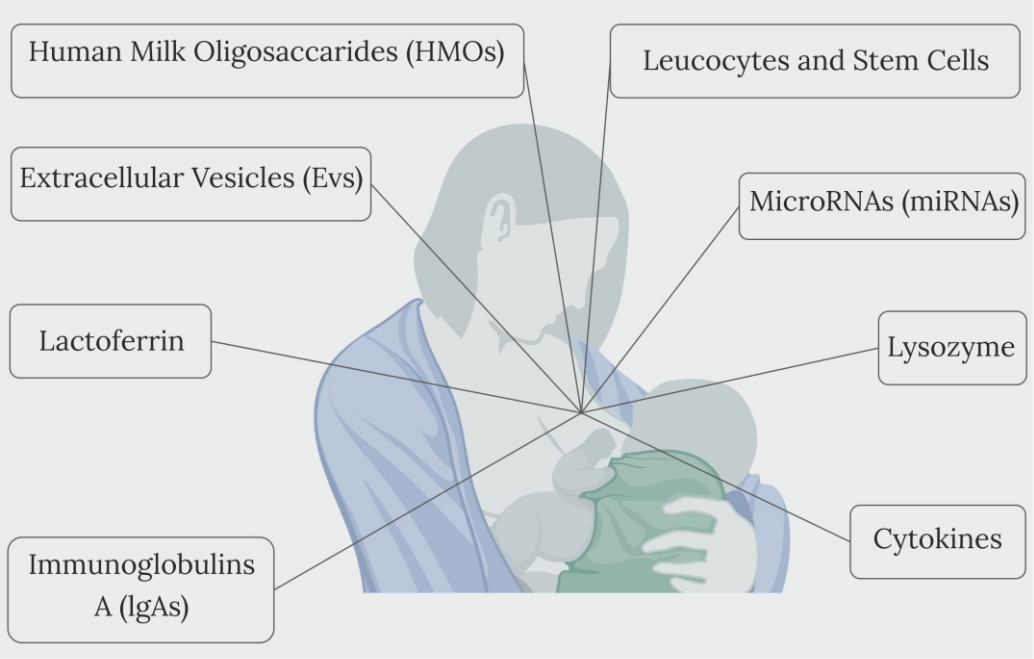

Figure 1: The immune elements found in human colostrum. Colostrum is rich in Human Milk Oligosaccharides (HMOs), Extracellular Vesicles (EVs), secretory immunoglobulin A (IgA), Lactoferrin, lysozyme, cytokines, leucocytes, stem cells, and MicroRNA (miRNA).

Over 4000 newborns and young children die worldwide every year as a result of not receiving colostrum within the first hour of life. Due to cultural influences, the breastfeeding rate in community settings ranges from approximately 70% to a low of 13%[12, 13]. Most of the women in poor nations who do not breastfeed their babies with colostrum to do so because they hold traditional or cultural beliefs that colostrum has no nutritional value for infants or is even harmful to the infant's health. Some women delay giving their newborns first milk because they are unaware of the benefits of colostrum[14, 15].

Ethiopia has one of the highest rates of infant mortality in the world, which is brought on by improper neonatal feeding. Despite almost universal breastfeeding across all ethnic groups and regions of Ethiopia, it does not always adhere to WHO/UNICEF recommendations[16-18].

Avoiding colostrum during the first three to four days of a baby's life raises the risk of illness and death. Avoiding the colostrum reduces the nutrients and immunoglobulin (Ig A) that the newborn has, which causes blockage in the digestive system and raises the risk of infant morbidity and mortality[19-21]. Despite the fact that colostrum feeding gives newborns antibodies to combat illness, any procedure that diminishes the frequency or volume of nursing during this period may weaken the neonates' long-term health and immune system[22-24].

Even though the world health organization (WHO) recommended initiating colostrum feeding within the first hour after birth, a higher number of mothers avoided their colostrum before giving milk to their babies[25,26]. According to different studies, children who did not receive colostrum are more likely to develop many infections, underweight, and wasting[27, 28].

Many studies have identified that several factors influence the colostrum feeding in developing countries, although there are few studies regarding the factors affecting the timely initiation of colostrum feeding[29, 30]. These variables include place of residence, maternal education, age, occupation, religion, marital status, income, and obstetric history such as parity, number of living children, household leadership, family support, prior deliveries, infant illness, peer pressure,number of prenatal visits, history of prior deliveries, mode of delivery, and breastfeeding advice were discovered to be predictors that affect the timing, awareness, and attitude of colostrum feeding either favorably or unfavorably[31, 32].

Even though neonatal and infant morbidity and mortality have steadily decreased in Ethiopia, it remains a significant public health issue. Colostrum feeding remains insufficient or low[33-35]. Studies conducted in West Gojjam and Gondar found that neonatal mortality was as high as 18.6 and 48.3 per 1000 live births, respectively. Infant mortality is still 48 deaths per 1,000 live births in the country[36-38].

Materials and Methods

Research approach

In this study Quantitative research approach was used to assess the knowledge and attitude of primigravida mothers regarding colostrum feeding at GGSMC & Hospital, Faridkot, Punjab.

Research design

The research design was selected for this study was descriptive research design.

Research setting

The present study was conducted in maternity ward and maternity OPD at Guru Gobind Singh Medical College and Hospital, Faridkot, Punjab.

Target population

The population included in study was primigravida mothers in maternity ward and maternity OPD of GGSMC & Hospital, District Faridkot, Punjab.

Sample and sampling technique

The data collection employed a convenient sampling technique in this study. The sample for this study comprised 100 primigravida mothers admitted to the maternity ward of GGSMC & Hospital in Faridkot, Punjab.

Criteria for sample selection

Incusion criteria

- Primigravida mothers who were willing to participate in the study.
- Primigravida mothers who could communicate in Hindi, English and Punjabi.
- Primigravida mothers whose period of gestation is above 28 weeks.

Exclusion criteria

- Primigravida mothers who were critically ill or mentally retarded.

Results and Discussions

After analysis of the data, study reported that 45% primigravida mothers have Poor knowledge, 45% primigravida mothers have Good knowledge and 10% primigravida mothers have Excellent knowledge regarding colostrum feeding and 6% primigravida mothers have positive attitude and 94% primigravida mothers have negative attitude regarding colostrum feeding. There was no association between knowledge and attitude regarding colostrum feeding among primigravida mothers (P=0.145).

Table 1: Socio-demographic characteristics of study subjects (N=100).

S.NO.	VARIABLES	FREQUENCY (n)	PERCENTAGE (% age)
1.	**AGE IN YEARS**		
	a.)19-22	22	22%
	b.)23-26	42	42%
	c.)27-30.	30	30%
	d.)31 and above	6	6%
2.	**RELIGION**		
	a) Hindu	44	44%
	b) Muslim	2	2%
	c) Sikh	49	49%
	d) Christian	5	5%
3.	**LEVEL OF EDUCATION**		
	a.)Illitrate	64	64%
	b.)Up to middle	25	25%
	c.)Matric	8	8%
	d.)Senior secondary	2	2%
	e.)Graduate and above	1	1%
4.	**OCCUPATION**		
	a) Housewife	88	88%
	b) Private Job	10	10%
	c) Government Job	1	1%
	d) Other	1	1%
5.	**TYPE OF FAMILY**		
	a) Nuclear family	77	77%
	b) Joint family	23	23%
6.	**FAMILY INCOME**		
	a) Below Rs.10,000	71	71%
	b) 10,000-20,000	24	24%
	c) 20,000-30,000	5	5%
	d) Above 30,000	0	0%
7..	**PLACE OF RESIDENCE**		
	a.)Rural	37	37%
	b.)Urban	63	63%

Table 1 reveals the frequency and percentage distribution of sample characteristics of primigravida mothers. As per age maximum mothers i.e.42% were in the age group of 23-26 years, followed by 30% were in the age group of 27-30 years, 22% in the age group of 19-22 year and 6% were in the age group of 31 and above. As per religion, majority of mothers i.e. 49% were Sikh, followed by 44% were Hindu, 5% were Christian and 2% were Muslim. As per education, majority of mothers i.e. 64% were illiterate, followed by 25\% were educated up to middle level, followed by 8% were educated up to metric level, 2% were educated up to Senior Secondary level and only 1% were graduated. As per occupation, maximum of mothers i.e. 88% were housewives, followed by 10% were doing Private Job, 1% were Government Employee and 1% were other kind of employees. As per type of family maximum of mothers i.e. 77% belong to nuclear family and only 23% belong to joint family. As per family income, per month income i.e. 71% below Rs.10.000, followed by 24% having Rs.10, 000-20,000, 5% having 20,000 - 30, 000 and No one having More than Rs.30,000. As per place of residence of mothers i.e. 63% belongs urban areas and only 37% mothers belong to rural areas.

Table 2: Frequency and percentage distribution of primigravida mothers as per their knowledge regarding colostrum feeding

Level of Knowledge	Frequency	Percentage(%age)
Poor Knowledge	45	45%
Good Knowledge	45	45%
Excellent Knowledge	10	10%

The table 2 depicts that 45% primigravida mothers were having poor knowledge, 45% having good knowledge and 10% primi-gravida mothers have a Excellent knowledge regarding colostrum feeding.

Table 3: Frequency and percentage distribution of primigravida mothers as per their attitude regarding colostrum feeding

Level of attitude	Frequency	Percentage (%age)
Positive attitude (0-42)	6	6%
Negative Attitude (43-85)	94	94%

Table 3 depicts that 6% primigravida mothers were having Positive attitude and 94% mothers were having Negative attitude regarding colostrum feeding. Hence, it was concluded that maximum of primigravida mothers have Negative attitude regarding colostrum feeding

Table 4: Mean score and standard deviation of knowledge of primigravida mothers regarding colostrum feeding

Area	Maximum Score obtained	Minimum score obtained	Mean score	Standard Deviation
Knowledge	27	5	11.91	4.860

Table 4 depicts the mean and standard deviation of knowledge of primigravida mother regarding colostrum feeding. Maximu--m score obtained was 27 and minimum score obtained was 5 regarding colostrum feeding. Mean score was 11.91 and standard deviation was 4.860

Table 5: Mean score and standard deviation of attitude of primigravida mothers regarding colostrum feeding

Area	Maximum Score obtained	Minimum score obtained	Mean score	Standard Deviation
Attitude	85	35	56.49	9.919

Table 5 depicts the mean and standard deviation of attitude of primigravida mother regarding colostrum feeding. Maximum score obtained was 85 and minimum score obtained was 35 regarding colostrum feeding. Mean score was 56.49 and standard deviation was 9.919.

Table 6: The association between the knowledge and attitude regarding colostrum feeding among primigravida mothers

Sr. No.	Level of Knowledge	Level of Attitude		Df	Chi-square	P-value
		Positive Attitude	Negative attitude			
1	Poor knowledge (0 -9)	1	44	2	3.861	.145^{NS}
2	Good knowledge (10 - 18)	5	40			
3	Excellent knowledge (19-27)	0	10			

NS= Non-Significant at p<0.05 level, N=100

Table 6 depicts that, Among 45 primigravida mothers with poor knowledge, 1 primigravida mother was having a positive attitude and 44 primigravida mothers were having a negative attitude regarding colostrum feeding. Among 45 primigravida mothers with Good knowledge, 5 primigravida mothers were having a positive attitude and 40 primigravida mothers were having a negative attitude regarding colostrum feeding. All the 10 mothers with excellent knowledge were having a negative attitude regarding colostrum feeding. The chi square value of 3.861 was found to be non-significant at p=0.145. Thus, it was concluded that there was no association between knowledge and attitude regarding colostrum feeding among primigravida mothers.

Conclusion

This study shows that half of mothers have good knowledge and half of mothers have poor knowledge regarding colostrum feeding and majority of primigravida mothers have negative attitude regarding colostrum feeding. There was no association between knowledge and attitude regarding colostrum feeding among primigravida mothers (P=0.145).

Conflicts of Interest

Not any conflict of interest.

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