

Original Research Paper

# Assessment of Breastfeeding Practices and Infant Feeding Patterns of 0 - 6 Months of Age Among Lactating Mothers

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## INTRODUCTION:

Human breast milk is considered the gold standard for infant feeding [1]. All the nutrients that an infant requires in the first 6 months of life are present in breastmilk. It includes fat, carbohydrates, proteins, vitamins, minerals, and water. Bioactive factors that augment the infant's immature immune system are present in breast milk and provide protection against infection and other factors that help digestion and absorption of nutrients [13]. Optimal breastfeeding practices can improve the bond between mother and infant, help achieve optimal growth and development, prevent non communicable diseases, and benefit maternal health [2]. Optimal IYCF play a critical role in determining the nutritional status, health, growth, and development of children, and improving maternal health [3].

## WHO Recommendations for Breastfeeding:

Breast milk provides all the energy and nutrients an infant need in the first months of life and it continues to provide up to half or more of a child's nutritional needs during the second half of the first year, and up to one third during the second year of life. WHO recommends that infants should be breastfed within the first hour of birth and be exclusively breastfed for the first 6 months of life – that is, with no other food or liquids, including water to be given. New-borns should be breastfed on demand, that is, as often as they want, day and night. Bottles, pacifiers should be avoided. WHO also recommends that from 6 months of age, children should

begin to eat adequate and safe complementary foods and continue to breastfeed until 2 years of age or older [4].

## Importance of breastfeeding:

The nutritional benefits of breast milk are due to powerful immune factors and unique composition that develop in tandem with the growth and development needs of infants. Breast milk promotes sensory and cognitive development and protects infants against infectious and chronic diseases. Children who are breastfed have better results on intelligence tests, are less likely to be overweight or obese, and are less likely to develop diabetes later in life. Breastfeeding also benefits the mother in a number of ways and reduces the risk of cancer and various other health problems in women [5].

## Breastfeeding Practices:

There are various factors such as maternal age, education, and ethnicity that are associated with exclusive breastfeeding practices in mothers [8]. Common pre-lactation foods in India are honey, ghutti, animal milk, etc. The harmful effects of pre-lacteals include delaying the initiation of breastfeeding and preventing the initial bonding between mother and baby. Infants who receive food before breastfeeding are more susceptible to malnutrition. In addition, food before breastfeeding can carry pathogens and thus cause diarrhoea and other illnesses in infants. Unlike colostrum, pre-lactation foods have less nutritional value [10]. Inadequate and inappropriate complementary feeding coupled with unhygienic practices leads to

recurrent and persistent infections and malnutrition, followed by stunted growth, immunodeficiency, and may lead to death in infants [9].

**Reason of Study:** To understand breastfeeding practices among low socio economic groups. To acknowledge factors that affect the mother's knowledge on breastfeeding.

**Aim:** To assess the breastfeeding practices among lactating mothers.

**Objectives:**

- 1) To evaluate the knowledge and awareness of mothers regarding appropriate breastfeeding practices.
- 2) To find out if exclusive breastfeeding practice is carried out by mothers.
- 3) To understand the awareness regarding colostrum and its importance.
- 4) To assess the influence of elderly's advice on breastfeeding practices.
- 5) To find out dietary modifications in the diet of the mother.
- 6) To counsel the mothers about galactagogues to increase breastmilk production.

**METHODOLOGY:**

**Type of Study:** Cross sectional study

**Study Design:**

**Subject Selection Criteria:**

Mothers with infants aged 0–6 months of age who presented to the government hospital without any acute or chronic illness were eligible to participate in the study.

**Exclusion Criteria:**

Lactating mothers with known chronic illnesses such as cancers, hepatitis C and HIV/AIDS or those on ART treatment were excluded from the study.

**Questionnaire Administration:**

The questionnaire consisted primarily of a closed format including dichotomous questions (e.g., yes/no) and open-ended questions for ease of completion and analysis. The resulting questionnaire consisted of a combination of 41 both close-ended and open-ended questions, all categorized in sections as follows.

1. **Section A:** The first section elicited information on the participants in terms of age, place of residence, marital status, type of family, parity, lifestyle factors (smoking and alcohol consumption), education, occupation, income, religion, and age of baby.
2. **Section B:** This section sought to understand the main factors encouraging mothers to breastfeed, their awareness of colostrum, the practice of exclusive breastfeeding, the termination of breastfeeding, as well as the main problems encountered during breastfeeding.
3. **Section C:** Multiple response and close-ended questions were mainly used in this section to determine dietary modifications during lactation.

**Questionnaire on Breastfeeding Mother:**

**SECTION A**

1. Name
2. Age of the mother
3. Residential area
4. Type of family
  - Single parent
  - Nuclear
  - Joint
5. Religion
6. Monthly Family income (INR)
  - Below 20,000
  - 20,000 - 40,000
  - 40,000 - 80,000
  - Above 80,000
7. Education qualifications of mother
  - Graduate
  - Post graduate
  - Diploma
  - Ph. D
8. Occupation
9. Type of delivery
  - Normal
  - Caesarean
10. Age of infant
  - 0 - 1 month
  - 2 month
  - 3 month
  - 4 month
  - 5 month
  - 6 month
11. What was the weight of the baby after birth? 12. What is the current weight of the baby?

13. Birth order of child

- First
- Second
- Third
- Fourth

14. Number of children

15. Gap between children

## SECTION B

16. When did you start breastfeeding your child?

- Within 3 hours of delivery
- On the same day
- After 2-3 days
- After a week or later

17. While you were in the hospital for delivery of this baby, did anyone help you with breastfeeding by showing you how or talking to you about breastfeeding?

- Yes
- No

18. How often is the child breastfed?

- More than 10 times a day
- 8 - 10 times a day
- 5 - 6 times a day
- 2 - 3 times a day
- Once a day

19. Does your baby usually feed from both breasts at each feeding?

- Yes
- No

20. How is the child breastfeed?

- On demand
- On regular intervals

21. How long does an average breastfeed last?

- Less than 10 minutes
- 11 - 20 minutes
- 21 - 30 minutes
- 31 - 40 minutes
- More than 40 minutes

22. Does your baby usually let go of the breast by him or herself?

- Yes, both breast
- Yes, first breast only
- Yes, second breast only
- No

23. In what position do you breastfeed the child?

- Sitting
- Lying
- Both

24. Did the baby have trouble sucking or latching on?

- Yes
- No
- Sometimes

25. Did you face any difficulty in initiation of breastfeeding?

- Yes
- No

26. Is breastfeeding painful for you?

- Yes
- No
- Only in the initial period

27. Is the child exclusively breastfed?

- Yes
- No

28. Is the child fed cow's milk or any other milk than breastmilk?

- Yes
- No

29. If yes, do you dilute it?

- Yes
- No, I feed directly

30. Do you give any formula milk/ breast milk substitutes to the child? specify if any 31. Do you give any vitamin supplements or medicines to the child? If yes, please specify.

32. Has your baby been given anything other than breast milk since he/she was born? If yes, please specify

33. Are you aware of colostrum?

- Yes
- No

34. If yes, where have you heard about it?

- Doctors
- Elders
- Media
- College
- Other

35. Was the child given colostrum?

- Yes
- No

36. If not, what were the reasons?

37. What were the pre-lacteal (foods given to new-borns before breastfeeding is established e.g. honey, jaggery, ghee, ghutti) feeds given to the infants?

## SECTION C:

38. Have you included any special foods in your diet to help increase the milk production?

- Yes
- No

39. If yes please mention

40. What all dietary modifications were included in the mother's diet?

41. Were any galactagogues included in the mother's diet?

## RESULTS:

### Sociodemographic Characteristics:

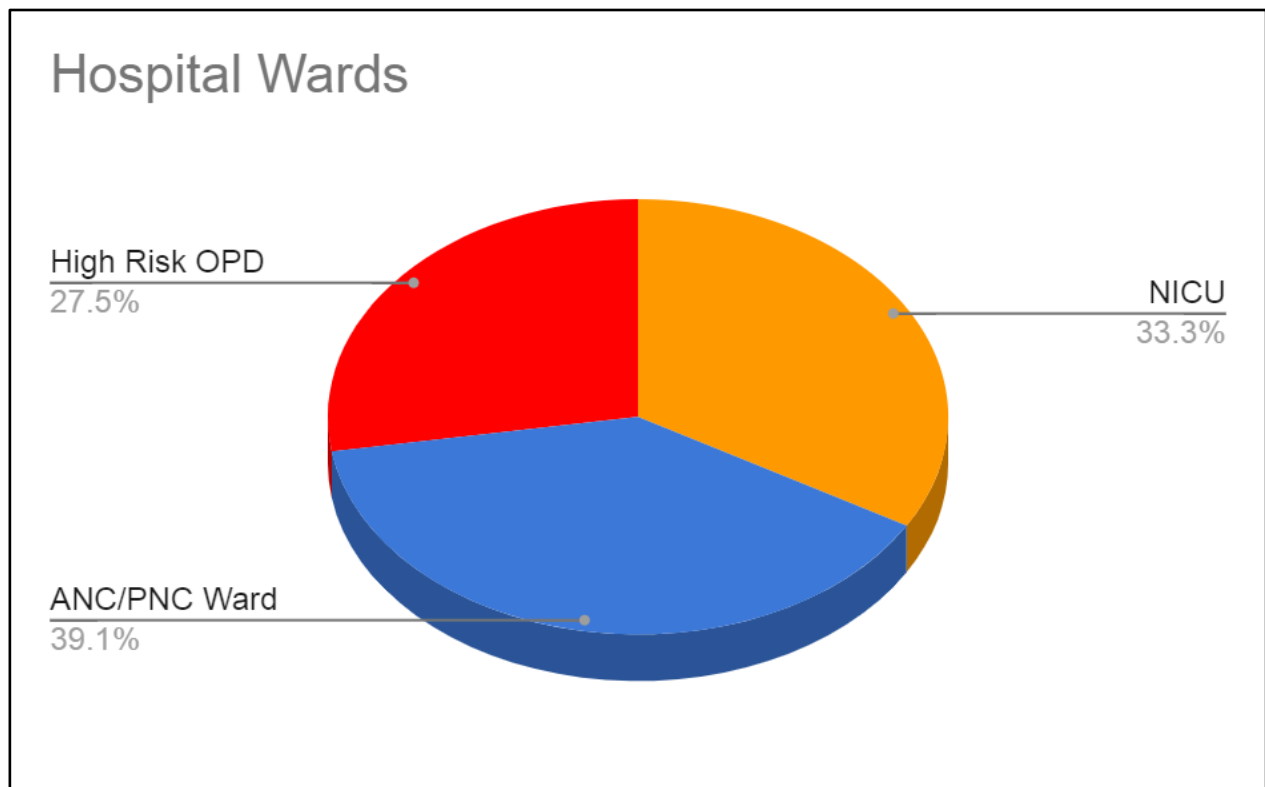
Out of 69 lactating women, maximum women belonged to the age group of 23 to 27 years (62.3%) maximum of

them belonged to nuclear families (84%). Out of all 69 mothers, 23 were interviewed from the NICU ward, 27 from the ANC/PNC ward and 19 from the high risk OPD at the hospital. The family income was not considered in this survey because the maximum number of lactating mothers were not comfortable with sharing the information. It was also observed that the maximum number of mothers had less than or equal to 2 pregnancies (89.8%), it was also seen that the majority of the mothers had caesarean delivery (55.1). Also, the maximum number of mothers were under the 0-6 months' lactation period (95.6%). (Table 1)

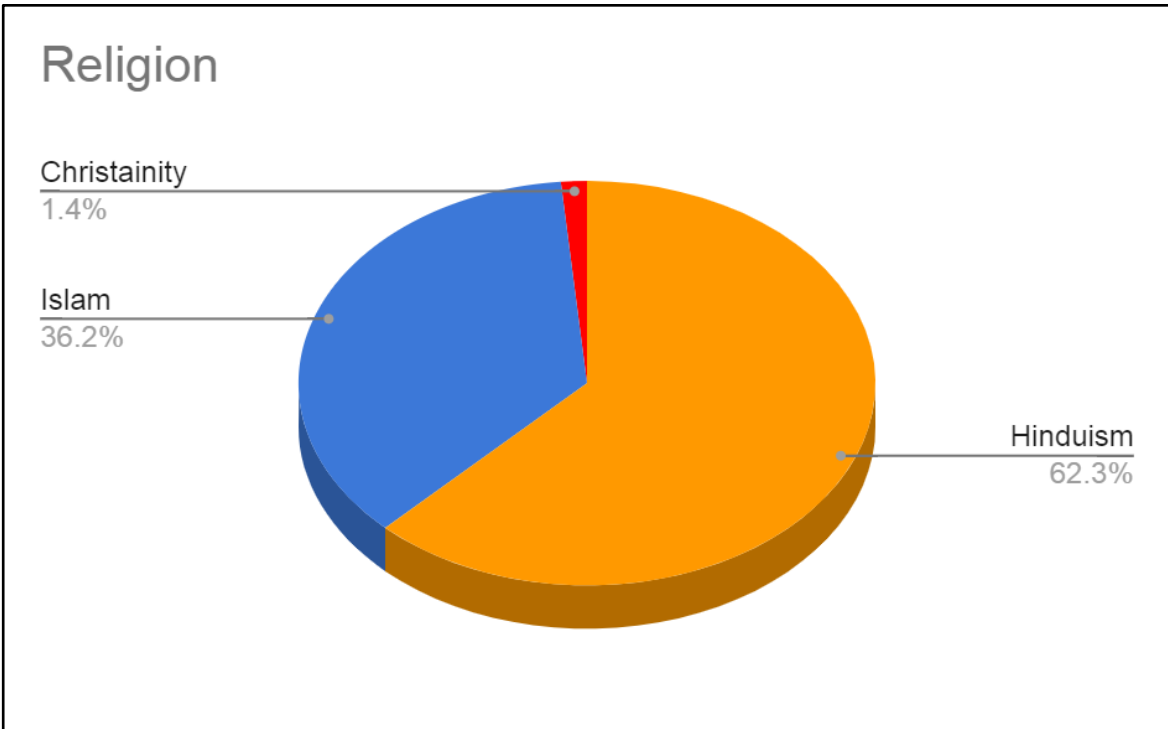
**Table 1. Sociodemographic characteristics**

Parameter	Categories	Frequency (n)	Percentage (%)
<b>Hospital Ward</b>	NICU	23	33.3%
	ANC/PNC WARD	27	39.1%
	High Risk OPD	19	27.5%
<b>Age Group</b>	18-22 years	20	28.9%
	23-27 years	43	62.3%
	28-33 years	6	8.6%
<b>Infant Age Group</b>	0 - 4 days	7	10.1%
	5 - 10 days	53	76.8%
	1 - 3 months	9	13%
<b>Religion</b>	Hinduism	43	62.3
	Islam	25	36.2
	Christianity	1	1.5%
<b>Type of Family</b>	Nuclear Family	58	84%
	Joint Family	11	16%
<b>Occupation</b>	Homemaker	64	92.7%
	Working	5	7.3%

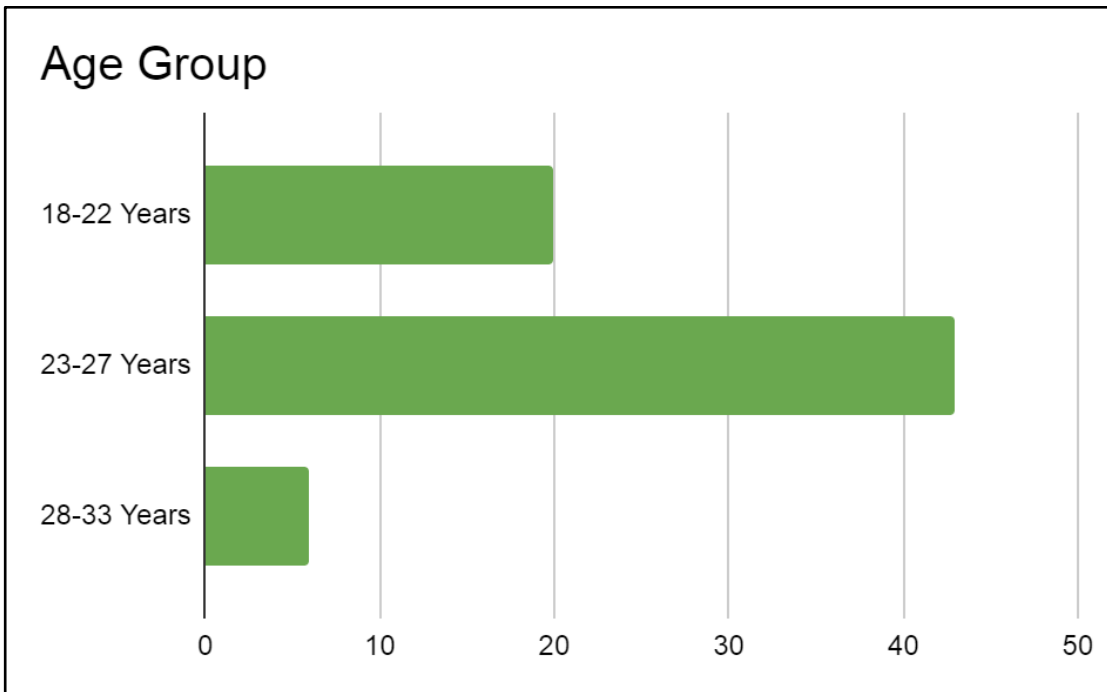
<b>Number of Gravidity</b>	</= 2 Pregnancies	62	89.8%
	> 2 pregnancies	7	
<b>Type of Delivery</b>	Normal	31	44.9%
	Caesarean	38	55.1%
<b>Maternal Lactation Period</b>	0-6 months	66	95.6%
	6-12 months	3	4.4%



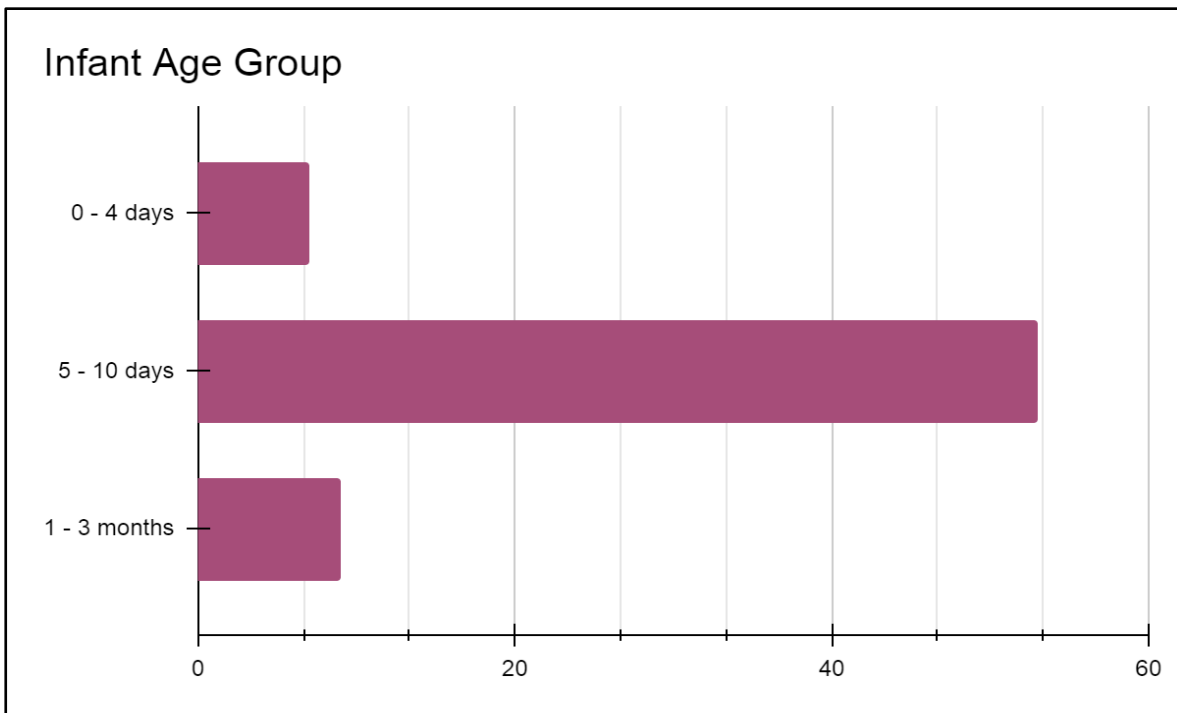
**Figure 1. Percentage of participants from 3 different hospital wards**



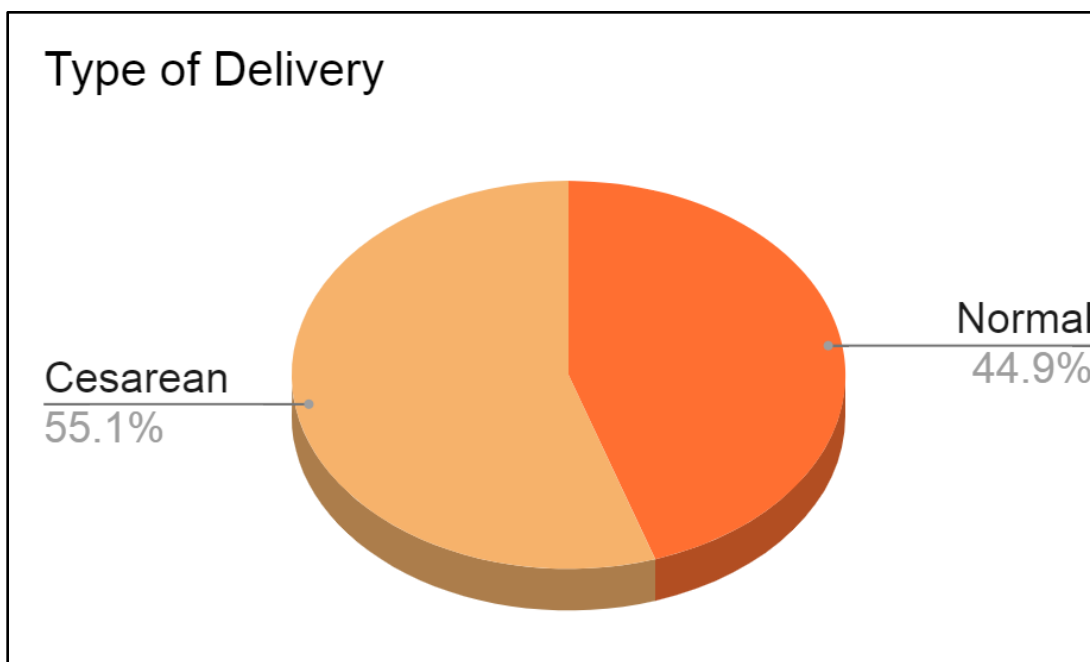
**Figure 2. Religion of participants**



**Figure 3. Age groups of participants**



**Figure 4. Age group of infants**



**Figure 5. Type of delivery of participants**

**Maternal Breastfeeding Practices**

In this study, all mothers reported exclusively breastfeeding their child. Only 1 out of 69 participants was reported giving prelacteal feed to the infant in the form of honey, as per religious beliefs. All mothers reported to be aware about the importance of colostrum

and majority of the mothers fed colostrum to their child (98.5%). Exclusive breastfeeding was reported in the majority of the lactating mother (98.5%) whereas the ones that did not practice exclusive breastfeeding was due to very less to no milk production (1.5%). Almost 85.5%

(n = 59) of the mothers started breastfeeding within 1-3 hours after delivery. Majority of the mothers (47.8%) reported breastfeeding on demand rather than on regular

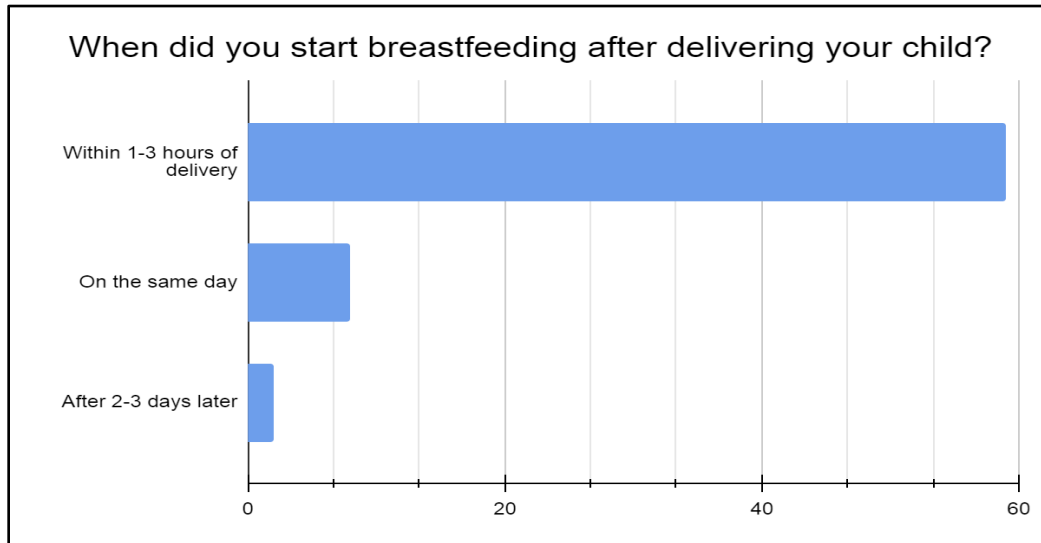
intervals which was seen most in mothers at the NICU ward (43.4%). Maximum number of mothers had not started consuming galactagogues (57.9%). (Table 2)

**Table 2. Information on maternal breastfeeding practices.**

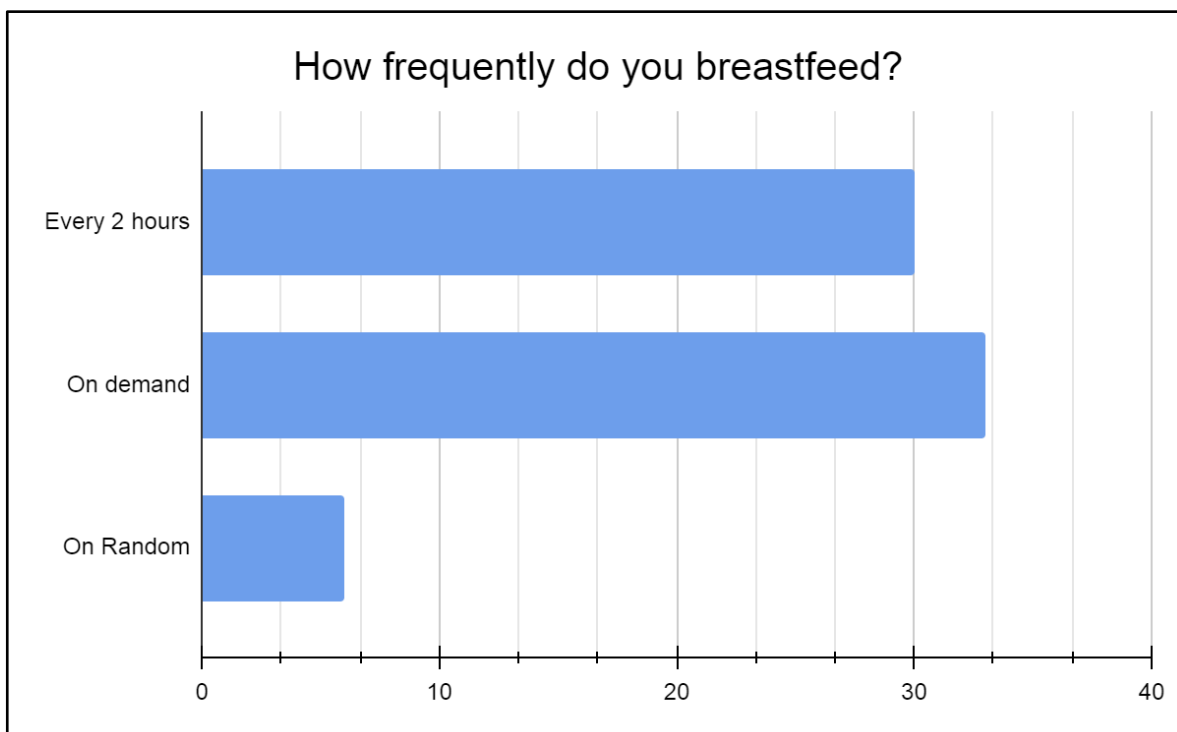
<b>Parameter</b>	<b>Categories/Variables</b>	<b>Frequency (n)</b>	<b>Percentage (%)</b>
<b>When did you start breastfeeding after delivering your child?</b>	Within 1-3 hours of delivery	59	85.5%
	On the same day	8	11.5%
	After 2-3 days later	2	1.4%
<b>Are you aware of the importance of colostrum?</b>	Yes	69	100%
	No	0	-
<b>Was the child given colostrum?</b>	Yes	68	98.5%
	No	1	1.5%
<b>How frequently do you breastfeed?</b>	Every 2 hours	30	43.4%
	On demand	33	47.8%
	On Random	6	8.6%
<b>Was the infant given any prelacteal feeds?</b>	Yes	1	1.5%
	No	68	98.5%
<b>Is the child exclusively breastfed?</b>	Yes	68	98.5%
	No	1	1.5%
<b>Is the baby fed cow's milk or any other milk other than breast milk?</b>	Yes	0	-
	No	69	100%
<b>Do you give any formula milk/ breast milk substitutes to the baby?</b>	Yes	1	1.5%



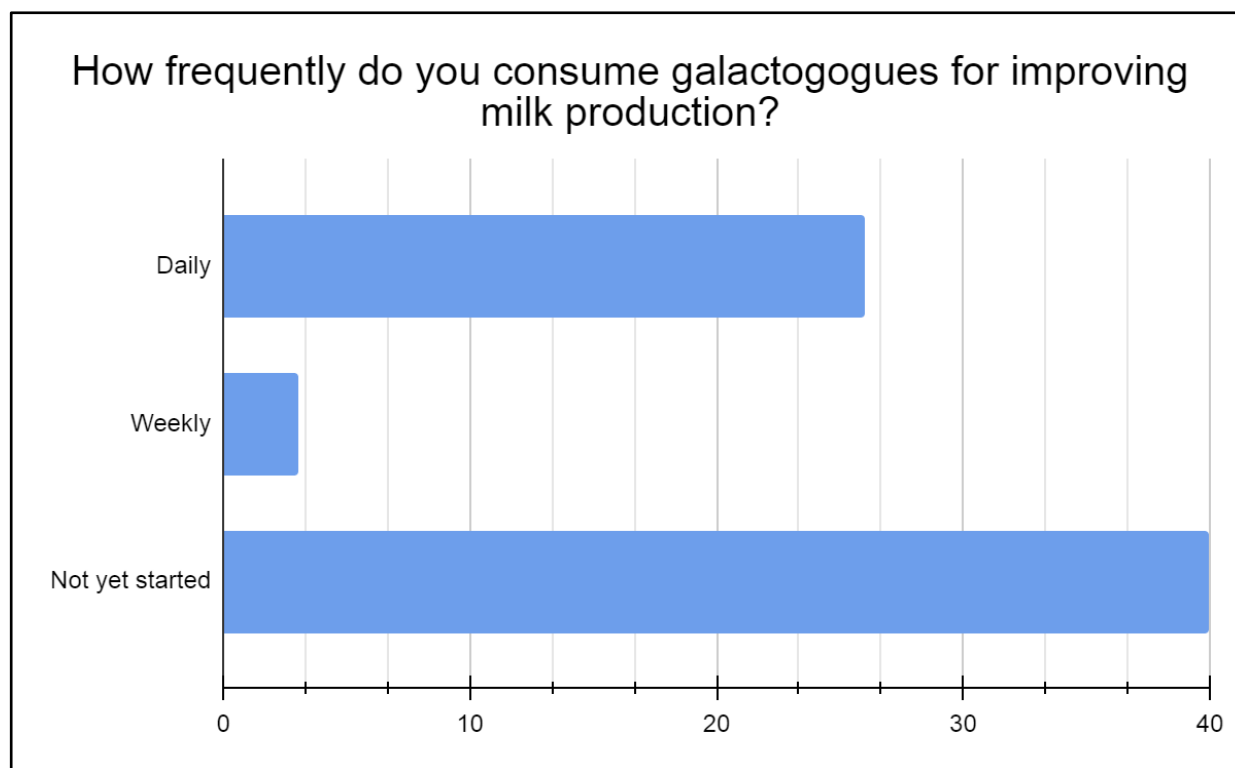
	No	68	98.5%
<b>How frequently do you consume galactogogues for improving milk production?</b>	Daily	26	37.6%
	Weekly	3	4.3%
	Not yet started	40	57.9%



**Figure 6. Initiation of lactation after delivery**



**Figure 7. Frequency of breastfeeding**



**Figure 8. Participant frequency of galactagogues consumption**

**Discussion:**

The study was conducted to assess the awareness and knowledge attitude and practices about breast feeding in lactating mothers. In the present study we found that the participants (mother's) were aware of good breastfeeding practices. Majority of them were housewives. The demographics were collected and the age of the mothers mostly varied from 23 to 27 years. The type of delivery was C - section in most of the cases. Most participants started breastfeeding their child on the same day of delivery. The infants were breastfed on demand. On an average, breastfeeding time was 11 to 20 minutes per feed for most of the infants. Most of the infants did not have any problem with sucking and latching. The breastfeeding mothers had pain during breastfeeding their child only during the initial period. Almost all the babies were exclusively breastfed and were not given any other feeds apart from it. Only one infant was given honey rather than just breast milk. The importance of colostrum was known by the majority of mothers and therefore, the majority of the infants were given colostrum. The higher rates of colostrum feeding observed by us were similar to the findings of Galhotra

et al., [14] while others have reported lower rates of colostrum feeding. [15–17]. Majority of the mothers included had not started consuming galactagogues in their diet to increase the milk production.

**CONCLUSION:**

In conclusion, the results depict how the sample population of lactating mothers who were a part of our survey had overall better than average understanding of exclusive breastfeeding, importance of colostrum, starting breastfeeding from day one. However, replication of the survey with a larger population, grouped under a specific demographic such as area, ethnicity, religion, education level, etc., is necessary to draw definitive conclusions.

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