

## KNOWLEDGE ABOUT BREAST FEEDING AMONG NURSING STUDENTS – A CROSS SECTIONAL STUDY

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### Abstract

**Background:** Breastfeeding is crucial for infant health and development, yet global rates of exclusive breastfeeding remain below optimal levels. Nursing students play a pivotal role in promoting breastfeeding practices as future healthcare professionals. **Objective:** This cross-sectional study aimed to assess the knowledge of breastfeeding among nursing students at Saveetha Nursing College, focusing on initiation, duration, colostrum, and associated benefits for mother and baby. **Methods:** A convenient sample of 85 nursing students participated in the study from June 2022 to August 2022. Data were collected using a semi-structured questionnaire covering various aspects of breastfeeding knowledge. Descriptive statistics and chi-square tests were employed for data analysis. **Results:** The majority of participants were female (91%) with a median age of 18 years. Knowledge gaps were identified, with varying awareness about breastfeeding initiation times (37.6% within one hour), definition of colostrum (62.4% correctly identified), and understanding of exclusive breastfeeding (41.2% knew it involves only breast milk). Awareness about benefits for mother (55.3%) and baby (60.0%) was moderate. Only half of the students (51.8%) knew breastfeeding could increase infant IQ. **Conclusion:** The study highlights gaps in breastfeeding knowledge among nursing students, suggesting a need for enhanced education and training in breastfeeding practices and benefits. Continuous education and reinforcement of breastfeeding knowledge are essential to improve breastfeeding rates and health outcomes among infants.

**Keywords:** Breastfeeding, Nursing Students, Knowledge, Colostrum, Exclusive Breastfeeding.

### INTRODUCTION

Breast milk is an ideal food for neonates. It is the best gift that a mother can give to her baby. Ensuring exclusive breastfeeding for 6 months has a potential to reduce under-5 mortality rate by 13%, by far the most effective means of intervention that is known to reduce newborn and child deaths. Benefits of Breast Milk- It contains all the nutrients for normal growth and development of a baby. Carbohydrates (Lactose), proteins, fats, vitamin and minerals, water and electrolytes, IgA, number of growth factor, enzymes and hormones, higher IQ, reduces diarrheal and respiratory illness among children and helps in reducing hospitalizations and reducing infant mortality. Benefits of mother- uterine involution, reducing chances of postpartum hemorrhage. It provides protection against pregnancy due to locational amenorrhea. WHO recommends initiation of breastfeeding within 1 h of birth, practicing exclusive breastfeeding for 6 months, and proper supplementation at 6 months. (1) Although the benefits of breastfeeding are evident, less than 40% of infants younger than six months receive breast milk as exclusive food worldwide. (2). Increasing trends in using

artificial feeds for infants, due to various reasons which include cosmetic purposes have affected the breastfeeding rates worldwide.

## **METHODOLOGY**

### **Study Design:**

This is a community based cross-sectional study.

### **Study Area and Population:**

Saveetha nursing college

### **Study Duration:**

The study was carried out from June 2022 to August 2022.

### **Sampling Method:**

Convenient sampling was done.

### **Sample Size:**

The sample size for the study was determined using previous studies and a convenient sample size was selected. Therefore the sample size selected for this study is 85.

### **Inclusion Criteria:**

Saveetha nursing college students

### **Exclusion Criteria:**

Students not willing to participate in the study were excluded.

### **Study tool and Data Collection Method:**

A semi-structured pretested questionnaire was used to interview the subjects in this study. The questionnaire was prepared in the local language and was back translated to validate it before it was used in the actual study. The students were assessed about the basic information about breastfeeding and with various hypothetical scenarios to know whether they had the awareness, if not they were also educated based on the necessary ones by the interviewer themselves about the particular scenarios.

### **Informed Consent:**

Informed oral consent in the local language i.e. Tamil and Hindi were obtained from the participants involved in this study before administering the questionnaire

**Statistical Analysis:** The data were analyzed using Microsoft Excel. The descriptive statistics were depicted using frequency tables and graphs. Factors associated with the study variables were analyzed by calculating the significance using Chi-square and P value.

## **RESULT**

The study population included 85 nursing students in total who were subjected to one to one interview using a validated questionnaire. The socio demographic of the participants are included in table 1. Out of the 85 participants in the study, 43% of the students were 19 years old belonging to the first year, 40% were 18 years old

belonging to the second year and 17% were 20 years old belonging to the third year. A vast majority of 91% of students subjected were females leaving a minority 9% males.

**Table: 1**

Age (Years)	Frequency	Percent
17	-	-
18	34	40%
19	36	43%
20	14	17%
21	1	-
Year Of Study	Frequency	Percent
1st	34	40%
2nd	36	43%
3rd	14	17%
Gender	Frequency	Percent
Female	77	91%
Male	8	9%

The following question helps us understand the knowledge that the students possess about breastfeeding. The questionnaire included questions about the duration of exclusive breastfeeding, the position of the baby, the colostrum and benefits of the baby and mother regarding breastfeeding. Out of 85 students 37.6% of them knew that breastfeeding should be initiated within one hour while 32.9% of the students said it has to be initiated after one hour, about 17.6% of the students said it has to be initiated after 2 hours and about 11.8% said after 3 hours. Regarding colostrum majority said it is the milk secreted during initial 3-4 days after delivery (62.4%) 60% said color of colostrum is yellow. When asked about how long to breastfeed the baby 65% of the students said it should be within an hour of birth and continue till 6 months. When asked about exclusive breastfeeding the majority said it gives only breast milk (47.1%). Majority of the students felt that breastfeeding helps in promoting mother (55.3%) and baby (60.0%) health as represented in table 2

**Table 2**

Variables	Frequency	Percent
<b>When is the correct time to initiate breastfeed?</b>		
After 1hr	28	32.9
After 2hr	15	17.6
After 3hr	10	11.8
Within 1hr	32	37.6
<b>What is Colostrum?</b>		
Milk secreted during initial 3-4 days after delivery	53	62.4
Milk secreted during the last stage of breastfeeding	14	16.5
Milk secreted during middle stage of breastfeeding	18	21.2
<b>What is the color of colostrum?</b>		
Green	6	7.1
None of the above	10	11.8
White	19	22.4
Yellow	51	60.0
<b>What is the consistency of colostrum?</b>		

Both thick and thin	19	22.4
Thick	43	50.6
Thin	23	27.1
<b>What does colostrum contain?</b>		
Immunocompetent cells	22	25.9
Large amount of antibodies	37	43.5
None of the above	9	10.6
Vitamins A, D, E and K	17	20.0

When asked about the position of the baby during breastfeeding, the majority (42%) students believe that the head and body should be placed in such a way where the neck can be twisted. Only 55.3% students were aware what effective sucking means and only 55.4% students know what good attachment is, which is lower than the other studies as represented in table 3. When asked about the relationship of breast feeding and IQ only half 51.8% of students were aware that breast feeding increases IQ. The benefits of breast feeding seem to be known by a fraction of the students, 60% knew the benefits for the baby while only 55.3% knew the benefits for the mother as represented in table 4.

**Table 3**

Variables	Frequency	Percent
<b>What is the time duration for exclusive breastfeeding?</b>		
Up to 12 months after birth	24	28.2
Within 3 months after birth	13	15.3
Within 8 months after birth	13	15.3
Within an hour of birth and continue through 1 to 6 months after birth	35	41.2
<b>What can be given in exclusive breastfeeding?</b>		
Breast milk and extra nutrition supplement	27	31.8
Breast milk and vitamin drops	17	20.0
None of the above	1	1.2
Only breast milk	40	47.1
Baby's nose at the level of nipple	15	17.6
<b>What is the comfortable position for breastfeeding babies?</b>		
Body turned opposite to mom	17	20.0
Head and body are placed in such a way that neck can be twisted	36	42.4
Only neck and shoulder supported	17	20.0
<b>What do you mean by attachment through breastfeeding?</b>		
After proper positioning of baby and mother	15	17.6
All of the above	34	40.0
Baby latched onto breast ensuring that nipple and most of areola are within baby's mouth	13	15.3
Baby's cheek touching breast of mom	11	12.9
Initiate rooting reflex in baby	12	14.1
<b>What are the signs of good attachment?</b>		
All of the above	46	54.1
Baby's chin touches breast and lower lip is everted	4	4.7
Baby's mouth wide open	7	8.2
Most of nipple and areola are in baby's mouth	15	17.6
Only upper areola visible and not lower one	13	15.3
<b>What do you mean by effective sucking?</b>		

All of the above	47	55.3
Baby suckles slowly	5	5.9
Baby's cheeks are full	9	10.6
Hearing gulping sounds of milk being swallowed	14	16.5
Pauses suckling in between swallowing	10	11.8

**Table 4**

Variables	Frequency	Percent
<b>How is breastfeeding related to the IQ of a baby?</b>		
Decrease IQ	11	12.9
Increase IQ	44	51.8
No relation with IQ	30	35.3
<b>What are the benefits of breastfeeding in mother?</b>		
All of the above	47	55.3
Protection against pregnancy during lactational amenorrhea	6	7.1
Reduce postpartum hemorrhage	6	7.1
Reduces risk of cancer of breast and ovary	10	11.8
Shedding extra weight gained during pregnancy	9	10.6
Uterine involution	7	8.2
<b>What are the benefits of breastfeeding in a baby?</b>		
All of the above	51	60
Helps in healthy weight gain	9	10.6
Increase immune system	13	15.3
Increase IQ of baby	8	9.4
Rich in fat	4	4.7

## DISCUSSION

Nursing students and all health care professionals need to be taught the adequate breastfeeding assessment not only in the classroom but also the hospital. There is a variation seen in the knowledge and skill among various health care professionals which hinders their confidence. (5, 6)

Higher levels of knowledge regarding breast feeding is seen in this study which is analogous to various studies done worldwide. 78% of students seem to have adequate knowledge about the benefits in a study conducted in the Midwest whereas in this study only 60% were well aware of the benefits. There seems to prevail a trend of higher knowledge about breastfeeding practice and its benefits than its physiology among the nursing students which is also suggested by the research done in midwestern countries (7, 3). In the present study 47.1% knew that breast milk is the ideal feeding choice for infants which is very less compared to a study in Midwest universities 90%. (3) 90% of students knew that breastfeeding should be exclusive until 6 months which is much higher than the current study where only 41.2% of the students are aware. More than 80% of the students correctly defined exclusive breastfeeding as breastfeeding without any supplementation which is much higher than the present study 47%. (1)

In the current study 60% of the responders were aware that colostrum helps the baby fight infections which seems to be much lower than a study conducted in Nigeria

where nearly 98% of the students were aware of the fact. In the same study only 3.5% of the responders felt formula feeding was beneficial which is 27% in the current study indicating their lack of awareness.(4) Training in breastfeeding should not end when university studies finish, but should be continuous, updated to the current need to promote breastfeeding by highlighting the lack of breastfeeding information for the population. However, breastfeeding knowledge may decrease among students because of their lack of practice and also may decrease among mothers pertaining to the thriving marketing practices of supplements. Knowledge retention throughout professional nursing careers and the possible influencing factors should be determined and subsequent protocols should be put to action.

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