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Expressed Breastfeeding: Knowledge and Attitude of Postnatal Women

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Abstract

Introduction Breastfeeding is the most valuable thing that mother can offer to her child. Breast milk provides all the necessary nutrients that are necessary for the overall growth and development of the infant. Mothers can continue feeding their infants with expressed breast milk even if they have to get separated from the child for any reasons. Expressed breastfeeding is a less used option by mothers due to multiple reasons.

Objective The aim of this study was to assess the knowledge and attitude regarding expressed breastfeeding among postnatal women.

Methodology A descriptive survey design was adopted for the study. The non-probability convenience sampling technique was adopted to select 80 postnatal women. A self-developed pretested knowledge questionnaire and structured attitude scale was used to collect the data from postnatal women.

Result Majority of postnatal women (73.8%) were in the age group of 21 to 30 years, 36.3% were with gravida and Para 2, 33.8% were having two children and most of them, 81.3%, were homemakers, and 66.3% were not practiced expressed breastfeeding. Satisfactory level of knowledge regarding expressed breastfeeding was found among 41.3%, while 40% had average knowledge. The mean knowledge score was 7.7 ± 4.20 with a maximum score of 15. Attitude toward expressed breastfeeding was unfavorable among 55 (68.75%) of the postnatal women, while 25 (31.25%) women had the favorable attitude. The mean attitude score was 46.96 ± 6.11 with a maximum possible score of 70. There was significant correlation between knowledge and attitude score with *p*-value is 0.03. The chi-squared computed between knowledge score and demographic variables revealed that there is significant association between knowledge score and age of postnatal women.

Conclusion The knowledge level was satisfactory among one-third of participants, but it was not adequate among the majority of participants. Attitude was not very favorable that indicates motivation of postnatal women by health workers is in very much need.

Keywords
- attitude
- expressed breastfeeding
- knowledge
- postnatal women

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Introduction

Breastfeeding is the best priceless gift a mother can offer to her child. Breastfeeding is the basic right of a newborn baby, and it is the perfect food for an infant.[1] To have optimal growth and development, breastfeeding should be initiated as early as baby is born and World Health Organization recommends exclusive breastfeeding (EBF) for first 6 months. Breastfeeding must be continued even after 6 months along with complementary feeding as much as the baby wants or at least till the baby is 2 years. Breastfeeding has the benefits both to the mother and baby, whereas infant formula lacks those benefits. In addition to providing nutrition to the baby, breastfeeding is also important for mothers' health. It creates a great bond between mother and her baby and helps to build trust in baby.[2] The babies who are exclusively breastfed have a lesser chance of getting illnesses such as respiratory tract infection, diarrhea, asthma, food allergy, type 1 diabetes mellitus, and leukemia, and breastfeeding reduces the risk of obesity in adulthood too. Breastfeeding helps in cognitive development of the child too. In the mother, breastfeeding delays the return of menstruation and fertility, a phenomenon known as lactation amenorrhea and it helps mother to regain her pre pregnancy body structure. Long-term benefits for the mother include decreased risk of breast cancer, cardiovascular disease, and rheumatoid arthritis.[1]

Exclusive breastfeeding can be defined as the practice of giving an infant only the breast milk for the first 6 months of life. It is one of the proved preventive measures to reduce the child mortality and it is the major key indicator of child survival. It has been estimated that if the children younger than 2 years are optimally breastfed, we could save the lives of more than 800,000 children under 5 years of age annually.[3] In the World Health Assembly, a target was set to increase the rate of exclusive breastfeeding of infants below 6 months up to at least 50% by 2025.[4]

A study conducted in India to find the regional prevalence and determinants of exclusive breastfeeding found that a wide difference in the prevalence of exclusive breastfeeding exists across regions of India. While Southern India had the highest (79.2%) prevalence of EBF, whereas the lowest (68.0%) was reported from North-East.[5] A study carried out in Kerala, a Southern state of India, revealed that EBF was independently associated with factors like maternal education, working mother, and receiving antenatal advice on exclusive breastfeeding.[6] Study conducted to assess the breastfeeding practices among mothers in rural areas of Mangalore reported that 29.5% of infants were fed with prelacteal feeds like sugar water and honey.[7] Another study conducted in Sri Lanka found that the prevalence of exclusive breastfeeding for 6 months was 50.8%. The factors independently associated with EBF are employed mothers, poor knowledge on EBF, and mother's poor attitudes toward EBF.[8] An Indonesian study found that promotion of formula milk and negative influence from family were the barriers for exclusive breastfeeding.[9]

In most of the countries, women's earnings are vital for the survival of the family. In Europe, 59% of working women supply more than 50% of their family income. Reports have shown that in India about 60 million people live in households maintained by the earnings of women.[10] After the amendment to the Maternal Benefit Act in India, women can claim up to 26 weeks of paid maternity leave. Although this bill is passed, all the women including daily wagers are not able to enjoy these benefits due to multiple reasons. This is one of the major barriers for exclusive breastfeeding. Lactating mothers must breastfeed or express milk regularly to maintain a supply of milk adequate to continue breastfeeding. Mothers are not able to maintain continuity in breastfeeding due to multiple reasons such as long working hours, long travelling distances, tight deadlines, and work pressure. Mothers may not find the enough time to feed their babies.[11] But the infants can get breastmilk even in the absence of mother and get all the benefits despite mother is not able to feed directly from her breast. Mothers can pass on all the goodness of breast milk to their infants by expressing breast milk, storing, and feeding it whenever baby demands for it.

If mothers must maintain exclusive breastfeeding while they support the family financially by working in different sectors, the only option is expressed breastfeeding. Even mothers can feed the baby with expressed breast milk in public if they are not comfortable to directly breastfeed the baby in public places. A study in Nigeria revealed that 34.9%of mothers expressed the breast milk to avoid direct breastfeeding in public. Mothers may hesitate to feed their babies with the expressed breast milk due to lack of knowledge, unfavorable attitude, poor support from the spouse and family members, and fear of cultural and societal nonacceptance. This hesitation may have a negative impact on the health, growth, and development of their infants.[12] To encourage mothers to maintain exclusive breastfeeding through expressed breastfeeding, the step is to identify their knowledge and attitude regarding expression of breast milk. Hence, this study was conducted to assess the knowledge and attitude of postnatal women on expressed breastfeeding and to find the correlation between the knowledge and attitude regarding expressed breastfeeding among postnatal women.

Materials and Methods

Institution-based cross-sectional study was conducted in a tertiary care hospital in Mangalore, a city of South India after obtaining the ethical clearance from Institutional Ethics Committee. Study population included postnatal women admitted in the postnatal ward. The nonprobability convenience sampling technique was adopted to select 80 postnatal women. Informed consent was taken prior to the data collection.

Data were collected using a self-reported knowledge questionnaire and structured attitude scale prepared by the investigators. Seven subject experts validated the content of the questionnaire and modifications were done based on their suggestions. It consisted of three parts. Part 1 included demographic characteristics, part 2 was knowledge questionnaire with total 15 multiple choice questions with one correct response. The maximum possible score for the

knowledge questionnaire was 15. The scores were categorized as poor (below 4), average (4–7), satisfactory (8–11), and good (12–15). Part 3 of the tool was 5-point Likert scale with 14 attitude statements (7 positive statements and 7 negative statements). To facilitate analysis, negatively worded items on the attitude scale were reverse coded. A total attitude score was calculated by summing all items with maximum possible score of 70. The scores below 35 were considered as unfavorable attitude. The internal consistency reliability of the knowledge questionnaire and attitude scale was 0.8 and 0.7, respectively. Data from postnatal women was collected by the investigators from 23/08/2019 to 15/09/2019. The collected data was analyzed using software SPSS 23.0

Results

Among the postnatal women, 73.8% women were in the age group of 21 to 30 years, 36.3% were with second delivery, and most of them (81.3%) were homemakers. About 32.5% were having preuniversity education and most of them (66.3%) did not practice expressed breastfeeding.

More than half of the postnatal women had proper idea of expressed breastfeeding (68.8%), and duration of exclusive breastfeeding (68.8%). The mean knowledge score of the postnatal women regarding expressed breastfeeding was 7.7 ± 4.20, median 8, and possible maximum score of 15 (►**Tables 1A** and **B**).

►**Table 2** indicates the most of the postnatal women (41.3%) had satisfactory level of knowledge on expressed breastfeeding.

The frequency and percentage of agreement/ disagreement of the postnatal women toward expressed breastfeeding for some of the attitude statements are described in ►**Table 3**. The mean attitude score was 46.96 ± 6.11 with a maximum possible score of 70. Considering scores 50% and below (scores less than 35) as unfavorable attitude, 55(68.75%) of the postnatal women had unfavorable attitude and 25(31.25%) had the favorable attitude toward expressed breastfeeding.

►**Table 4** depicts that there is significant but poor positive correlation between knowledge and attitude score with *p*-value is 0.03. The knowledge score of the participants had significant association with their age, but no association was found with other demographic variables such as gravida, para, number of children, education, occupation, and practice of expressed breastfeeding.

Discussion

This study assessed the knowledge and attitude of postnatal women toward expressed breastfeeding. Major findings of the study are that approximately 40% of the postnatal women had satisfactory level of knowledge. This correlates with the practice of expressed breastfeeding of postnatal women (33.7%). The findings of this study are in consonance with the findings of study conducted by Rai in which 36% of the postnatal women had satisfactory knowledge regarding expressed breastfeeding for their infants.[13] In contrast to this, a study conducted in Nigeria showed only 4.1% of the women had good knowledge of expressed breastfeeding and 8.9% had fair knowledge and majority of the women 87.0%

Table 1 Knowledge of postnatal women regarding expressed breastfeeding ($n = 80$)

Knowledge on expressed breastfeeding	Frequency (%) of right answer
Meaning of expressed breastfeeding	55 (68.8)
Recommended duration of exclusive breastfeeding	56 (70)
Methods of expressing breast milk	22 (27.5)
Breast milk can be stored in refrigerator	41 (51.3)
Duration of storing of expressed breast milk in the room temperature at a temperature of 26°C or below (6–8 hours)	57 (71.3)
Duration of storing of expressed breast milk in the fridge at a temperature of 4° C or lower (up to 3 days)	33 (41.2)
Duration storing of expressed breast milk in the freezing compartment of refrigerator (2 weeks)	31 (38.8)
Correct process of thawing the refrigerated breast milk before feeding	36 (45)
Carrying of expressed breast milk for a distant place	30 (37.5)
Advantage of expressed breastfeeding	26 (32.5)
Methods of expressing breast milk	23 (28.75)
Amount of breast milk secretion per day	33 (41.25)
Initiation of expressed breastfeeding after delivery	35 (43.75)
Observations of the baby while feeding with expressed breast milk	41 (51.25)
Best method to feed the baby with expressed breast milk	42 (52.5)
Duration of carrying the expressed breast milk in cool bags	23 (28.75)

Table 2 Frequency and percentage of postnatal women according to the level of knowledge on expressed breastfeeding ($n = 80$)

Grading of knowledge	Scores	Frequency	Percentage (%)
Poor	Below 4	7	8.8
Average	4–7	32	40
Satisfactory	8–11	33	41.3
Good	12–15	8	10

Table 3 Attitude score of postnatal women regarding expressed breastfeeding ($n = 80$)

Attitude statements	Strongly agree	Agree	Undecided	Disagree	Strongly disagree
I prefer to give expressed breast milk to my child	18 (22.5%)	12 (15%)	31 (38.8%)	14 (17.5%)	5 (6.3%)
Expressed breast milk helps to maintain the bond between mother and child when they are away from each other	26 (32.5%)	20 (25%)	23 (28.8%)	7 (8.8%)	4 (5%)
I feel expressed breast milk will reduces the risk of breast cancer	20 (25%)	14 (17.5%)	32 (40%)	6 (7.5%)	8 (10%)
I feel expressed breast milk is a best option to maintain breastfeeding among working mothers	22 (27.5%)	19 (23.8%)	27 (33.8%)	3 (3.8%)	9 (11.3%)
Expression of breast milk may alter the appearance of breast	9 (11.3%)	15 (18.8%)	27(33.8%)	11(13.38%)	18 (22.5%)
My religious and cultural practices do not allow me to practice expressed breastfeeding	10 (12.5%)	10 (12.5%)	36(45%)	9 (11.3%)	15 (18.8%)
I feel expression of breast milk alters the nutritional value of breast milk	12 (15%)	9 (11.3%)	32 (40%)	17 (21.3)	10 (12.5%)

Table 4 Correlation between knowledge score and attitude score regarding expressed breastfeeding ($n = 80$)

Knowledge score	Mean	*r*-Value	*p*-Value
Mean knowledge score	7.70	0.239	0.03[a]
Mean attitude score	47.27		

[a]Significant at $p < 0.05$.

had poor knowledge.[12] This study findings about knowledge of methods of expressing breastmilk (27.5%) can be matched with another study conducted in Maharashtra, India, which showed knowledge of technique of milk expression (17.9%) among the study participants.[14]

In this study, 55 (68.75%) postnatal women had an unfavorable attitude toward expressed breastfeeding and there is a poor positive correlation between knowledge and attitude score. These findings are in contrast to a similar study conducted by Elaiyamudha at Kanchipuram, India, in which majority of postnatal women had positive attitude and no significant correlation between knowledge and attitude on expressed breastfeeding.[15]

Educating the mothers can be effective in improving the knowledge and practice of expressed breastfeeding. Studies have shown that self-instructional module or information booklets were found to be effective in improving the knowledge of mothers of infants on collection and storage of breast milk.[16,17] Knowledge regarding the expressed breastfeeding is found to be high among working mothers, nurses, and mothers those who have undergone breastfeeding classes. A significant positive correlation is also found between knowledge and practice.[18]

Conclusion

It can be concluded that the one-third postnatal women had satisfactory level knowledge, and at the same time equal percentage had average knowledge that has to be further enhanced by antenatal and postnatal teaching on expressed breastfeeding. This study shows that the majority postnatal women had unfavorable attitude toward expressed breastfeeding. Hence, healthcare workers mainly nurses need to work toward changing the attitude of women toward expressed breastfeeding, so that it helps to maintain exclusive breastfeeding up to 6 months and to ensure the availability of breast milk to the child thereafter in case mother has to get separated from the child.

Authors' Contributions

All the authors have equally contributed from the beginning of the project till the preparation of manuscript. We verify that all authors had access to the data, all have contributed in writing the manuscript and it is approved by all the authors.

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Conflict of Interest

None declared.

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