

Research Article

Knowledge and Attitude of Parents of Preterm Babies and Health-Care Providers Related to Human Milk Banking in a Tertiary-Care Hospital

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Abstract

AIM: The aim of the study was to assess the knowledge and attitude of parents of preterm babies and health-care providers related to human milk and human milk banking in a tertiary-care hospital in North India.

METHODS: A descriptive study was conducted on 280 samples (200 parents and 80 health-care providers) of neonatal units of a tertiary-care hospital in North India. Self-developed 25-item knowledge-related questionnaire and 15-item attitude scale was used for health-care providers. Whereas ten-item knowledge-related interview schedule and five-item open-ended attitude assessment tools were used for parents. The content validity index was more than 0.72 for all the tools.

RESULTS: Among health-care providers, majority (93.3%) of doctors and nursing officers (80%) were aware of human milk banking, but they demonstrated lack of knowledge about the processing and safety of such milk. Majority of mothers (89.3%) and fathers (90%) reported that they don't have problem in accepting the breast milk from other mothers if provided by human milk bank, while others had certain concerns related to infection and religious/cultural beliefs.

CONCLUSION: There is a need to spread public awareness about human milk and human milk banking to foster its acceptance. The health-care providers also need regular update to ensure adequate knowledge and acceptability.

Keywords: Attitude, breastmilk expression, infant, knowledge, milk bank, parents, premature

Introduction

Human milk is recognized for its numerous benefits, inducing tolerance to allergens, providing passive immunization, improving lipid profile, and controlling blood pressure (Corpeleijn et al., 2010). It is a natural food for babies; it provides the nutrients and energy required by every infant for a healthy life (Andrews Ryan et al., 2012). Many studies conducted in neonatal units have proved that infants who were fed with human breast milk had fewer severe infections, less necrotizing enterocolitis, and less colonization by pathogenic organisms. The term babies can suck, swallow, and digest mother's milk well (St-Onge Maude et al., 2015). On the other hand, preterm babies have many handicaps, one of them being lack of sucking and swallowing reflex, which increases the risk of undernutrition. Second, these babies have immature gut and they are not able to digest large volumes of feed and are at higher risk for developing necrotizing-enterocolitis, growth

retardation, infectious disease, and developmental delay (Shulhan et al., 2017).

Additionally, due to these handicaps, in the initial days after birth even if the mother of a preterm baby is producing sufficient milk, the whole quantity can't be utilized and milk gets wasted. Once the baby gets stabilized, the need gradually increases and the mother may not produce sufficient quantity of breast milk due to factors like stress and poor health of the mother. In such situations, where mother's milk is either less or cannot be used, milk of other mothers which is pasteurized and stored can be the best and first consideration for supplementation (Underwood, 2017).

Donor human milk significantly reduces the incidence of severe gut disorder in preterm neonates (Quigley, 2019). Human milk banking (HMB) is an essential prerequisite for the availability of donor human milk in neonatal intensive care units/special

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new-born care units. In India, every year, 25 million children are born and 1.7 million of these births are preterm (Kannaujia et al., 2022). To ensure that each premie baby receives only human milk, there is a need to establish human milk banks at all levels (level 2, 3) facilities, both at public as well as private sectors in India (Bharadva et al., 2014). The patient and relatives' acceptance of human milk provided from human milk banks often depends on how the health-care professionals present the information to them. However, the parents' willingness and health-care providers (HCPs)'s ability to convince parents also depend on their knowledge and attitude about human milk and HMB. Considering this, it was planned to include both parents and HCPs in this study with an objective to assess the knowledge and attitude related to human milk and HMB among parents of admitted preterm neonates and HCPs working in neonatal units of a tertiary-care hospital in North India. In the near future, the data generated from this study will assist us in identifying what is already known to the study population and what additional information needs to be provided to facilitate early acceptance of human milk banks and their use when the HMB is established at our setup.

Research Question

1. What is the Knowledge and attitude of parents of preterm babies and health care providers related to Human Milk Banking in a tertiary care hospital in India which is likely to start HMB?

Methods

Study Design

A descriptive study design was adopted.

Sample

Through total enumeration sampling technique, a total of 280 subjects were enrolled. Among them, there were 200 parents (150 mothers and 50 fathers) of admitted preterm neonates and 80 HCPs (50 nurses and 30 doctors) working in neonatal units of a tertiary-care hospital in North India participated in the study. The study was conducted in the neonatal units of a tertiary-care hospital of North India catering to the needs of seven to eight nearby states with enormous cultural variability. In each year, approximately 5000–6000 babies are born in this facility, out of which 1500–2000 are preterm neonates and get admitted in neonatal units. At a time, nearly 50–60 neonates get admitted to all these units.

Data Collection Tools

A self-developed 25-item knowledge-related questionnaire and 15-item attitude scale were used for HCPs. Whereas 10-item knowledge-related interview schedules and 5-item open-ended attitude assessment tools were used for parents. To develop the tool, extensive review of literature was done and refined by expert neonatologists and nurses. The tool was then given to 10 experts (5 neonatologists, 3 nurse educators, and 2 neonatal nurses) for content validation. The Item Content Validity Index (I-CVI) and Scale CVI (S-CVI) were calculated. The experts were requested to rate each item on a 4-point ordinal scale for relevancy: 1: not relevant, 2: somewhat relevant,

3: quite relevant, 4: highly relevant and similarly on a 4-point ordinal scale for clarity: 1: not clear, 2: item needs some/major revision, 3: clear but needs minor revision, and 4: very clear. The formula used for I-CVI was the number of those judging the item as relevant or clear (rating 3 or 4) divided by the number of content experts (Zamanzadeh et al., 2015). The S-CVI is calculated by sum of I-CVI scores divided by number of items (Yusoff, 2019) (Zamanzadeh et al., 2015). Scale CVI of knowledge and attitude questionnaires for parents was 0.73 and 0.76 respectively. Scale CVI of knowledge and attitude questionnaires for HCPs was 0.75 and 0.77 respectively. Authors have verified that a proper CVI of more than 0.70 is good to confirm the acceptability of items in a questionnaire (Amin, 2005; Tilden et al., 1990).

Data Collection

The first four Investigators (N.K., K.K., S.P., V.T.), who were trained nurses, collected the data. An interview technique was used to collect the data from parents and each parent was interviewed separately at the bedside and in the mother's room for 10–15 minutes. The interview schedule comprised ten structured and five open-ended questions. To collect data from HCPs, a questionnaire was given and 30 minutes of time was allotted to complete both the attitude and knowledge questionnaire. The tool was comprised of fifteen statements related to HMB in the attitude questionnaire and 25 structured questions in the knowledge questionnaire.

Statistical Analysis

After the data was collected, it was checked for completeness and consistency, and it was entered into the computer using the Statistical Package for Social Sciences, version 17.0 software (SPSS Inc.; Chicago, IL, USA). The frequency distribution and percentage were used for knowledge of parents, knowledge and attitude of HCPs, and chi-square was used to find association between knowledge and attitude, and p -value of $\leq .05$ was considered significant. The attitude of parents was assessed by open-ended questions, and descriptive statistics was used to count the responses.

Ethical Considerations

The study was approved by the Ethics Committee of National Institute of Nursing Education (Approval No: EC_UGT_PB_8, Date: February 20, 2018), and written informed consent was taken from the participants.

Results

Participants' Demographics

The mean age and standard deviation of mothers was 27.52 ± 4.373 and for fathers it was 30.22 ± 3.813 . Majority (80.7%) of mothers and more than half (52%) of fathers were from the age group of 20–30 years and 32% and 42% of mothers and fathers were graduates, respectively (Table 1).

Knowledge and Attitude of Parents of Preterm Babies

It was found that most (96.7%) of mothers and (98%) of fathers were not aware of HMB and its processing. Though when they were asked about human milk and its benefits, 67.3% of fathers and 68% of mothers demonstrated an average level (4–7 score)

Table 1.
Sociodemographic Profile of Parents of Preterm Babies (N=200)

Variables	Mothers n = 150 f (%)	Fathers n = 50 f (%)
Age		
20–30	121 (80.7%)	26 (52%)
30–40	27 (18%)	24 (48%)
>40	2 (1.3%)	-
Age (mean ± SD) (range)	27.52 ± 4.373 (20–42)	30.22 ± 3.813 (23–40)
Education		
Illiterate	4 (2.7%)	-
Primary school certificate	16 (10.7%)	8 (16%)
Middle school certificate	34 (22.7%)	7 (14%)
High school certificate	31 (20.7%)	9 (18%)
Intermediate or post-high school diploma	6 (4%)	3 (6%)
Graduate/postgraduate	48 (32%)	21 (42%)
Professional or honors	11 (7.3%)	2 (4%)
Occupation		
Home maker	123 (82%)	-
Unskilled worker	2 (1.3%)	-
Semi-skilled worker	4 (2.7%)	6 (12%)
Skilled worker	3 (2%)	17 (34%)
Clerical, shop owner	4 (2.7%)	16 (32%)
Semi professional	2 (1.3%)	11 (22%)
Professional	12 (8%)	-
Per capita income		
1000–5000	104 (69.3%)	
5001–10000	42 (28%)	
10001–15,000	4 (2.7%)	
Mean ± SD (range)	4002.77 ± 2255.32 (1035–13809)	
Socioeconomic class		
Lower (<5)	4 (2.7%)	-
Upper lower (5–10)	77 (51.3%)	10 (20%)
Lower middle (11–15)	46 (30.7%)	29 (58%)
Upper middle (16–25)	16 (10.7%)	11 (22%)
Upper (26–29)	7 (4.7%)	-

of knowledge on breastmilk/feeding (Table 2). Only 58% of fathers and 42% of mothers were aware that breastfeeding is started within half an hour after birth. More than a quarter (26%) of mothers and only 16% of fathers were aware that expressed breast milk can be stored for 4–6 hours at room temperature. Before asking the tenth question the parents were educated about HMB and majority (89.3%) of mothers and fathers (90%) agreed that they don't have a problem in accepting breast milk from another mother if provided by a human milk bank. The

attitude questions were: do you know that milk of one mother can be given to the baby of other mother? In case of need, can you give another mother's milk to your baby? if not, why? Do you know something about human milk banking? Do you think mother's milk is important for the baby or not? If it is important, why? and if not why? The analysis was done in a descriptive manner by coding the responses. It was found that only 3.3% of mothers and 2% fathers were aware about the HMB and its processing. After explanation about HMB, the majority parents agreed to give other mother's milk if it was provided from human milk bank and rest (10.7% of mothers and 10% father had concerns related to fear of infections, religious, and cultural beliefs (Figure 1).

Answers to practical open-ended questions related to practices of first feed of preterm revealed that, only (8.7%) of mothers sent the breast milk within 1 hour and the rest others had no information about the first-hour feed. After the initial few days, 71.3% of mothers gave only expressed breast milk to their babies as they had sufficient milk production, whereas more than 28.7% of mothers had to administer additional supplement as they did not had adequate breast milk. On the other hand, knowledge of parents of preterm babies related to breastmilk/feeding was not associated with their educational qualification and monthly income ($p \leq .625$ and $p \leq .617$ respectively).

Knowledge and Attitude of Health-Care Providers

The sociodemographic data of the HCPs (doctors and nursing officers) showed that among doctors, the majority (83.3%) were of age 20–30 years and among nursing officers, less than two-third (60%) were of age 20–30 years. The mean ± SD of age for doctors and nursing officers was 27.93 ± 3.619 and 30.84 ± 7.654, respectively. More than two-third (70%) of doctors were male and among nurses, the majority (98%) were female. The majority (83.3%) of doctors and more than two-third (68%) of nurses follow Hinduism.

It was found that the majority (93.3%) of doctors were aware of HMB but none of them had attended any program or workshop. Whereas more than three-fourth (80%) of nursing officers were aware of this concept and very few (4%) of them had attended the workshop. Less than two-third doctors (63.3%) possessed a very good level of knowledge and only half of the nurses (50%) had a good level of knowledge of HMB (Figure 2). The item-wise responses of HCPs on the knowledge questionnaire are depicted in Table 3. It was surprising that only 46.7% of doctors and 30% of nurses responded correctly to the question that expressed breast milk can be stored in a refrigerator at 4°C for 96 hours.

In this study among HCPs, maximum (88.8%) of them had a positive attitude toward the HMB (56–75 score), 10% had a neutral attitude (35–55 score) whereas, only 1.3% of them possessed a negative attitude as they scored between (15–34 score). The item-wise responses of HCPs on the attitude questionnaire are depicted in Table 4. Surprisingly, 20% of HCPs agreed to the statement "if baby is fed with another mother's breast milk stored in a human milk bank then it will increase the risk of transmission of infections like HIV/HCV." Whereas, the

Table 2.
Item-Wise Knowledge Score of Parents of Preterm Babies Related to Breastmilk/Feeding (N = 200)

Items	Mothers (n=150) f (%)	Fathers (n=50) f (%)
1. Breast feeding is started within half an hour after birth.	87 (58%)	21 (42%)
2. Colostrum is the first feed given to the baby after birth.	144 (96%)	50 (100%)
3. Exclusive breastfeeding is done from birth up to 6 months.	123 (82%)	39 (78%)
4. Breast milk is important for preterm babies because it prevents infection, helps in weight gain, and cognitive development.	107 (71.3%)	42 (84%)
5. Other benefits of breast milk are bone growth, immunity, and physical development.	110 (73.3%)	39 (78%)
6. Expressed breast milk can be stored for 4–6 hours at room temperature.	39 (26%)	8 (16%)
7. Breast feeding should be done every 2 hourly.	135 (90%)	45 (90%)
8. Expressed breast milk can be stored for 4 days in the refrigerator.	23 (15.3%)	13 (26%)
9. Human milk bank is a place where breast milk is expressed, tested, and stored.	5 (3.3%)	1 (2%)
10. We don't have a problem in accepting breast milk from other mothers if provided by a human milk bank. (This question was asked after educating parents about human milk banking)	134 (89.3%)	45 (90%)

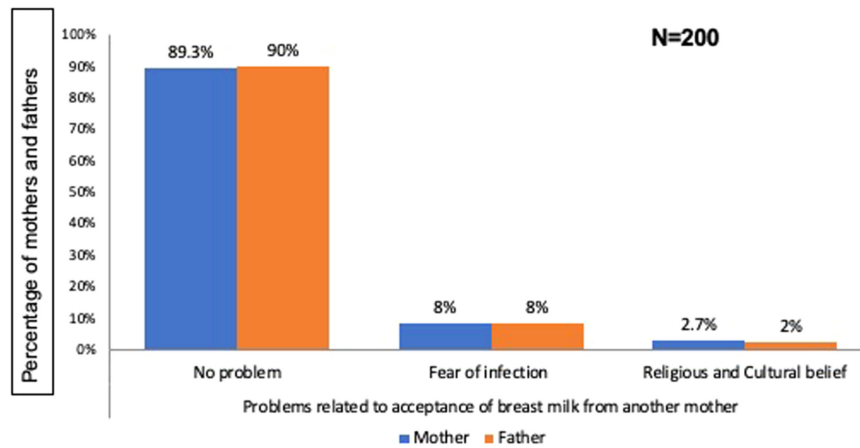


Figure 1.
Concerns of Parents Related to Human Milk Banking.

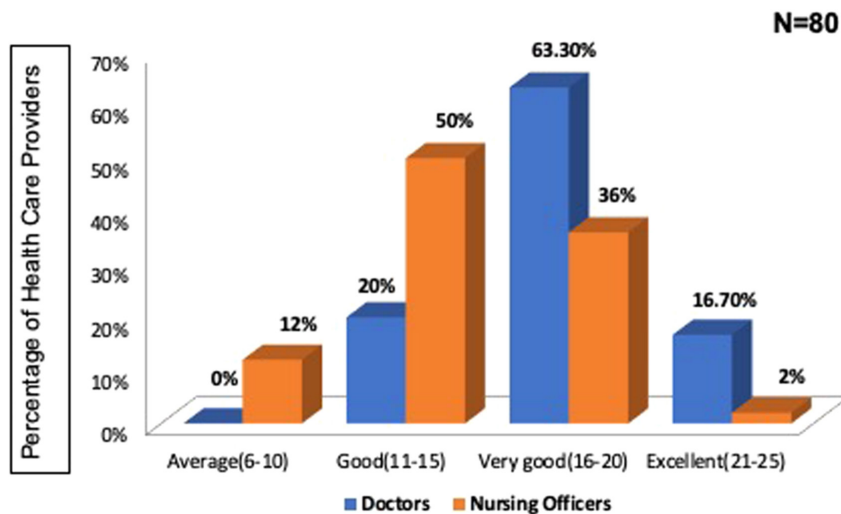


Figure 2.
Bar Chart Depicting the Levels of Knowledge of Health-Care Providers Related to Human Milk Banking.

Table 3.
Item-Wise Knowledge Score of Health-Care Patients Related to Human Milk and Human Milk Banking (N = 80)

ITEMS	Doctors n = 30 f (%)	Nursing Officers n = 50 f (%)
1. Colostrum is the first milk produced after delivery.	30 (100%)	30 (100%)
2. Oxytocin is responsible for ejection of milk in human.	30 (100%)	34 (68%)
3. Hind milk provides satiety to the baby.	26 (86.7%)	36 (72%)
4. In refrigerated human milk, bactericidal activity decreased within 2 days.	11 (36.7%)	13 (26%)
5. Human milk bank is a service that screens, collects, processes, and dispense human milk.	29 (96.7%)	48 (96%)
6. Presence of free fatty acids in stored human milk indicates a reduction in pH.	19 (63.3%)	10 (20%)
7. Milk fat globule membrane present in human milk is responsible for cognitive development.	14 (46.7%)	15 (30%)
8. Human breast milk contains 1–1.5 grams of protein.	17 (56.7%)	21 (42%)
9. Expressed breast milk can be stored in a refrigerator at 4°C for 96 hours.	14 (46.7%)	15 (30%)
10. Wet nurse is a mother who donates breast milk.	27 (90%)	35 (70%)
11. Serology testing for breast milk includes Hepatitis B, C, and HIV	27 (90%)	42 (84%)
12. Mother who uses tobacco/has received organ/blood transfusion cannot donate breast milk.	29 (96.7%)	47 (94%)
13. Pasteurized donor human milk.	22 (73.3%)	20 (40%)
14. Polycarbonates or propylene containers are used to store donated breast milk.	9 (30%)	11 (22%)
15. Pasteurized human milk can be stored for 6 months at –20°C.	22 (73.3%)	31 (62%)
16. Thawed milk can be stored for 24 hours in a refrigerator.	17 (56.78%)	21 (42%)
17. After refrigeration cold milk can be warmed by keeping it in warm water.	26 (86.7%)	48 (96%)
18. Holders pasteurization method is used for sterilization of human milk in Human Milk Bank.	21 (70%)	35 (70%)
19. Para amino benzoic acids present in the breast milk provide protection against malaria.	16 (53.3%)	14 (28%)
20. Proteins and calories have a higher concentration in premature breast milk.	25 (83.3%)	33 (66%)
21. 2–2.5 grams of protein are present in 100 mL of cow milk-based formula.	14 (46.7%)	14 (28%)
22. Immunoglobulin A is the antibody present in breast milk which provides the first line of mucosal defence.	27 (90%)	33 (66%)
23. Common bacteria responsible for contamination of stored human milk is staphylococcus.	21 (70%)	33 (66%)
24. Thawing means a process where heat changes something solid into liquid	28 (93.3%)	34 (68%)
25. Maximum protein content is found in human milk.	9 (30%)	22 (44%)

majority (79.7%) of them disagreed with the statement. The study showed that knowledge of HCPs related to HMB was not associated with their educational qualification ($p \leq .08$). The knowledge of doctors was significantly associated with their clinical experience ($p \leq .014$). Whereas, the knowledge of nursing officers was not associated with their clinical experience ($p \leq 1.000$).

Discussion

Breast milk is universally accepted as the optimum exclusive source of nutrition for the first 6 months of life (Martin, 2016). In contrast, preterm babies in the initial stabilization phase may not receive and digest the mother's milk due to various unique challenges, poor sucking reflex, inadequate milk production, and immature gut (Buckley & Charles, 2006). Gradually, after stabilization, the need for the baby increases, and almost all mothers can't produce sufficient milk to meet the needs of preterm babies (Asztalos, 2018), which is why human milk banks were established way back in 1909 (Kim & Unger 2010).

In the Indian setup, the concept is still emerging and it is necessary to explore the knowledge and attitude of HCPs and parents. Therefore, keeping this in view with the objective to assess the knowledge and attitudes of parents of preterm neonates and HCPs, this study was conducted on 280 participants, in which 200 were parents (150 mothers and 50 fathers) and 80 HCPs (50 nurses and 30 doctors).

The knowledge and attitudes of parents were assessed in the present study; it was found that only 3.3% of mothers were aware of HMB. On the other hand, a survey conducted in Izmir province in Turkey showed that less than half (41.6%) of mothers were aware of HMB (Ekşioğlu, 2015). In contrast, one more study conducted in Turkey in Erzurum depicted that 90.6% of mothers had not previously heard about HMB (Gürol et al., 2014).

Additionally, the Erzurum, Turkish study also revealed that less than one-third (36.3%) of mothers had concerns about giving another mother's milk to their babies due to religious

Table 4.
Item-Wise Attitude Scale Response of Health-Care Providers Related to Human Milk Banking (N = 80)

S. No	Statement	Strongly Disagree f (%)	Disagree f (%)	Undecided f (%)	Agree f (%)	Strongly Agree f (%)
1.	I feel that breastfeeding is beneficial for both mother and baby.	1 (1.3%)	0	-	17 (21.3%)	62 (77.5%)
2.	I feel that human-donated breast milk is not exactly equal to mother's fresh breast milk.	1 (1.3%)	30 (37.5%)	6 (7.5%)	38 (47.5%)	5 (6.3%)
3.	I feel that other woman's breast milk can be given to the baby if required without any treatment/pasteurization.	36 (45.6%)	23 (28.8%)	-	16 (20.3%)	5 (6.3%)
4.	I feel that expression of human breast milk can be done by massage or using a breast pump.	1 (1.3%)	3 (3.8%)	-	66 (82.5%)	10 (12.4%)
5.	I feel that human breast milk can be stored at room temperature for four to 6 hours.	1 (1.3%)	0	-	50 (63.3%)	29 (36.3%)
6.	I feel that storing human breast milk can be beneficial for working mothers.	1 (1.3%)	1 (1.3%)	-	42 (52.5%)	36 (45.6%)
7.	I feel that preterm babies who are fed donated human breast milk are at a lower risk for necroenterocolitis compared to babies on top feed.	1 (1.3%)	3 (3.8%)	-	50 (62.5%)	26 (32.9%)
8.	I feel that pasteurized/treated donor breast milk reduces the chances of infections in babies.	0	0	-	44 (55%)	36 (45.6%)
9.	I feel that inadequate mother's breast milk to the baby results in a poor health status of baby.	2 (2.5%)	2 (2.5%)	-	50 (62.5%)	26 (32.9%)
10.	I feel that if a baby is fed with another mother's breast milk stored in a human milk bank then it will increase the risk of transmission of infections like HIV/HCV etc.	25 (31.6%)	38 (48.1%)	-	16 (20%)	1 (1.3%)
11.	I feel that there is a chance of rejection of donated breast milk on the basis of religion, culture, traditional values, and beliefs.	5 (6.3%)	19 (23.8%)	-	51 (64.6%)	5 (6.3%)
12.	I feel that human milk banking is an effective and useful method of storing and preserving donated human breast milk.	2 (2.2%)	0	-	30 (37.3%)	48 (60.5%)
13.	I feel that thorough knowledge regarding human milk donation and banking is important for lactating mothers.	1 (1.3%)	2 (2.5%)	-	21 (26.3%)	56 (70.9%)
14.	I feel that there is a need of providing knowledge to HCPs related to expression and storage of breast milk.	1 (1.3%)	1 (1.3%)	-	17 (21.5%)	61 (76.3%)
15.	I feel that there should be implementation of human milk banks under government in maximum possible health-care facilities.	2 (2.5%)	0	7 (8.8%)	27 (33.8%)	44 (55%)

beliefs (Gürol et al., 2014). Similarly, another study conducted at Istanbul University, Turkey, depicted less than half (45.9%) of mothers found it to be against religious rules (Kaya & Ergul, 2017). Whereas in the current study, very few (2.7%) mothers refused to give another mother's milk to their babies due to religious and cultural beliefs. In addition to the previous findings, the Istanbul University, Turkey study also revealed that less than one-fourth (23.6%) of mothers had a problem giving another mother's milk to their babies due to the risk of infectious diseases (Kaya & Ergul, 2017). In the present study, only 8% of mothers refused to give another mother's milk to their babies due to fear of infection.

The present study showed that nearly one-fourth (26%) of mothers were aware of breast milk storage. On the other hand, a study conducted at JIPMER, Pondicherry, India, showed that only 2% were aware of breast milk storage (Ekambaram et al., 2010). Similarly, a study in Mangalore showed that the majority (86.5%) of mothers had adequate knowledge about the storage of breast milk (Lukose & Shetty et al., 2003).

An Indian study at Mangalore revealed that parents were unaware of human milk banks. Similarly, the present study showed that very few parents (5.3%) were aware of HMB, and surprisingly, there were 6.7% of doctors and 20% of nurses who were also unaware of human milk banks. The present study revealed that 80% of doctors and 36% of nurses had sufficient knowledge scores (good/excellent). On the other hand, a study conducted in Nepal reported that 93.3% of nurses had adequate knowledge (Ray & Thakali, 2021). Contrary to these findings, JIPMER Puducherry reported that 93.18% had inadequate knowledge about HMB (Safeena et al. 2021). We found that 70% of nurses and doctors were aware of the processing of donor milk; on the other hand, a study from Zimbabwean tertiary hospitals reported that 32% of nursing staff and 74% of doctors were aware of the processing of human milk (Chagwena et al., 2020).

Related to knowledge and attitude of HCPs, an Australian study revealed that more than two-third (67.5%) HCPs agreed to the establishment of human milk banks (Lam et al., 2012). Whereas, in this study, it was found that more than half (55%)

of HCPs strongly agreed for implementation of human milk banks. In addition, the previous findings of the Australian study also revealed that 70% of HCPs agreed to the donation of breast-milk whereas, in our setup, more (97.8%) HCPs strongly agreed that HMB is an effective and valuable method (Lam et al., 2012).

Further, the Australian study illustrated that 81% of HCPs agreed that pasteurized donated breast milk decreases the risk of necrotizing enterocolitis (Lam et al., 2012). On the other hand, the current study revealed that nearly two-third (62.5%) HCPs agreed that preterm babies fed with donated breast milk are at lower risk for necrotizing enterocolitis. Besides the previous findings, the Australian study also illustrated that 8.4% of HCPs agreed that donated breast milk increases the chances of transmission of infection (Lam et al., 2012). In contrast, the recent study revealed that 20% of HCPs thought that pasteurized donated breast milk increases the risk of transmission of infection. The findings of the study, revealed that there is a need to make a solid move to educate HCPs as well as parents about human milk banks and its numerous benefits.

Study Limitations

The study duration was limited and total enumeration sample technique was used rather than calculating the exact sample size using the power of the study. The parents were not aware of HMB and its processing, so detailed knowledge and attitude about HMB could not be assessed. Therefore, more focus was laid on the assessment of knowledge and attitude about human milk among parents. The concept of HMB was explained to parents, and some relevant questions about HMB were asked of them.

Conclusion and Recommendations

The parents were not aware of HMB; however, more than two-thirds demonstrated good knowledge about human milk. Majority of doctors and less than half of the nurses had sufficient knowledge, but their attitude was not associated with their knowledge. The knowledge of doctors was significantly associated with their clinical experience. The study recommends that extensive public promotion would be essential so that human milk and HMB become a topic of general knowledge to foster their acceptance. There is a need to conduct workshops/conferences on this concept at various national platforms to ensure the acceptability of HMB among HCP, and in return, they can develop positive attitudes toward it among parents.

Ethics Committee Approval: Ethical committee approval was received from the Ethics Committee of National Institute of Nursing Education, PGIMER, Chadigarh, India (Approval No: EC_UGT_PB_8, Date: February 20, 2018).

Informed Consent: Written informed consent was obtained from the participants who agreed to take part in the study.

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S.P., V.T., S.S.; Materials – G.K.; Data Collection and/or Processing – N.K., K.K., S.P., V.T.; Analysis and/or Interpretation – G.K., N.K., K.K., S.P., V.T., S.S.; Literature Search – N.K., K.K., S.P., V.T.; Writing Manuscript – G.K., S.D.; Critical Review – G.K., S.D., S.S.

Declaration of Interests: The authors have no conflict of interest to declare.

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