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POSTNATAL MOTHERS' VIEWS AND CONSEQUENCES TOWARDS DONATING BREAST MILK TO HUMAN MILK BANKING: A CROSS-SECTIONAL STUDY AT SELECTED HOSPITALS.

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ABSTRACT

Human milk banking is an effective strategy to improve neonatal survival, particularly among preterm and low birth weight infants. However, the success of breast milk donation programs largely depends on postnatal mothers' knowledge, beliefs, perceptions, and perceived consequences. Cultural barriers, misconceptions, and lack of awareness continue to influence mothers' willingness to donate breast milk.

Objectives:
To assess the views of postnatal mothers towards donating breast milk to human milk banking.
To determine the consequences of breast milk donation among postnatal mothers.
To assess the level of knowledge regarding human milk banking among postnatal mothers.
To find the association between views towards breast milk donation and selected socio-demographic variables.

Methods:
A descriptive cross-sectional study will be conducted among postnatal mothers admitted in selected hospitals. A sample of 200 mothers will be selected using a convenient sampling technique. Data will be collected using a structured questionnaire consisting of socio-demographic variables, a knowledge and perception scale, and a checklist on perceived consequences of breast milk donation. Data will be analysed using descriptive and inferential statistics.

Results:
The findings revealed that the majority of participants, 142 (71.0%), had a moderately favourable view towards breast milk donation. A smaller proportion, 47 (23.5%), exhibited an unfavourable view, while only 11 (5.5%) demonstrated a favourable view. These findings indicate that although most mothers are not completely opposed to breast milk donation, very few possess a strongly positive attitude. Majority of participants, 187 (93.5%), perceived negative consequences related to breast milk donation. Only 13 (6.5%) reported moderate perceived consequences, and none of the participants (0%) perceived positive consequences.

Conclusion:
Understanding postnatal mothers' views and perceived consequences will help in designing effective educational and awareness programs to promote human milk donation and strengthen human milk banking practices.

Introduction

Human milk banking plays a vital role in improving neonatal health outcomes, especially for preterm and low birth weight infants1,3. Despite its proven benefits, breast milk donation is influenced by mothers' knowledge, cultural beliefs, perceptions, and perceived consequences[7],[10]. Understanding postnatal mothers' views towards donating breast milk is essential to promote human milk banking practices[6]. Postnatal mothers are the primary potential donors; hence, their views, beliefs, and perceived consequences directly influence milk donation practices[7]. Misconceptions, cultural barriers, and lack of knowledge may act as major obstacles in breast milk donation[7],[10]. Studies conducted in developing countries have reported that willingness to donate breast milk ranges between 30% to 60%,

depending on knowledge level, cultural beliefs, and family support[7],[10]. In India, although the number of human milk banks has increased over the past decade, awareness among postnatal mothers remains inconsistent[4],[6].

Operational Definitions

1. Postnatal Mothers: Women who have delivered a baby and are within six weeks after childbirth, admitted in selected hospitals during the period of data collection.
2. Views: Refers to the opinions, attitudes, beliefs, and perceptions of postnatal mothers regarding donating breast milk, measured using a structured Likert scale questionnaire.
3. Consequences: Refers to the perceived outcomes (both positive and negative) of breast milk donation as expressed by postnatal mothers, assessed through a checklist.
4. Breast Milk Donation: The voluntary act of expressing and donating excess breast milk by a lactating mother for use by other infants in need through a human milk bank.
5. Human Milk Banking: A service that collects, screens, processes, stores, and distributes donated human breast milk to infants who are unable to receive milk from their own mothers.

Hypothesis

H1-There is a significant association between knowledge regarding human milk banking and views towards breast milk donation among postnatal mothers.

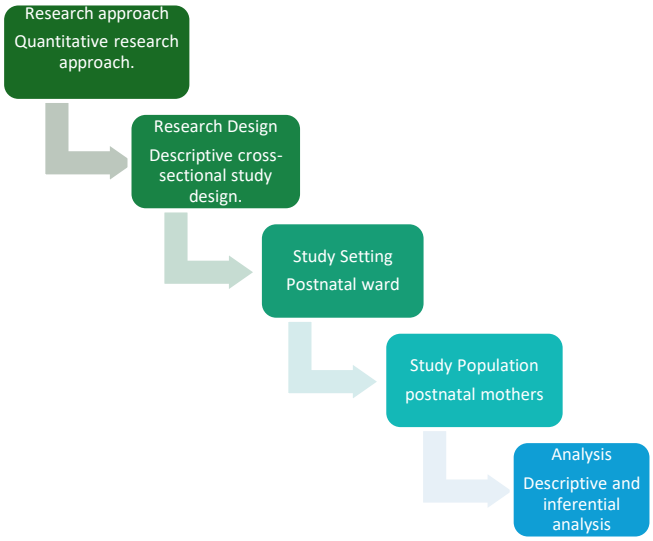
H2-There is a significant association between views towards donating breast milk and selected socio-demographic variables among postnatal mothers.

Research Methodology

1. Research Approach
Quantitative research approach.
2. Research Design
Descriptive cross-sectional study design.
3. Study Setting
Postnatal wards of selected hospitals.
4. Study Population
Postnatal mothers admitted in selected hospitals during the period of data collection.
Sampling technique: Non-probability convenience sampling
Sample size: 200
5 Tools used for the study
Structured questionnaire consisting of:
Section A: Socio-demographic data
Section B: Knowledge regarding human milk banking
Section C: Views/attitude scale towards breast milk donation

After obtaining ethical clearance and informed consent, data was collected using a structured questionnaire.

Figure:1 Flow chart on research methodology



Results:

In this study, among 200 postnatal mothers 103 (51.5%), had adequate knowledge. A considerable proportion, 75 (37.5%), had inadequate knowledge, while only 22 (11.0%) demonstrated moderately adequate knowledge. The findings reveal that the majority of the participants, 142 (71.0%), had a moderately good view towards breast milk donation. A smaller proportion, 47 (23.5%), exhibited an unfavourable view, while only 11 (5.5%) demonstrated a favourable view. The findings show that the majority of the participants, 187 (93.5%), perceived negative consequences. A small proportion, 13 (6.5%), reported moderate perceived consequences. None of the participants (0%) perceived positive consequences.

The association between views towards breast milk donation and selected socio-demographic variables using the Chi-square test. The analysis revealed that education ($\chi^2 = 11.907$, $p = 0.008$) and gestational age ($\chi^2 = 12.854$, $p = 0.002$) had a highly significant association with views towards breast milk donation at the 0.01 level of significance.Sex of the baby ($\chi^2 = 4.425$, $p = 0.035$) was found to have a statistically significant association at the 0.05 level. However, variables such as age ($p = 0.971$), occupation ($p = 0.221$), religion ($p = 0.399$), type of family ($p = 0.537$), parity ($p = 0.183$), mode of delivery ($p = 0.599$), and birth weight ($p = 0.916$) did not show any statistically significant association with views towards breast milk donation, as their p-values were greater than 0.05.

Table-1 Frequency and percentage distribution of Postnatal Mothers according to their views towards donating breast milk to human milk banking

SI No	View	Frequency (n)	Percentage (%)
1	Unfavorable View	11	5.5
2	Moderately favorable	142	71.0
3	Unfavorable	47	23.5
	Total	200	100.0

Table:2 Frequency and percentage distribution of Postnatal Mothers according to their knowledge level regarding human milk banking

SI No	knowledge level	Frequency (n)	Percentage (%)
1	Inadequate	75	37.5
2	Moderately Adequate	22	11.0
3	Adequate	103	51.5
	Total	200	100.0

Table:3 Frequency and percentage distribution of Postnatal Mothers according to their perceived consequences

SI No	Perceived	Frequency (n)	Percentage (%)
1	Negative consequences	187	93.5
2	Moderate consequences	13	6.5
3	Positive consequences	00	0.0
	Total	200	100.0

The table no 3 Presents the frequency and percentage distribution of postnatal mothers according to their perceived consequences towards breast milk donation. The findings show that the majority of the participants, 187 (93.5%), perceived negative consequences. A small proportion, 13 (6.5%), reported moderate perceived consequences. None of the participants (0%) perceived positive consequences. The most postnatal mothers in the present study held negative perceptions regarding the consequences of breast milk donation, highlighting the need for appropriate education and awareness programs to address misconceptions and promote informed decision-making.

Table:4 Association between views towards breast milk donation and selected socio-demographic variables.

Variables	Chi-square value	Df	p-value	Result
Age	0.241	3	.971	NS
Education	11.907	3	0.008	HS
Occupation	3.018	2	0.221	NS
Religion	2.952	3	0.399	NS
Types of family	0.381	1	0.537	NS
Parity	1.773	1	0.183	NS
Mode of delivery	0.277	1	.599	NS
GA	12.854	2	0.002	HS
Birth Weight	0.175	2	0.916	NS
Sex of baby	4.425	1	0.035	S

Discussion

The present study revealed that the majority of participants, 142 (71.0%), had a moderately favorable view towards breast milk donation. A smaller proportion, 47 (23.5%), had an unfavorable view, while only 11 (5.5%) demonstrated a favorable view. The present finding is comparable with the study conducted among 200 parous women in Patiala, Punjab.

The recent Vijayapura study also reinforces the importance of awareness. Only 20.0% of urban mothers and 11.4% of rural mothers reported awareness of milk-bank donation, and previous knowledge of milk donation was a significant predictor of willingness to donate. This finding is highly relevant to the present study because it indicates that knowledge and awareness-building interventions may be important strategies for improving participation in milk donation programmes.

The finding that more than half of the participants had adequate knowledge is encouraging; however, the fact that 37.5% still had inadequate knowledge demonstrates an important educational gap. Adequate general knowledge about breastfeeding may not necessarily translate into adequate knowledge regarding human milk banking, donor selection, safety procedures, eligibility criteria, and the benefits of donor human milk.

The present finding contrasts with the study conducted among parous women in Punjab, where 56.5% had inadequate knowledge and only 43.5% had adequate knowledge regarding human milk banking12. The difference may reflect increasing awareness of human milk banking over time, differences in study setting, educational status of participants, or exposure to breastfeeding counselling.

Conclusion

These findings indicate that education, gestational age, and sex of the baby may influence mothers' views towards breast milk donation, whereas the other selected socio-demographic variables were not found to have a significant association.

Limitations

- The study was limited to selected hospitals, which may restrict generalizability of findings.
- Convenience sampling may introduce sampling bias.
- Self-reported responses may lead to social desirability bias.
- Being a cross-sectional study, causal relationships cannot be established.

- Cultural and religious beliefs influencing responses were not explored in depth qualitatively.

Recommendations

1. Conduct structured awareness programs on human milk banking in antenatal and postnatal wards.
2. Include education about breast milk donation in routine maternal counseling sessions.
3. Develop information booklets and visual aids explaining the safety and screening process.
4. Conduct similar studies with larger sample sizes and in different geographic settings.
5. Undertake qualitative studies to explore cultural and religious beliefs in depth.
6. Evaluate the effectiveness of educational interventions on improving willingness to donate breast milk.

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