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Original Research Article

A STUDY ON KNOWLEDGE, ATTITUDE, AND PRACTICES REGARDING BREAST MILK DONATION AMONG MOTHERS OF BABIES ADMITTED TO A SPECIAL NEWBORN CARE UNIT IN NORTH INDIA

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ABSTRAC

Background: Donor human milk is a critical life-saving intervention for preterm and sick neonates when a mother's own milk is unavailable or insufficient. Despite the establishment of human milk banks, breast milk donation remains underutilized, largely due to gaps in maternal knowledge, attitude, and practices. **Objectives:** To assess the knowledge, attitude, and practices (KAP) regarding breast milk donation among mothers of neonates admitted to the Special Newborn Care Unit (SNCU) and to identify factors associated with willingness to donate breast milk.

Materials and Methods: A hospital-based cross-sectional study was conducted among mothers whose babies were admitted to the SNCU of a district hospital in Tonk, Rajasthan. Data were collected using a pre-tested, structured questionnaire covering socio-demographic variables and KAP domains related to breast milk donation. Data were analyzed using descriptive statistics and inferential tests. A p-value of <0.05 was considered statistically significant.

Results: A total of 150 mothers participated in the study. Awareness that donated breast milk could be used for sick or preterm neonates was observed in 52% of mothers, while only 28% were aware of the existence of human milk banks. A positive attitude toward breast milk donation was noted in 64% of participants; however, actual donation practices were low, with only 12% having donated breast milk previously. Willingness to donate breast milk was significantly associated with higher educational status, multiparity, and prior counseling by healthcare workers ($p<0.05$).

Conclusion: Although most mothers demonstrated a favorable attitude toward breast milk donation, significant gaps persist in knowledge and actual donation practices. Structured counseling and integration of milk donation education into routine SNCU care may enhance donor milk availability and utilization.

Keywords: Breast milk donation; Human milk bank; Knowledge, attitude, practice; SNCU; Neonatal care.

INTRODUCTION

The World Health Organization (WHO) recommends exclusive breastfeeding for the first six months of life, followed by continued breastfeeding along with appropriate complementary feeding.[1] In situations where a mother's own milk is unavailable or insufficient, particularly among preterm, low-birth-weight, and critically ill neonates, pasteurized donor human milk is considered the next best alternative.[2-4] Breast milk is widely recognized as the most suitable source of nutrition for newborns, offering essential nutrients, immune protection, and growth-promoting factors.[3] Evidence suggests that the use of pasteurized donor human milk significantly lowers the risk of necrotizing enterocolitis, sepsis, and other serious morbidities among vulnerable neonates.[5]

Human milk banks (HMBs) have been established in Special Newborn Care Units (SNCUs) to collect, screen, pasteurize, store, and distribute donor milk safely.[6-7] India has witnessed a gradual expansion of human milk banking facilities under national newborn health initiatives; however, utilization remains suboptimal.[7]

Cultural beliefs, misconceptions regarding milk sharing, lack of awareness about milk banking services, fear of infection transmission, and inadequate counseling by healthcare providers act as major barriers to breast milk donation.[8-12] Understanding maternal knowledge, attitudes, and practices regarding breast milk donation is therefore essential for improving donor milk availability.

Objectives

1. To assess the level of knowledge regarding breast milk donation among mothers of babies admitted to the SNCU.
2. To evaluate maternal attitudes toward breast milk donation.
3. To assess practices related to breast milk donation.
4. To identify factors associated with willingness to donate breast milk.

MATERIALS AND METHODS

Study Design and Setting

A hospital-based cross-sectional study was conducted in the Special Newborn Care Unit of a district hospital in Tonk, Rajasthan, from January to December 2024.

Study Population

Mothers of neonates admitted to the SNCU during the study period were included.

Inclusion Criteria

- Mothers who had initiated breastfeeding
- Mothers willing to participate and provide informed consent

Exclusion Criteria

- Mothers who were critically ill
- Mothers with contraindications to breastfeeding
- Mothers who did not give consent

Sample Size

A total of 150 mothers were included using convenience sampling.

Study Tool

Data were collected using a structured, pre-tested questionnaire comprising four sections:

1. Socio-demographic details
2. Knowledge regarding breast milk donation and human milk banks
3. Attitude toward breast milk donation
4. Practices related to breast milk donation

The tool was adapted from previously published KAP studies.[9-10]

Data Collection

Face-to-face interviews were conducted in the local language after obtaining informed consent.

Statistical Analysis

Data were analyzed using descriptive statistics and chi-square tests. A p-value of <0.05 was considered statistically significant.

Ethical Considerations

Ethical approval was obtained from the Institutional Ethics Committee. Confidentiality and anonymity were maintained.

RESULTS

Socio-Demographic Characteristics

The majority of participants were aged 20–30 years (60%), similar to findings reported in other Indian studies.[8-10] Approximately 40% were primiparous, and 30% had attained secondary or higher education.

Table 1: Socio-Demographic Characteristics of Study Participants (N = 150)

Variable	Category	Frequency (n)	Percentage (%)
Age (years)	<20	18	12.0
	20-30	90	60.0
	>30	42	28.0
Parity	Primiparous	60	40.0
	Multiparous	90	60.0
Education	Illiterate	45	30.0
	Primary	60	40.0
	Secondary & above	45	30.0

Knowledge Regarding Breast Milk Donation

Only 52% of mothers were aware that donated breast milk could be given to sick or preterm neonates. Awareness regarding the existence of human milk banks was limited to 28%, and only 10% had knowledge about screening and pasteurization procedures, consistent with previous studies.[9-10]

Attitude Toward Breast Milk Donation

Despite limited knowledge, 64% of mothers demonstrated a positive attitude toward breast milk donation, and 65% believed that milk donation could save neonatal lives. However, concerns regarding hygiene and safety were expressed by 20% of participants, similar to earlier reports.[11-12]

Practices Related to Breast Milk Donation

Only 12% of mothers had previously donated breast milk. However, 58% expressed willingness to donate in the future if adequately counseled, reflecting the commonly observed gap between attitude and practice.[8-12]

Table 2: Knowledge, Attitude, and Practices Regarding Breast Milk Donation (N = 150)

Domain	Variable	Yes n (%)	No n (%)
Knowledge	Aware donor milk can be used for sick/preterm neonates	78 (52.0)	72 (48.0)
Knowledge	Aware of human milk banks	42 (28.0)	108 (72.0)
Knowledge	Knowledge of screening/pasteurization	15 (10.0)	135 (90.0)
Attitude	Positive attitude toward milk donation	96 (64.0)	54 (36.0)
Attitude	Belief that donation saves neonatal lives	98 (65.3)	52 (34.7)
Practice	Previously donated breast milk	18 (12.0)	132 (88.0)
Practice	Willing to donate after counseling	87 (58.0)	63 (42.0)

Factors Associated with Willingness to Donate Breast Milk

Higher educational status, multiparity, and prior counseling by healthcare providers were significantly associated with willingness to donate breast milk, highlighting the importance of maternal education and health-worker involvement.[10-14]

DISCUSSION

The present study demonstrates a significant discrepancy between favorable maternal attitudes and actual practices. Although most mothers recognized the life-saving role of donor human milk, awareness regarding milk banking services and safety procedures remained limited.

Similar findings have been reported across India and other low- and middle-income countries, where lack of counseling and misconceptions were major barriers to milk donation.[8-12] Evidence suggests that structured education and reassurance regarding screening and pasteurization significantly improve donation rates.[13-15]

Integrating breast milk donation counseling into routine antenatal, postnatal, and SNCU care, along with strengthening the visibility of human milk banks, may substantially enhance donor milk availability and neonatal outcomes.[14-15]

Limitations

Being a single-center study, the findings may have limited generalizability. Convenience sampling may have introduced selection bias, and self-reported responses are subject to recall and social desirability bias.

CONCLUSION

Although mothers of babies admitted to the SNCU generally exhibit a positive attitude toward breast milk donation, substantial gaps persist in knowledge and actual donation practices. Incorporating structured counseling on breast milk donation into SNCU care protocols and conducting regular awareness sessions on human milk banks are essential to improve donor milk availability and optimize neonatal outcomes.[11-15]

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