

Evaluation of Mothers' Understanding of Human Milk Banking

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Abstract

a descriptive study to evaluate mothers' understanding of human milk banking. 60 mothers were chosen through the use of purposeful sampling. The investigation was conducted in the postpartum and labor rooms of the Government Medical College and Hospital in Sector 32, Chandigarh. Data was gathered using a self-structured questionnaire. Experts in pediatric medicine, neonatology, and the nursing department validated the tool's reliability ($r = 0.838$). According to the study's results, 48% of mothers had average knowledge, 40% had bad knowledge, and only 12% had strong knowledge. Mothers' educational status was found to be statistically significant in the association between sociodemographic factors and mothers' knowledge. Mothers' level of knowledge was statistically significantly correlated with education, occupation, and family income, but not with age, religion, source of information, or participation ($p < 0.05$).

Keywords: Knowledge, Human milk banking and mothers

Introduction

Background of the study

A child is a unique person who requires constant care in order to survive and grow. They are the main users of medical services. Children make up almost 35% of India's total population. They are regarded as a unique risk category and are not only numerous but also susceptible to a number of health issues. The optimum nutrition for newborns and infants is believed to be breast milk. For the first six months, the WHO advises exclusive breastfeeding; after that, supplemental breastfeeding is advised for at least two years, and thereafter for as long as the mother and child choose [1].

Breast milk It has many immunologic qualities, is easily absorbed by the newborn's digestive system, and effectively guards against respiratory tract infections, gastrointestinal infections, and many allergies. It operates as a laxative for newborns and has bacteriostatic properties against gram-positive bacteria. Regardless of the baby's gestational age, the mother's own milk is the preferred diet for newborns. However, occasionally, especially with sick and immature infants, the mother is unable to continue nursing, necessitating the use of an alternative food. The infant was directly breastfed by a wet nurse in 1800 BC. A nursing mother who breastfeeds another child is known as a wet nurse. Although it may seem taboo in our culture, wet nurses were actually rather common before formulae were developed [2].

Commercially accessible formula or banked human milk are realistic alternatives for babies who cannot be breastfed. The gathering, storing, and processing of human milk provided by nursing mothers for infants other than their own is referred to as "human milk banking." The phrase is occasionally used to describe gathering and storing milk for a mother's own child when the child is momentarily unable to nurse. Many disorders, including prematurity, malabsorption, short-gut syndrome, intractable diarrhea,

nephrotic syndrome, congenital malformations, formula intolerance, failure to grow, and immunological deficiencies, are treated with banked human milk, primarily in neonatal intensive care units (NICUs). In Vienna, Austria, the first human milk was produced in 1909. In 1989, the first human milk bank in Asia was established at Lokmanya Tilak Municipal Hospital. The Deenath Mangehkar Hospital hosted the opening of Pune's first human milk bank. Since then, about 25 human milk banks—the majority of which are in the western states of Maharashtra and Gujarat—have been providing essential services for premature babies in need of temporary intervention in cases of delayed lactation abandonment or illness. These banks have also been life-saving for infants [3]. This is because it is common for women to donate milk for humanitarian reasons.

Need of the study

In 1980, the United Nations Children's Fund and the World Health Organization released a joint statement. Breast milk from another healthy mother is the greatest diet for any infant whose own mother's milk is unavailable. The importance of breastfeeding in maintaining child health and lowering newborn and child mortality is highlighted in the recently published India Report of the World Breast Feeding Trends Initiative 2008. According to SRS 2008, India's infant mortality rate is 55 per 1000 live births, which makes up 72% of the nation's under-five mortality rate.⁷

Breastfeeding is the most crucial intervention to prevent newborn infections, diarrhea, and pneumonia, which cause child deaths in the month after birth until the end of the first year of life. In 2010, the infant mortality rate was 49.13%; in 2011, it was 47.57% per 1000 live births, with males accounting for 46.18% and females for 49.14%. The majority of neonatal and infant mortality in India can be avoided by exclusively breastfeeding for the first six months after delivery and starting breastfeeding within the first hour after birth [4].

According to the American Academy of Paediatrics, premature newborns who are breastfed have significantly outgrown their formula-fed peers in terms of growth and development. Breastfeeding reduces the incidence of numerous ailments in both moms and babies, according to studies. The proper ratio of nutrients included in breast milk helps a baby develop into a robust and healthy toddler. Compared to babies fed formula, breastfed infants and those fed expressed breast milk experience less illnesses.

For healthy growth, nutrition, and the avoidance of infections or other issues that could result in longer-term care, higher costs, or early mortality, it is imperative that individuals who are born prematurely or with low birth weight have access to human breast milk [5].

In order to safeguard, promote, and support the idea and concept of human milk banking and improve the health of newborns, the researcher believed that mothers' understanding of this practice needed to be improved.

Materials and Methods

Research approach and design: Quantitative research and Descriptive research design

Research setting: Labor room and Post natal wards of Hospital in Indore

Sample size and technique: 60 mothers admitted in Labor room and Post natal wards of Hospital, and were selected with Probability sampling technique

Tool for data collection

A self-structured questionnaire was utilized to gather data. Thirty multiple-choice questions with strong,

moderate, and poor knowledge levels made up the instrument. Experts in pediatric medicine, neonatology, and the nursing department validated the tool's reliability ($r = 0.838$).

Results

Table 1:

Table 1: Frequency and percentage distribution of selected socio-demographic variables among mothers. N=60

Socio Demographic Variable	Frequency (f)	Percentage (%)
Age		
<20	4	6.7
21-30	45	75.0
31-40	11	18.3
41-50	0	0.0
Total	60	100.0
Religion		
Hindu	46	76.7
Muslim	3	5.0
Christian	0	0.0
Sikh	11	18.3
Any Other	0	0.0
Total	60	100.0
Source of knowledge		
Relative	5	8.3
Magazines	3	5.0
TV	0	0.0
Internet	2	3.3
Newborn	20	33.3
Hospitalization No	30	50.0
Total	60	100.0
Participation in training programmer		
Yes	2	3.3
No	58	96.7
Total	60	100.0
Education		
Uneducated	7	11.7
Elementary	13	21.7
Secondary	22	36.7
Higher	18	30.0
Total	60	100.0

Table 1 shows that of the 60 women, 75.0% were between the ages of 21 and 30, 76.7% were Hindu, 50.0% had no source of information, and 33.3% had information because their newborn had been hospitalized. 96.7% of the 60 mothers did not participate. 11.7% of moms lacked formal education. 30.0% had higher education, while 21.7% had only completed secondary school. Of the 60 mothers, 88.3% were homemakers and 86.7% had family incomes over \$2000.

Fig 1:

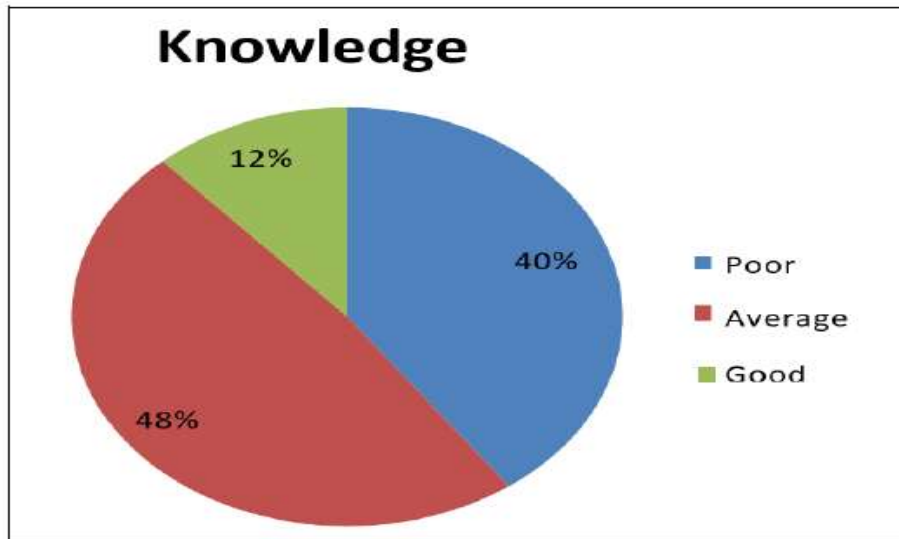


Fig 1: Level of knowledge among mothers.

Association between socio demographic variables and level of knowledge

Table 2:

Table 2: Association between socio demographic variables and level of knowledge

Age	Knowledge			Total	Fisher's Exact Test
	Poor	Average	Good		
<20	1	3	0	4	5.648 p=.187
	25.0%	75.0%	0.0%	100.0%	
21-30	16	24	5	45	
	35.6%	53.3%	11.1%	100.0%	
31-40	7	2	2	11	
	63.6%	18.2%	18.2%	100.0%	
Total	24	29	7	60	
	40.0%	48.3%	11.7%	100.0%	
Religion	Knowledge			Total	Fisher's Exact Test
	Poor	Average	Good		
Hindu	18	23	5	46	2.129 p=.718
	39.1%	50.0%	10.9%	100.0%	
Muslim	1	1	1	3	
	33.3%	33.3%	33.3%	100.0%	
Sikh	5	5	1	11	
	45.5%	45.5%	9.1%	100.0%	
Total	24	29	7	60	
	40.0%	48.3%	11.7%	100.0%	
Source of knowledge	Knowledge			Total	Fisher's Exact Test
	Poor	Average	Good		
Relative	3	2	0	5	10.733 p=0.136
	60.0%	40.0%	0.0%	100.0%	
Magazines	1	1	1	3	
	33.3%	33.3%	33.3%	100.0%	
Internet	1	1	0	2	
	50.0%	50.0%	0.0%	100.0%	
Newborn hospitalisation	4	11	5	20	
	20.0%	55.0%	25.0%	100.0%	
No	15	14	1	30	

	50.0%	46.7%	3.3%	100.0%	
	24	29	7	60	
Total	40.0%	48.3%	11.7%	100.0%	
Participation		Knowledge		Total	Fisher's Exact Test
	Poor	Average	Good		
Yes	1	1	0	2	.664 p=1.000
	50.0%	50.0%	0.0%	100.0%	
No	23	28	7	58	
	39.7%	48.3%	12.1%	100.0%	
Total	24	29	7	60	
	40.0%	48.3%	11.7%	100.0%	
		Knowledge			Fisher's Exact Test
Education	Poor	Average	Good	Total	
Uneducated	0	2	5	7	28.099 p=.0001
	0.0%	28.6%	71.4%	100.0%	
Elementary	1	11	1	13	
	7.7%	84.6%	7.7%	100.0%	
Secondary	12	10	0	22	
	54.5%	45.5%	0.0%	100.0%	
Higher	11	6	1	18	
	61.1%	33.3%	5.6%	100.0%	
Total	24	29	7	60	
	40.0%	48.3%	11.7%	100.0%	
Occupation		Knowledge		Total	Fisher's Exact Test
	Poor	Average	Good		
Housewife	19	27	7	53	5.159 p=.551
	35.8%	50.9%	13.2%	100.0%	
Self-employed	2	0	0	2	
	100.0%	0.0%	0.0%	100.0%	
Govt. employed	1	0	0	1	
	100.0%	0.0%	0.0%	100.0%	
Private	2	2	0	4	
	50.0%	50.0%	0.0%	100.0%	
Total	24	29	7	60	
	40.0%	48.3%	11.7%	100.0%	
Family income		Knowledge		Total	Fisher's Exact Test
	Poor	Average	Good		
>2000	22	24	6	52	3.569 p=.837
	42.3%	46.2%	11.5%	100.0%	
1000-1999	1	2	1	4	
	25.0%	50.0%	25.0%	100.0%	
750-999	1	2	0	3	
	33.3%	66.7%	0.0%	100.0%	
<750	0	1	0	1	
	0.0%	100.0%	0.0%	100.0%	
Total	24	29	7	60	
	40.0%	48.3%	11.7%	100.0%	

Table 2 shows that while the relationship between mothers' level of knowledge and education, occupation, and family income was statistically significant, the relationship between mothers' level of knowledge and age, religion, source of knowledge, and participation was not statistically significant ($p < 0.05$).

Discussion

The study's responses showed that just 12% had strong knowledge, 40% had low knowledge, and 48% had average knowledge. Mothers' educational status was found to be statistically significant in the association between sociodemographic factors and mothers' knowledge. A study by Can Seyda [2018]

[12] that evaluated mothers' awareness of wet nursery and breast milk banking provides support for the current investigation. According to the results, 44.9% of mothers said they did not trust Milk Bank services, and 73.2% of mothers were unaware of breast milk banking.

because their understanding of breast milk banking was inadequate. Ghuge S. [2018] [11] studied postpartum mothers at a particular hospital to determine their views and knowledge about giving milk to the Human Milk Banking. The findings demonstrated that postpartum mothers had sufficient knowledge. Of the sample, 21.67% had a decent level of knowledge score and 78.33% had an exceptional level.

Yilmaz M, Aykut M, Sahin H et al. [2018] [10] conducted a study to assess knowledge, attitude, and practices about Wet-Nursing & Human Milk Banking in Kayseri, Turkey. The results showed that 93.6% of mothers had not heard about milk banking and 97.2% did not know its purpose and services. Rajeesh C. H, Sahana K.S, and Prakash R.M. Saldanha [2018] [9] conducted a study to determine whether or not postpartum mothers in YMCH Hospital.

A study was carried out by Kenechukwu K. Ikenna K. Isaac N. et al. [2018] [13] to evaluate the knowledge, acceptance, and willingness to give breast milk. 59.1% of mothers strongly felt that human milk banking would benefit those in need, despite the fact that 84.8% of moms would not give their kid human milk. Melwani V, Sethia S, Bansal M, et al. [2018] [8] carried out a cross-sectional study on antenatal and postnatal women's willingness to willingly take part in Breast Milk Bank activities at three Bhopal hospitals. The findings indicated that 10% of study participants were aware that breast milk existed, whereas 85.4% and 84.9% of them were eager to accept and donate the milk, respectively.

Alemu Mezemr [2016] [15] carried out a study to evaluate nursing mothers' and health professionals' attitudes and knowledge regarding pasteurized donor human milk banking. The majority of study mothers (95%) were unaware that donor human milk existed, and only five percent had heard of it. A cross-sectional study on the viewpoints of mothers in a Muslim nation about human milk banking and milk kinship was carried out by Karadag Ahmet, Ozdemir Ramazan, Ak Muharrem, et al. [2015] [16]. According to the results, 44.2% of the moms said they would donate their breast milk, 31.9% approved of getting milk, and 42.4% opposed the services provided by the human milk bank.

A study was carried out by Gurol A, Ozkan H, Celebioglu A et al. [2014] [19] to evaluate opinions and knowledge of mother's milk banking. According to the results, 90.6% of respondents said they had never heard of breast milk banking before, 64.0% said they could donate their milk, and 36.3% said it was a religious issue. A study was carried out by Eksioglu Aysun [2014] [18] to evaluate attitudes and knowledge regarding human milk banking. The findings revealed that 68.8% of the moms were eager to donate breast milk, 71.3% were willing to receive milk bank services, and 41.6% were aware of milk banking.

Conclusion

Few moms had strong understanding about human milk banking, whereas the majority had poor to mediocre knowledge. Mothers' level of knowledge was statistically significantly correlated with education, occupation, and family income, but not with age, religion, source of information, or participation ($p < 0.05$).

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