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Assessment of knowledge regarding Human Milk Banking among mothers

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Abstract
A descriptive study to assess the knowledge regarding Human Milk Banking among mothers. Purposive sampling was used to select 60 mothers. Setting of study was in Labor room and Post natal wards of Government Medical College and Hospital, Sector 32 Chandigarh. A self structured questionnaire was used for data collection. The tool was found reliable with r =0.838 and validated by the experts in the field of Pediatric Medicine, Neonatologists and Nursing Department.
According to responses in the study that level of knowledge among mother was found to be that 48% had average knowledge, 40% had poor knowledge & only 12% had good knowledge. The relationship between socio-demographic variables and knowledge of mothers showed that the mother's educational status was statistically significant.
The association of level of knowledge among mothers with age, religion, source of knowledge and participation was not statistically significant as $p< 0.05$ whereas the association of level of knowledge among mothers with education, occupation and family income was statistically significant.

Keywords: Knowledge, Human milk banking and mothers

Introduction

Background of the study

A child is an individual who always need special care to survive and thrive. They are the major consumers of health care. In India, about 35% of total population are children. They are not only large in number but also vulnerable to various health problems and considered as special risk group Breast milk is thought to be best form of nutrition for neonates and infants. WHO recommends exclusive breast feeding for the first six months, supplemented breast feeding is recommended until at least two years and then as long as the mother and child wishes [1].
Breast milk it is easily digestible by the newborns intestine, offers a variety of immunologic properties, effective in protecting the baby from respiratory tract infection gastrointestinal infections and numerous allergies. It has got bacteriostatic functions against gram positive bacteria and also acts as a laxative agent in neonates. The preferred food for newborn infant is the mother‟s own milk irrespective of baby‟s gestational age but sometimes particularly in the case of sick and immature infants, the mother is unable to maintain her lactation and an alternative food is required. In 1800 BC the infant have been directly breastfeed by wet nurse. A wet nurse is a lactating woman who breast feeds another baby. While this may seem to be ataboo in our culture wet nurse was actually popular until the invention of formulas [2].
The practical alternative diet for baby who are unable to breast feed are banked human milk or commercially available formula. The term human milk banking refers to the collection, storage and processing of human milk donated by lactating mothers for infants other than their own. The term sometimes applied to the collection and storage of milk for a mothers own infant when the infant is temporarily unable to suckled. Banked human milk is used for the treatment of many conditions (mainly in Neonatal Intensive Care Units: NICUs): prematurity, malabsorption, short-gut syndrome, intractable diarrhoea, nephrotic syndrome, congenital anomalies, formula intolerance, failure to thrive, immune deficiencies. The world‟s first human milk was established in 1909, in Vienna, Austria. Asia‟s first human milk bank was set up at Lokmanya Tilak Muncipal Hospital in 1989. The first human milk bank in Pune city was inaugurated in the Deenath Mangehkar Hospital. Human milk are crucial for India because the practice of women donating milk on humanitarian grounds is common, since then some 25 human milk banks across India – most of were located in the western states of Maharashtra and Gujarat have been

performing vital services for premature babies requiring temporary intervention in cases of delayed lactation abandonment or illness, these banks also been a life savers for infants [3].

Need of the study

According to a joint statement by the World Health Organization and United Nations Children's Fund in 1980. The best food for any baby whose own mother's milk is not available is the breast milk of another healthy mother. The recently released India Report of World Breast Feeding Trends Initiative 2008 highlights the role of breast feeding in ensuring child health and reducing infant and child mortality. India has an infant mortality rate of 55 per 1000 live births (SRS 2008) which accounts for 72 per cent of the country‟s under-five mortality rate.[7] In 2010 the infant mortality rate was 49.13% and in 2011 it is 47.57% per 1000 live birth in that males is 46.18% and females is 49.14%.Breast feeding is the most important intervention to prevent newborn infections, diarrhoea and pneumonia, which cause child deaths in the month after birth till the end of the first year of life. Initial breast feeding in the first hour after birth and exclusive breast feeding in the first six months after birth can go a long way in preventing most neonatal and infant deaths in India [4].

The American Academy of Paediatrics states that breastfeed premature babies have shown significant growth and progress beyond that of formula feed counterparts. Studies have proven that breastfeeding lowers the risk of many illnesses in babies and mothers. Breast milk provides the right balance of nutrients to help an infant grow into a strong and healthy toddler. Breastfeed infants and those who are fed expressed breast milk has fewer illness than babies fed with formula. However, it is crucial that those who are born preterm or with low birth weight have access to human breast milk for proper growth, nutrition and the prevention of infectious or other complications that may lead to longer term care, cost or premature death [5].

Therefore the researcher felt that there is a need to improve the mothers‟ knowledge regarding human milk banking in order to protect, promote and support the idea and concept of human milk banking, thereby enhancing the healthier life of infants.

Materials and Methods

Research approach and design: Quantitative research and Descriptive research design.

Research setting: Labor room and Post natal wards of Government Medical College and Hospital, Sector 32 Chandigarh.

Sample size and technique: 60 mothers admitted in Labor room and Post natal wards of Government Medical College and Hospital, Sector 32 Chandigarh and were selected with Probability sampling technique.

Tool for data collection

For collection of data, self structured questionnaire was used for data collection. The tool consisted of 30 multiple choice questions with level of knowledge categorized as good, average and poor. The tool was found reliable with r =0.838 and validated by the experts in the field of Pediatric Medicine, Neonatologists and Nursing Department.

Results

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 Depicts out of 60 mothers 75.0% mothers were from age group 21-30 years, 76.7% mothers belongs to Hindu religion, 50.0% had no source of knowledge and 33.3% had knowledge due to newborn hospitalization. Out of 60 mothers 96.7% mothers had no participation. 11.7% mothers were uneducated 21.7% studied till secondary and 30.0% had studied higher. Out of 60 mothers 88.3% were housewife 86.7% mothers had family income > 2000.

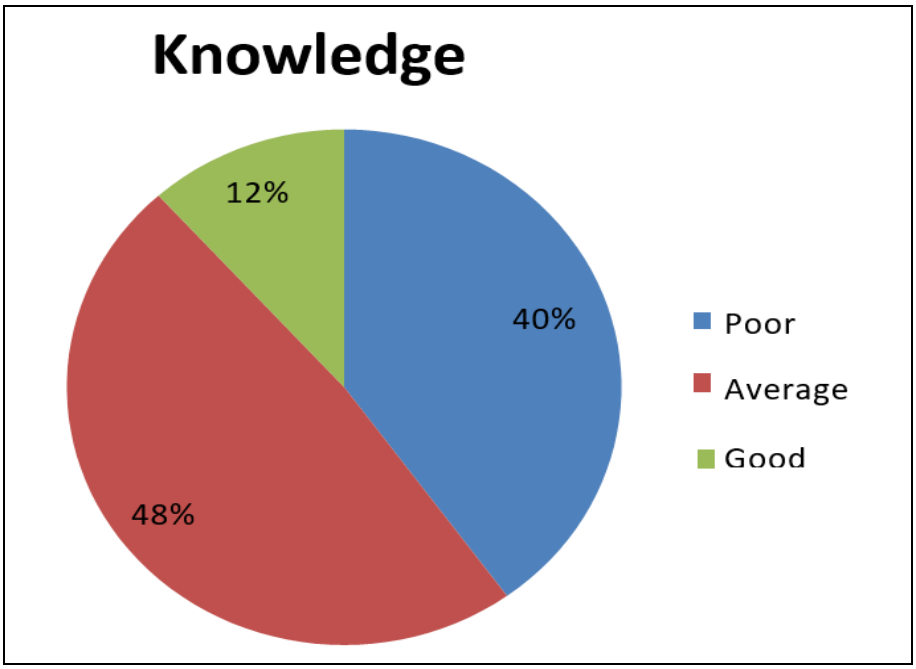

Fig 1: Level of knowledge among mothers.

Figure 1 Depicts that 48% mothers had average knowledge, 40% had poor knowledge and only 12% had good knowledge.

Association between socio demographic variables and level of knowledge

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%	
Total	24	29	7	60	
	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: depicts that the association of level of knowledge among mothers with age, religion, source of knowledge and participation was not statistically significant as $p< 0.05$ whereas the association of level of knowledge among mothers with education, occupation and family income was statistically significant.

Discussion

According to the response in the study 48% had average knowledge, 40% had poor knowledge & only 12% had good knowledge. The relationship between socio- demographic variables and knowledge of mothers showed that the mother's educational status was statistically significant.

The present study is supported by a study conducted by Can Seyda [2018] [12] to assess the knowledge of mother regarding Wet Nursery & Breast Milk Banking. Result showed that 73.2% mothers did not know about Breast Milk banking & 44.9% stated that they did not trust on Milk Bank services.

Because they had insufficient knowledge about breast milk banking.

Ghuge S. [2018] [11] conducted a study to assess the knowledge & attitudes regarding donating milk to the Human Milk Banking among postnatal mothers of selected hospital. Results showed that postnatal mothers was having adequate knowledge. 78.33% of the sample had excellent level of knowledge score & 21.67% had good level of knowledge score.

Rajeesha C. H, Sahana K.S, Prakash R.M. Saldanha [2018] [9] conducted a study to assess the knowledge & attitude of post natal lactating mothers regarding Human Milk donation in YMCH Hospital. Result showed that majority of mother neither willing to donate their or accept. Only 6.7% mothers had heard about human milk banks and 17.3% thought that human milk bank services required.

Yilmaz M, Aykut M, Sahin H *et al*. [2018] [10] conducted a study to assess knowledge, attitude & practices about Wet-Nursing & Human Milk Banking in Kayseri, Turkey. Result showed that 93.6% stated that they had not heard about milk banking, whereas 97.2% didn"t know its purpose & services.

Kenechukwu K. Ikenna K. Issac N. *et al*. [2018] [13] conducted a study to assess the knowledge, acceptability & wil ingness to donate breast milk. Result showed that 84.8% of mothers wouldn‟t give their child human milk; however 59.1% strongly agreed that human milk banking would help assist in need.

Melwani V, Sethia S, Bansal M *et al*. [2018] [8] conducted a cross-sectional study on acceptance to voluntarily participate in Breast Milk Bank activities amongst Antenatal & Postnatal Women in Three Hospitals of Bhopal. Result showed that knowledge about existence of breast milk was 10% while willingness to accept the milk was 85.4% & to donate was 84.9% in study participants.

Mezemr Alemu [2016] [15] conducted a study to assess the knowledge & attitude of lactating mothers & health professions towards pasteurized donor human milk banking. Result showed that majority (95%) of study mothers didn‟t know the existence of donor human milk & only (5%) heard about its existence.

Karadag Ahmet, Ozdemir Ramazan, Ak Muharrem *et al*. [2015] [16] conducted a cross-sectional study on Human Milk Banking & milk kinship; perspectives of mothers in a Muslim country. Result showed that 44.2% of the mothers stated that they would donate their breast milk, 31.9% of the mothers approved for obtaining milk & 42.4% were against the human milk bank services.

Gurol A, Ozkan H, Celebioglu A *et al*. [2014] [19] conducted a study to assess the knowledge & views regarding mother‟s milk banking. Result showed that 90.6% stated that they hadn‟t previously heard anything about breast milk banking, 64.0% stated that they could donate their milk, 36.3% stated it constituted a problem from a religious aspect.

Eksioglu Aysun [2014] [18] conducted a study to assess the knowledge & views towards human milk banking. Result showed that the mothers 41.6% were aware of milk banking, 71.3% were willing to receive milk bank services & 68.8% were willing to donate breast milk.

Conclusion

Majority of mothers have poor to average knowledge where as only few had good knowledge regarding Human milk banking**.** The association of level of knowledge among mothers with age, religion, source of knowledge and participation was not statistically significant as $p< 0.05$ whereas the association of level of knowledge among mothers with education, occupation and family income was statistically significant.

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