

A Study on Human Milk Bank A New Initiation in Kerala

Tess Jacob¹, Sony Vijayan²

¹M. Phil. Scholar, ²Associate Professor, Department of Commerce and Management, Amrita School of Arts and Science, Kochi

Abstract

In India, where 40 out of every 1000 infants die before the age of 5 because of various reasons. In infant mortality rate, our nation remains highest in the world, followed by China. However, India is making good progress in reducing the infant deaths through a number of Government initiatives. One among those is human milk bank. Human milk is the only lifesaving, nutritious food that can keep an infant alive and healthy. Similar to the activities of a blood bank a breast milk bank works on to receive and supply donated breast milk to pre-term babies. Health experts call donated breast milk as 'liquid gold' and consider it as a boon for babies with poor health and a weak immune system. The number of milk banks are very less in India, when it is compared with the population growth rate. Human milk bank is totally a new initiative for Keralites. This study is focused to find out the significance of human milk bank and its level of awareness among nursing mothers in Kerala. It is also attempted by means of this study to find out whether they are ready to accept the novel public welfare concept.

Key words: *Infant mortality, Human Milk Bank, Liquid Gold, Nursing Mothers.*

Introduction

A mother is a female parent, who brought forth a kid. The human milk must be given to those kids who are undermined or in vulnerable condition of wellbeing due to their nourishment and body needs. Getting the most ideal beginning in the life is the inheritance of every single new-conceived infant. The animal milk or formula milk is not appropriate for a large portion of the human children and results in different wellbeing dangers. Here, comes the significance of a Donor Milk Bank. World Health Organization (WHO) expresses that the primary option in contrast to a natural mother not having the option to bosom feed is the utilization of human milk from different sources. A human milk bank helps those nursing mothers who not able to feed

their new born babies. The ideal nourishment for new-conceived new-born child is breast feeding, if possible for the principal year. Human milk banks offer a solution for the moms who cannot supply their very own bosom milk, for various reasons.

Milk banking is prepared contrastingly in various nations around the globe. Brazil is broadly recognized to have the broadest framework with numerous exercises for other people. France is the only country where Human milk banks are governed along with blood banks. In numerous nations, milk banking is still very constrained by absence of political will, because of strict religious concerns, and on account of moms' medical problems. In India, the first milk bank was set up in 1989, in Mumbai. Presently, just 50 milk banks are effectively working on the whole around the country. The idea of human milk bank is very new to Kerala. Now only the Indian Medical Association (IMA) alongside Rotary Club have proposed the making of milk banks at General hospital, Kochi and Jubilee hospital, Trissur in august, 2019.

Corresponding Author:

Tess Jacob,

M. Phil. Scholar, Dept. of Commerce and Management,
Amrita School of Arts and Science, Kochi.

Designation: M. Phil Scholar, Ullattikunnel House,
Kanakkary P.O., Kottayam, 686632.

Mail Id: tessjacob1988@gmail.com

Mobile: + 91 9048203069

Statement of the Problem

Human Milk Banking is a significant medico -social

activity to the extent eventual fate of human race is concerned. Although, human milk banking flourishes in different nations, it is as yet not broadly acknowledged in India. At present there are no laws overseeing human milk banks in India. There is requirement for government and approach creators to outline rules, guidelines, and legislations in order to secure the privileges of mother and kid. Only a limited research has been directed about the human milk bank and about its social viewpoints. The purpose of this investigation is to evaluate the mothers' perceptions about human milk bank and whether they are ready to accept and donate human milk. Hence, the problem is stated as,

Nursing mothers perspective on human milk bank a new initiation in Kerala.

Objectives

1. To analyse the awareness level of human milk bank in Kerala among nursing mothers.
2. To study whether mothers are willing to donate their milk to human milk bank.
3. To find out whether mothers are ready to accept milk from human milk bank.
4. To identify the significance of human milk bank a public welfare initiative of the state.

Research Methodology

A descriptive study has been used for this research. Out of 12 Government Medical Collages in Kerala the researcher has selected three from among which are Kozhikode, Ernakulum, Thiruvananthapuram, total 150 samples, 50 from each on purposive sampling method. Structured questionnaire has been used for collecting primary data and distributed among nursing mothers. Statistical package for social sciences (SPSS) is used for analysis part. One- way ANOVA was used to measure the awareness level of mothers with that of their demographic factors. While secondary data has collected from various journals, articles and different websites.

Hypothesis

1. H₀: There is no significant association between demographic factors and awareness level of human milk

bank.

2. H₀: There is no significant association between the attitude of nursing mothers and human milk donation.

Review of Literature

Meghwal looked into the essential qualities of givers and beneficiaries, and the sums and defilement of bosom milk gave at the human milk bank from a tertiary consideration emergency clinic in south Rajasthan. The contributor pool comprised of 3117 moms. The exploration infers that the human milk bank serve a crucial capacity by giving human milk to untimely new-born children, hospitalized babies and other people who, for assortment of reasons, would some way or another not approach moms' milk. The utilization of contributor milk is generally supported. Also, building up an across the country system of human milk banking and effectively incorporating human milk banking administrations with new conceived consideration will additionally add to the advancement of milk banking and decreasing preventable new conceived passing. ⁽¹²⁾

Sangeeta explains the importance of health and good nutrition. The researcher explained about the knowledge and attitude regarding donating milk to human milk bank. For the purpose, a descriptive study is conducted among the selected hospitals. Total 60 samples were selected through non probability sampling convenience method. The result showed that there were no significant association between demographic variables. It also indicates that postnatal mothers have adequate knowledge and have a positive attitude towards donating human milk to milk bank. ⁽²⁾

Jahan aimed to increase the awareness level about human milk bank among mothers in developing countries. Human milk bank is well accepted and well known in developed countries. In this study a face to face interaction method is used to collect data about the knowledge and attitude. The discussion results explained that human milk bank is a solution to the mothers who are not able to feed their infants because of maternal illness or insufficient milk supply. Scientific studies and research reviews proved that donor milk is more preferable than infant formula. The researcher concludes with a wide scope for further research in this topic because only limited data is available about human

milk bank and its awareness. (3)

Yadav explored that getting the most ideal beginning in life is the privilege of each new conceived. The decision of encouraging is immediate at moms' bosom, on the off chance that impractical, at that point communicated mother's own milk, at that point gave crisp milk and in conclusion creature milk. The unregulated and uncontrolled utilization of creature or recipe milk proceeds in our general public imperilling wellbeing of things to come age. In India, weight of low birth weight babies in different medical clinics is about 30% to 40%. Human milk banks are principally focussed to give benefactor milk to high chance new-borns. At present there are no laws overseeing human milk banks in India. There is requirement for government and strategy creators to outline rules, enactment, leads in order to ensure the privileges of mother and kid. Human milk banking is a significant medicinal social activity to the extent fate of human race is concerned. Thus, government, wellbeing specialists and common society hold hands to engender idea of human milk banking for purpose of thousands of low birth weight and preterm babies. (4)

Cristina clarified about the current proof of the advantages and normal concerns getting from the utilization of contributor human milk in preterm babies. The remark additionally traces the hole in information

and gives proposals for training and recommendations for future research headings. Nearness of human milk bank doesn't diminish bosom nourishing rates at release, yet diminishes the utilization of recipe during the principal long stretches of life. Giver human milk ought to be given from a built up human milk bank, which pursues explicit security rules. Future research should concentrate on the improvement of milk preparing in human milk bank, especially of warmth treatment; on advancement of human milk fortress; and on future assessment of the potential clinical advantages of handled and invigorated contributor human milk. (7)

Mackenzie investigated mothers' information on and attitudes toward human milk banks to advice the advancement regarding human milk banking approaches and rules in South Australia should a milk bank be set up. The researcher has conducted a semi structured interview among 12 mothers who are pre- term or sick babies. The result shows that both breast feeding and potential mothers, unanimously supports to donating their milk to milk bank because the process of donating milk is easy and it is not time consuming. In addition to that mothers of pre mature babies are ready to accept donor milk from bank if they are assured the milk is safe and healthy. The mothers' in South Australia would welcome having access for both donating and receiving milk from donor milk bank. (6)

Analysis and Interpretation

1 One Way ANOVA					
1.1. Age of the respondent and awareness level					
Table No. 1					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	6.502	4	1.626	2.972	.021
Within Groups	79.868	146	.547		
Total	86.371	150			

Interpretation

The result of the above table reveals that F value is (2.972) is significant at (.021, p<0.05). So we reject the null hypothesis and accept the alternative hypothesis. Hence, there is significant association between the awareness levels of human milk bank with that of the age of the respondents.

1.2. Educational qualification and awareness level**Table No. 2**

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2.954	4	.738	2.709	.032
Within Groups	39.801	146	.273		
Total	42.755	150			

Interpretation

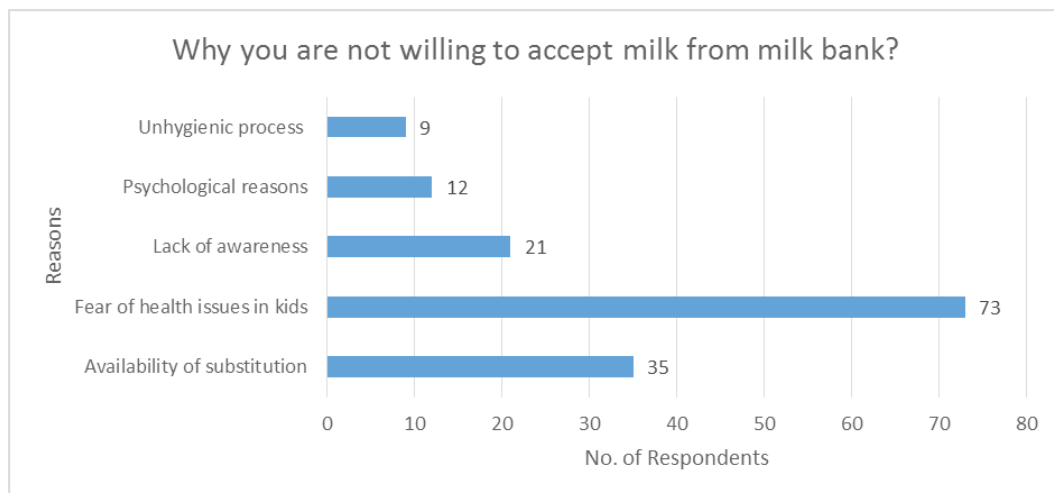
The result of the above table reveals that F value is (2.709) is significant at (.032, $p < 0.05$). So we reject the null hypothesis and accept the alternative hypothesis. Hence, there is a significant association between the awareness levels of human milk bank with that of the educational qualification of the respondents.

1.3. Attitude of mothers and human milk donation**Table No.3**

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	9.107	5	1.821	10.014	.000
Within Groups	26.376	145	.182		
Total	35.483	150			

Interpretation

The result of the above table reveals that F value is (10.014) is significant at (.000, $p < 0.05$). So we reject the null hypothesis and accept the alternative hypothesis. Hence, there is significant association between the attitudes of mothers with acceptance of milk from milk bank.

3. Reason for not accepting milk from milk bank**Figure No - 1**

Interpretation

In the above chart, it is evident that 49% of the respondents are not ready to accept milk from milk bank because fear of health issues in kids. 23% says that availability of substitution, 14% says that lack of awareness, 8% says that psychological reasons and 6 % says that unhygienic process is the reason for not accepting milk from human milk bank.

4. Reason for not donating milk to milk bank

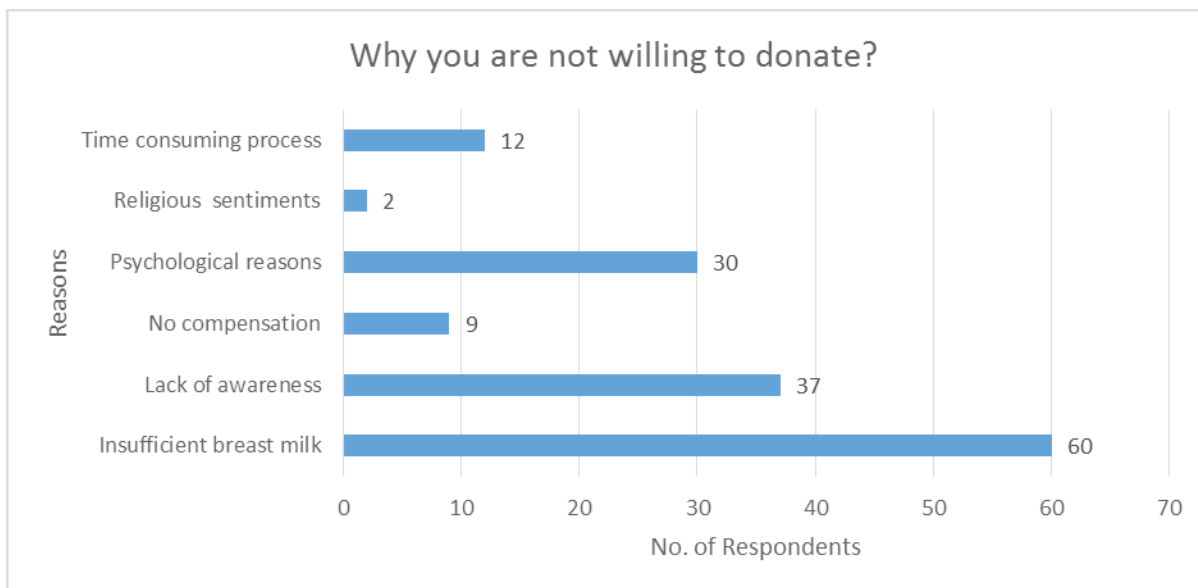


Figure No - 2

Interpretation

In the above figure, it is clear that 40 % of the mothers have insufficient milk to feed their own babies. 25% says lack of awareness, 20% says psychological reasons, 8 % says it is a time consuming process, 6% says no compensation for providing milk and only 1 % says religious sentiments for not donating milk to human milk bank.

Findings

Ø From the study it is found that most of the mothers belongs to the age group of 26-30 (48.2%) and followed by 31-35 (33.9%).

Ø Majority of the respondents (51.3%) belongs to the U.G. degree on education qualification and followed by P.G. degree (23.4%).

Ø Most of the mothers (63.1%) have single child and followed by 2 kids (30.3%).

Ø Mothers prefer to use formula milk (60.8%), if there is insufficient breast milk, the second preference is for animal milk (29.4%) and only few prefer donor’s milk.

Ø From this work it is found that majority of the respondents (41.1%) are fully unaware about human milk bank and only (23.2 %) are partially aware about human milk bank.

Ø Most of the mothers (62.5%) are not ready to donate their milk to human milk bank.

Ø Almost all the mothers (40%) are facing a problem of insufficiency of milk to feed their own babies.

Ø Majority of the respondents (53.6%) have the opinion that accepting human milk from milk bank is not practical and effective.

Ø Fear of health issues in kids (48.6%) is the initial reason for not accepting human milk from milk bank and

followed by availability of substitution (23.3%).

Ø Few of the mothers have mentioned that human milk bank is slightly important (39.2%).

Suggestions

Ø Government should grant subsidies to hospitals other than medical colleges for the initiation of human milk bank.

Ø There is no proper regulation and act in this regard, so authorities can take some initiative to make regulations.

Ø There is no compensation for donating milk to milk bank, if it is paid one few may come forward to provide milk to milk bank.

Ø Authorities should give advises to mothers for healthy diet plan during the time of gestation period itself, to get sufficient breast milk after delivery.

Ø Wide range of promotion program is necessary to get familiarity about human milk bank.

Ø Awareness programmes are essential about the benefits of human milk bank to get donors and to avoid fear of receiving milk from milk bank.

Conclusion

In India, bosom milk donation is a rising idea and has been started in certain urban communities the nation over. Human milk banks assume a significant job in protecting another new born life. Instead of feeding directly, the bosom milk is gathered by milk banks and kept sterilized. The milk experiences the procedure of pasteurization and is put away in low temperatures. There is appropriate screening and appraisal of the mother before the milk is gathered. By doing so, the procedure of assortment and appropriation is safe and hygiene. However many are unaware about the process and the benefits of human milk bank. The study showed that mothers will prefer to use formula milk as substitution in case of insufficiency of milk. Fear of health issue is the main reason for not accepting donor's milk from milk bank. Mothers' are not willing to donate milk to milk bank because many are facing the problem, lack of breast milk. The study found that there is a significant association between the awareness level

and the demographic factors and also found that there is association between the attitude of nursing mothers and milk donation to milk bank.

The milk bank is a proven solution for spare the lives of the most delicate new-born against dangerous ailment and genuine diseases identified with pre-term birth. Therefore all nursing mothers should attempt to contribute their bit in this initiation to save lives. One's donated breast milk can help a little one to lead a healthy and longer life.

Ethical Clearance: No other organisation are pointed out in this research paper.

Source of Funding: Self

Conflicts of Interest: Nil

References

1. Nangia S, Sachdeva RC, Sabharwal V. Human milk banking: An Indian experience. *Neoreviews*. 2018 Apr 1; 19(4):e201-10.
2. Sangeeta Ghuge, Jayabala Aghamkar, Rupali Salvi. A Study to assess the knowledge and attitude regarding donating milk to the human milk bank among postnatal mothers of selected hospitals. 2018. *International Journal of Applied Research*. ISSN: 2394-7500.
3. Jahan Y, Rahman SA, Chowdhury AS, Chowdhury S, Rahman MM. Mothers' Knowledge and Attitudes toward Breast Milk Banking in Developing Countries. *Annals of Pregnancy and Care*. 2017; 1(1):1002.
4. Yadav B, Tiwari S. Human milk banking: Indian Perspective. *Int J Gastroenterol Hepatol Transplant Nutr*. 2016; 3:1-4.
5. Toon E. The Machinery of Authoritarian Care: Dramatising Breast Cancer Treatment in 1970s Britain. *Social History of Medicine*. 2014 Aug 1; 27(3):557-76.
6. Mackenzie C, Javanparast S, Newman L. Mothers' knowledge of and attitudes toward human milk banking in South Australia: a qualitative study. *Journal of human lactation*. 2013 May; 29(2):222-9.
7. Arslanoglu S, Corpeleijn W, Moro G, Braegger C, Campoy C, Colomb V, Decsi T, Domellöf M, Fewtrell M, Hojsak I, Mihatsch W. Donor

- human milk for preterm infants: current evidence and research directions. *Journal of pediatric gastroenterology and nutrition*. 2013 Oct 1; 57(4):535-42.
8. McCallie KR, Lee HC, Mayer O, Cohen RS, Hintz SR, Rhine WD. Improved outcomes with a standardized feeding protocol for very low birth weight infants. *Journal of perinatology*. 2011 Apr; 31(1):S61-7.
 9. Lording RJ. A review of human milk banking and public health policy in Australia. *Breastfeeding Review*. 2006 Nov; 14(3):21.
 10. McGuire W, Henderson G, Fowlie PW. Feeding the preterm infant. *Bmj*. 2004 Nov 18; 329(7476):1227-30.
 11. Beal D, Ashdown LR, Mackay M. The organization of a human milk bank in a North Queensland hospital. *Medical Journal of Australia*. 1978 Jan; 1(1):8-10.
 12. Meghwal B, Code QR. Experience of human milk banking from tertiary care centre of South Rajasthan. *Age (yrs.)*; 20(25):26-30.
 13. Dambra- Candelaria LM. Mothers Voices: The Lived Experience of the Human Milk Banking Association of North America Milk Donor.