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A STUDY TO ASSESS THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON KNOWLEDGE REGARDING HUMAN MILK BANKING AMONG MOTHERS OF INFANTS AT SELECTED VILLAGES OF BAIREDDIPALLE MANDAL, CHITTOOR DISTRICT

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ABSTRACT

Background: Breastfeeding is the best method of infant feeding because human milk continues to be the only milk which is tailor-made and uniquely suited to the human infant. All mothers should be encouraged to breast-feed their infants. When a mother, for some reason, is unable to feed her infant directly, her breast milk should be expressed and fed to the infant. If mother's own milk is unavailable or insufficient, the next best option is to use pasteurized donor human milk (PDHM). **Objectives:** To assess the knowledge regarding Human Milk Banking among mothers of infants. To evaluate the effectiveness of Structured teaching programme on knowledge regarding human milk banking among mothers of infants. To find the association between pre and post test knowledge and socio-demographic variables regarding human milk banking among mothers of infants. **Methods:** A pre- experimental one group pre-test, post-test design was adopted to assess the effectiveness of structured teaching programme on knowledge regarding human milk banking among mothers of infants at selected villages of Baireddipalle mandal, Chittoor district. Sixty mothers of infants were selected, convenient sampling technique was used. **Results:** The study shows that the overall knowledge and knowledge on practice levels of mothers of infants regarding human milk banking. In pretest majority of the mothers 52(86.70%) were having inadequate knowledge followed by 7(11.70%) were having moderate

knowledge and 1(1.70%) were having adequate knowledge.In post-test, majority of the mothers of infants 52(86.70%) were having adequate knowledge and only 18(13%) were having moderate knowledge. It is evident that the structure teaching programme was effective and has great Impact on mothers of infants knowledge regarding human milk banking.Knowledge and practice were significant at $p<0.01$ level. **Conclusion:** The study findings reveals that the structure teaching programme was effective and has great Impact on mothers of infants knowledge regarding human milk banking.

Keywords: Assess, Effectiveness**,** Structured teaching programme (STP), knowledge, Human milk banking, Mothers of infants.

INTRODUCTION

"While breast feeding may not seem the right choice for every parent, it is the best choice for every baby"

Breastfeeding is the best method of infant feeding because human milk continues to be the only milk which is tailor-made and uniquely suited to the human infant. All mothers should be encouraged to breast-feed their infants. When a mother, for some reason, is unable to feed her infant directly, her breast milk should be expressed and fed to the infant. If mother's own milk is unavailable or insufficient, the next best option is to use pasteurized donor human milk (PDHM).

Human milk bank or breast milk bank is a service which collects, screens, processes and dispenses by prescription human milk donated by nursing mothers who are not biologically related to the recipient infant. The optimum nutrition for newborn infants is breast feeding, if possible, for the first year.

The first breast milk bank or human milk bank in India was set up in 1989 in Mumbai. Up to august 3rd 2018 the country has around 47 milk banks but now More than 60 human milk banks around the country are trying to ensure access to breast milk for human babies. As human milk is the best and safest feed for a baby, infants who don't have access to mother's milk are benefitted by the milk banks. Feeding newborns, especially low birth weight babies with pasteurized breast milk can reduce the risk of infections and boost the immune system.

NEED FOR THE STUDY

Human milk banks offer a solution to themothers that cannot supply their own breast milk to theirchild, for reasons such as a baby being at risk of gettingdiseases and infections from a mother with certain diseases,or when a child has a condition such as necrotizing enterocolitis. It was found that human milk banks had anincrease in the amount of milk collected in 2012 comparedto 2007, in addition the amount of milk donated by eachdonor had also increased. Mothers' Milk Bank (Humanmilk bank) says, this service provides mothers with analternative to infant formula and allows the mother to givetheir newborn the nutrition it needs for healthy growth.

RajeeshaC.H et al., (2018) conducted a study to assess the knowledge and attitude of post natal lactating mothers regarding human milk banking. Only 6.7% mothers had heard about human milk banks. Only 17.3% mothers and 3 mothers among the 15 NICU babies think that a human milk bank is required. In our study we concluded that the majority of mothers were unaware about the concept of human milk banking and were reluctant to neither donate nor accept breast milk. The major reason for this is the lack of knowledge about the importance of human milk.

TheInternational Milk Banking Initiative (IMBI), was foundedat the International HMBANA Congress in 2005. It lists 33countries with milk bank programs. The World health Organization (WHO) states that the first alternative to a biological mother not being able to breast feed is the use of human milk from other sources.

MATERIALS AND METHODS

Research design: Pre- experimental one group pre-test, post-test design.

Setting of the study: The study was conducted in Selected villages of Baireddipalle mandal (Thavadakuppam, Gaddindlu, Nachakuppam ,Mooganapalli, Lakkanapalli) Chittoor district, Andhra Pradesh.

Population: Population of this study consists of mothers of infants at selected villages of Baireddipalle mandal, Chittoor district.

Sample size: The sample size was 60 mothers of infants.

Sampling technique: Non probability convenient sampling technique was adopted for the present study based on inclusion criteria.

Criteria for sample selection:

Inclusion criteria:

- Mothers of infants.
- The mothers who are willing to participate in the study.

Exclusion criteria:

- The mothers who are not willing to participate in the study.
- Mothers who cannot understand and speak Telugu.

DEVELOPMENT AND DESCRIPTION OF TOOL

The tool was developed with the help of related literature from journals, websites, discussion and guidance from the experts in the field of nursing and medicine.

The tool consists of two sections

SECTION 1: This consists ofSocio-demographic data such as age, religion, education of the mother and father, occupation of the mother and father, income per month, type of the family, place of residence, parity, knowledge regarding human milk banking, Source of information received from.

SECTION 2: This divided in to two parts.

Part A: Questionnaire consists of 10 questions to assess the level of knowledge on human milk banking among mothers of infants.

Part B: Questionnaire consists of 15 questions to assess the level of knowledge on practice regarding human milk banking among mothers of infants.

Scoring interpretation: Scoring key was prepared for

Section 1: By coding the demographic variables

Section 2: It consists part A and part B. For part- A and part- B each correct answer has a score of '1' and for wrong answer '0'. Thus maximum score of 10 were allotted to knowledge on human milk banking and 15 were allotted to knowledge on practice regarding human milk banking.

The score were interpreted in the following manner.

<50% - Inadequate knowledge

50 -75% - Moderately adequate knowledge

>75% - Adequate knowledge

CONTENT VALIDITY

Content validity was obtained for the questionnaire from 10 experts: 2 in the field of pediatric medicine, 8 in the field of nursing. Accordingly necessary modifications were incorporated in the tool.

RELIABILITY OF THE TOOL

Reliability of the tool was established by usingGuttmann split half formula and spearman-brown equal and unequal length formula. The reliability of the tool was knowledge on human milk banking 0.80 and knowledge on practice was 0.89.

RESULTS

Table 1: Frequency and percentage distribution of demographicvariables among mothers of infants. The data presented in table-1 Shows that Out of 60 mothers of infants**,** majority 33(55 %) were in the age group of 21-25 years and least 6(10 %) were in the age group of 26-30 years.Related to religion of the mother majority 57(95.00%) of mothers belongs to Hindu religion and least 1(1.70%) were muslim. Related to education of the mother, majority 26(43.30%) were studied up to secondary education and least 5(8.30%) were illiterate. Related to education of the father, majority 37(61.7%) were studied up to secondary education and least 1(1.70%) were illiterate. Pertaining to occupation of mother, majority 32(53.30%) were homemakers and least 1(1.70%) were doing business. In accordance with fathers occupation, majority 38(63.30%) were labourer and least 4(6.70%) were doing some other works. Related to family income per month, majority 28(46.70%) were having income was 10001-15000 and least 6(10%) were earning 15001-20000 per month. Related to type of family, majority 44(73.30%) were in nuclear family and least 1(1.7%) were in extended family. Related to place of residence, 60(100%) of mothers of infants residing in rural areas. Related to parity, majority 33 (55%) of mothers of infants were multipara and least 27(45%) were primipara. Related to knowledge on human milk banking, majority 48(80%) were not having knowledge regarding human milk banking and least 12(20%) were having knowledge regarding human milk banking. Regarding source of information, majority 6(50%) mothers of infants getting information from Parents and Relatives and least 2(16.70%) were from Neighbours and Friends.

Table 2: Distribution of level of knowledge scores regarding human milk banking among mothers of infants. Out of 60 mothers the level of knowledge on human milk banking. In pre test 57(95%) had inadequate knowledge, 2(3.30%) hade moderate knowledge and 1(1.70%) had adequate knowledge.In post test5(8.30%) had moderate knowledge and 55(91.70%) had adequate knowledge.

Table 3: Distribution of level of knowledge on practice scores regarding human milk banking among mothers of infants. Reveals that in pre test 52(86.70%) had inadequate knowledge, 6(10%) hade moderate knowledgeand 2(3.300%) had adequate knowledge on practice.In post test 9(15%) had moderate knowledge and 51(85%) had adequate knowledge on practice.

Table 4: Overall knowledge and knowledge on practice levels of mothers of infants regarding human milk banking in pretest and post-test. Describes thatthe overall knowledge and knowledge on practice levels of mothers of infants regarding human milk banking. In pretest majority of the mothers 52(86.70%) were having inadequate knowledge followed by 7(11.70%) were having moderate knowledge and 1(1.70%) were having adequate knowledge.In post-test, majority of the mothers of infants 52(86.70%) were having adequate knowledge and only 18(13%) were having moderate knowledge.

Table 5 (Annexure-5): Effectiveness of structured teaching programme on level of knowledge and knowledge on practice regarding human milk banking among mothers of infants. Both the level of Knowledge and practice were significant at $p<0.01$ level.

Table-1 Frequency and percentage distribution of demographic variables among mothers of infants.

S.No	DEMO GRAPHIC VARIABLES		FREQUENCY	PERCENTAGE
1	Age of the mother	Less than 20 years	14	23.00
		21-25 years	33	55.00
		26-30 years	6	10.00
		31 years and above	7	11.70
		Total	60	100.00
2	Religion of the mother	Hindu	57	95.00
		Muslim	1	1.70
		Christian	2	3.30
		Total	60	100.00
3.	Education of the mother	Illiterate	5	8.30
		Primary education	10	16.70
		Secondary education	26	43.30
		Collegiate	19	31.70
		Technical/Professional	0	0.00
		Total	60	100.00
4	Education of the father	Illiterate	1	1.70
		Primary education	10	16.70
		Secondary education	37	61.70
		Collegiate	11	18.30
		Technical/Professional	1	1.70
		Total	60	100.00
5	Occupation of mother	Home maker	32	53.30
		Business	1	1.70
		Labourer	24	40.00
		Employee	3	5.00
		Total	60	100.00

6.	Occupation of father	Employee	11	18.30
		Business	7	11.70
		Labourer	38	63.30
		Any other	4	6.70
		Total	60	100.00
7	Family income per month (in rupees)	Less than 10000	12	20.00
		10001-15000	28	46.70
		15001-20000	6	10.00
		20001 and above	14	23.30
		Total	60	100.00
8	Type of family	Nuclear family	44	73.30
		Joint family	13	21.70
		Extended family	1	1.70
		Single parent family	2	3.30
		Total	60	100.00
9	Place of residence	Rural	60	100.00
		Urban	0	0.00
		Semi urban	0	0.00
		Total	60	100.00
10	Parity	Primipara	27	45.00
		Multipara	33	55.00
		Total	60	100.00
11	Do you have knowledge regarding human milk banking	Yes	12	20.00
		No	48	80.00
		Total	60	100.00
12	If yes source of information received from	Mass media	0	0.00
		Parents and Relatives	6	50.00
		Neighbours and Friends	2	16.70
		Health professionals	4	33.30
		Total	12	100.00

TABLE-2: distribution of level of knowledge scores regarding human milk banking among mothers of infants.

(n=60)

Variables	PRE TEST						POST TEST					
	Inadequate		Moderate		Adequate		Inadequate		Moderate		Adequate	
	N	%	N	%	N	%	N	%	n	%	n	%
Knowledge	57	95.00	2	3.30	1	1.70	0	0.00	5	8.30	55	91.70

TABLE-3: distribution of level of knowledge on practice scores regarding human milk banking among mothers of infants.

(n=60)

Variables	PRE TEST						POST TEST					
	Inadequate		Moderate		Adequate		Inadequate		Moderate		Adequate	
	n	%	N	%	n	%	n	%	N	%	N	%
Knowledge	52	86.70	6	10.00	2	3.30	0	0.00	9	15.00	51	85.00

TABLE-4: Overall knowledge and knowledge on practice levels of mothers of infants regarding human milk banking in pretest and post-test.

CATEGORIES	PRE TEST		POST TEST	
	Frequency	Percent	Frequency	Percent
Inadequate	52	86.70	0	0.00
Moderate	7	11.70	8	13.30
Adequate	1	1.70	52	86.70
Total	60	100.00	60	100.00

Table-5 Effectiveness of structured teaching programme on level of knowledge and knowledge on practice regarding human milk banking among mothers of infants

(n=60)

S.No	Categories	Mean	N	Std. Deviation	t-value	p value
1	Pre test Knowledge on Human Milk Banking	3.30	60	1.21	52.369**	0.000
	Post test Knowledge on Human Milk Banking	9.02	60	1.03		
2	Pre test Knowledge on Practice regarding Human Milk Banking	3.57	60	2.71	29.859**	0.000
	POST test Knowledge on Practice regarding Human milk banking	13.33	60	1.54		
3	Total Pre test Knowledge	6.87	60	3.76	38.089**	0.000
	Total Post test knowledge	22.35	60	2.38		

Significance:

**=p<0.01

DISCUSSION

The present study reveals that to assess the knowledge regarding human milk banking among mothers of infants at selected villages of Baireddipalle mandal, Chittoor district.

The first objective of the present study was to assess the knowledge regarding Human Milk banking among mothers of infants.

The level of knowledge regarding human milk banking among mothers of infants, In pre test 57(95%) had inadequate knowledge, 2(3.30%) hade moderate knowledge and 1(1.70%) had adequate knowledge. In post test 5(8.30%) had moderate knowledge and 55(91.70%) had adequate knowledge.

The level of knowledge on practice regarding human milk banking among mothers of infants, in pre test 52(86.70%) had inadequate knowledge, 6(10%) hade moderate knowledge and 2(3.300%) had adequate knowledge on practice. In post test 9(15%) had moderate knowledge and 51(85%) had adequate knowledge on practice.

The above results were supported by **SangeetaGhuge et al., (2018)** wasconducted a study to assess the knowledge and attitude regarding donating milk to the human milk bank among postnatal mothers of selected hospital. Results shows that 78.33% of the samples had excellent level of knowledge score, 21.67% had good level of knowledge score.53.33% of the samples had good level of attitude score and 46.67% had excellent level of attitude score.

The second objective of the study was to evaluate the effectiveness of structured teaching programme on knowledge regarding human milk banking among mothers of infants.

Effectiveness of level of knowledge and knowledge on practice regarding human milk banking scores in pre test the mean of knowledge was 3.30 and standard deviation was 1.21, mean of practice was 3.57 and standard deviation was2.71. In post test mean of knowledge was 9.02 and standard deviation was 1.03, mean of practice 13.33 and standard deviation was 1.54. Knowledge and practice were significant at $p<0.01$ level

The above results were supported by **Renuka (2018)** was conducted a study to assessthe knowledge and attitude regarding the storage of breast milk for the infants among staff nurses working in NICU, PICU, Antenatal, postnatal and labour room of the selected hospitals of Gwalior city. The findings revealed that 15% staff nurses had poor knowledge, 66.66% had average knowledge and 18.37% had good knowledge. Religion had a significant relationship with knowledge whereas age and source of knowledge had a high degree of significance with attitude (at $p <0.05$ level). It was concluded that staff nurses had average knowledge with a positive attitude towards the storage of breast milk.

The third objective of the study to find the association between pre and post test knowledge and socio-demographic variables regarding human milk banking among mothers of infants.

In pre test there was a significant association between knowledge and knowledge on practice regarding human milk banking among mothers of infants with the socio demographic variables like age of the mother, education of the father, occupation of the mother, occupation of the father and knowledge regarding human milk banking were significant at $p<0.01$ level and other socio demographic variable like family income for month was significant at $p<0.05$ level. In post test there was a significant association between knowledge and knowledge on practice regarding human milk banking with the education of the mother, education of the father, family income for month and type of family at $p<0.01$ level, whereas age of the mother were significant at $p<0.05$ level.

The above results were supported by **Miss.Vanshikajoshi, (2016)** conducted a study to assess the effectiveness of structured teaching programme on human milk banking among students of B.sc nursing from selected college of Dehradun, uttarkhand. The pre-test mean knowledge score of the respondents was 11.9(35%) and post-test knowledge mean was 27.5(80.88%). The calculated chi-square value with regards to

age , gender, religion, area of residence, previous knowledge and source of information were less than the table values at P< 0.05 level of significance.

CONCLUSION

The present study revealed that structured teaching programme had improved knowledge of mothers of infants regarding human milk banking.

Nursing implications:

In order to improve the knowledge of mothers of infants regarding human milk banking to promote optimum child development, there is a need of structured teaching programme. The findings of the study have implications in nursing services, nursing education, nursing administration and nursing research.

Nursing services:

Health education programmes are the essential part of nursing service. The results of the study would help the nurse to enlighten their knowledge on importance of health education.

Nurses can help the mothers of infants by teaching about human milk banking purposes, collection of breast milk and process.

- Provide family centered nursing care and involve the mothers in the health programmes in hospital and community.
- Provide anticipatory guidance to mothers regarding knowledge on human milk banking.
- In pediatric wards, well baby clinics, primary health centers, sub centers and anganwadi centers health education is planned and implemented using various teaching audio visual aids like charts, flip cards, pamphlets and black board.

Nursing education:

- ❖ The nursing curriculum should emphasize on implementing health information to community using different teaching methods.
- ❖ Nursing students should be trained in planning incidental and planned health education program regarding knowledge on human milk banking.
- ❖ Mothers should taught regarding human milk banking to reduce infant mortality rate.

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