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A Quasi Experimental Study to Assess the Effectiveness of Structured Teaching Programme on Knowledge Regarding Expressed Breast Milk (EBM) Among Employed Lactating Mothers of Selected Community Areas of District Patiala, Punjab

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Abstract: ***A Quasi experimental design, was selected for the present study. The present study was conducted in the community i.e. Industrial area of Patiala, Punjab. The target population for the present study consisted of Employed lactating mothers of selected community i.e. Industrial areas of District Patiala, Punjab. The tool for the study was structured questionnaire which consists of two parts- PART- I consisted questions related to Socio-demographic data,PART-II consisted of structured questionnaire to assess the knowledge regarding expressed breast milk.***

Keywords: Expressed breast milk

1. Introduction

The importance of breast milk has been accepted since the time of Hippocrates who has stated that one's own milk is beneficial.[3] Human milk is unquestionably the best source of nutrition for neonates or infants by the virtue of uniqueness of its biological composition.[4] Breast feeding is fundamental to health and development of children and important for the mothers. Just as there is no substitute for mother's love, there is no substitute for mother's milk. Breast milk is not only the best, but a must for the infants.[12] Breast milk is safest and most secure form of nourishment for babies and protect them against illness. The nutrients include all the proteins, fat, sugars, vitamins, minerals and also the ante infective factors.[12]

2. Need of the Study

Investigator felt the need to conduct a study on the most important topic i.e. EBM and to give a teaching program to enhance the knowledge regarding expressed breast milk of working post natal mothers. It can also help the mothers to practice expression of breast milk in order to develop a skill before returning to work which will support them to cope with their employment along with breast feeding.

3. Aim of Study

The Aim of the study is to assess the effectiveness of Structured Teaching Programme on knowledge regarding expressed breast milk (EBM) among employed lactating mothers.

4. Review of Literature

Kaur B[42] conducted a comparative study to assess the knowledge, attitude and practices of mothers regarding breastfeeding in a selected urban and rural community in Ludhiana, Punjab. The sample size was 100, out of which 50 were from urban and 50 from rural area. The study findings revealed that rural mothers had more positive attitude regarding breast feeding irrespective of knowledge regarding breast feeding. Also according to age and education of the mothers rural mothers with increasing age had more knowledge, positive attitude and better practices regarding breastfeeding whereas practices of urban mothers with more education were also better. Thus this study finding interprets that socioeconomic strata, age education influence breast feeding knowledge and practices.

Diane L S[43] conducted a cohort study at Children's hospital of Philadelphia on very sick babies admitted in neonatal intensive care unit. His study findings revealed that sickest babies can benefit from exclusive breast feeding. Many of these highly vulnerable newborns immediately experience a paradoxical situation. Their mother's milk helps to reduce the infection rates and provided easily digestible nutritious food and also reduces the infant's stay in the NICU.

The World Health Organization & China Ministry of Health[50] mentioned that only 29% of mothers exclusively breastfed their babies for six months, while more than half of the mothers failed to do so. Insufficient breast milk & having no time to continue exclusively breast feeding after returning to work were cited as two major reasons by mothers to exclusively breast feed their babies up to six months.

Auerbach KG et al[62] conducted a cohort study among mothers from two public maternity hospitals in Perth, Australia regarding breast feeding duration in mothers who express breast milk. A total of 587 mothers participated in the study. Of these 93.5% were breastfeeding at discharge from hospital. Mothers who expressed breast milk were less likely to discontinue any breastfeeding before six months than those who had never expressed milk. This study found

that mothers who express breast milk are more likely to breastfeed to six months.

5. Research Design

A quantitative research approach was used for the present study as it was aimed to assess the effectiveness of structured teaching programme on knowledge regarding Expressed Breast Milk among Employed Lactating Mothers of Community i.e. Industrial areas of District Patiala, Punjab. Quasi-Experimental research design was used for the present study. Sample size was 60 Employed lactating mothers. In the present study convenient sampling technique was used to select the sample. The tool was consisted of two parts. **PART- I** consisted of questions related to Socio-demographic data. **PART-II** consisted of self administered questionnaire. The reliability of the tool was assessed by testing the stability and internal consistency. Stability was assessed by Split half Method. Karl Pearson correlation of coefficient formula was used and the reliability of the tool was found to be 0.7. Hence the tool was reliable.

6. Results

6.1 Frequency & percentage of socio-demographic variables of employed lactating mothers

Table 1: Socio demographic characteristics of sample

Socio Demographic Variables		*Experimental Group*		*Control Group*	
		%	*F*	*%*	*F*
Age (in years)	18-23	47	14	43	13
	24-29	20	6	27	8
	30-35	23	7	23	7
	35 &Above	10	3	7	2
Educational Qualification	Middle	0	0	0	0
	Secondary	10	3	13	4
	Senior Secondary	50	15	63	19
	Graduation & Above	40	12	23	7
Profession	Medical Professional	10	3	0	0
	Teaching Professional	23	7	33	10
	Entrepreneur (Self-Employed)	63	19	50	15
	Others	3	1	17	5
No. of Live Births	One	67	20	63	19
	Two	23	7	27	8
	Three	10	3	10	3
	Above Three	0	0	0	0
Support during Lactation for giving feeds	Yes	80	24	63	19
	No	20	6	37	11
Monthly Family Income	Rs.<5000/-	0	0	0	0
	Rs.5001/- 10,000/-	0	0	0	0
	Rs. 10,001/- 15,000/-	40	12	33	10
	Above Rs.15000/-	60	18	67	20
Previous Knowledge of Expressed Breast Milk	Yes	30	9	30	9
	No	70	21	70	21

Table 1 shows the demographic characteristics of the lactating women, frequency & percentage distribution. In Table 1 and Figure 1 shows that majority of the mothers 14(47%) in experimental group 13(43%) in control group were in the age group between 18-24 years. As shown in Figure 2 of the same table regarding qualification/education, 15(50%) in experimental group & 19(63%) in control group were having education above senior secondary whereas 12(40%) in experimental group & 7(23%) in control group having educational qualification was graduation & above. As shown in Figure 3 of the same table about profession 19(63%) in experimental group, 15(50%) in control group were self employed. In Figure 4 of the same table regarding no. of live births 20(67%)in experimental group, 19(63%) in control group had only 1 live child whereas 7(23%) in experimental group, 8(27%) in control group had two living children. In Figure 5 of the same table shown 24(80%)in experimental group and 19(63%) of mothers were supported during lactation. In Figure 6 of the same table about the monthly income 18(60%) in experimental group and 20(67%) in control group had monthly income above Rs15000/. Regarding previous knowledge about expressed breast milk 21(70%) in experimental group, 21(70%) in control group were not having knowledge about expressed breast milk whereas only 9(30%) women were having knowledge regarding EBM in both the experimental & control group.

6.2 Frequency & Percentage of pre-test knowledge scores of employed lactating mothers

Table 2
N=60

Score Level	Experimental		Control	
	F	%	f	%
High(17-25)	0	(0%)	0	(0%)
Average(9-16)	9	(30%)	10	(33.3%)
Low(0-8)	21	(70%)	20	(66.6%)

Maximum Score=25, Minimum Score=0

Table 2 shows the frequency & percentage of pre-test knowledge scores of lactating mothers. It shows that 21(70%) of lactating mothers in experimental group,and 20(66.7%) in control group were having low knowledge

regarding EBM whereas 9(30%) in experimental group & 10(33.3%) in control group were having average knowledge regarding EBM.

6.3 Frequency & percentage of post test knowledge scores of employed lactating mothers

Table 3
N=60

Score Level	Experimental		Control	
	F	%	f	%
High(17-25)	28	(93%)	0	(0%)
Average(9-16)	2	(6%)	19	(63.3%)
Low(0-8)	0	(0%)	11	(36.6%)

Maximum Score=25, Minimum Score=0

It showed that maximum 28(93%) women in experimental group were had high knowledge whereas only 2 (6%) had average knowledge about EBM after the administration of STP. In the control group 19(63.3%) had average knowledge & 11(36.6%) had low knowledge regarding EBM.

6.4 Mean, SD & comparison of pre-test & post test knowledge scores of employed lactating mothers

Table 4
N=60

Scores	Pre Test		Post Test		MD	t-test	P value
	Experimental	Control	Experimental	Control			
Mean	8.00	8.03	19.6	9.97	11.6	25.14	0.00*
SD	1.46	1.75	1.63	1.84			

Maximum Score=25, Minimum Score=0
***=Significant**

Table no. 4 shows that post test knowledge scores regarding expressed breast milk was higher than the pre test knowledge score in the experimental group (8.00± 1.46 vs 19.6 ± 1.63) as compared to control group (8.03 ± 1.75 vs 9.97 ± 1.84). Findings showed that there was significant difference in the pre test-post test knowledge scores of employed lactating women & also showed that there is significant increase in the knowledge scores of employed lactating women of experimental group.

6.5 Association of post test knowledge scores regarding expressed breast milk of employed lactating women with demographic variables

Table 5

Variables	*Opts*	*High*	*Average*	*Low*	*Chi Test*	*P Value*	*Df*	*Table Value*
Age (in years)	18-23	13	1	0	1.301	0.729	3	7.815*
	24-29	6	0	0				
	30-35	6	1	0				
	35 and Above	3	0	0				
Qualification/Educational Achievements	Middle	0	0	0	0.268	0.875	2	5.991*
	Secondary	3	0	0				
	Senior Secondary	14	1	0				
	Graduation and Above	11	1	0				
Profession	Medical Professional	3	0	0	1.241	0.743	3	7.815*
	Teaching Professional	7	0	0				
	Entrepreneur (Self-Employed)	17	2	0				
	Others	1	0	0				
No. of Live Births	One	19	1	0	4.018	0.134	2	5.991*
	Two	7	0	0				
	Three	2	1	0				
	Above Three	0	0	0				
Support during Lactation for giving feeds	Yes	23	1	0	1.205	0.272	1	3.841*
	No	5	1	0				
Monthly Family Income	Rs.<5000/-	0	0	0	1.429	0.232	1	3.841*
	Rs.5001/- to Rs. 10,000/-	0	0	0				
	Rs. 10,001/-to Rs 15,000/-	12	0	0				
	Above Rs.15000/-	16	2	0				
Previous Knowledge of Expressed Breast Milk	Yes	9	0	0	0.918	0.338	1	3.841*
	No	19	2	0				

N=30
***=Non Significant**

6.6 Association of post test knowledge scores of Control Group with the selected demographic variables regarding EBM.

Table 6
N=30

Variables	Opts	High	Average	Low	Chi Test	P Value	df	Table Value
Age (in years)	18-23	0	5	8	6.830	0.078	3	7.815*
	24-29	0	7	1				
	30-35	0	5	2				
	35 and Above	0	2	0				
Qualification/ Educational Achievements	Middle	0	0	0	2.447	0.294	2	5.991*
	Secondary	0	2	2				
	Senior Secondary	0	14	5				
	Graduation & Above	0	3	4				
Profession	Medical Professional	0	0	0	1.435	0.488	2	5.991*
	Teaching Professional	0	5	5				
	Entrepreneur (Self-Employed)	0	10	5				
	Others	0	4	1				
No. of Live Births	One	0	12	7	0.017	0.992	2	5.991*
	Two	0	5	3				
	Three	0	2	1				
	Above Three	0	0	0				
Support during Lactation for givin21g feeds	Yes	0	11	8	0.660	0.417	1	3.841*
	No	0	8	3				
Monthly Family Income	Rs.<5000/-	0	0	0	0.072	0.789	1	3.841*
	Rs.5001/- to Rs. 10,000/-	0	0	0				
	Rs. 10,001/-to Rs 15,000/-	0	6	4				
	Above Rs.15000/-	0	13	7				
Previous Knowledge of EBM	Yes	0	6	3	0.062	0.804	1	3.841*
	No	0	13	8				

NS=Non Significant

Table 5 and 6 shows the association of post test knowledge scores with the selected demographic variables regarding EBM. Chi square was applied to find out association with selected demographic variables. It was concluded that there was no significant association between the post test knowledge scores & selected demographic variables.

7. Conclusion

The conclusion was based on the findings of the study. t-test was applied to conclude the differences in mean scores & to find out the effectiveness of the STP. Post test knowledge scores regarding expressed breast milk is higher than the pre test [experimental group pre-post test scores (8.00± 1.46 vs 19.6 ± 1.63) control group pre-post test scores (8.03 ± 1.75 vs 9.97 ± 1.84)]. Findings showed that there is significant difference in the pre test-post test knowledge scores of employed lactating women & also showed that there is significant increase in the knowledge scores of employed lactating mothers. Findings were significant & showed that STP is effective in increasing the knowledge scores of employed lactating mothers.

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