International Journal of Advance Research in Nursing

A study to evaluate the effectiveness of planned teaching programme on knowledge regarding human milk banking among staff nurses in selected hospitals, Bhopal

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Abstract
The study was conducted by using evaluative research approach and one group pretest research design. Purposive sampling technique was used to select 60 Staff Nurses at selected hospitals in Bhopal, based on inclusion and exclusion criteria. A pilot study was conducted with 6 Staff Nurses before starting the main study. Base line data was collected by using demographic sheet. Structured questionnaire was used to assess the knowledge of Staff Nurses regarding Human Milk Banking. The collected data were analyzed by using descriptive and inferential statistics. The findings shows that mean pre-test knowledge score (14.4) and the post-test knowledge score (18.16). Posttest knowledge score is higher than the pre-test knowledge score. Than pre-test score (SD=4.45) is higher than that of post-test score (SD=2.94) and computed paired value shows there is significant difference between mean pre-test knowledge score (t=16.68).This indicates that planned teaching programme is effective in increasing knowledge score of staff nurse regarding human milk banking.

Keywords: Effectiveness, planned teaching programme, knowledge, human milk banking, staff nurse

Introduction
`Health is wealth, for the good health we need good nutrition. Babies get nutrition from mother's milk`. Breast Milk is the safest and best protective food for infants and also the best choice to feed premature and ill babies. Superiority of human milk is due to its superior nutritive and protective value. It provides total nutrient requirement for the first six months of life. Human milk is known to contain important immunologic, enzymatic, hormonal and endocrine factors which are absent in commercial formulas and contribute to improved gastrointestinal maturation and function. Recently, studies in preterm infants have shown improved feeding tolerance, lower infection risks and a decreased rate of necrotizing enter colitis with an exclusive human milk diet. It also prevents malnutrition and allow the child to develop fully. There are also maternal health benefits from breastfeeding as well as societal and environmental advantages.

Need for study
Breast feeding has been indentified as an important upstream intervention that affects the health and well-being of babies and their mothers in India most of the mothers are unaware of expression and storage of breast milk which leads to inadequate provision of mother milk to the baby result in in decreased health status of the child as the mother returns to work. So it is very important to give education to the working mothers regarding storage and expression of breast milk.

Researches says that in the most tropical countries, breast feeding is essential if the baby is to survive and except for rare serious reasons the breast feeding should not be withheld

Statement of the problem
"A study to assess the effectiveness of planned teaching programme on knowledge regarding Human Milk Banking among staff nurses working in selected Choudhary Hospitals, at Bhopal".

The objective of the study
1) To assess the pre-test knowledge regarding Human Milk Banking among the Staff Nurses.
2) To evaluate the effectiveness of planned teaching programme on knowledge regarding Human Milk Banking after administering planned teaching programme among staff nurse.
3) To find out the association between pre -test knowledge scores of Staff Nurses with their selected demographic variables.

Hypothesis
H1: There will be a significant difference in pretest and posttest level of knowledge scores of Staff Nurses regarding

Human Milk Banking.

H2: There will be a significant association between pre-test knowledge scores of Staff Nurses regarding Human Milk Banking with their selected demographic variables.

Methodology
All the 4th year BSc. Nursing students of R.D. Memorial College of Nursing, Bhopal were enrolled in the study. The study tool was designed by the researcher and validated by the guide and faculty of the college. The study tool included 5 demographic questions and 30 Objective type questions.
A study capsule on high-risk pregnancy was developed by the researcher.
Study participants filled the pre-teaching assessment using the study tool and then received a 1-hour session on High-risk pregnancy. Post-teaching assessment was done using the same study tool.
After conducting the study, data were analyzed using MS Excel and Google Sheets.

Results
60 BSc. Nursing students of R.D. Memorial College of

Nursing, Bhopal participated in the study. The baseline pre-teaching scores showed an average score of 11 out of 30, which is 37%. This shows a poor level of knowledge on this topic. The scores range from 7 to 15, the standard deviation is 1.
After the 1-hour computer-assisted teaching session, conducted by the researcher, a post-teaching assessment was conducted using the same tool. The post-teaching assessment average score was 16 out of 30, which is 53%. The score ranges from 10 to 22, the standard deviation is 3.
Thus, a 16% rise in the scores was seen after the teaching session.
The baseline pre-teaching assessments were analyzed with respect to the selected demographic variables, the results are as follows:

Table 1: Pretest level of knowledge of the staff nurses regarding Human Milk Banking

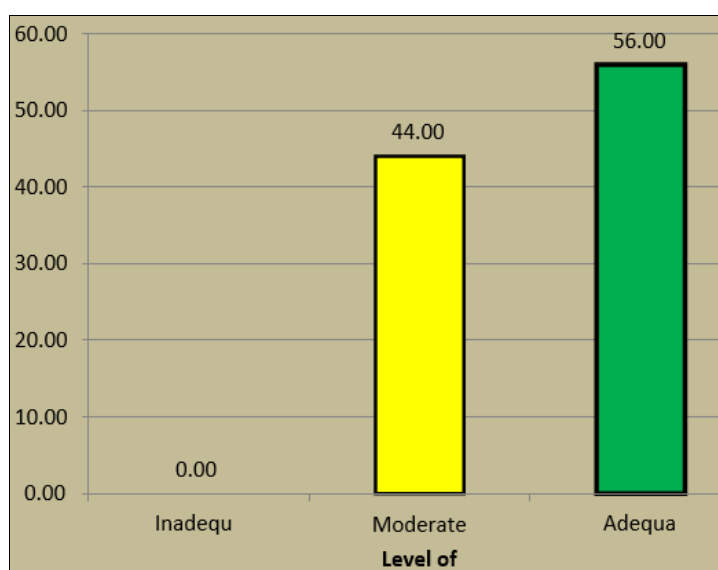| Level of knowledge	Frequency	Percentage
Inadequate	23	46%
Moderate	21	42%
Adequate	6	12%

Fig 1: Frequency distribution and percentage of pretest level of knowledge of the staff nurses regarding Human Milk Banking

Table 3 showed that majority 23 (46%) of Staff nurses were having inadequate knowledge regarding Human Milk Banking, 21(42%) have moderate level of knowledge and 6 (12%) of the samples have adequate knowledge regarding Human Milk Banking in the pretest.

Table 2: Posttest level of knowledge of the staff nurses regarding Human Milk Banking

Level of knowledge	Frequency	Percentage
Inadequate	0	0
Moderate	22	44%
Adequate	28	56%

Table 2 Frequency distribution and percentage of posttest level of knowledge of the staff nurses regarding Human Milk Banking.

Table 3: Comparison between pretest and posttest knowledge scores of staff nurses regarding Human Milk Banking

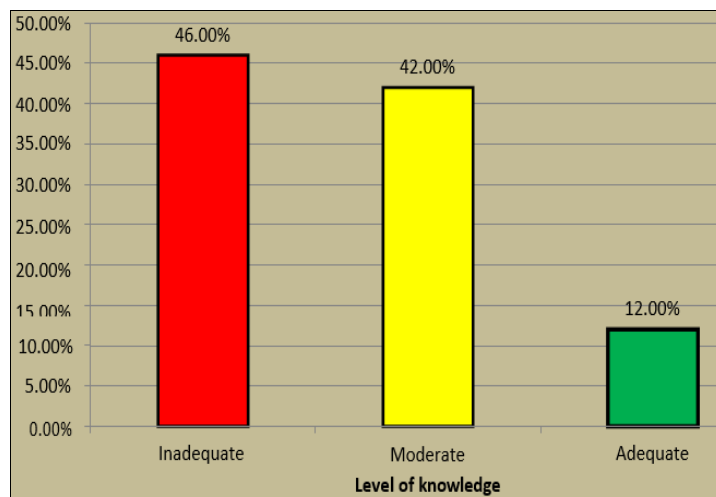| Level of knowledge	Pretest		Post test	
		%		%
Inadequate (<50%)	23	46%	0	0%
Moderate (50-75%)	21	42%	22	44%
Adequate (>75%)	6	12%	28	56%

Fig 2: Frequency distribution and percentage of posttest level of knowledge of the staff nurses regarding Human Milk Banking

Table 5 reveals that, in the pretest, 46% of the staff nurses had inadequate knowledge, 42% of the staff nurses had moderate level of knowledge and 12% had adequate knowledge regarding Human Milk Banking. In the post test, none of the staff nurses have inadequate level of knowledge, 44% of staff nurses have moderate level of knowledge and 56% of staff nurses have adequate knowledge regarding Human Milk Banking.

Fig 3: In the post test, none of the staff nurses have inadequate level of knowledge, 44% of staff nurses have moderate level of knowledge and 56% of staff nurses have adequate knowledge regarding Human Milk Banking.
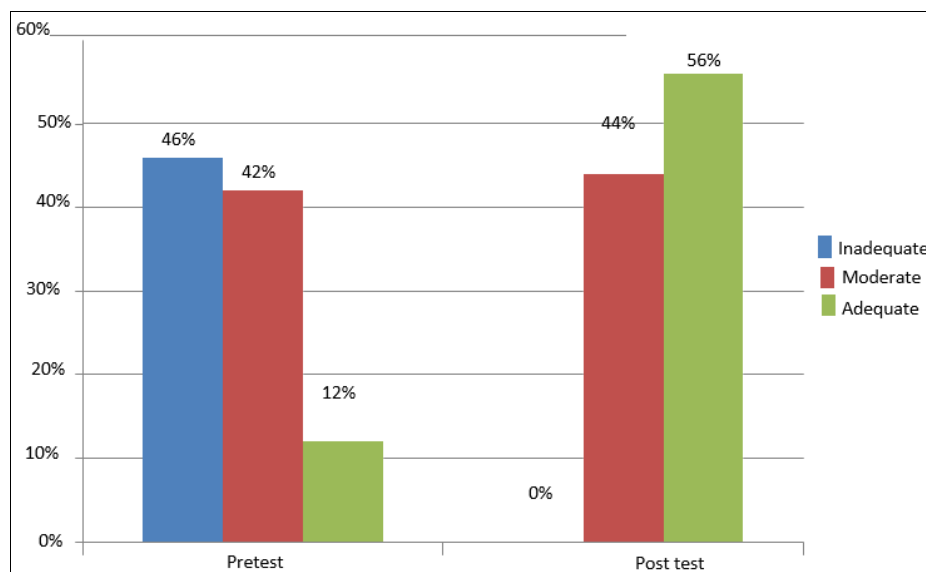
Table 4: Find out the association between knowledge of the staff nurses regarding Human Milk Banking and selected demographic variables.

No	Socio-Demographic variables	Inadequate	Moderate	Adequate	Chi Square Value (χ^2 Value)
1	Age				
	a) 20-25	0	7	8	
	b) 26-30	0	8	8	1.731
	c) 31-35	0	5	09	DF=3 NS
	d) Above 36	0	02	06	
2.	Religion				
	a) Hindu	0	10	12	
	b) Christian	0	11	14	0.157
	c) Muslim	0	01	02	DF=2 NS
	d) Other	0	0	0	
3.	Educational level				
	a) GNM	0	04	08	0.729
	b) B.Sc./Post B.Sc.	0	18	20	DF=1 NS
4.	Type of family				

	a) Nuclear	0	21	26	0.147
	b) Joint	0	01	02	DF=1 NS
5.	Area of residence				
	a) Urban	0	16	21	0.033
	b) Rural	0	06	07	DF=1 NS
6.	Work experience				
	a) <1 years	0	05	03	
	b) 1-3 years	0	07	07	10.148
	c) 3-5 years	0	10	08	DF= S
	d) >5 years	0	0	10	
7.	Previous knowledge regarding Human Milk Banking				
	a) Yes	0	19	26	0.577
	b) No	0	03	02	DF=1 NS
8	Source of information regarding Human Milk Banking				
	a) Healthcare professionals	0	18	22	
	b) Colleagues	0	1	2	0.216
	c) Internet	0	02	03	DF=3 NS
	d) Magazines	0	01	01	

1. Age
All the respondents were aged from 20 yrs to 36 yrs. The Scatter plot does not indicate any significant correlation between age and pre-teaching scores. Pearson's correlation coefficient was 1.73.

2. Family type
94% of the respondents were nuclear family and only 6% being living in joints family. The average marks scored by nuclear family were 27% and by joints family was 37%. But, due to the very small number of joints family participants, no generalizable comparative inference could be drawn from this data set.

3. Religion
About 44% of the participants belonged to the Hindu religion. Participants belonged to two other religions namely Chritiantinity and muslim. The average marks scored in the pre-teaching assessment by Christians and Hindus were 94%, while muslim students scored 6%. But, again due to the very small number of participants from other religion, no generalizable comparative inference could be drawn from this data set.

4. Educational Qualification at the time of admission to BSc. Nursing 76% of the respondents while 24% were GNM Nursing. Staff.

5. Working experience
Below 16% of the respondents one year experience where 28% is 1-3 experience 3-5 year experience having is 36% and 20% experience having in more than 5 year People who attended scored 33% while those who have not attended scored 37% in the pre-teaching assessment.

Conclusion
Overall findings have shown that Staff Nurses knowledge regarding Human Milk Banking was improved after the administration of the PTP. The study concluded that PTP was effective in improving the knowledge level of Staff Nurses regarding Human Milk Banking.

Implications
The findings of the study have implications in the following areas:
- Nursing Education
- Nursing and Practice
- Nursing Administration
- Nursing Research

Limitations
1. The study population was small, thus it was difficult to draw many statistically significant inferences.
2. The tool was developed for the purpose of this study. While it was validated, a pre-existing standardized tool would have been better.
3. It is limited to BSc Nursing 4th year students of one college. A diverse sample would have been better.

Recommendations
On the basis of the findings, the following recommendations are offered for future nursing practice and research.
- Study can be conducted to assess women's attitude towards Human Milk Banking.
- Study can be replicated on large sample in different setting so that the findings can be generalized to large population.
- A comparative study can be done to study the knowledge about Human Milk Banking among urban and rural women.
- A qualitative study can be conducted to illuminate women's perceptions of Human Milk Banking.

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