



**A COMPARATIVE STUDY TO ASSESS THE EFFECTIVENESS OF PROBLEM BASED
LEARNING AND LECTURE METHOD ON KNOWLEDGE REGARDING PRETERM
BABY AMONG BSC NURSING STUDENTS AT SELECTED NURSING COLLEGE AT
KOLLAM**

Betey K. Jayims^{1*}, Pinky Antony¹, Soly Thomas² and Asha Francis²

¹Assistant Professor, Dept. of Child Health Nursing, Bishop Benziger College of Nursing, Kollam.

²Nursing Tutor, Dept. of Child Health Nursing, Bishop Benziger College of Nursing, Kollam.

***Corresponding Author:** Betey K. Jayims

Assistant Professor, Dept. of Child Health Nursing, Bishop Benziger College of Nursing, Kollam.

Article Received on 15/12/2019

Article Revised on 05/01/2020

Article Accepted on 26/01/2020

ABSTRACT

A comparative study to assess the effectiveness of problem based learning and lecture method on knowledge regarding preterm baby among BSc nursing students at selected nursing college at kollam. The objective of the study were: To assess the sample characteristics ,To assess the effectiveness of Problem based learning on knowledge regarding preterm baby among BSc nursing students (group A),To assess the effectiveness of Lecture method on knowledge regarding preterm baby among BSc nursing students (group B),To compare the effectiveness of Problem Based Learning in group A and Lecture method in group B on Knowledge regarding Preterm baby among BSc Nursing Students. Quantitative research approach was used for the study. Quasi experimental design was used. In the present study, the samples are third year BSc nursing students of Bishop Benziger College of Nursing Kollam. The sampling technique is purposive sampling technique. The sample size is 48. The structured questionnaire regarding the preterm baby and its management which was developed after extensive review of literature and based on the expert opinion. The data collected was analyzed by means of descriptive and inferential statistics. The following conclusions were made: 100% samples are female. Samples did not have any previous source of information regarding preterm baby. There is no significant difference between post-test scores of knowledge among students regarding preterm baby undergoing PBL and lecture method. Hence, both methods are equally effective in improving the knowledge regarding preterm baby among students.

KEYWORDS: Comparative study, Problem Based Learning, Lecture method, Knowledge, Preterm Baby, Nursing students.

INTRODUCTION

Good health begins even before birth. Pregnancy and child birth are special events in a women's life. A baby born healthy, with normal birth weight and after completed period of gestation brings joy in the family. A premature birth reduces the amount of time a baby has to grow and develop and if the birth is too premature, the baby may be insufficiently developed to survive. Preterm birth accounts for 75% of all perinatal deaths and up to 50% of the neurological handicaps found in infancy.

Preterm birth is a leading cause of neonatal long term sickness and death. Although there are many maternal characteristics associated with preterm birth, the etiology in most cases is not clear.

The Hindu newspaper reported that the current neonatal mortality rate (NMR) of 44 deaths per 1000 live births

accounted for nearly two thirds of the global infant mortality and half of the global child mortality. The study also pointed out that undivided states of Uttar Pradesh, Madhya Pradesh, and Bihar together accounted for over 50% of the number of neonatal deaths in India in the year 2000. The study has revealed that almost eight million Low Birth Weight infants were born in India every year.

So it is important to teach the mothers about the prevention and care of newborn preterm babies. The BSc Nursing students must have to play major role in the health education process to teach the mothers. Hence it is important to assess the knowledge of BSc nursing students about the preterm babies. So researchers interested to impact the knowledge of Preterm baby to BSc nursing students.

OBJECTIVES

1. To assess the sample characteristics.
2. To assess the effectiveness of Problem based learning on knowledge regarding preterm baby among BSc nursing students (group A).
3. To assess the effectiveness of Lecture method on knowledge regarding preterm baby among BSc nursing students (group B).
4. To compare the effectiveness of Problem Based Learning in group A and Lecture method in group B on Knowledge regarding Preterm baby among BSc Nursing Students.

HYPOTHESES

All hypotheses will be tested at 0.05 level of significance

- H_1 : There will be significant difference between pre-test and post-test scores of knowledge among students regarding preterm baby undergoing PBL.
- H_2 : There will be significant difference between pre-test and post-test scores of knowledge among students regarding preterm baby undergoing lecture method.
- H_3 : There will be significant difference between post-test scores among students undergoing PBL and lecture method.

MATERIAL AND METHODS

Research approach

Quantitative research approach was used for the study.

Research design: Quasi experimental design.

Setting of the study

The study conducted in Bishop Benziger College of Nursing Kollam.

Population

In the present study, the population was BSc nursing students.

Sample and sampling technique

In the present study, the samples are third year BSc nursing students of Bishop Benziger College of Nursing Kollam. The sampling technique is purposive sampling technique.

Sample size: The sample size is 48.

Sampling criteria

Inclusion criteria: Students who belongs to 3rd year Bsc Nursing Programme.

Exclusion criteria: Students from other colleges.

VARIABLES

Dependent variables

In this study, dependent variables are knowledge of BSc nursing students regarding preterm baby.

Independent variables

In this study, independent variables are problem based learning and Lecture method.

TOOLS AND TECHNIQUES

Description of the tool

The structured questionnaire regarding the preterm baby and its management which was developed after extensive review of literature and based on the expert opinion.

Technique/Intervention

On the first day, pre-test was given to both groups using structured questionnaire and teaching was given to both groups using Problem based Learning (Group 1) and Lecture method (Group 2). On the 7th day, the post test was done using the same questionnaire.

Data analysis

The data collected was analyzed by means of descriptive and inferential statistics.

Descriptive statistics

Mean and standard deviation was used to assess the changes in the knowledge of students regarding preterm baby.

Inferential statistics

- Effectiveness of PBL was assessed by using paired 't' test.
- Effectiveness of lecture method was assessed by using paired 't' test
- Comparing the effectiveness of PBL and lecture method was assessed by using unpaired 't' test.

RESULTS AND DISCUSSION

Description of sample characteristics

Graphical Representation of the Sample According To Demographic Variables.

(N=48)

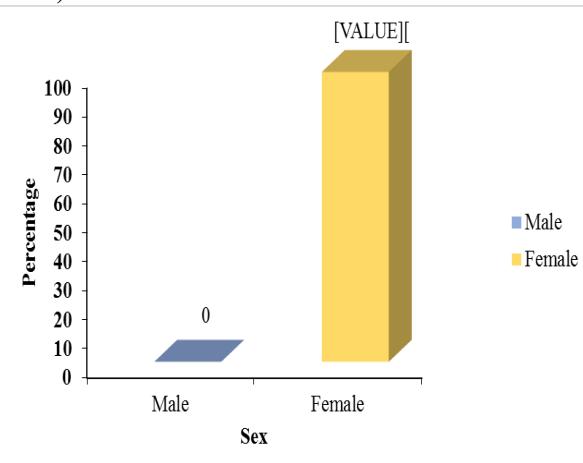


Figure 1: Shows 100% samples are female.

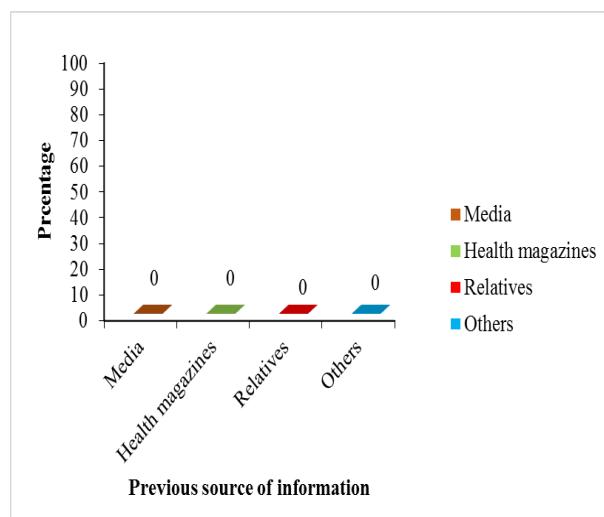


Figure 2: Shows that samples did not have any previous knowledge regarding preterm baby.

Frequency and percentage distribution of samples according to knowledge score in Group A (PBL).

Level of Knowledge	Pre test		Post test	
	Frequency	%	Frequency	%
Poor	0	0	0	0
Average	24	100	14	58.3
Good	0	0	10	41.7

In Group A, pre test Knowledge score among samples were average (100%) and post test Knowledge score among samples were average (58.3%) and good (41.7%).

Frequency and percentage distribution of samples according to knowledge score in Group B (Lecture method).

Level of Knowledge	Pre test		Post test	
	Frequency	%	Frequency	%
Poor	1	4.2	0	0
Average	18	75	16	66.7
Good	5	20.8	8	33.3

In Group B, the pretest Knowledge score among samples were Poor (4.2%), average (75%), Good (20.8%) and post-test Knowledge score among samples were average (66.7%) and good (33.3%).

Effectiveness of Problem based learning on knowledge regarding preterm baby among BSc nursing students (group A).

(n=24)

	Mean	SD	T
Pre test	8.82	1.23	6.81
Post test	10.26	1.38	

Table value =2.07

In Group A, the pre-test, mean, SD value were 8.82 and 1.23 respectively and post-test, mean SD value were 10.26 and 1.38 respectively. The paired't' test value was 6.81, which was greater than the table value (2.07). Therefore, research hypothesis was accepted. Hence, there is significant difference between pretest and

posttest scores of knowledge among students regarding preterm baby undergoing PBL method.

Effectiveness of Lecture method on knowledge regarding preterm baby among BSc nursing students (group B).

(n=24)

	Mean	SD	T
Pre test	9.82	1.37	
Post test	9.58	1.71	5.14

Table value =2.07

In Group B, the pre-test, mean, SD value were 9.82 and 1.37 respectively and post-test, mean SD value were 9.58 and 1.71 respectively. The paired't' test value was 5.14, which was greater than the table value (2.07). Therefore, research hypothesis was accepted. Hence, there is significant difference between pre-test and post-test scores of knowledge among students regarding preterm baby undergoing lecture method.

Compare the effectiveness of PBL and lecture method on knowledge regarding preterm baby among BSc nursing students.

(N=48)

	Mean	SD	T
PBL	10.26	1.38	
Lecture	9.58	1.74	1.51

The PBL, mean, SD value were 10.26 and 1.38 respectively and post-test, mean SD value were 9.58 and 1.74 respectively. The unpaired't' test value was 1.51, which was lesser than the table value (2.02) at 0.05 level of significance. Therefore, research hypothesis was rejected. Hence, there is no significant difference between post-test scores of knowledge among students regarding preterm baby undergoing PBL and lecture method.

CONCLUSION

The following conclusions were made:

1. 100% samples are female.
2. Samples did not have any previous source of information regarding preterm baby.
3. There is no significant difference between post-test scores of knowledge among students regarding preterm baby undergoing PBL and lecture method. Hence, both methods are equally effective in improving the knowledge regarding preterm baby among students.

ACKNOWLEDGEMENTS

We acknowledge for all the participants of the study.

REFERENCES

1. H. Barrows and R. M. Tamblyn, Problem-Based Learning: An Approach to Medical Education, Springer Series on Medical Education, Springer, New York, NY, USA, 1980.

2. M. A. Albanese and S. Mitchell, "Problem-based learning: a review of literature on its outcomes and implementation issues," *Academic Medicine*, 68: 1.
3. W. Antepohl and S. Herzig, "Problem-based learning versus lecture-based learning in a course of basic pharmacology: a controlled, randomized study," *Medical Education*, 33: 2.
4. H. B. Yuan, B. A. Williams, L. Yin, M. Liu, J. B. Fang, and D. Pang, "Nursing students' views on the effectiveness of problem-based learning," *Nurse Education Today*, 31: 6.
5. S. Y. Hwang and M. J. Kim, "A comparison of problem-based learning and lecture-based learning in an adult health nursing course," *Nurse Education Today*, 26: 4.
6. J. Li, Q. L. Li, J. Li et al., "Comparison of three problem-based learning conditions (real patients, digital and paper) with lecture-based learning in a dermatology course: a prospective randomized study from China," *Medical Teacher*, 35: 2.
7. <https://www.ncbi.nlm.nih.gov/pubmed/23535270>
8. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5633274/>
9. <https://www.ncbi.nlm.nih.gov/pubmed/19000029>