



A study to assess the effectiveness of the structured teaching programme on knowledge regarding prevention and management of post-natal breast complications among primigravida mothers

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Abstract

An A pre experimental study with one group pre- test –posttest group design was carried out to assess the effectiveness of structured teaching programme in selected hospitals in Bhopal city. Total 50 subjects were selected structured teaching programme was given to the primigravida mothers about prevention and management of post-natal breast complications. Data collection tool included socio demographic variables and structured knowledge questionnaire. The results of major findings indicated that the primigravida mothers had inadequate in knowledge prevention and management of postnatal breast complication. Structure teaching planning was found to be a very effective method of providing information regarding prevention and management of postnatal breast complication. the significant difference between pre-test and post test score of knowledge regarding postnatal breast complication questionnaire as “t” value was 20.94 at df 49 which was more than table value 2.086 and was very highly significant at $p < 0.001$. The mean score of knowledge questionnaire was 7.32 in Pretest which had a markedly improved in Posttest to 21.08 which clearly signifies the improvement in knowledge score. The mean difference was 13.76, standard deviation was 5.63, standard error was 0.65, degree of freedom was 49 and “t” value was 20.94 which was significant at the level $p < 0.001$ score of primigravida mothers regarding prevention and management of post-natal breast complications.

Keywords: effectiveness, structured teaching programme, post-natal breast complications, knowledge of primigravida mothers

1. Introduction

“Bottle fills his stomach, but breastfeeding fills his soul”

Breast feeding is the act of naturally feeding an infant with milk produced in the mothers breast. Breast milk is the best food for a newborn, nothing comes even closer to provide all the nutrients that the baby will need later in life.

Breastfeeding is an art and skills which need to be learnt and mastered. This skill has to be learnt and followed by mothers not only to feed their infants but also to avoid breastfeeding complications. One of the important steps in breastfeeding technique is helping the baby to latch on the breast correctly. A good latch eliminates the problem of sore nipples and proper breastfeeding reduces the chances of other breastfeeding complications. Some primiparous inexperienced mothers need some help and should be made aware about the importance of breastfeeding and its techniques during the antenatal period, so as to prevent complications in the later periods.

Everywhere on earth people use home remedies, this is having a great values and works as well as modern medicines or even better. They are often cheaper. It is evidenced that home remedies such as cooling therapy reduces the intensity of pain. The home remedies have no side effects and extra complications it can be practiced without the help of nurse-midwives.

The common breast problems in puerperium are

- Breast engorgement.
- Mastitis and Breast Abscess.

- Lactation Failur

- Sore, Cracked and painful nipple leading to difficulty in breastfeeding.

2. Problem Statement

A Study to Assess the Effectiveness of the Structured Teaching Programme on Knowledge Regarding Prevention and Management of Post-Natal Breast Complications among Primigravida Mothers Objectives

The objectives of the study are

- To assess the pretest knowledge scores regarding prevention and management of post-natal breast complications among primigravida mothers in selected hospitals at Bhopal (M.P)
- To find out the effectiveness of Structured teaching programme on knowledge regarding prevention and management of post-natal breast complications among primigravida mothers in selected hospitals at Bhopal (M.P)
- To find out an association between pretest scores of knowledge regarding prevention and management of post-natal breast complications among primigravida mothers with selected demographic variables in selected hospitals at Bhopal (M.P)

Hypotheses

- **H1:** There will be significant difference of posttest knowledge score on prevention and management of postnatal breast complications among primigravida mothers in

selected hospital at Bhopal (M.P.).

- **H2:** There will be significant difference in association between the pretest score of knowledge regarding primigravida mothers with selected demographic variables.

3. Material and Methods

- **Research Approach-** In the present study the quantitative evaluation research approaches was considered to be appropriate evaluate the effectiveness of Structured teaching programme on knowledge regarding prevention and management of post-natal breast complications among primigravida mothers.
- **Research Design-** In the present study the pre-experimental one group pretest-posttest design was used to observe the effectiveness of structured teaching programme on knowledge regarding prevention and management of post-natal breast complications among primigravida mothers.
- **Research Variables-** In the present study the independent variable is structured teaching programme. In the present study the dependent variable is knowledge regarding prevention and management of post-natal breast complications among primigravida mothers.
- **Setting of the Study-** The study was conducted in Sultania zanana hospital at Bhopal.
- **Population-** The population in this study consists of all primigravida mothers who are having suspected one or more post natal breast complications of Bhopal city.
- **Sample and sample Technique-**

-In this study, the samples include 50 primigravida mothers who are having one or more post natal breast complications in the selected hospitals of Bhopal city.

-Non Probability convenient sampling technique will be used in this study.

- **Data Collection Technique and Tool-**In the present study it aimed at evaluating the effectiveness of structured teaching programme on knowledge regarding prevention and management of post-natal breast complications among primigravida mothers in selected hospitals at Bhopal. The tools in this study are: Socio demographic Performa and Structured Questionnaire for assessing the knowledge regarding postnatal breast complications.

▪ Description of Tools

Section A: socio demographic data- This part was comprised of 10 items of to get the baseline data about selected factors such as Age of conception, Duration of Pregnancy, Education Type of Family, Residence, Socio-economic status, Parity, Type of Delivery, Initiation of Breast Feeding and Source of Knowledge.

Section B: knowledge questionnaire- It consisted of 30 items covering the knowledge regarding prevention and management of post-natal breast complications among primigravida mothers. Each item had four options or responses in the form of answers and among the form of responses one correct answer has to be selected. Score on each item refers to poor knowledge (0-10), average knowledge (11-20), and good knowledge. (21-30)

- **Validation of Tools-** A prepared tool along with the objective and structured knowledge questionnaire was given to 5experts who were from the field of obstetric and

gynaecological nursing.

- **Reliability of the Tool-** The tool was test- retests measurements for reliability of knowledge questionnaire to assess the knowledge regarding prevention and management of post natal breast complications among primigravida mothers was carried out by investigator and suggested to be 0.75 or greater and thus is acceptable.
- **Procedure for Data Collection-** written permission was obtained from the respective authorities prior to data collection. The study was carried out in Sultania zanana hospital, Bhopal during the period of 21.08.2019 from 10.09.2019 (Excluding Sundays) collected the pretest and posttest knowledge score. The sample size selected was 50 primigravida mothers from Sultania zanana hospital. The primigravida mothers were given the demographic and structured questionnaire (30 multiple choice questions).

▪ Plans for Data Analysis

The data was obtained from 50 primigravida mothers who are the suspect affected from postnatal breast complication will be analyzed using the descriptive statistics and inferential statistics.

- Baseline data containing sample characteristics would be analyzed using frequency and percentage.
- Chi- Square would be used to find the association between knowledge questionnaires. And selected demographic variable
- Paired t-test would be applied to determine the effectiveness of structured teaching program between mean “t” test score and mean post test score of knowledge questionnaire.

4. Analysis and interpretation

Study Findings: The findings were organized and presented under the following sections

Section I: Socio-demographic variables

Section II: Knowledge questionnaire to assess the knowledge of postnatal breast complications among primigravida mothers

Section III: Association of knowledge questionnaire and selected socio demographic variables

Section IV: Evaluation of the effectiveness of structured teaching program on postnatal breast complications among primigravida mothers.

Section I

This section deals with socio demographic variables

The demographic characteristics of the study were Age of conception, Duration of Pregnancy, Education, Type of Family, Residence, Socio-economic status, Parity, Breast problem in early pregnancy, and Source of Knowledge.

Out of 50 samples:

- Age of conception wide distribution of demographic variable among 50 clients, 2(4%) clients belonged to the age group of 18 or less. 26(52%) belongs to age of 19-25 and 4to 40

% fall under age of no less than 35

Based on the trimester 30-32% clients were in first and second trimester whereas 18% were either in third trimester and just 0% yet to deliver.

- Considering the educational status among 50 clients,

Further 4% were mostly up to primary, 62% higher secondary and 34% graduated.

- Type of family wide distribution of demographic variable among 50 clients, 64% nearly the same nuclear families, 25% in joint and 11% in extended family
- On the basis of residential status the study reveals that 74% lives in urban area, 26% in rural. As far as the socio-economic status is concern 13(26%) belongs to lower socio economic group, 18(36%) belongs to middle class background, 10(20%) belongs to upper middle class and finally, 9(18%) belongs to higher class
- Out of all the clients maximum 30(60%) were housewives, 17(34%) are in private job, 2(4%) are in public services and 1(2%) owns a business.
- Further, if we look at the parity, 50(100%) were primiparous and 00(00%) were multiparous
- 24(48%) doesn't have any breast problems as maximum 24(48%) were knowledgeable relating to same.
- Source of Knowledge wide distribution of demographic variable among 50 clients, 28% were knowledgeable from relative, 48% family members, 29% mass media, 22% health team.

Section II

Assessment of the Pretest Scores of Knowledge Regarding Postnatal Breast Complications among Primigravida Mothers

Table 1: Frequency and Percentage distribution of pretest scores of knowledge regarding postnatal breast complications among primigravida mothers

S. No.	Grades	Marks	Pre-test Score	
			Frequency	Percentage (%)
1	Poor	1-10	33	66%
2	Average	11-20	17	34%
3	Good	21-30	0	0%

Table 1 depicted that in pre-test majority 33(66%) primigravida mothers scored (1-10marks) which was graded as "Poor", 17 (34%) scored (11-20marks) graded as "Average". None of the primigravida mothers scored between (21-30marks) hence not graded as "Good"

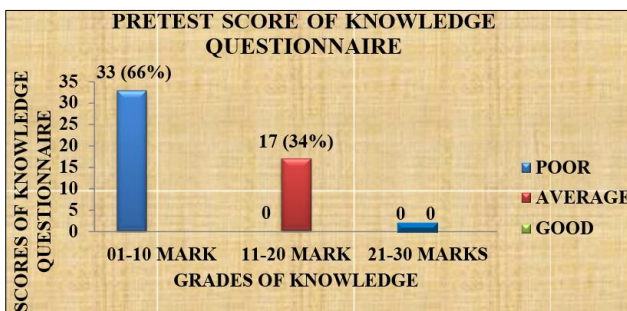


Fig 1: Bar diagram showing the Pretest knowledge score of postnatal breast complications among primigravida mothers

Section III

Association of Knowledge Questionnaire and Selected Socio Demographic Variables

Table 2(a): Chi-Square value of knowledge questionnaire score and Selected Socio-Demographic Variable. N=50

S. No.	Variables	Poor	Average	Good	df	χ^2	Table value $p < 0.05$
1	Age						0.04
	18 years or less	10	11	0	2	8.0	
	>18 years but <25 years	17	2	0			
	> 25 years but <35 years	4	3	0			
>35 years but <45 years	2	1	0				
2.	Duration of Pregnancy						0.03
	First trimester	6	4	0	1	3.7	
	Second trimester	16	4	0			
	Third trimester	11	9	0			
Delivered	0	0	0				

$p < 0.05$ NS- Non Significant, S- Significant

Data Presented in Table 2(a) reveals that as χ^2 value of Age in years was 8.0 at DF 2 was significant, and duration of pregnancy was 3.7 at DF 1 respectively which was less than table value at level of

$p < 0.05$; indicates that there was no significant association between knowledge questionnaire score and selected socio-demographic variable. Hence, H_1 was accepted and rejected as well.

Table 2(b): Chi-Square values of knowledge questionnaire and Selected Socio-Demographic Variable. N=50

S.No.	Variables	Poor	Average	Good	df	χ^2	Table value $p < 0.05$
3	Education						0.12
	Up to primary	13	7	0	2	4.1	
	Higher secondary	17	5	0			
Graduation	3	5	0				
4.	Type of Family						0.95
	Nuclear	16	9	0	1	0.09	
	Joint	13	6	0			
Extended	4	2	0				
5.	Residence						0.75
	Rural	19	9	0	1	0.09	
Urban	14	8	0				

$p < 0.05$ NS- Non Significant, S- Significant

Data Presented in Table 2(b) reveals that as χ^2 value of Education and type of family and Residential status was 4.1, 0.09 and 0.09 respectively, at DF 2, 1 and 1, which was less than table value at level of

$p < 0.05$; indicates that there was no significant association between knowledge questionnaire score and selected socio-demographic variable. Hence, H_1 was rejected.

Table 2(c): Chi-Square values of knowledge questionnaire score and Selected Socio-Demographic Variable.

S. No.	Variables	Poor	Average	Good	df	χ^2	Table value $p<0.05$	
6	Socio-economic Status					5	13.4 S	0.03
	Lower Class	3	7	0				
	Middle Class	17	3	0				
	Upper middle Class	3	5	0				
	Higher Class	10	2	0				
7	Occupation					2	0.9 NS	0.26
	Government Job	9	5	0				
	Private Job	9	3	0				
	Business	6	7	0				
	House wife	9	2	0				
8	Parity					2	0.24 NS	0.62
	Primiparous	33	17	0				
	Multiparous	00	00	0				

$p \leq 0.05$ NS- Non Significant, S- Significant

Data Presented in Table 2(c) reveals that as χ^2 value of socioeconomic status was 13.4 at df 5 and was significant but occupation and parity was 0.9, and 0.24 respectively, at df 2, which was less than table value at level of $p \leq 0.05$; indicates that there was no significant association between knowledge questionnaire score and selected socio-demographic variable. Hence, H1 was rejected.

Table 2(d): Chi-Square values of Knowledge questionnaire score and Selected Socio-Demographic Variable. N=50

S. No.	Variables	Poor	Average	Good	df	χ^2	Table value $p<0.05$	
9.	Breast Problem in Early Pregnancy					2	1.3 NS	0.24
	Yes	10	8	0				
	No	23	9	0				
10	Source of knowledge					2	13.4 S	0.03
	Relatives	3	7	0				
	Family members	15	3	0				
	Mass Media	3	5	0				
	Health Team	12	2	0				

$p \leq 0.05$ NS- Non Significant, S- Significant

Data Presented in Table 2(d) reveals that as χ^2 value of Breast Problem in Early Pregnancy was 1.3 at DF 2, and was not significant Hence, H1 was rejected. But Source of knowledge was 13.4 respectively at DF 2, which was more than table value at level of $p \leq 0.05$; indicates that there was significant association between knowledge questionnaire score and selected socio-demographic variable. Hence, H1 was accepted.

Section IV

Evaluation of the Effectiveness of Structured Teaching Program on Postnatal Breast Complications among Primigravida Mothers

Table 3: Mean, Mean Difference, Standard Deviation, and “t” value of Pre-test and Post-test of Knowledge regarding postnatal breast complication N=50

Score	Mean	MD	SD	SE	df	“t”value	Table value
Pre-test score	7.32	13.76	5.63	0.65	49	20.94 S***	2.086
Post test score	21.08		5.47	0.57	37		

$p < 0.05$ * Significant $p < 0.01$ ** Highly Significant $p < 0.001$ ***Very Highly Significant NS –Non Significant S- Significant

Table 3 shows the significant difference between pre-test and post test score of knowledge regarding postnatal breast complication questionnaire as “t” value was 20.94 at df 49 which was more than table value 2.086 and was very highly significant at $p \leq 0.001$. The mean score of knowledge questionnaire was 7.32 in Pretest which had a markedly improved in Posttest to 21.08 which clearly signifies the improvement in knowledge score. The mean difference was 13.76, standard deviation was 5.63, standard error was 0.65, degree of freedom was 49 and “t” value was 20.94 which was significant at the level $p \leq 0.001$. Hence, H2 was accepted.

Mean Score of Knowledge Questionnaire to Assess the Knowledge Regarding Postnatal breast Complication among Primigravida Mothers

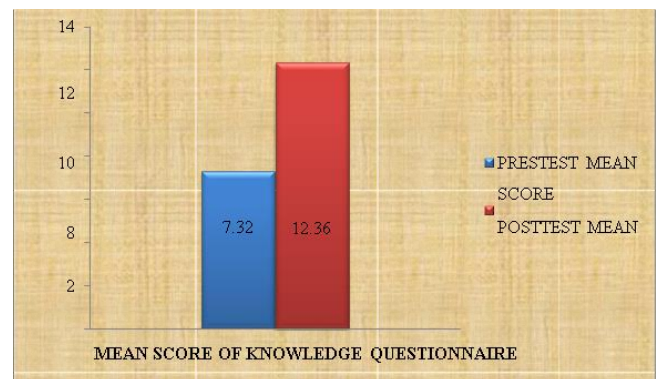


Fig 2: Column diagram showing Mean Pretest Posttest Score of knowledge questionnaire

5. Discussion

Assessment of Socio-Demographic Variables

The present study shows that among 50 clients, 2(4%) clients belonged to the age group of 18 or less. 26(52%) belongs to age of 19-25 and 4to 40 % fall under age of no less than 35. Based on the trimester 30-32% clients were in first and second trimester whereas 18-20% were either in third trimester or yet to deliver. Considering the educational status and type of family 62% were mostly 12th pass and nearly the same has nuclear families. On the basis of residential status the study reveals that 74% lives in urban area, 26% in rural. As far as the socio-economic status is concern

13(26%) belongs to lower socio economic group, 18(36%) belongs to middle class background, 10(20%) belongs to upper middle class and finally, 9(18%) belongs to higher class. Out of all the clients maximum 30(60%) were housewives, 17(34%) are in private job, 2(4%) are in public services and 1(2%) owns a business. Further, if we look at the parity, 00(00%) were multiparous and 05(100%) were primiparous. 24(48%) doesn't have any breast problems as maximum 24(48%) were knowledgeable relating to same.

Assessment of the Knowledge Regarding Postnatal Breast Complications among Primigravida Mothers at Present

Upon assessing the pretest knowledge score, the data depicted that in pre-test majority 33(66%) primigravida mothers scored (1-10 marks) which was graded as "Poor", 17 (34%) scored (11-20 marks) graded as "Average". None of the primigravida mothers scored between (21-30 marks) hence not graded as "Good"

Above findings were supported by a study conducted by Kalyani Sitamani Dongre (2018) at Aligarh in the Academic Year of 2018 on implementation of knowledge questionnaire regarding postnatal breast complications among primigravida mothers, Method to improve their knowledge in this subject through conducting two experiments with them. She investigated the effectiveness of the structured teaching program for learning from educational books. Structured teaching program was compared with simple reading strategies using free-recall, multiple-choice, and short-answer inference tests immediately after study and after a 1-week delay. In Experiments 1 and 2, structured teaching program promoted immediate and delayed free recall of fact-based passages, relative to the rereading and note-taking strategies. In Experiment 2, which used longer, more complex passages on obstetrical topics, performance on multiple-choice and problem-solving items was better in the structured teaching program than in the rereading condition, and was equivalent in the structured teaching program and note-taking conditions, though it took less study time than note taking. An inherent advantage of structured teaching program relative to other testing methods for improving learning is that structured teaching program is under the learner's control. These results indicate that it is also an efficacious study technique that capitalizes on the mnemonic potency of retrieval and feedback.

Effectiveness of Structured Teaching Program on Knowledge Regarding Postnatal Breast Complications on Knowledge Score among Primigravida Mothers

The present study shows the significant difference between pre-test and post test score of knowledge regarding postnatal breast complication questionnaire as "t" value was 20.94 at df 49 which was more than table value 2.086 and was very highly significant at $p \leq 0.001$. The mean score of knowledge questionnaire was 7.32 in Pretest which had a markedly improved in Posttest to 21.08 which clearly signifies the improvement in knowledge score. The mean difference was 13.76, standard deviation was 5.63, standard error was 0.65, degree of freedom was 49 and "t" value was 20.94 which was significant at the level $p \leq 0.001$. Hence, H_2 was accepted.

The above findings were consistent with an another study carried by Sreeja Vijayan (2017) which stated that 73% of primigravida mothers report difficulties preparing for breast feeding and this

percentage of reported postnatal breast complications and poor knowledge in the early stages and while initiating feeding. Those weak strategies include poor knowledge and educational status, and employing redundant strategies. The implementation of structured teaching program was done to improved 98% primigravida mothers' knowledge at selected hospital at Bhopal.

6. Conclusion

After the detailed analysis, this study leads to the following conclusion. The mean pre –test knowledge 7.32 and post test score was 21.08. This means that structured teaching programme was effective in order to increase the knowledge of primigravida mothers regarding prevention and management of post natal breast complication.

Hence, on the basis of above findings, it could be concluded undoubtedly that the structured teaching was effective to increase the knowledge of among of primigravida mothers regarding prevention and management of post natal breast complication.

7. Recommendations

- A similar study can be replicated on a large scale.
- A comparative study can be done to assess the knowledge and practice on breast complications can be done.
- Survey studies on availability of special guidance and classes for the students with problems in breast can be done.
- A study can be done to identify the contributing factors that cause problems among mothers during clinical duties.
- A correlation study can be done to assess the knowledge of the nursing students regarding postnatal breast complications.
- A comparative study can be done to assess the efficacy of the structured teaching program containing both the experimental group and control group.
- A comparative study can be done with other methods of breast care for improving the knowledge of the nursing students regarding obstetrical problems.
- A correlation study to assess the problem during attending obstetrical clients and teachers support and clinical atmosphere can be done.
- An experimental study to assess effectiveness structured teaching program and and postnatal breast complications can be done.

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