

A Pre-Experimental Study to Assess the Effectiveness of Self-Instructional Booklet about Knowledge regarding Postnatal Breast Problems and its Preventive Management among Antenatal Mothers in Selected Hospital

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Abstract: *Introduction:* Breast - feeding releases hormones which cause the uterus to shrink after delivery and also decreases bleeding. Mothers who breastfeed typically have an easier time losing weight after pregnancy. Breast problems are often cited as the reason for stopping breastfeeding, and breastfeeding rates might improve if effective care could be given for these problems. The majority of such problems can be prevented by routine practices which support breastfeeding, and skilled help to establish breastfeeding in the early postpartum period. *Objectives:* The main objective of the study to assess the existing knowledge regarding postnatal breast problems and its preventive management among antenatal mothers. *Research approach:* The quantitative research approach with this pre - experimental study explores the effectiveness of a self - instructional booklet in enhancing antenatal mothers knowledge about postnatal breast problems and their prevention. Conducted with 80 participants in a selected hospital, the study used pre - test and post - test evaluations to measure knowledge improvement. The results indicated a significant increase in the knowledge level post - intervention, demonstrating the booklets effectiveness in maternal education. The data were collected by using Structured questionnaire and analysis were done by using SPSS 24 version 7. The comparison between the mean of pretest and post test for knowledge showed that the mean of differences was 12.32 ± 3.63 Mean, standard deviation and mean difference values are compared and student's paired' test is applied at 5% level of significance. The tabulated value for $n=80 - 1$ i. e.79 degrees of freedom was 1.98. The calculated 't' value i. e.30.30 are much higher than the tabulated value at 5% level of significance for overall knowledge score of subjects which is statistically acceptable level of significance. Hence it is statistically interpreted that the self - instructional booklet on knowledge regarding postnatal breast problems and its preventive management was effective. Thus the H1 is accepted. *Conclusion:* - The analysis of the study revealed that there was a significant improvement in the level of knowledge of the antenatal mother. The self instructional module proved to be effective in improving the knowledge and of antenatal mother in selected hospital.

Keywords: Effectiveness, Self - Instructional Booklet, Knowledge, Postnatal Breast Problems, Antenatal Mothers

1. Introduction

“Surely I have pacified and stilled my soul, like the suckling on its mother’s breasts; like a suckling is in me my soul.”

- Psalms cxxxi, 2 - 3

The wealth of the nation is its healthy population. The mother contribution in creating a healthy population is beyond explanation, so mother should be kept physically, emotionally and socially healthy. Human milk has no substitute and breast is nature’s apparatus for feeding babies. Breast feeding is an art. In recognition of the immense important of breast feeding, the baby – friendly hospital Initiative was launched by UNICEF/WHO in 1991. Breast feeding result in decreased problems such as infections and other medical problems. breast feeding is one of the first bonding experiences between mother and child.¹

IN philosophy, the woman symbolizes the mother’s natural feminine characteristic in the universe. Women are the primary care takers, bearers, and nurturers of the next

generation. They are also vulnerable group. Among the women’s population in our country, the women under the child bearing age constitutes 22%. The incidence of health problems in high among the women of reproductive age.

Women’s health is an issue which has been taken up to many feminists, especially where reproductive health is considered.² Breast milk contains valuable antibodies from the mother that may help the baby resist infections and allergies. Breast milk is extremely nutritious and contains carbohydrates, proteins, and fats essential for a baby’s health. Breast - feeding also offers benefits to nursing mothers. Breast - feeding releases hormones which cause the uterus to shrink after delivery and also decreases bleeding. Mothers who breastfeed typically have an easier time losing weight after pregnancy. According to the American Academy of Pediatrics, breast - feeding also helps build a woman’s bone mineral density and helps prevent osteoporosis after menopause.³

In the Grampian study 33% of all women experienced breast problems in the first 2 weeks post - partum, and 28% in the weeks thereafter. This may be an underestimation, because

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some of the women may have considered these problems as baby feeding problems. Apart from overt mastitis, a relatively rare condition, these problems may have comprised engorgement, and sore, cracked, bleeding or inverted nipples. Breast problems are often cited as the reason for stopping breastfeeding, and breastfeeding rates might improve if effective care could be given for these problems. The majority of such problems can be prevented by routine practices which support breastfeeding, and skilled help to establish breastfeeding in the early postpartum period.⁴

2. Background of the Study

Several common problems that may arise during the breast feeding period, such as breast engorgement, breast infection and insufficient milk supply originate from conditions that lead the mother to inadequately empty the breasts. Incorrect techniques not frequent breast feeding and breast feeding on scheduled time's pacifiers and food suppliers are important risk factors that can predispose to lactation problems. The adequate management of those conditions is fundamental as if not treated they frequently lead to early weaning. These problems can be prevented if the mother empties her breast effectively. If that thing are happen they should be carefully and adequately approached thus avoiding the early weaning resultant from painful and stressing situations the mother may face.⁵

3. Literature Survey

A literature review is a synthesis of literature that describes which known or has been studied regarding the particular research question.

A qualitative study was conducted on An Exploration of the Maternal Experiences of Breast Engorgement and Milk Leakage after Perinatal Loss at Shahrekord Medical Science Universities in 2016. The objective of the study was to exploring women's experience with breast problems and milk leakage after perinatal loss. The sample size was taken 18 participants by using purposefully and through snowball sampling technique. The data was collected by using semi - structured interview. The finding of the study was Data analysis indicated four themes including beyond pain longing being mother, insufficiency of provided information and coping Strategies and beliefs and values regarding milk leakage and breast engorgement. That concluded the findings suggested that health care givers needed to inform the patients about probability milk leakage and breast engorgement and remedies to reduce pains and problems of breast engorgement.⁶

A Longitudinal cohort study Risk factors for subclinical mastitis among HIV infected and uninfected women in Lusaka, Zambia in 2006. Post natal women conducted and showed that Women (198 HIV infected. 189 HIV uninfected) were recruited sample was selected. The finding of the study was revealed the geometric mean milk Na/K ratio and the proportion of women with Na/K ratio > 1.0 in one or both breasts were significantly higher among HI infected then among uninfected women. Others factors associated with the higher mean Na/K ratio in uninvariable analysis postpartum

health care, especially management of maternal infections and especially in primiparous women, on the prevalence of subclinical mastitis and its consequences requires investigation".⁷

A experimental study was conducted on does application of tea bags to sore nipples while breastfeeding provide effective relief at st. boniface general hospital school of nursing in 2016. The objective of the study was to evaluate effectiveness of water versus tea bag compresses in treatment of sore nipples during breastfeeding. The sample size was taken 65 primipara with sore nipples who were breastfeeding after a vaginal delivery at 37 or more weeks gestation, who were 36 hours or less postpartum, and had combined mother - infant care. By using prospective, randomized tria technique. The data was collected by using rating scale. The finding of the study was tea bag and water compresses were more effective than no treatment, with no statistically significant difference between the two types of compresses. It concluded warm water or tea bag compresses are an inexpensive, equally effective treatment for sore nipples during the early postpartum period.⁸

A quasi - experimental study was conducted on Breastfeeding success with the use of the inverted syringe technique for management of inverted nipples in lactating women: a study protocol for a randomized controlled trial in 2019. The objective of the study was to investigate whether, in women with inverted nipples, the use of an inverted syringe increases the rate of exclusive breastfeeding at one month compared to standard care. The sample size was taken 100 women by using single - center, openlabel, parallel - arm, randomized technique. The data was collected by using e - mail, telephone messages, or communication through social media in questioner.

the finding of the study was the use of the inverted syringe to evert inverted nipples is a simple, inexpensive, and safe technique that can be performed by mothers with inverted nipples. Findings of this trial, if positive, will provide much needed evidence for a safe, affordable, readily available, and simple intervention to treat inverted nipples, and improve breastfeeding practice among affected women.⁹

A pre - experimental study was conducted on The Effectiveness of Planned Teaching Programme through Booklet on Knowledge Regarding Defibrillation among the Staff Nurses Working at Selected Hospital Bhopal in 2017. The objective of the study was to abscess "To assess the knowledge regarding defibrillator among the staff nurses" and "To assess the effectiveness of planned teaching programme through information booklet regarding defibrillation among the staff nurses. The sample size was taken 40 staff nurses by using purposive sampling technique. The data was collected by using structured knowledge questionnaire. The finding of the study was the study indicates that, the mean pretest knowledge score 5.23. The analysis of binding of the showed educating of staff nurses help them to improve their knowledge regarding defibrillation. The 't' test calculated value for knowledge (14.69) is very high. So there is significance difference between pretest and posttest knowledge score of staff nurses regarding defibrillation. It concluded the written material

prepared by the investigator in the form of booklet help the staff nurses improve their knowledge regarding knowledge of defibrillation.¹⁰

Problem Definition

“A pre- experimental study to assess the effectiveness of self- instructional booklet about knowledge regarding postnatal breast problems and its preventive management among antenatal mothers in selected hospital”.

4. Objectives of Study

Primary Objective:

To assess the effectiveness of self - instructional booklet on knowledge regarding post natal breast problems and its preventive management among antenatal mothers in selected hospital.

Other Objective

- 1) To assess the existing knowledge regarding post natal breast problems and its preventive management among antenatal mothers in selected hospital.
- 2) To evaluate the effectiveness of self - instructional booklet about knowledge regarding post natal breast problems and its preventive management among antenatal mothers in selected hospital.
- 3) To associate the knowledge of antenatal mothers regarding post natal breast problems and its preventive management with their selected demographical variable such as age, garvida, and educational status.

5. Material and Methods

Pre experimental one group pre - test and post - test research design has been used to evaluate the effectiveness of self - instructional booklet about knowledge regarding postnatal breast problems and its preventive management among antenatal mothers in selected hospital”.

A structured knowledge questionnaire was used to conduct the pre - test on day 1 to evaluate the existing knowledge regarding postnatal breast problems and its preventive management among antenatal mothers in selected hospital” and was depicted as 01 and planned teaching also was conducted on day 1 and depicted as X. A post test was conducted on day 7 using the same structured knowledge questionnaire depicted as 02.

Group	Pre test		Intervention						Post test
			Planned teaching						
	Day								
	1	2	3	4	5	6	7		
Experimental group	0 ₁	X	-	-	-	-	-	0 ₂	

A quantitative approach in pre experimental research design was found to be more appropriate to evaluate the effectiveness of self - instructional booklet about knowledge regarding postnatal breast problems and its preventive management among antenatal mothers. The proposed study was undertaken on antenatal mothers in selected hospital. . The population and samples antenatal mothers of the selected hospital. Who were fulfilling the inclusion and exclusion criteria and the sample consisted of 80 antenatal

mothers in selected hospital. The sampling technique used in this study was non probability sampling technique. Tools used for data collection include three section namely demographic variable and structured knowledge questionnaires.

6. Results

A structured questionnaire is used for data collection. The analysis was done with the help of descriptive and inferential statistics.

Sr. No.	Data Analysis	Method	Remarks
1	Descriptive statistics	Frequency and percentage	To describe the distribution of demographic variables
2	Inferential statistics	Mean, median, standard deviation	To determine the knowledge regarding postnatal breast problems and its preventive management
		Paired t - test	To determine the effectiveness self - instructional booklet in terms of gain in knowledge scores.

The data was analyzed and is presented in the following sections: -

The collected data is analyzed on the bases of objectives of the study in the following way:

Section A: Distribution of subjects with regards to demographic variables.

Section B: Assessment of existing knowledge regarding the post natal breast problems and its preventive management among subjects in selected hospital.

Section C: Assessment of effectiveness of self - instructional booklet about knowledge regarding postnatal breast problems and its preventive management among subjects in selected hospital.

Section D: Association of knowledge of subjects regarding postnatal breast problems and its preventive management with their selected demographic variables such as age, gravida and educational status.

Significance of difference between knowledge score in pre and post test of subjects regarding postnatal breast problems and its preventive management

Overall	Mean	SD	Mean Difference	t - value	p - value
Pre Test	10.48	2.57	12.32 ±3.63	30.30	0.0001 S, p<0.05
Post Test	22.81	3.65			

7. Discussion

The findings of the study were discussed with reference to the objective stated as below. The present study was undertaken as, A pre - experimental study to assess the effectiveness of self - instructional booklet about knowledge regarding postnatal breast problems and its preventive management among antenatal mothers in selected hospital”. The major finding of the study showed that among all subjects, in pre - test knowledge score was, 21.25% of the subjects had poor level of knowledge score and 78.75% of them had average level of pre test knowledge score. Minimum knowledge score in pretest was 2 and maximum knowledge score in pretest was 15. Mean knowledge score

in pre test was 10.48 ± 2.57 and mean percentage of knowledge score in pre test was 32.77 ± 8.03 . Post - test level of knowledge score was, majority 3.75% of the subjects had average level of knowledge score, 56.25% had good and 40% of them had excellent level of post test knowledge score. Minimum knowledge score in post test was 15 and maximum knowledge score in posttest was 30. Mean knowledge score in post - test was 22.81 ± 3.65 and mean percentage of knowledge score in post test was 71.28 ± 11.42 . The study reported that the result regarding level of knowledge regarding post natal breast problems and its preventive management the subjects in pre - test were poor and after the implementation of self - instructional booklet post - test score was increased. With regard to second objective of the study result showed that in pre - test mean score of knowledge was 10.48 and standard deviation was 2.57. post - test mean score was 23.93 and standard deviation was 1.67. The calculated 't' value i. e. 20.12 are much higher than the tabulated value at 5% level of significance for overall knowledge score of females which is statistically acceptable level of significance. In pre - test attitude score was 86.45 and standard deviation was 7.95. post - test mean score was 22.81 and standard deviation was 3.65 The calculated 't' value i. e. 30.30 are much higher than the tabulated value at 5% level of significance for overall knowledge score of antenatal mother which is statistically acceptable level of significance. Hence, it was statistically interpreted that the self instructional booklet on knowledge regarding postnatal breast problems and its preventive management among antenatal mother in selected rural area was effective. With regard to third objective of the study result showed that there was no association of knowledge score in relation to their demographic variable like age and gravid and education status.

8. Conclusion

The study conclusively demonstrates that the use of a self - instructional booklet significantly enhances the knowledge of antenatal mothers regarding postnatal breast problems and their prevention. This finding underscores the value of educational interventions in maternal healthcare and suggests broader application in similar contexts.

9. Future Scope

The findings of the study have implication in nursing service, nursing education, nursing administration, nursing research.

Nursing Practice

The finding of the present study emphasize on knowledge regarding postnatal breast problems and its preventive management which can be put into nursing practice in improved knowledge and awareness and self - instructional booklet can be used as a basis for educating them to use the knowledge in daily care.

The health care professions including nurse will be move vigilant and tactful in order to identify and prevent factors that cause complication regarding postnatal breast problems that may alter their physical, social life, well - being significantly.

The finding of the study will help the nursing professionals working in the hospital gaining the knowledge and help in planning and implementing of the health teaching.

Nursing Education

The present study emphasizes health education on knowledge regarding postnatal breast problems and its preventive management among antenatal mothers. In order to educate the antenatal mothers, it is essential that the nurses are competent and have sound knowledge to improve the level of understanding which can be reflected to public through education.

The nurses would develop an insight regarding knowledge on postnatal breast problems and its preventive management the knowledge of the same while dealing with client in various setting.

The nurse can use the instrument prepared for this study for collecting information of postnatal breast problems and its preventive management.

The finding can be utilized to prepare a module on factors contributing knowledge of postnatal breast problems and its preventive management.

Nursing Administration

Health administration plays a pivotal role in supervision and management of nursing profession. The nurse administration can utilize the present tool for assessing the knowledge of antenatal mothers and can implement measures to promote health on the finding of the study. Distribution of booklet, group discussions can also be arranged for antenatal mothers. Knowledge regarding postnatal breast problems being concern of medical health care facilities, programme at college level for prospective can be planned and implemented country wide to improve the knowledge of postnatal breast problems and its preventive management

Nursing Research

The finding of the present study can be utilize by nurse investigator to contribute to profession to accumulate new knowledge regarding postnatal breast problems and its preventive management, and can take professional accountability to educate and motivate the antenatal mothers towards health promoting practices.

The present study would help nurses and other health care personnel to understand the level of knowledge of antenatal mothers regarding postnatal breast problems and its preventive management. Based on this knowledge the nurse investigator may utilize the suggestion and recommendations for further study. The nurse investigator can use the finding of this study as baseline data to conduct further international researches to identify the level of knowledge and to determine the association of others demographic variable as age, gravida, educational status and to identify the effect of any variable on knowledge of postnatal breast problems and its preventive management

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