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A Quasi-experimental Study to Evaluate the Effectiveness of Jasmine Application in Reduction of Breast Engorgement among Postnatal Mothers in Selected Hospitals of Bangalore

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Abstract: ***Breast engorgement can lead to other breastfeeding problems if not treated. Being able to recognise breast engorgement will help you to treat it promptly, avoiding complications, To Evaluate The Effectiveness Of Jasmine Application In Reduction Of Breast Engorgement Among Postnatal Mothers, this study was conducted with the conceptual framework of Widenbach's. A. Heloing Art of clinical nursing (1964) which is modified by Investigator. One group pretest and post test design with quasi experimental design was adopted . In view of the nature of the problem and to accomplish the objectives of the study, the structured questionnaire and observational checklist was prepared focusing on breast engorgement. Reliability of the tool was tested and validity was ensured in consultation with guides and experts in the field of medicine and nursing. Purposive sampling technique was used and study conducted over a period of 4 week. The data was collected from 35 respondent with breast engorgement. Out of 35 in pretest 11 (31%) had moderate level of breast of engorgement whose score ranged between 5-9.4, about 24 (69%) had severe engorgement. With regard to the pre-test assessment, the mean was 10.17 and standard deviation was 1.34. In post test significant decreased score was found. That is mean was found to be 2.05 and standard deviation was 0.7. Further, effectiveness of the jasmine application was tested by inferential statistics using the paired t test. A high significant difference (57.13) was found between pre and post test scores of the respondents indicating significant decrease in breast engorgement after jasmine application. Hence H_1 is accepted therefore jasmine application was effective in reduction of breast engorgement.***

Keywords: Breast engorgement, Postnatal mother, Effectiveness. Hypothesis

1. Introduction

The newborn baby has only three demand. They are warmth in the arms of its mother, food from her breast and security in the knowledge of her presence. Breastfeeding satisfying all three. Dr. Grnatly Dic –Reed

Breast feeding is internationally important, providing benefits both immunologically and emotionally[1]. Breast feeding is the optimal method of infant feeding, World Health Organization (WHO) and United Nations Children's fund has developed successful steps in improving breast feeding. Health care professionals have an important role to play in promoting and protecting breast feeding.

Breast feeding provides ideal nutrition, growth hormone and antibodies that changes over time as growing infant 's and children' s needs change and provides these inexpensively with no harm to the environment. Breastfed infants are healthier than other infant overall, and research indicates that the health benefits may continue on into adulthood.

A breast become engorged when there is a rapid increase in the milk supply and the milk is not completely drained in Nursing. Breast will feel tender and hard. Engorgement can also occur when the milk ducts are plugged. There may be spots of dried milk on ducts, which should be cleaned from the nipple.

Breast feeding is not so natural as it thought to be. It has to be practised, learned and it needs a lot of determination, patience and effort on the part of the mother. A strong determination to breast feed and the patience to get up and feed at the frequent interval help the mother to become a successful breastfeeder. Positive thinking by the mother who feed confident of producing enough milk for the baby can extend the period of breastfeeding.

Engorgement can happen when milk come in to the breast, during the first few days after birth. Breast start making milk for baby about 2 to 5 days after baby is born. Some women feel only slight swelling, while others feel uncomfortably swollen. Early breast fullness is completely normal. It occurs as milk supply develops and baby has an irregular breastfeeding routine. The normal fullness is caused by the milk extra blood and fluids in mothers breast, body uses the extra fluid to make more breast milk for the baby.

If mother breastfeed after baby is born, mother will have several days and of mild to moderate breast engorgement. This gradually goes away when the breast are not stimulated to make more milk. Overfilled breast can easily become very swollen and painful leading severe breast engorgement.

Mc Hochalan found that 70% of mothers experiencing breast engorgement have found reduction in pain with chilled cabbage leaves and aroma therapies.

Problem statement

A Quasi-experimental Study To Evaluate The Effectiveness Of Jasmine Application In Reduction Of Breast

Engorgement Among Postnatal Mothers In Selected Hospitals Of Bangalore.

2. Literature Survey

Shirvastav P, George K conducted a study of effectiveness of Jasmine flowers (Jasmine Sambac) applied to the breast to suppress puperal lactation was compared to bromocriptine. Effectiveness of both regimens was monitored by serum prolactin level while both bromocriptine and jasmine flowers brought about significant reduction in serum prolactin, the decrease was significantly greater with bromocriptine. However rebound lactation occurred in a small propotoin of women treated with bromocriptine. Jasmine flowers seems to be effective and inexpensive method for suppression of lactation.

As for Jasmine and lactation from November News letter the Petals have traditionally applied to the breasts mothers of still born babies in India to halt lactation. Jasmine oleaceae help in reduction of breast engorgement.

Gernster G conducted a retrospective atudy regarding inhibition of lactation in early puberium in maternity hospital. It was found that the individuals cause for primary or secondry inhibition of lactation in early puperium was maternal and neonatal conditions. Breast engorgement contributes about 5.2%. Although several maternal and neonatal condition suppress lactation this could be avoided in a considerable percentage by adequate medical advice and encouragement for the patient.

3. Method and Approach

Objectives of the study:
To identify postnatal mothers with breast engorgement.
To assess the effectiveness of jasmine application for postnatal mothers with breast engorgement.
To find out the association between the levels of breast engorgement and selected demographic variable.

Research approach
An experimental approach was used to evaluate the effectiveness of Jasmine application in reduction of breast engorgement. Quasi experimental one group pre and post test design O_1 X O_2 was adopted for this study . The selection of this setting was done for the present study on the basis of the geographical proximity, feasibility of the study and the availability of sample. The study was conducted in K C general hospital, Maternity centre and Vanivillas, Bangalore. The population of the study was breast engorged mothers who are admitted in post natal ward of KCG, Vanivillas and Maternity Centre. The sample consisted of 35 postnatal mother s with breast engorgement. The Inclusion criteria was Post natal mother is suffering from the breast engorgrment and the exclusion Criteria was Post natal mothers who are using non –hormonal substance like bromocriptine. The samples were selected through purposive sampling technique. The following tools were used for the study: Structure questionnaire and Observational checklist.

The tool consisted of two parts

Part I: Demographic data
The section consisted of 14 items, describing the mother and baby characteristics such as age, education, income, residential area, gravida, body built, duration of Breast feeding, mode of delivery, nipple abnormality, getational age, weight of the baby, condition, intiation of breastfeeding, sucking ability and additional food of the baby.

Part II: Observational checklist
Observational checklist consisted of 14 items which includes signs and symptoms of breast with a response of present and absent. Score 1 has given for present and 0 has given for Absenr. The total score of the observational checklist was 14.
The result score were arranged as follows:
Mild engorgement-1 to 4
Moderate engorgement-5 to 10
Severe engorgement-11 to 14.

Testing of the tool

Content validity
The observation checklist was developed by the investigator based on the review of literature. The prepared instrument along with objective, operational definition, scoring key and criteria check list for validation were submitted to seven experts, which includes three gynaecologist, three nurses and one Biostatistician to establish content validity.

Reliability
The reliability of the observational checklist was established by innterrator nethod by carried out five breast engorged mothers and the tool was found to be reliable.

Pilot study
A pilot study conducted in KCG hospital and Maternity centre, Bangaluru. Written permission was taken from the hospital authority. Data collection was done under purposive sampling. The purpose of finding out the feasibility of the syudy prior to the beginning of the main study.

Jasmine was applied after identification of the breast engorgement among post natal mothers with the help of observational checklist and post test was done with the same tool. Data analysis was done using descriptive and inferential statistics. The pilot study participants were excluded in the main study.

4. Data Collection Process

The study was conducted in KCG hospital, Maternity centre and Vanivilas, Bangalore. The period of data collection from for one month. Prior to data collection permission was obtained from the concerned authorities. The investigator administered the structured questionnaire for baseline data and checklist for breast engorgement to all the postnatal mothers are selected postnatal ward. Then identified the mother with breast engorgement fulfilling the inclusion criteria as a sample for the present study. Every day on an average 1-2 postnatal mother were selected by purposive sampling; the explanation given to the sample and informed

concern obtained. Wipe the breast with wet towel. The jasmine flowers applied over the breast with the help of lengthy towel as a binders. The amount of jasmine applied depend upon the size of the breast. The jasmine left in place 30-60 minutes three times a day. Post test was done each day by using the same observational check list and the result were recorded. Comparison was done between pre test and post test score. This will helped to evaluate the effectiveness of jasmine application.

5. Result and Discussion

Table 1 shows the frequency and percentage distribution of subject according to variables.

S. No	Demographic Variables	Frequency	Percentage
1	Age		
	18-22years	25	80
	23-27 years	9	20
2	Education		
	Secondary	11	31
	Higher secondary	10	29
	Diploma	5	14
	Degree	9	26
3	Monthly income		
	Rs.3000-5000	30	86
	Rs 5001-8000	5	14
4	Residence		
	Urban	35	100
5	Gravida		
	Primi	23	66
	Multi	12	34
6	Duration of breast engorgement		
	2-3 days	30	86
	4-5days	5	14
7	Body built		
	Thin	9	26
	Moderate	15	43
	Obese	11	36
8	Mode of delivery		
	LSCS	21	60
	Normal	9	26
	Assisted vaginal delivery	5	14
9	Abnormality of Nipple		
	Flat	5	14
	Inverted	5	14
	Crack	5	14
	Retracted	4	12
	No abnormality	16	46
10	Gestation age of the day		
	Term	14	40
	Pre term	10	29
	Post term	11	31
11	Weight of the baby		
	>3KG	21	60
	<3 KG	14	40
12	Condition of the baby		
	Healthy	17	49
	Illness	18	51
13	Initiation of breast feeding		
	>2hrs	35	100
14	Sucking ability		
	Good	17	49
	Poor	18	51
15	Baby fed with additional food		
	Yes	20	57
	No	15	43

The above table 1. reveals that maximum number of post natal mothers 28 (80 %) were in the age group of 18-22 years and remaining 7 (20 %) were in the age group of 23-27years, 11 (31.14 %) were educated till secondary, 10 (29 %) were educated till high secondary, 5 (14 %) were educated till diploma and remaining 9 (26 percent) were graduates.30 (86 %) were getting an income of Rs.3000-5000 per month and remaining 5 (14 %) were having an income of Rs.5001-8000 per month.23 (66 %) were primi mothers and remaining 12 (34 percent) were multi.9 (26 percent) were with in body built, 15 (43 %) of the subject were moderate and remaining 11 (31%) were obese. The data reveals that 30 (86 percent) of the subject had breast engorgement from 2-3 days.5 (14%) had breast engorgement from 4-5days.21 (60 %) were underwent LSCS, 9 (26 %) of the subject had normal delivery and 5 (14 %) were underwent assisted vaginal delivery.16 (46 %) were having abnormalties of nipple and remaining 19 (54 %) were not having any abnormalities. Out of 35 subjects 14 (40 %) of the babies were term, 10 (29 %) were pre term, 11 (31 %) were post term babies.17 (49 %) of the babies were healthy, 18 (51 %) had illness. The propotoin of babies, 35 (100 %) were intiated breast feeding after 2 hrs. About 17 (49 %) of the babies had good sucking ability, 18 (51 %) of the babies had poor sucking ability.20 (57 %) of the babies fed with additional food and remaining 15 (43 %) not fed with additional food.

Finding regarding level of breast engorgement

Out of 35 breast engorged mothers in pretest.11 (31%) had moderate level of breast of engorgement whose score ranged between 5-9.4, about 24 (69%) had severe engorgement.

Table 2: Association between demographic variables with pre-test score

S. N	Demographic Variables	>mean 10.17	< mean 10.17	Total	x^2	df	Table value	Inference
1	Age in yrs							
	18-22	20	8	28	0.858	1	3.841	NS
	2327	6	1	7				
2	Education							
	Secondary	9	2	11	1.55	3	7.815	NS
	Higher secondary	8	2	10				
	Diploma	6	4	10				
	Degree	3	1	4				
3	Monthly income							
	Rs.3000-5000	22	8	30	0.11	1	3.841	NS
	Rs5001-8000	4	1	5				
4	Gravida							

	Primi	15	8	23	0.457	1	3.841	NS
	Multi	9	3	12				
5	Duration of breast engorgement							
	2-3 days	19	8	28	0.178	1	3.841	NS
	4-5 days	5	3	7				
6	Body built							
	Thin	7	2	9	10.84	2	5.991	NS
	Moderate	11	4	15				
	Obese	7	4	11				
7	Mode of delivery							
	LSCS	13	8	21	2.317	2	5.991	NS
	Normal	8	1	9				
	Assisted vaginal delivery	3	2	5				
8	Abnormality of nipple							
	Flat	4	1	5	3.647	4	9.4	NS
	Inverted	3	2	5				
	Crack	5	0	5				
	Retracted	2	2	4				
	No abnormality	10	6	16				
9	Gestational age of the baby							
	Term	11	3	14	2.669	2	5.9	NS
	Preterm	7	3	10				
	Post term	6	5	11				
10	Weight of the baby							
	>3kg	16	6	22	0.073	1	3.8	NS
	< 3kg	10	3	13				
11	Condition of the baby							
	Healthy	13	4	17	0.11085	1	3.8	Ns
	Illness	14	4	18				
12	Sucking ability							
	Good	11	5	16	0.433	1	3.8	NS
	Poor	15	4	9				
13	Baby fed with additional food							
	Yes	14	5	19	0.0072	1	3.8	NS
	No	12	4	16				

Table 2 shows that there is no significant association between pre –test score and selected demographic variables.

Table 3: Comparision of mean and standard deviation for the level breast engorgement among postnatal mother in the pre test and post test

No	Variables	Pretest		Post test	
1	Level of breast engorgement	Mean	SD	Mean	SD
		10.17	1.34	2.05	0.72

Finding revealed that pre test knowledge score it was found that post natal mothers had overall mean of 10.17 and standard deviation was 1.34.

With respect to post –test knowledge score the overall mean was 2.05 and Standard deviation was 0.72. this indicates there was a reduction of breast engorgement.

Table 4: Comparison of pre and post test scores to determine the effectiveness of jasmine application in reduction of breast engorgement

Areas	Mean difference	SD	Df	t-value	't ' table value	P-value
Effectiveness of jasmine application	8.17	0.84	34	57.13	1.645	0.05

Findings revealed that there was a significant difference between pre test and post test scores, i. e the obtained value is bigger than that of table value. Hence the hypothesis is accepted. Therefore, jasmine application is effective in reduction of breast engorgement.

6. Limitation & Conclusion

The study was only 35 postnatal mothers generalization is not possible. The study limited to only one group pre test and post test design.

Finding of the study have several implication for the following fields:

Nursing skills
Study findings signify the importance of jasmine application in reduction of breast engorgement so the investigator generally integrate findings into practice.

Nursing education
The studies have proved that jasmine is effective in reduction of breast engorgement. Nursing personnel can be given in service education to update knowledge regarding breast engorgement and have abilities to identify the Breast engorgement earlier and plan for appropriate intervention.

Nursing research
The investigator felt that vital it is vital to on the area of breast engorgement by the maternal and child health nurse in order to develop the practices and skill in jasmine application .

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