



# “THE EFFECT OF BREAST MASSAGE ON REDUCTION OF BREAST ENGORGEMENT AMONG MOTHERS UNDERGONE CAESAREAN SECTION”

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## ABSTRACT

Breast milk is the perfect food for normal neonate. It is the best gift another can give her baby. It contains all the nutrients for normal growth and development of a baby from the time of birth to first six months of life. Proper proportion and in a form that is easily digested and absorbed. Infants need to be given only exclusive breast feeding for the first six months of life. “If the winter comes can the spring be far behind.” Great poet says that the spring is followed by winter. That reveals that the joy after suffering. But labour does not come to end with child birth. The mothers do suffer much difficulty after childbirth. The design adopted for the study was quasi experimental pre- test and post -test control group design to assess the effectiveness of breast massage on reduction of breast engorgement among mothers undergone caesarian section. Purposive sampling was used to select 60 mothers in selected hospitals among that 30 samples were allotted for experimental group, 30 samples for control group. The data collection tools developed for generating the necessary data were standard scale was used to assess breast engorgement among mothers undergone caesarian section. The reliability of rating scale ( $r=0.9$ ) was established by test retest technique method. The tool was found to be reliable. Pilot study was conducted to find out the feasibility of the study and to plan for data analysis. There was no significant difference between mean pretest level of breast engorgement among mothers undergone caesarian section in experimental and control group ( $t=0.86$ ,  $p<0.05$ ). There was a significant difference between mean post test level of breast engorgement among mothers undergone caesarian section in experimental and control group ( $t=4.88$ ,  $p<0.05$ ). There was a significant difference between mean pre and post test level of breast engorgement among mothers undergone caesarian section in experimental group ( $t=5.76$ ,  $p<0.05$ ). There was a no significant difference between mean pre and post test level of breast engorgement among mothers undergone caesarian section in control group ( $t=0.05$ ,  $p<0.05$ ). There was no significant association between post-test level of breast engorgement and experimental group demographic variables in age, education, occupation, postnatal day, feeding started, duration and frequency of feeding among mothers undergone caesarian section at ( $p<0.05$ ) level. There was a significant association between post-test level of breast

engorgement and experimental group demographic variables in gravida, among mothers undergone caesarian section at ( $p < 0.05$ ) level. There was no significant association of post-test level of breast engorgement and control group demographic variables in age, education, occupation, postnatal day, feeding started, duration and frequency of feeding among mothers undergone caesarian section at ( $p < 0.05$ ) level. There was a significant association between post-test level of breast engorgement and control group demographic variables gravida, among mothers undergone caesarian section at ( $p < 0.05$ ) level. Conclusion: The results of the study concluded that breast massage was effective on reduction of breast engorgement among mothers undergone cesarean section Breast massage is easy to practice, not painful and can enhance comfort to mother in the postnatal period, hence could easily be adopted as a regular intervention.

**Key Words :** Breast Engorgement, Mother

## INTRODUCTION

Child birth is a process beautifully designed by nature and care following the birth of the baby also essential for maintenance of health of both mother and child. Child birth is a transcendent event with meaning far beyond the actual physiological process. The primiparous mother and the mother with inelastic breast are likely to be involved in breast complication. The factors like exaggerated normal venous and lymphatic enlargement of the breasts which precedes lactations in turn prevents escape of milk from the lacteal system leads to engorgement of breast. A postnatal mother may leave the hospital as soon as she is medically stable, though the average for spontaneous vaginal delivery (SVD) is 3-4 days, and the average caesarean section postnatal stay is 6-8 days. The major focus of postpartum care is ensuring that the mother is healthy and capable of taking care of her newborn, equipped with all the information she needs about breastfeeding, reproductive health and contraception, and the imminent life adjustment. Post partum is the six weeks interval between the birth of the newborn and the return of reproductive organs to their normal non-pregnant state.

The rise in circulating prolactin acts upon the alveoli of the breast and stimulate milk production during the first 3-4 days of puerperium of the breast become heavy and engorged. The breast is hard, painful and sometime flushed. The areola will typically feel hard rather than soft, with tight skin that may appear shiny. The nipple may increase in diameter and become flat and taut, making a latch on challenging. The mammary gland is a milk producing gland which is composed largely of fat. It is a complex network of branching ducts & sac-like structures called lobules, which produce milk. Breast tissue fluid drains through the lymphatics into the lymph nodes located in the axilla and behind the sternum. Breast engorgement and nipple trauma are the complications associated with breastfeeding and considered as the most significant factors impacting on breastfeeding in the first weeks of motherhood.

## NEED FOR THE STUDY

The breast is engorged if the mother is unable to feed the baby frequently or thoroughly enough to drain the breast in the first few days after birth. This is very important even though only a small amount of milk production right after delivery. Engorgement can make it difficult for the baby to breast feed effectively. If the breast feel hard, swollen, throbbing, lumpy, uncomfortably full or painful likely to be engorged.

A descriptive study was conducted to identify the concerns of breastfeeding mothers during the first 20 weeks postpartum. The study concluded that proportion of mothers expressing concerns decreased over time, but some concerns such as breast engorgement & nipple tenderness persisted over the 20 weeks. Engorgement is a well known but poorly researched aspect. Global incidence of lactational mastitis vary as low as 2% and up to 50%. Mastitis is an inflammation of the breast that is most commonly caused by milk stasis rather than infection. Non-infectious mastitis can usually be resolved without the use of antibiotics. "Without effective removal of milk, non-infectious mastitis was likely to progress to infectious mastitis, and infectious mastitis to the formation of an abscess." A recent study from Glasgow suggests an incidence of 18%. In approximately 3% of those with mastitis a breast abscess may result in complication.

So the investigator felt that this study need to be conducted to assess the effectiveness of breast massage on reduction of breast engorgement among mothers undergone caesarean section admitted in hospital. The investigator being a nurse interested in non pharmacological measures. The expert in the field and many researchers has given idea about breast massage on reduction of breast engorgement during post natal days. Therefore the researcher interested in study to evaluate the effectiveness of breast massage on reduction of breast engorgement among mothers undergone caesarean section admitted in selected hospital.

### STATEMENT OF PROBLEM:

"A study to assess the effectiveness of breast massage on reduction of breast engorgement among mothers undergone caesarean section admitted in selected hospitals at Durg"

### OBJECTIVES OF THE STUDY:

1. To assess the pre-test and post test level of breast engorgement among mothers undergone caesarean section in experimental and control group.
2. To find out the effectiveness of breast engorgement among mothers undergone caesarean section in experimental group and control group.
3. To compare the pre-test and post- test level of breast engorgement among mothers undergone caesarean section mothers in experimental group and control group.
4. To associate the post-test level of breast engorgement among mothers undergone caesarean section in experimental and control group with their selected demographic variables.

**HYPOTHESES:**

**H<sub>1</sub>:** Mean post -test level of breast engorgement among mothers undergone caesarean section mothers in experimental group will be significantly lower than the mean post- test level of breast engorgement among mothers undergone caesarean section lower segment caesarean mothers in control group.

**H<sub>2</sub>:** There will be a significant difference between mean pre-test and post- test level of breast engorgement among mothers undergone caesarean section in experimental and control group.

**H<sub>3</sub>:** There will be a significant association between post -test level of breast engorgement among mothers undergone caesarean section mothers in experimental and control group with their selected demographic variables.

**ASSUMPTIONS:**

- Breast engorgement may cause pain, tenderness, discomfort and heaviness to the mother's undergone caesarean section.
- Breast massage may help to reduce the breast engorgement among mothers undergone caesarean section.
- Breast engorgement is not given attention it may lead to mastitis & breast abscess leading to poor feeding of neonate.

**DELIMITATIONS:**

1. The Study was delimited to the lower segment caesarean section mother with breast engorgement.
2. The study was delimited to the age group of 20 to 35 years.
3. The study was delimited to those who are willing to participate.
4. The Study was delimited to 4 weeks period of time.
5. The study was delimited to 60 lower segment caesarean section mothers.

**RESEARCH METHODOLOGY****RESEARCH APPROACH**

Quantitative research approach was used in this study.

**RESEARCH DESIGN**

The research design adopted in this study was quasi experimental pre- test and post -test control group design.

GROUPS	PRE TEST	INTERVENTION	POST TEST
Experimental group	O <sub>1</sub>	X	O <sub>2</sub>
Control group	O <sub>1</sub>	-	O <sub>2</sub>

## Schematic representation of quasi experimental design.

### Key:

X – Breast massage.

O<sub>1</sub>– Pre assessment level of breast engorgement among control group and experimental group.

O<sub>2</sub>– Post test level of breast engorgement among control group and experimental group.

## VARIABLES

### Dependent variable:

Breast engorgement

### Independent variable:

Breast massage

## SETTING OF THE STUDY

The study was conducted in post operative ward of selected hospitals Durg.

## POPULATION

The study population consists of mothers who were undergone caesarean section.

## SAMPLE

The study samples consist of mothers who underwent caesarean section and admitted in selected hospital post natal ward with fulfilling the inclusive criteria.

## SAMPLE SIZE

Sample size was 60 caesarean mothers. Out of which 30 of them were allotted to the experimental group and 30 of them in the control group.

## SAMPLING TECHNIQUE

The sampling technique used for this study was non probability purposive sampling technique.

## CRITERIA FOR SAMPLE SELECTION

### Inclusive Criteria

1. Caesarian mothers with mild, moderate, and severe breast engorgement.
2. Caesarian mothers in the age group of 20 to 35.
3. Caesarian section mothers on 3<sup>rd</sup> to 5<sup>th</sup> post- operative days.
4. Caesarian section mothers were willing to participate.

**Exclusive Criteria**

1. Caesarian mothers receiving lactation suppressants for breast engorgement.
2. Caesarians mothers with mastitis, breast abscess, retracted nipple, bleeding or cracked nipples.
3. Caesarian mother, with any systemic illness & obstetrical complication.
4. Caesarean mother who are taking alternative therapy for breast engorgement.

**SECTION-A:****DESCRIPTION OF DEMOGRAPHIC VARIABLES AMONG CAESAREAN MOTHERS IN EXPERIMENTAL AND CONTROL GROUP****Table-1: Frequency and Percentage Distribution of Demographic Variables among cesarean mothers in experimental and control group.**

(N=60)

S.No	Demographic variables	Experimental group (n=30)		Control group (n=30)		Total (N=60)	
		f	%	f	%	f	%
<b>1.</b>	<b>Age</b>						
	<20 yrs	10	33.3	13	43.33	23	38.3
	20-30yrs	10	33.3	11	36.66	21	35
	>31yrs	10	33.3	6	20	16	26.6
<b>2.</b>	<b>Educational status</b>						
	Illiterate	10	33.3	7	23.33	17	28.3
	Primary	6	20	9	30	15	25
	Secondary	7	23.33	10	33.3	17	28.3
	Graduate	7	23.33	4	13.33	11	18.3
<b>3.</b>	<b>Occupation</b>						
	House wife	14	46.66	13	43.3	27	45
	Working	16	53.33	17	56.6	33	55
<b>4.</b>	<b>Gravida</b>						
	Primi	14	46.66	15	50	29	48.3
	Second	10	33.33	6	20	16	26.6
	Multi	6	20	9	30	15	25

<b>5.</b>	<b>Postnatal day</b>								
	3 <sup>rd</sup>	13	43.3	14	46.6	27	45		
	4 <sup>th</sup>	10	33.33	10	33.33	20	33.3		
	5 <sup>th</sup>	7	23.33	6	20	13	21.6		
<b>6.</b>	<b>Feeding started</b>								
	1 hour	9	30	8	26.66	17	28.3		
	1-2 hour	12	40	7	23.33	19	31.6		
	3 hour	9	30	15	50	24	40		
<b>7.</b>	<b>Duration</b>								
	0-10	12	40	11	36.66	23	38.6		
	10-20	9	30	12	40	21	35		
	20-30	9	30	7	23.33	16	26.6		
<b>8.</b>	<b>Frequency</b>								
	<2 hour	16	53.33	19	63.33	35	58.3		
	>2 hour	14	46.66	11	36.66	25	41.6		

**SECTION-B;****ASSESSMENT ON LEVEL OF BREAST ENGORGEMENT AMONG CAESAREAN MOTHERS IN EXPERIMENTAL AND CONTROL GROUP****Table-2: Assessment of the pre-test and post test level of breast engorgement among Caesarean Mothers in Experimental and Control Group**

S.No	Level of breast Engorgement	Experimental group				Control group			
		Pre test		Post test		Pre test		Post test	
		f	%	f	%	f	%	f	%
1.	Normal	0	0	26	86.6	0	0	0	0
2.	Mild Engorgement	23	76.7	4	13.3	25	83.3	25	83.3
3.	Moderate Engorgement	7	23.3	0	0	5	16.6	5	16.6
4.	Severe Engorgement	0	0	0	0	0	0	0	0

(N=60)

**Table - 3: Mean and Standard Deviation of Pre test level of breast engorgement among caesarean Mothers in Experimental and control group.**

(N=30)

S. No.	Group	Mean	Standard Deviation
1.	Experimental	2.86	2.8
2.	Control	2.73	2.67

**Table-4: Assessment of the post test level of breast engorgement among caesarean mothers in experimental and control group.**

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(N=30)

S.No	Group	Level of Breast Engorgement							
		Normal		Mild		Moderate		Severe	
		f	%	f	%	f	%	f	%
1.	Experimental Group	26	86.6	4	13.3	0	0	0	0
2.	Control Group	0	0	25	83.3	5	16.6	0	0

**Table-5: Mean and Standard Deviation of Post-test level of breast engorgement among Caesarean mothers in Experimental Group and control group.**

(N=60)

S. No.	Group	Mean	Standard Deviation
1.	Experimental Group	1.13	1.10
2.	Control Group	2.83	2.77



## SECTION –C

## COMPARISON OF LEVEL OF BREAST ENGORGEMENT AMONG CAESAREAN MOTHERS IN EXPERIMENTAL AND CONTROL GROUP.

Table-6: Comparison of Mean and standard deviation of the pre and post test level of breast engorgement among caesarean mothers in experimentalGroup

(N=30)

S. No.	Test	Mean	Standard deviation	Mean difference	't' value
1.	Pre test	2.86	2.8	1.73	t = 5.76
2.	Post test	1.13	1.10		S P<0.05

Table-7: Comparison of Mean and standard deviation of the pre and post test level of breast engorgement among caesarean mothers in ControlGroup

(N=30)

S. No.	Test	Mean	Standard deviation	Mean difference	't' value
1.	Pre test	2.73	2.67	-0.1	t = 0.05NS P<0.05
2.	Post test	2.83	2.77		

NS – Not Significant

Table-8: Comparison of Mean and Standard Deviation of Pre test Level of breast engorgement among Caesarean Mothers in Experimental andcontrol group.

(N=60)

S. No.	Group	Mean	Standard Deviation	Level of significance "t' Value
1.	Experimental	2.86	2.8	0.86 NS P<0.05
2.	Control	2.73	2.67	

NS – Not Significant

**Table-9: Comparison of Mean and Standard Deviation of Post test Level of breast engorgement among Caesarean Mothers in Experimental and control group.**

(N=60)

S. No.	Group	Mean	Standard Deviation	Level of significance “t’ Value
1.	Experimental Group	1.13	1.10	4.88 S P<0.05
2.	Control Group	2.83	2.77	

S-significant

## SECTION-D:

**ASSOCIATION OF POST-TEST LEVEL OF BREAST ENGORGEMENT AMONG CAESAREAN MOTHERS IN EXPERIMENTAL AND CONTROL GROUP WITH THEIR SELECTED DEMOGRAPHIC VARIABLES.**

(N=30)

S.No	Demographic variables	Level of Breast Engorgement								χ <sup>2</sup> value
		Normal		Mild		Moderate		Severe		
		F	%	f	%	f	%	f	%	
<b>1</b>	<b>Age</b>									4.043
	<20 years	9	30	1	3.3	0	0	0	0	df=6
	20-30yrs	7	23.3	3	10	0	0	0	0	NS
	>31years	10	33.3	0	0	0	0	0	0	
<b>2</b>	<b>Educational status</b>									3.110
	Illiterate	10	33.3	0	0	0	0	0	0	df=9
	Primary	5	16.6	1	3.3	0	0	0	0	NS
	Secondary	6	20	1	3.3	0	0	0	0	
	Graduate	5	16.6	2	6.7	0	0	0	0	
<b>3</b>	<b>Occupation</b>									0.177
	House Wife	12	40	2	6.7	0	0	0	0	df=3
	Working	14	46.7	2	6.7	0	0	0	0	NS
<b>4</b>	<b>Gravida</b>									12.65

	Primi	13	43.3	1	3.3	0	0	0	0	df=3 <b>S</b>
	Second	9	30	1	3.3	0	0	0	0	
	Multi	4	13.3	2	6.6	0	0	0	0	
<b>5</b>	<b>Postnatal Day</b>									0.747
	3 <sup>rd</sup>	12	40	1	3.3	0	0	0	0	df=6 <b>NS</b>
	4 <sup>th</sup>	8	26.6	2	6.6	0	0	0	0	
	5 <sup>th</sup>	6	20	1	3.3	0	0	0	0	
<b>6</b>	<b>Feeding Started</b>									0.181
	1 hr	8	26.6	1	3.3	0	0	0	0	df=6 <b>NS</b>
	1-2 hr	10	33.3	2	6.6	0	0	0	0	
	3 hr	8	26.6	1	3.3	0	0	0	0	
<b>7</b>	<b>Duration</b>									0.907
	0-10	11	36.6	1	3.3	0	0	0	0	df=6 <b>NS</b>
	10-20	8	26.6	1	3.3	0	0	0	0	
	20-30	7	23.3	2	6.6	0	0	0	0	
<b>8</b>	<b>Frequency</b>									1.61
	< 2 hr	15	50	1	3.3	0	0	0	0	df=3 <b>NS</b>
	>2 hr	11	36.7	3	10	0	0	0	0	

NS- Non Significant; S- Significant

**Table-11: Association of Post-test level of breast Engorgement among Caesareanmothers in control Group with their Selected Demographic Variables**

(N=30)

S.No	Demographic variables	Level of Breast engorgement								X <sup>2</sup> Value
		Normal		Mild		Moderate		Severe		
		f	%	f	%	f	%	f	%	
										2.105 df=6NS
<b>1</b>	<b>Age</b>									
	<20 years	0	0	11	36.7	2	6.6	0	0	
	20-30yrs	0	0	8	26.7	3	10	0	0	
	>31years	0	0	6	20	0	0	0	0	
	<b>Education</b>									
	Illiterate	0	0	6	20	1	3.3	0	0	1.139 df=9NS
	Primary	0	0	7	23.3	2	6.6	0	0	
	Secondary	0	0	8	26.7	2	6.6	0	0	
	Graduate	0	0	4	13.3	0	0	0	0	
<b>3</b>	<b>Occupation</b>									3.3 df=3NS
	House Wife	0	0	9	30	4	13.3	0	0	
	Working	0	0	16	53.3	1	3.33	0	0	
<b>4</b>	<b>Gravida</b>									3.12 df=3S
	Primi	0	0	13	43.3	2	6.7	0	0	
	Secondary	0	0	6	20	0	0	0	0	
	Multi	0	0	6	20	3	10	0	0	
<b>5</b>	<b>Postnatal Day</b>									1.51 df=6NS
	3 <sup>rd</sup>	0	0	11	36.6	3	10	0	0	
	4 <sup>th</sup>	0	0	8	26.7	2	6.7	0	0	
	5 <sup>th</sup>	0	0	6	20	0	0	0	0	
<b>6</b>	<b>Feeding Started</b>									0.936

	1 hr	0	0	7	23.3	1	3.3	0	0	DF=6NS
	1-2 hr	0	0	5	16.6	2	6.7	0	0	
	3 hr	0	0	13	43.3	2	6.7	0	0	
<b>7</b>	<b>Duration</b>									1.177 df=6NS
	0-10	0	0	10	33.3	1	3.3	0	0	
	10-20	0	0	10	3.33	2	6.7	0	0	
	20-30	0	0	5	16.6	2	6.7	0	0	1.407 df=3NS
<b>8</b>	<b>Frequency</b>									
	< 2 hr	0	0	17	56.6	2	6.7	0	0	
	>2 hr	0	0	8	26.6	3	10	0	0	

NS- Non Significant: S- Significant.

## SUMMARY

Breast feeding is a gift that can only be given by giving oneself. But it may get affected by certain complication if it is not managed properly. This may also lead to the mother failing to enjoy her motherhood. If the midwife understands the effect of breast massage on the level of breast engorgement among Caesarean mothers they will be prepared to provide support and care. Preventing complication during breast feeding offering a variety of pharmacological and non-pharmacological approaches. It is a type of non pharmacological method, breast massage on reducing the level of breast engorgement. It can be done safely or can be done by a professional. So, the investigator assessed the effectiveness of breast massage on level of breast engorgement among Caesarean mothers who are admitted in selected Hospital.

## CONCLUSION

The present study assessed the effectiveness of breast massage on level of breast engorgement among caesarean mothers. The results of the study concluded that applying breast massage was effective in reducing the level of breast engorgement among cesarean mothers. Breast Massage is easy to apply, not painful and can enhance comfort to the mother in the postnatal period, hence could easily be adopted as a regular intervention. Therefore, the investigator felt that more importance should be given to the assessment on level of breast engorgement among cesarean mothers in 3-6<sup>th</sup> postnatal day using standard breast engorgement scale, following the intervention of breast massage can be given as a non-pharmacological measures to reduce breast engorgement.

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