

# A Study to Assess the Effectiveness of Application of Cabbage Leaves in the Management of Breast Engorgement among Postnatal Mothers in Doon Female Hospital at Dehradun, Uttarakhand

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**Abstract:** Breastfeeding is considered as one of the most natural and intimate of all human interactions. Breast engorgement is considered as the second most common reason that the mothers stop breastfeeding. Breast engorgement is the painful overfilling of the breast with milk. The study was conducted in post-natal wards of Doon female (government) Hospital, Dehradun. The study design was quasi Experimental design. Total Sample size was 60. (Experimental group-30, Control group-30). A standardized "six point breast engorgement" scale was used and It consists of standardized "Six- point engorgement scale" which scores ranging from 1 to 6. The subjects were assigned into two groups by using purposive sampling technique through random selection. Experimental group: Subjects who received the intervention of cabbage leaves application. Control group: Subject who received routine hospital care. Major finding of the study revealed that 67% of the postnatal mothers developed breast engorgement after 6 days following delivery whereas 63.3% developed after 2-3 day and only 30% of the women developed breast engorgement after 4-6 days of following delivery while Mean pre-test score of experimental group was found to be 3.43 after giving intervention the mean post test score was found to be 1.27. Significance difference ( $p < 0.05$ ) is found between pre test and post test score. It can be concluded that the cabbage leaves application was effective in control of breast engorgement and cabbage leaves can be used as folk remedy and natural therapy for relieving breast engorgement.

**Key Words:** Effectiveness, cabbage leaves, Breast engorgement and post natal mothers.

## 1. INTRODUCTION:

Pregnancy is a unique exciting and often joyous time in a women's life as it highlights the women's amazing creative and nurturing power while providing a bridge to the future. Breastfeeding is considered as one of the most natural and intimate of all human interactions. The most common problems associated with the breastfeeding are breast engorgement, mastitis, cracked or sore nipple, inverted nipple etc. Breast engorgement is considered as the second most common reason that the mothers stop breastfeeding sooner than they have planned. Breast engorgement is the painful overfilling of the breast with milk. This is usually caused by an imbalance between secretion and feeding. Breast engorgement is characterized by swelling, tenderness, warmth, throbbing pain and low-grade fever. Breast engorgement if not treated promptly can result in mastitis. Researchers have found that the cabbage leaf scientifically known as brassica oleracea has proved to be effective in reducing the swelling in sprains and broken bones. Use of cabbage leaf compress to alleviate the swelling and pain associated with Breast engorgement has been reported since 1800's. Cabbage leaves contain sinigrin (allyl isothiocyanate) rapine, mustard oil, magnesium oxylate and amino acid methionine. Herbalist believe that sulphur in amino acid methionine acts as an antibiotic and anti irritant, which in turn draws an extra flow of blood to the area. The cabbage leaves thus works only on the trapped fluid around the lactating tissue and not on the milk volume in the ducts. It dilates the capillaries and acts a counter irritant thus relieving the engorgement and inflammation and allowing the milk to flow freely.

## 2. OBJECTIVE:

- To assess the level of breast engorgement among post-natal mothers before and after the application of cabbage leaves
- To compare the post-test level of breast engorgement among post-natal mothers between experimental group (administered with cabbage leaves) and control group
- To find out the association of the post test level of breast engorgement among post- natal mothers with their selected demographic variables.

## 3. ASSUMPTIONS:

- Most of the post-natal mothers may have breast engorgement.

- Application of cabbage leaves may have effect in the management of breast engorgement.

**4. HYPOTHESIS:**

- **H<sub>1</sub>:** There was significant difference in the pre-test and post-test level of breast engorgement among post-natal mothers before and after the application of cabbage leaves
- **H<sub>2</sub>:** Post test level of breast engorgement among postnatal mothers was higher in experimental group than the control group.
- **H<sub>3</sub>:** There was significant association between the post test level of breast engorgement among post-natal mothers with their selected demographic variables.

**5. RESEARCH METHODOLOGY:**

Methodology of research indicates the general patterns to gather valid and reliable data for the problem under investigation.

**Research approach:**

Quantitative research approach is used in the study.

**Research design**

Quasi Experimental design.

**Setting**

The study was conducted in post-natal wards of Doon female Hospital, Dehradun. Hospital is running under Uttarakhand government with the capacity of 750 beds catering its services to the hilly regions of Himalaya, Uttarakhand and neighbouring states.

**Population**

The population consists of post-natal mothers with breast engorgement.

**Sample**

Post-natal mothers were considered as a sample.

**Sample size**

The sample consisted of 60 postnatal mothers who have breast engorgement. Out of which 30 mothers were in experimental group and 30 mothers were in control group.

**Sampling technique**

Purposive sampling technique was found to be appropriate for the purpose of the study.

**Data collection instrument**

The tool consists of the following sections.

**Section A:** Demographic variables

**Section B:** It consists of standardized “Six- point engorgement scale”

**6. FINDINGS AND ANALYSIS:**

**SECTION A**

**Table - 1 Frequency & Percentage distribution of demographic variables of experimental group and control group.**

Demographic variables	n <sub>E</sub> =30 n <sub>C</sub> =30			
	Experimental group		Control group	
	Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)
1) Age( in years)				
a) 18-24	13	43.3	15	50.0
b) 25-31	16	53.3	14	46.7
c) 32-38	01	3.3	01	3.3
d) 39-45	00	00	00	00
2) Educational status				
a) No formal education	02	6.7	02	6.7
b) Primary school				
c) Higher secondary school	03	10	04	13.3
d) Graduate and above	08	26.7	16	53.3
	17	56.7	08	26.6

3) Types of family				
a) Joint family	24	80	21	70
b) Nuclear family	06	20	09	30
c) Broken / divorce	00	00	00	00
d) Extended family	00	00	00	00
4) Parity				
a) Primipara	25	83.3	24	80
b) Multipara	05	16.7	06	20
c) Grandmultipara	00	00	00	00
5) Types of delivery				
a) Normal vaginal delivery	12	40	13	43.3
b) LSCS	18	60	17	56.7
c) Instrumental delivery	00	00	00	00
6) Initiation of breast feeding				
a) Within half an hour	07	23.3	05	16.7
b) Within 6 hours	06	20	11	36.7
c) Within 24 hours	10	33.3	14	46.7
d) Within 48 hours	07	23.3	00	00
7) Frequency of breast feeding( per day)				
a) 14-16 times	00	00	00	00
b) 11-13 times	00	00	02	6.7
c) 8-10 times	01	3.3	05	16.7
d) Less than 8 times	29	96.7	23	76.7
8) Postnatal day of breast engorgement				
a) 2-3 day	19	63.3	16	53.3
b) 4-6 day	09	30	13	43.3
c) After 6 day	02	6.7	01	3.3
9) Previous history of breast engorgement				
a) Yes	00	00	00	00
b) No	30	100	30	100
10) Any other pain relieving measures				
a) Yes	00	00	00	00
b) No	30	100	30	100

From the findings of the study it can be calculated that Maximum 53.3% of postnatal mothers belong to the age group 25-31 who were having breast engorgement. Most of them 56.7% were graduate and above and 80% of postnatal mothers belong to joint family. Maximum 83.3% of postnatal mothers were primipara and 16.70% were multipara. Almost 2/3<sup>rd</sup> of postnatal mothers had undergone LSCS whereas 1/3<sup>rd</sup> of postnatal mothers had undergone normal vaginal delivery. 33.30% initiated the breast feeding within 24 hours whereas 23.30 initiated breast feeding within ½ an hour and within 48 hours. Only 20% of them initiated the breast feeding within 6 hours. 96.70% post natal mothers breast fed their baby for less than 8 times/ day whereas very few 3 % of them breast fed 8-10 times /day .67% of the postnatal mothers developed breast engorgement after 6 days following delivery whereas 63.3% developed after 2-3 day and only 30% of the women developed breast engorgement after 4-6 days of following delivery.

## SECTION- B

**Table 2 Assess the level of breast engorgement among postnatal mothers before and after the application of cabbage leaves**

n<sub>E</sub>=30 n<sub>C</sub>=30

Groups	Breast engorgement scale	
	Pre-test (Mean±SD)	Post-test (Mean±SD)
Experimental group	3.43± 0.67	1.27± 0.52
Control group	3.27 ±0.58	2.77 ±0.72

Table 2 shows that the Mean pre-test score of experimental group was found to be 3.43 after giving intervention the mean post test score was found to be 1.27 which reduced because of the cabbage leaves application to the postnatal mothers whereas in the control group there was not much difference found in the mean pre-test score 3.27 and the mean post-test score 2.77

**Table 3 Effectiveness of application of cabbage leaves among postnatal mothers**

Experimental group	Mean Pre-test	Mean Post- test	t	P
	3.43	1.27		

**n<sub>E</sub>=30**

**Paired t-test t<sub>tab</sub>=2.05 df= 29\*P<0.05**

Table 3 shows that the Mean pre-test score of experimental group was found to be 3.43 after giving intervention the mean post test score was found to be 1.27 which reduced because of the cabbage leaves application to the postnatal mothers. The calculated value of paired t test is 20.04 which is more significant.

**Table 4 Compare the post-test level of breast engorgement between 2 groups of postnatal mother’s-Experimental group and control group**

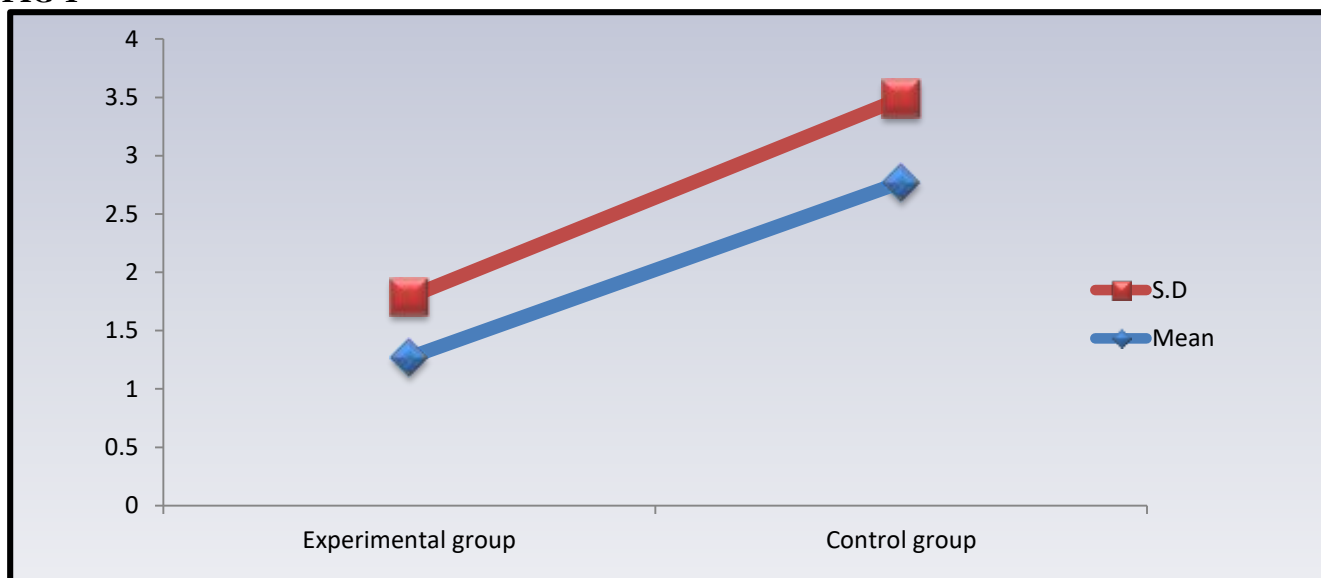
Group	Post-test (Mean±SD)	Mean difference	t	P
Experimental group	1.27 ±0.52	-1.50	9.179	0.000*
Control group	2.77± 0.72			

**n<sub>E</sub>=30 n<sub>C</sub>= 30**

**Independent t-test t<sub>tab</sub>=2.00 df= 58 \*P< 0.05**

Table 4 shows that the mean post test score of experimental group was found to be 1.27 i.e. after giving intervention whereas the mean post test score of control group was found 2.77 The calculated value of independent t test is 9.179 which is more significant.

**FIG-1**



Above figure revealed the line diagram in which the mean post test score of experimental group was found to be 1.27 and S.D was 0.52 whereas the post test score of control group was found 2.77 and S.D was 0.72. The difference between the post test score of experimental and control group was statistically significant.

**6. RECOMMENDATION:**

Based on the results of the study following recommendations are made for future study-

- ❖ The study can be replicated on larger sample for generalization of findings.
- ❖ A comparative study can be conducted to determine the effectiveness of cabbage leaves application and cold compress.
- ❖ A comparative study can be conducted to determine the effectiveness of chilled and room temperature cabbage leaves in treating breast engorgement.

## **7. CONCLUSION:**

The present study assessed the Effectiveness of Application of Cabbage Leaves in the Management of Breast Engorgement and Mean pre-test score of experimental group was found to be 3.43 after giving intervention the mean post test score was found to be 1.27 which reduced because of the cabbage leaves application to the postnatal mothers and it found to be very effective at  $p < 0.005$  level. The study findings revealed that the cabbage leaves application was effective in control of breast engorgement. So the study concluded that the cabbage leaves can be used as folk remedy and natural therapy for relieving breast engorgement, though breast engorgement can be cured in advance stage by promoting proper positioning, massaging, hot and cold application.

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