

# A Study to Assess Effectiveness of Chilled Cabbage Leaf Application on Breast Engorgement Among Post-Partum Women's At Selected Hospital of South Gujrat

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## ABSTRACT

**Introduction :** Childbirth is a process beautifully designed by nature and the care following the birth of the baby also essentials for the maintenance of the health of both mother and child. Because of some reasons complication results to the Breast Engorgement. Many methods have been used to relieve the symptoms of engorgement. The cabbage is powerhouse of the nutrition. It has many healing properties and it's also easy to use, cheap and readily available. Mother can apply without any supervision. Cold application decreases the swelling and inflammation and numb the pain.

**Objectives of the study :** 1) To assess the level of breast engorgement among post-partum women's at selected hospital of South Gujarat. 2) To determine effectiveness of chilled cabbage application on Breast Engorgement among Post-Partum Women's at selected hospital of South Gujrat. 3) To find out the association between pre-test of chilled cabbage application on breast engorgement scores among the post-partum women's with selected demographical variables in selected hospital of South Gujarat.

**Method :** A quantitative research approach with Quasi experimental one group pre-test, post-test design was use in the present study. The sample taken as 60 post-natal women with breast engorgement. those sample selected by using Non probability Purposive technique. Data collection done between 25 April 2022 to 21<sup>st</sup> May 2022 at Nadkarni Hospital and Test tube baby centre, Pardi by using Six-point Breast Engorgement score. Data was analysed by using the method of descriptive and inferential statistics.

**Result :** Majority post-partum women's 24 belongs to 26-30 years age group. Majority of post-partum women's 22 are high school certificates. Most of post-partum women's 28 are unemployed. Majority in family incomes are 20,000-24,999/-Rs that are 28 post-partum women. Most of 59 women are emotionally stable. Majority post-partum women's 32 are non-vegetarians. All post-partum women's have no any bad lifestyle habits. The majority women's 38 has no previous knowledge regarding breastfeeding. Most of post-partum women's 42 are primi parity. Majority post-partum women's 27 are primi gravida. Most of post-partum women's 39 had done L.S.C.S. Majority post-partum women's 23 had breast engorgement on 4<sup>th</sup> day. Majority post-partum women's 52 have no any puerperal complications. Most of 36 babies are live without complications. Majority post-partum women's 46 are done 3-4 hourly breastfeeding. Most of post-partum women's 35 are done less than 10 min feeding. Majority in type of feeding was 36 normal breast feeding. Most of post-partum women's 32 has left breast affected. Majority in post-partum women's 39

has no any other medical complications during pregnancy and delivery. The mean 3 and standard deviation 0.843 in the pre- intervention. ANOVA Test is done to assess the repetitive assessment of breast engorgement score.

**Interpretation and conclusion :** The study concludes that breast engorgement is a common problem among post-partum women, particularly during the early postnatal period. The findings indicate that the application of chilled cabbage leaves is an effective, safe, economical, and non-invasive intervention for reducing breast engorgement among post-partum women. The intervention was well accepted and easy to administer without the need for professional supervision. Therefore, chilled cabbage leaf application can be recommended as a supportive nursing measure for the management of breast engorgement in post-partum women, helping to promote maternal comfort and successful breastfeeding.

## INTRODUCTION

Childbirth is a process beautifully designed by nature and the care following the birth of the baby also essentials for the maintenance of the health of both mother and child. Because of some reasons complication results to the Breast Engorgement. Many methods have been used to relieve the symptoms of engorgement. The cabbage is powerhouse of the nutrition. It has many healing properties and it's also easy to use, cheap and readily available. Mother can apply without any supervision. Cold application decreases the swelling and inflammation and numb the pain.

## PROBLEM

“A study to assess effectiveness of Chilled Cabbage Leaf application on Breast Engorgement among Post-partum women's at selected hospital of south Gujrat.”

## OBJECTIVES OF THE STUDY

1. To assess the level of breast engorgement among post-partum women's at selected hospital of South Gujarat.
2. To determine effectiveness of chilled cabbage application on Breast Engorgement among Post-Partum Women's at selected hospital of South Gujrat.
3. To find out the association between pre-test of chilled cabbage application on breast engorgement scores among the post-partum women's with selected demographical variables in selected hospital of South Gujarat.

## OPERATIONAL DEFINITION

### 1) Assess:

In this study assess refers to the organized, systematic and continuous process of collecting data from the post-partum women with breast engorgement.

### 2) Effectiveness:

In this study the desired changes brought by the chilled cabbage leaf application in breast engorgement.

### 3) Chilled cabbage leaf:

In this study cold cabbage leaves refers to cabbage leaves which are refrigerated in the freezer (40 F or 4 C) for 30 minutes before application. The cabbage leaves contain sulfa compound which pass through the skin and reduces inflammation. This reduction in inflammation and swelling allows the milk to flow. Place the freeze cold cabbage leaves on the engorged breast, leaving the nipple exposed.

**4) Breast engorgement:**

In this study breast engorgement is refers to a swelling of the breast due to an increase in blood and lymph supply as precursor to lactation.

**5) Post-partum women:**

In this study post-Partum refers to a woman who have post-partum period, birth of baby to 6 weeks.

**ASSUMPTION**

- Women in post-partum period may have breast engorgement
- Chilled cabbage leaf reduces the level of breast engorgement

**DELIMITATIONS**

- This study is limited to women's post-partum periods with breast engorgement
- This study is limited to 60 sample
- This study is limited to 4 week of data collection

**HYPOTHESIS**

- H1: There is a significant difference between pre-test and post-test breast engorgement scores of application of chilled cabbage leaf among the post- partum women's in selected hospital of South Gujrat at the level of  $p \leq 0.05$ .
- H2: There is a significant association between pre-test breast engorgement scores among the post-partum women's with selected demographical variables in selected hospital of South Gujrat at the level of  $p \leq 0.05$ .

**RESEARCH METHODOLOGY**

**RESEARCH APPROCH :** Quantitative research approach

**RESEARCH DESIGN :** Quasi Experimental, One group pre-test post-test.

**VARIABLE :**

**DEPENDENT VARIABLE :** Level of Breast Engorgement

**INDEPENDENT VARIABLE :** Chilled Cabbage Leaf

**SOCIO DEMOGRAPHIC VARIABLE :** Age, education, occupation, family monthly income, emotional status, dietary pattern, lifestyle hobbit.

**RESEARCH SETTING :** The study will be conducted in hospitals namely Nadkarni Hospital & Test tube baby center, Killa Pardi, Gujarat.

**POPULATION AND SAMPLE :**

**POPULATION:** Eligible Post-partum Women's with Breast Engorgement who admits in Nadkarni Hospital & Test tube baby center, Killa Pardi, Gujarat.

**SAMPLE:** 60

**SAMPLING TECHNIQUE :** Non-probability Purposive sampling technique.

**DESCRIPTION OF TOOL :****SECTION 1: DEMOGRAPHIC CRITERIA**

It consist of selected Socio demographic variable such as Age, education, occupation, family monthly income, emotional status, dietary pattern, lifestyle hobbit.

**SECTION 2: OBSTETRIC CRITERIA**

It consist of selected Obstetrical variable such as Gravida, Parity, Mode of delivery, Puerperal day, Puerperal complications, Status of the baby, Duration of feeding, Frequency of feeding, Types of feeding, Site of breast engorgement and Any other maternal complication during pregnancy & delivery.

**SECTION 3: SIX-POINT BREAST ENGORGEMENT SCALE**

This tool is developed by the Hill and Humenick. It is a standardized tool to assess the severity of breast engorgement of the postnatal period. It contains 6 points such as soft, heaviness, firm but non-tender breast, firm with beginning tenderness in breast, firm with tender and very firm with tender with observable vein. Scoring 1-2 is mild, 3-4 is moderate and 5-6 Severe.

SR. NO.	DESCRIPTION	SCORE	BEFORE INTERVENTION	AFTER INTERVENTION
1	Soft	1		
2	Heaviness	2		
3	Firm, non-tender breast	3		
4	Firm, beginning tenderness in breast	4		
5	Firm tender	5		
6	Very firm, very tender with observable vein	6		

**SCORING**

- 1 To 2 - Mild Breast Engorgement
- 3 to 4 – Moderate Breast Engorgement
- 5 to 6 - Severe Breast Engorgement

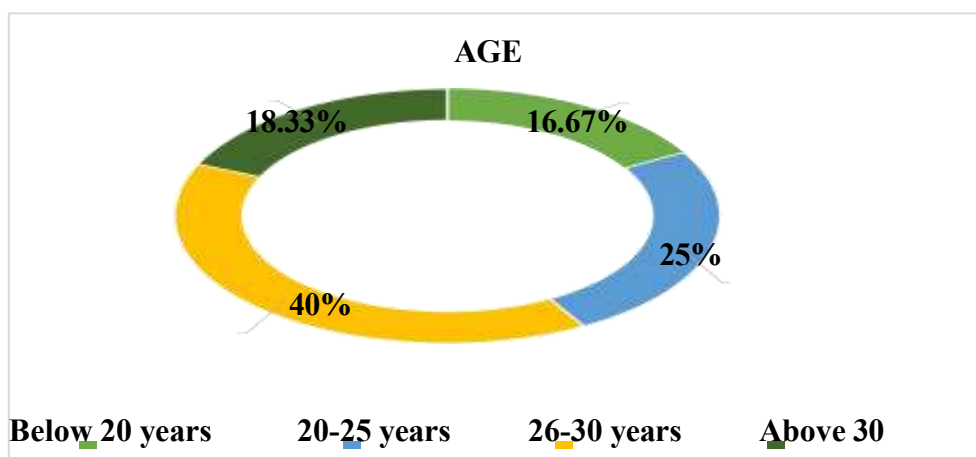
**RESULT**

**SECTION – 1 : Frequency and percentage distribution of sociodemographic variables the Post-partum woman’s with Breast Engorgement**

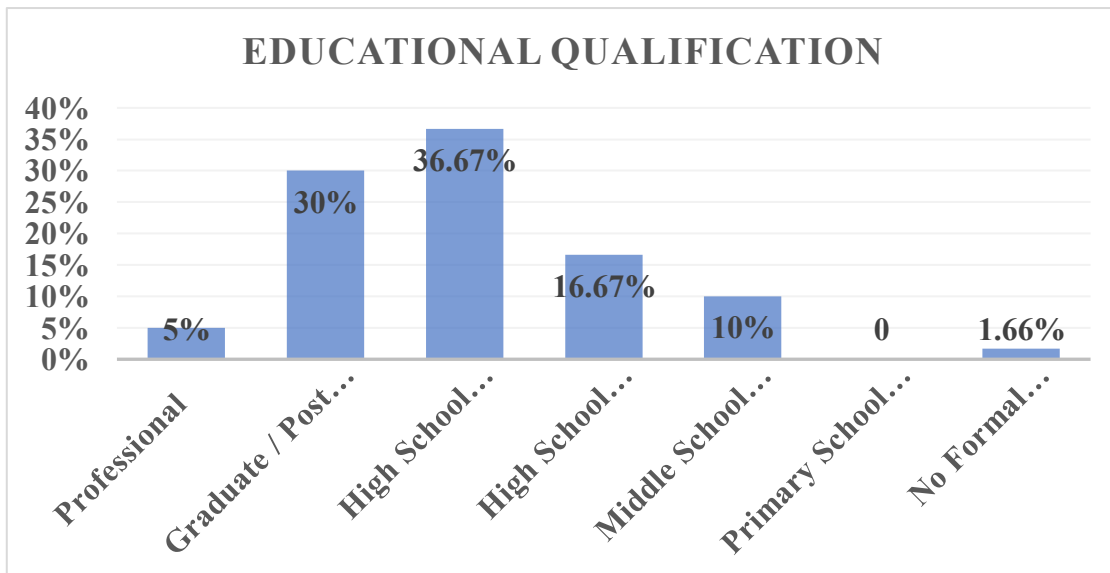
N=60

DEMOGRAPHIC VARIABLES	CATEGORY	FREQUENCY	PERCENTAGE
Age	Below 20 years	10	16.67%
	20-25 years	15	25%
	26-30 years	24	40%
	Above 30	11	18.33%
Educational qualification	Professional	3	5%
	Graduate/post graduate	18	30%
	High school diploma	22	36.67%
	High school certificate	10	16.67%
	Middle school certificate	6	10%
	Primary school certificate	0	0
	No formal education	1	1.66%

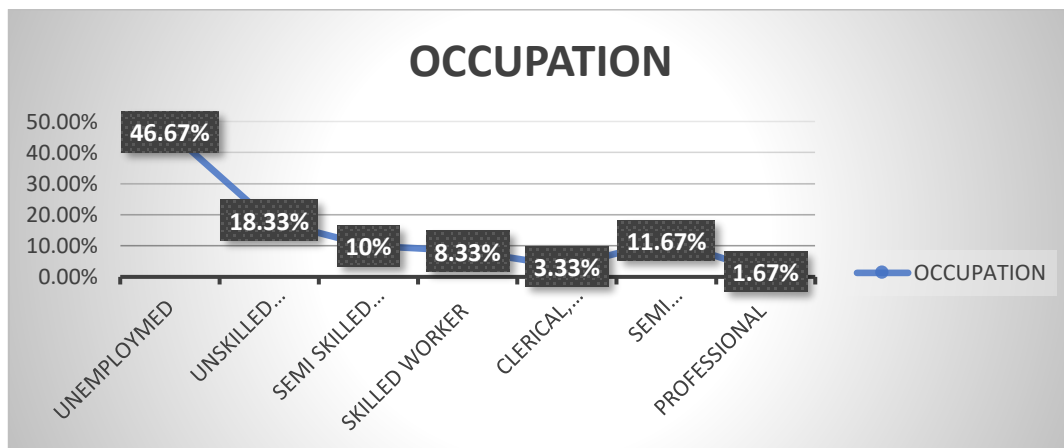
Occupation	Unemployed	28	46.67%
	Unskilled worker	11	18.33%
	Semi skilled worker	6	10%
	Skilled worker	5	8.33%
	Clerical, farmer, shop owner	2	3.33%
	Semi professional	7	11.67%
	Professional	1	1.67%
Family income	> 25000/-Rs	8	13.33%
	20000-24999/-Rs	26	43.33%
	15000-19999/-Rs	18	30%
	10000-14999/-Rs	8	13.33%
	5000-9999/-Rs	0	0
	2000-4999/-Rs	0	0
	<1999/-Rs	0	0
Emotional status	Stable	59	98.33%
	Unstable	1	1.67%
Dietary pattern	Vegetarian	28	46.67%
	Non-vegetarian	32	53.33%
Lifestyle habit	Smoking	0	0
	Alcohol	0	0
	Other substance abuse	0	0
	None of above	60	100%
Previous knowledge regarding breastfeeding	Yes	22	36.67%
	No	38	63.33%



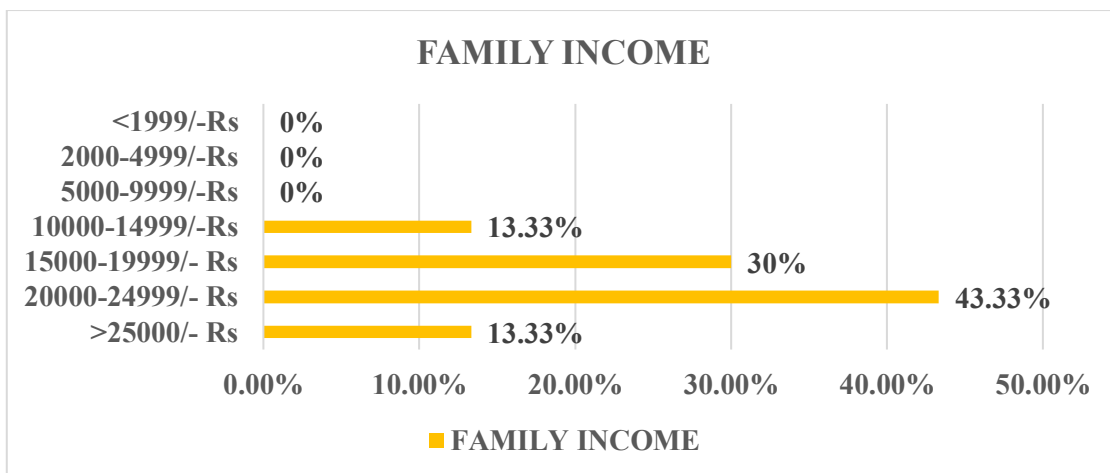
**GRAPH-1 DISTRIBUTION OF THE SUBJECT ACCORDING TO THE AGE OF POST-PARTUM WOMEN'S**



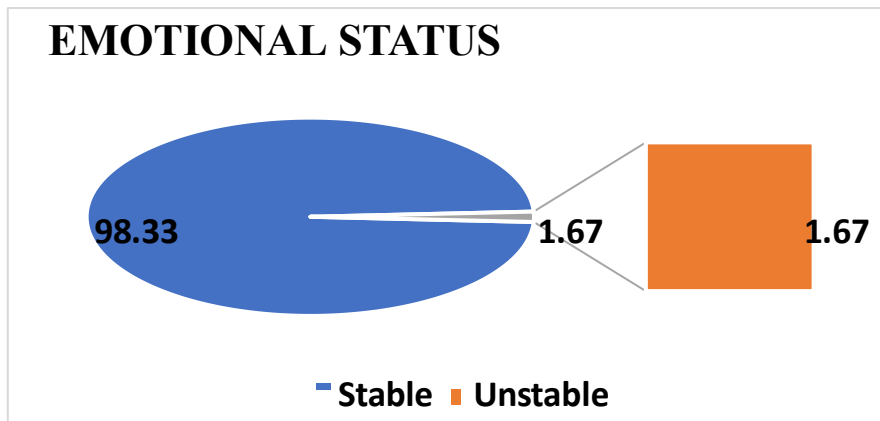
**GRAPH-2 DISTRIBUTION THE SUBJECT ACCORDING TO EDUCATION OF POST-PARTUM WOMEN'S**



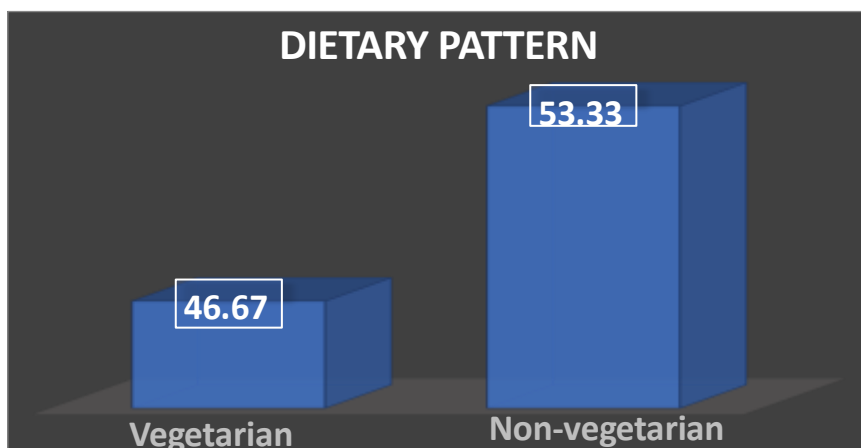
**GRAPH-3 DISTRIBUTION THE SUBJECT ACCORDING TO OCCUPATION OF POST-PARTUM WOMEN'S**



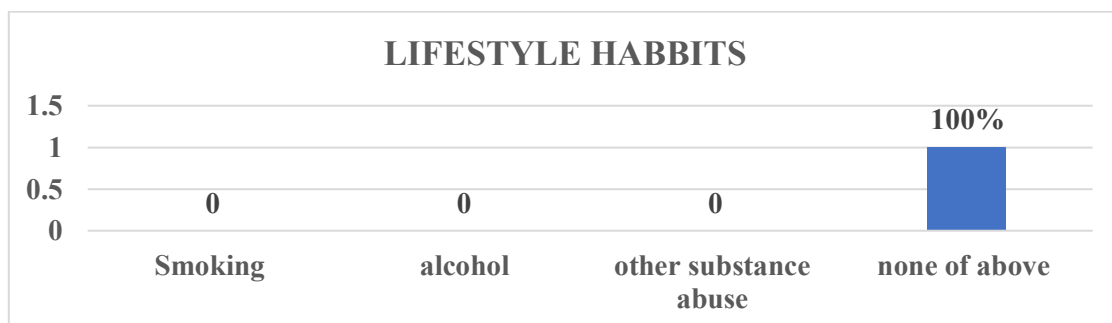
**GRAPH-4 DISTRIBUTION THE SUBJECT ACCORDING TO FAMILY INCOME OF POST-PARTUM WOMEN'S**



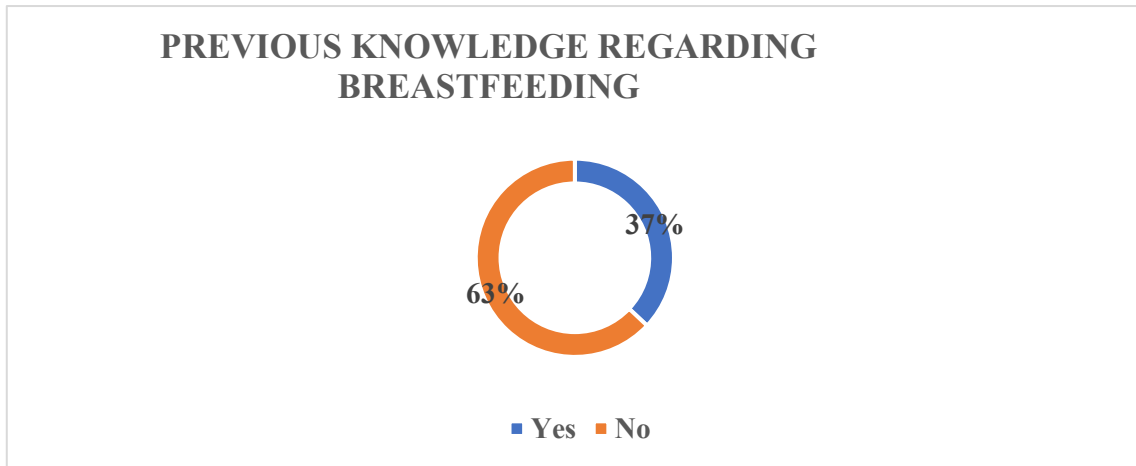
**GRAPH-5 DISTRIBUTION THE SUBJECT ACCORDING TO EMOTIONAL STATUS OF POST-PARTUM WOMEN'S**



**GRAPH-6 DISTRIBUTION THE SUBJECT ACCORDING TO DIETARY PATTERN OF POST-PARTUM WOMEN'S**



**GRAPH-7 DISTRIBUTION THE SUBJECT ACCORDING TO LIFESTYLE HABBITS OF POST-PARTUM WOMEN'S**

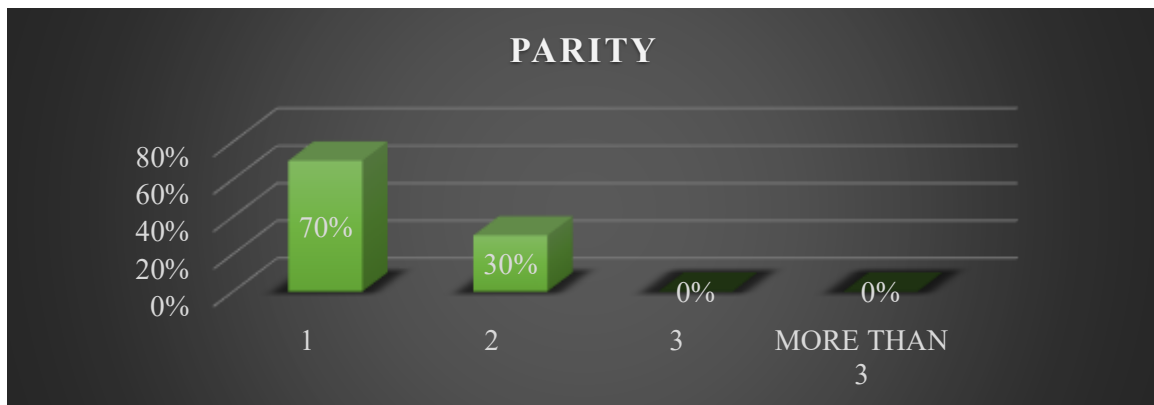


**GRAPH-8 DISTRIBUTION THE SUBJECT ACCORDING TO PREVIOUS KNOWLEDGE REGARDING BREASTFEEDING OF POST-PARTUM WOMEN’S**

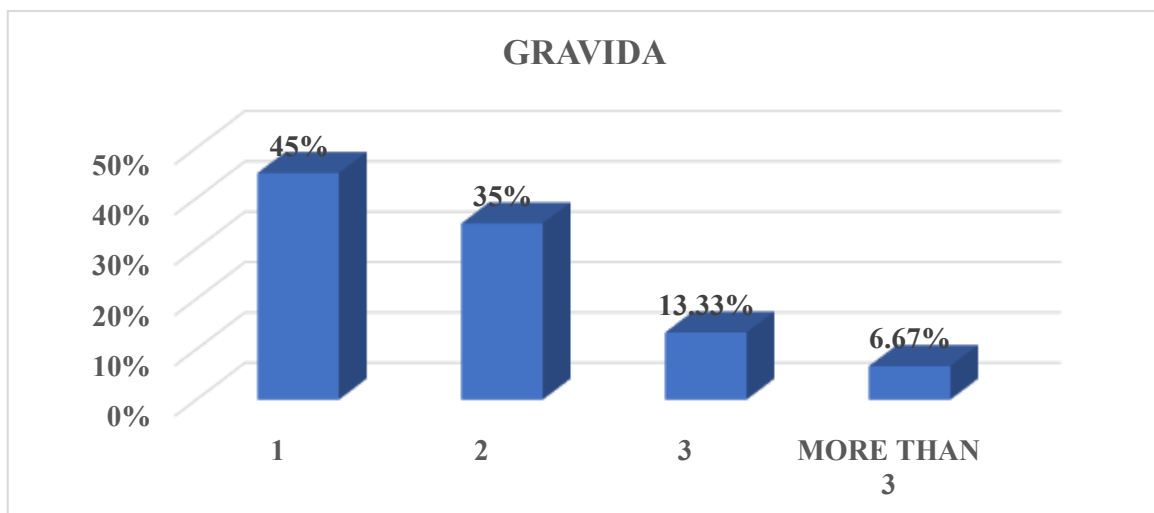
**SECTION 2: Frequency and percentage distribution of the Post-partum woman’s with Breast Engorgement. N=60**

OBSTETRIC VARIABLES	CATEGORY	FREQUENCY	PERCENTAGE
Parity	1	42	70%
	2	18	30%
	3	0	0
	More than 3	0	0
Gravida	1	27	45%
	2	21	35%
	3	8	13.33%
	More than 3	4	6.67%
Mode of delivery	Normal delivery	19	31.67%
	L.S.C.S.	39	65%
	Forceps delivery	0	0
	Ventous delivery	2	3.33%
Puerperium period	3 <sup>rd</sup> day	16	26.67%
	4 <sup>th</sup> day	23	38.33%
	5 <sup>th</sup> day	19	31.67%
	6 <sup>th</sup> day & More than 6 <sup>th</sup> day	2	3.33%
Puerperal complication	Yes	8	13.33%
	No	52	86.67%
Status of the baby	Live without complications	36	60%
	Live with complications	24	40%
	Death	0	0
Frequency of feeding	Every 2 hourly	14	23.33%

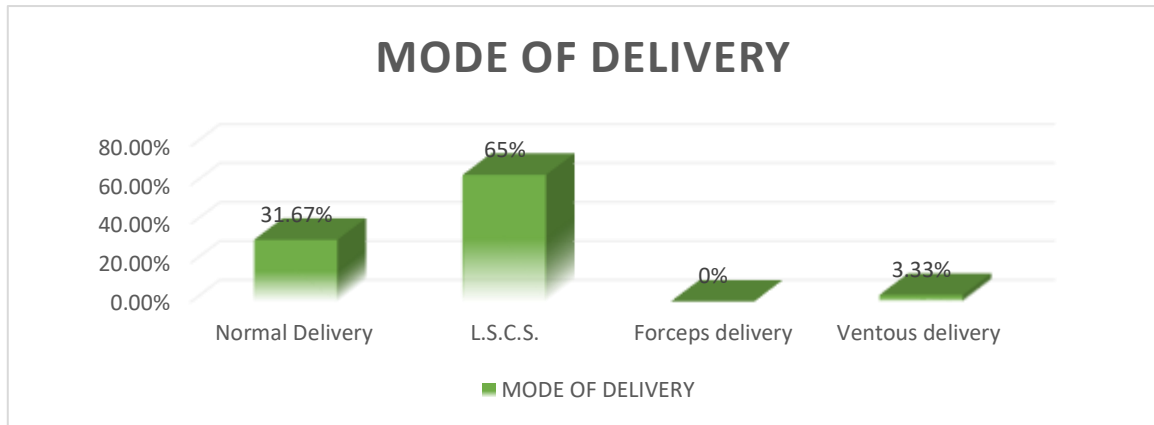
	3-4 hourly	46	76.67%
Duration of feeding (in minutes)	Less than 10 min	35	58.33%
	10-20 min	23	38.33%
	More than 20 min	2	3.33%
Type of breast feeding	Normal breast feeding	36	60%
	Expressed breast feeding	20	33.33%
	Artificial feeding	4	6.67%
Site of engorgement	Left Breast	32	53.33%
	Right Breast	28	46.67%
	Both Breast	0	0
Any other medical complication during pregnancy & delivery	Yes	21	35%
	No	39	65%



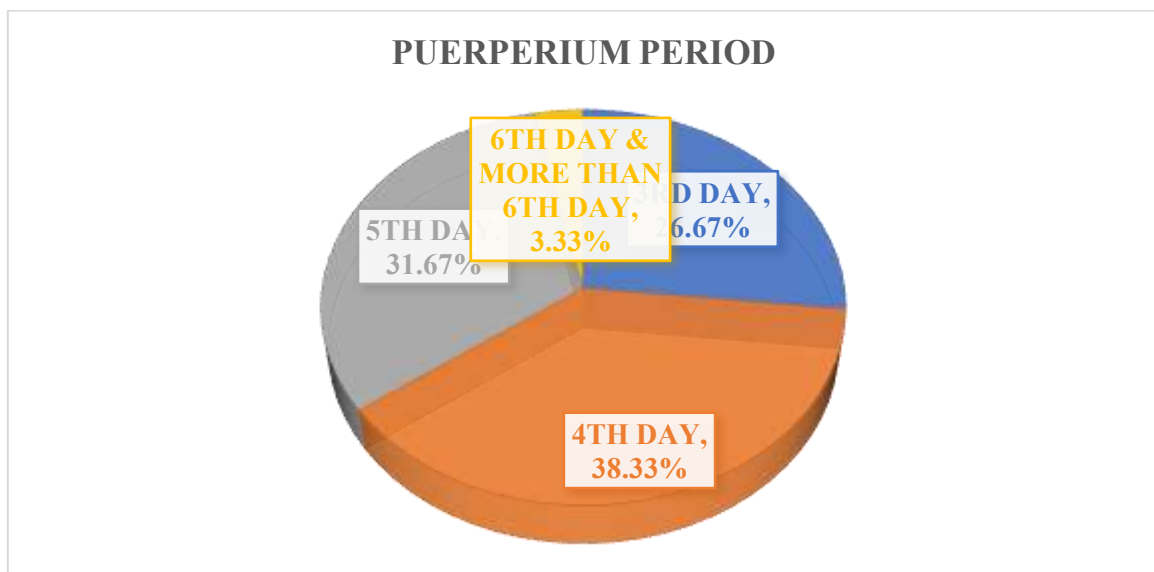
**GRAPH-9 DISTRIBUTION OF THE SUBJECT ACCORDING TO THE PARITY OF POST-PARTUM WOMEN'S**



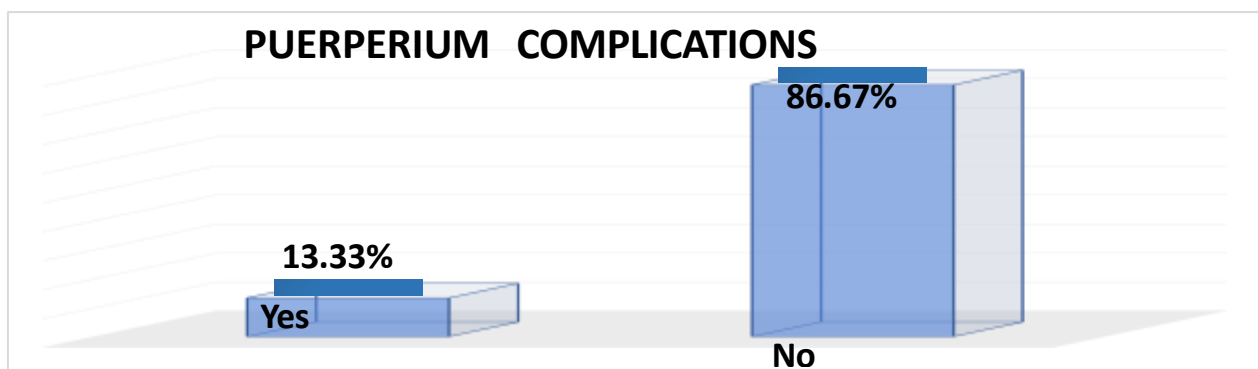
**GRAPH-10 DISTRIBUTION OF THE SUBJECT ACCORDING TO THE GRAVIDA OF POST-PARTUM WOMEN'S**



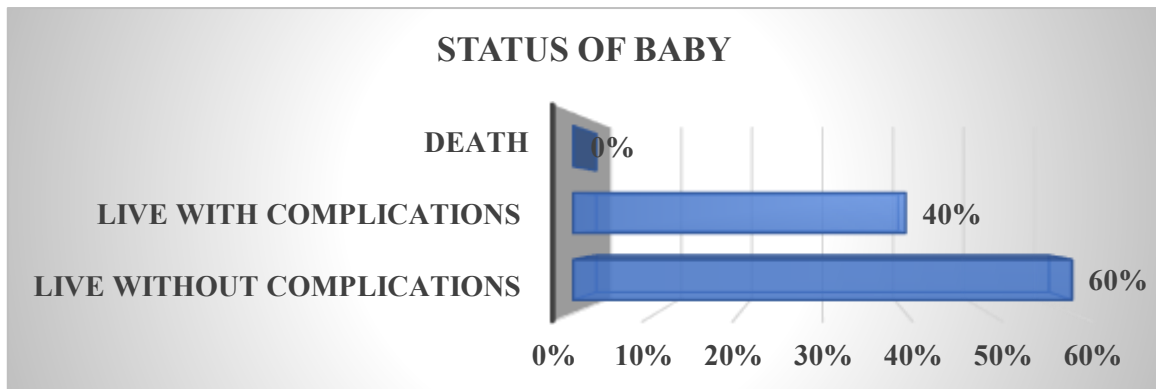
**GRAPH-11 DISTRIBUTION OF THE SUBJECT ACCORDING TO THE MODE OF DELIVERY IN POST-PARTUM WOMEN'S**



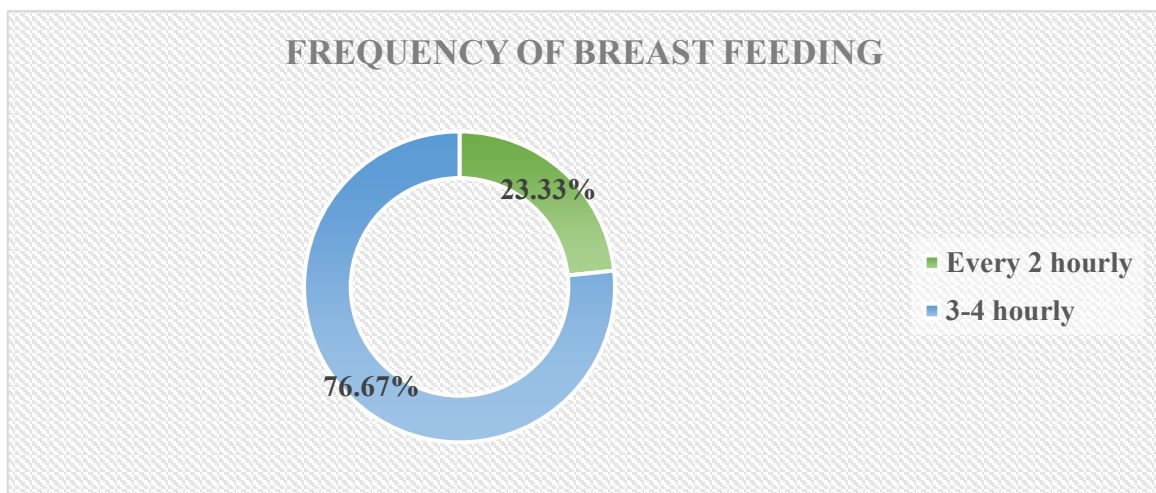
**GRAPH-12 DISTRIBUTION OF THE SUBJECT ACCORDING TO PUERPERIUM PERIOD OF POST-PARTUM WOMEN'S**



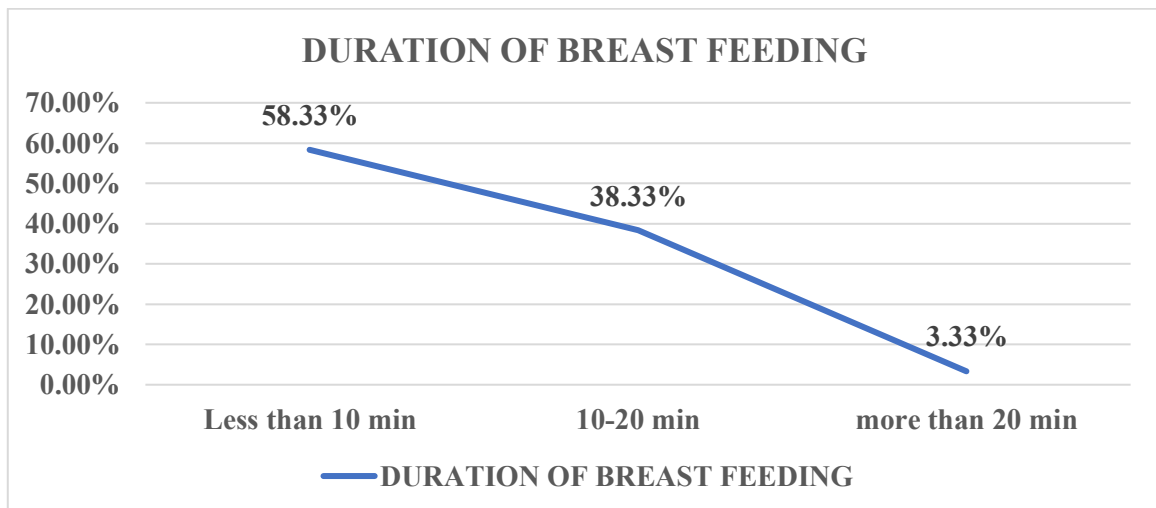
**GRAPH-13 DISTRIBUTION OF THE SUBJECT ACCORDING TO PUERPERIUM COMPLICATIONS OF POST-PARTUM WOMEN'S**



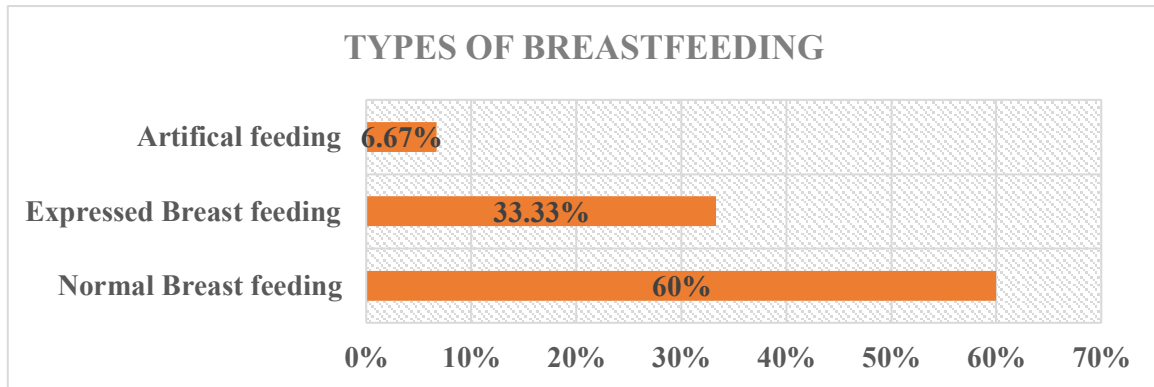
GRAPH-14 DISTRIBUTION OF THE SUBJECT ACCORDING TO STATUS OF BABY



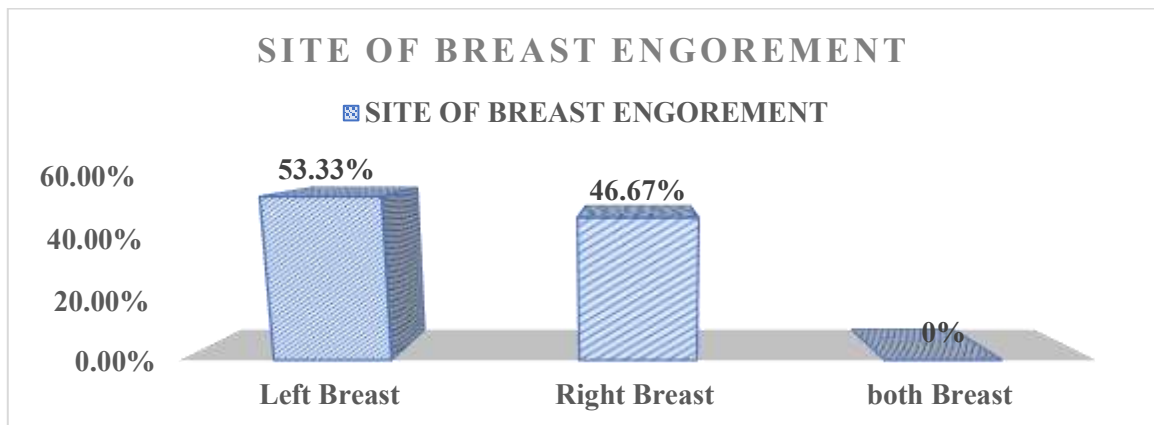
GRAPH-15 DISTRIBUTION OF THE SUBJECT ACCORDING TO FREQUENCY OF BREASTFEEDING



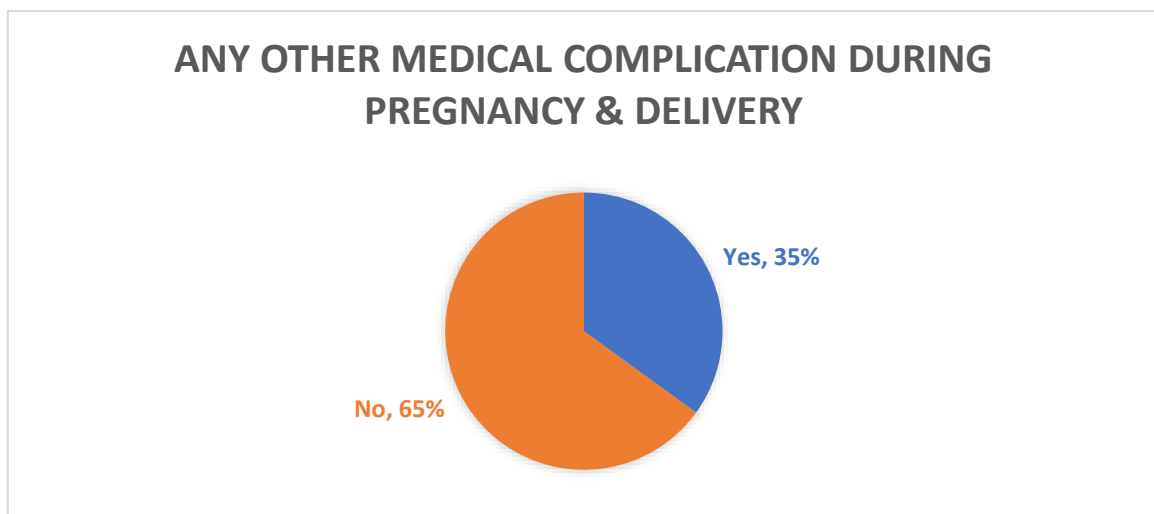
GRAPH-16 DISTRIBUTION OF THE SUBJECT ACCORDING TO DURATION OF BREASTFEEDING



**GRAPH-17 DISTRIBUTION OF THE SUBJECT ACCORDING TO TYPE OF BREASTFEEDING**



**GRAPH-18 DISTRIBUTION OF THE SUBJECT ACCORDING TO SITE OF BREAST ENGOREMENT IN POST-PARTUM WOMEN'S**



**GRAPH-19 DISTRIBUTION OF THE SUBJECT ACCORDING TO ANY OTHER MEDICAL COMPLICATION DURING PREGNANCY AND DELIVERY**

**SECTION 3: COMPARISON OF PRE-INTERVENTION AND POST- INTERVENTION OF LEVEL OF BREAST ENGORGEMENT IN POST- PARTUM WOMEN’S N=60**

**SECTION 4: ASSOCIATION OF THE BREAST ENGORGEMENT SCORE WITH DEMOGRAPHIC VARIABLES**

OBSERVATION		S.D.		MEAN			MODE		MEDIAN		
Pre-intervention		0.843		3			3		3		
<b>ANOVA</b>											
Source of Variation		Sum of Squares		df	Mean of Sum of Squares			'F' Calculate d value	'F' Table value	Remark	
Between Groups		290.73		59	4.93			9.24	1.92	Significance	
Within Groups		256		480	0.53						
Total		546.73		539							
SR . N O.	VARIABLES	CATEGO RY	TOTAL SCORE			D F	CHI-SQUA RE (CAL.) VALU E	CHI-SQUA RE (TABL E) VALU E	INFEREN CE		
			> M	M	< M						
1.	Age	Below 20 years	2	6	2	6	6.719	12.59	NS		
		20.-25 years	4	6	5						
		26-30 years	5	9	10						
		Above 30 years	6	3	2						
2.	Educationa l qualificati on	Professional	2	1	0	10	16.118	18.31	NS		
		Graduate/post graduate	7	5	6						
		High school diploma	5	7	10						
		High school certificate	0	8	2						

	Middle school certificate	3	2	1				
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	Primary school certificate	0	0	0				
	No formal education	0	1	0				
Occupation	Unemployed	5	14	9	12	18.036	21.026	NS
	Unskilled worker	6	3	2				
	Semi skilled worker	2	4	0				
	Skilled worker	2	0	3				
	Clerical, farmer, shop owner	1	0	1				
	Semi professional	1	2	4				
	Professional	0	1	0				
Family income	> 25000/-Rs	3	3	2	6	6.517	12.56	NS
	20000-24999/-Rs	11	8	7				
	15000-19999/-Rs	2	9	7				

		10000-14999/-Rs	1	4	3				
		5000-9999/-Rs	0	0	0				
		2000-4999/-Rs	0	0	0				
		<1999/-Rs	0	0	0				
5.	Emotional status	Stable	16	24	19	2	2.572	5.99	NS
		Unstable	1	0	0				
6.	Dietary pattern	Vegetarian	11	6	11	2	7.711	5.99	S
		Non-vegetarian	6	18	8				

7.	Lifestyle habits	Smoking	0	0	0	-	-	-	NS
		Alcohol	0	0	0				
		Other substance abuse	0	0	0				
		None of above	17	24	19				
8.	Previous knowledge regarding breastfeeding	Yes	7	8	7	2	9.404	5.99	S
		No	10	6	12				

**SECTION 5: ASSOCIATION OF THE BREAST ENGORGEMENT SCORE WITH OBSTETRIC VARIABLES**

SR. NO.	VARIABLES	CATEGORY	TOTAL SCORE			DF	CHI-SQUARE (CAL.) VALUE	CHI-SQUARE (TABLE) VALUE	INFERENCE
			>M	M	<M				
1.	Parity	1	13	17	12	2	0.77	5.99	NS
		2	4	7	7				
		3	0	0	0				
		More than 3	0	0	0				
2.	Gravida	1	8	13	6	6	5.762	12.59	NS
		2	4	8	9				
		3	3	3	2				
		More than 3	2	0	2				
3.	Mode of delivery	Normal delivery	1	12	6	4	12.827	9.49	S
		L.S.C.S.	14	12	13				
		Forceps delivery	0	0	0				
		Ventous delivery	2	0	0				
4.	Puerperium period	3 <sup>rd</sup> day	2	8	6	6	29.99	12.59	S
		4 <sup>th</sup> day	2	15	6				
		5 <sup>th</sup> day	13	1	5				
		6 <sup>th</sup> day & More than 6 <sup>th</sup> day	0	0	2				

5.	Puerperal complication	Yes	6	1	1	2	9.91	5.99	S
		No	11	23	18				
6.	Status of the baby	Live without complication	4	17	15	2	13.43	5.99	S
		Live with complication	13	7	4				
		Death	0	0	0				
7.	Frequency of feeding	Every 2 hourly	2	6	6	2	2.031	5.99	NS
		3-4 hourly	15	18	13				
8.	Duration of feeding (in minutes)	Less than 10 min	13	12	10	4	5.796	9.49	NS
		10-20 min	4	10	9				
		More than 20 min	0	2	0				
9.	Type of breast feeding	Normal breast feeding	2	17	17	4	25.422	9.49	S
		Expressed breast feeding	13	5	2				
		Artificial feeding	2	2	0				
10.	Site of engorgement	Left Breast	7	16	9	2	2.99	5.99	NS
		Right Breast	10	8	10				
		Both Breast	0	0	0				
11.	Any other medical complication during pregnancy & delivery	Yes	6	12	3	2	5.456	5.99	NS
		No	11	12	16				

## DISCUSSION

the Pre-intervention standard deviation was 0.843 and mean was 3. The mean difference between pre-intervention and post-intervention was 1.5. The paired ANOVA test done in that Sum of Squares between groups 290.73 and within group 256 so total 546.73. Degree of freedom between groups 59 and within group 480 so total 539. The mean of sum of Squares of between groups 4.93 and within groups 0.53. The calculated F value 9.24 is greater than F table value 1.92 at Degree of Freedom 59 at vertical and 480 at horizontal so it proves that hypothesis is significant.

## CONCLUSION

The study concludes that breast engorgement is a common problem among post-partum women, particularly during the early postnatal period. The findings indicate that the application of chilled cabbage leaves is an effective, safe, economical, and non-invasive intervention for reducing breast engorgement among post-partum women. The intervention was well accepted and easy to administer without the need for professional supervision. Therefore, chilled cabbage leaf application can be recommended as a supportive nursing measure for the management of breast engorgement in post-partum women, helping to promote maternal comfort and successful breastfeeding.

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