EFFECTIVENESS OF CABBAGE LEAVES Vs JASMINE FLOWERS ON BREAST ENGORGEMENT AND PAIN AMONG POSTNATAL MOTHERS IN SELECTED HOSPITAL AT KANYA KUMARI

By

Ms. BRINDA.N.V

Reg. No: 30106222

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CERTIFICATE

Certified that this is the bonafied work of **Ms. BRINDA.N.V**, Final year M.Sc (Nursing) student of Sara Nursing College, Tirrupur, Submitted in partial fulfillment of the requirement for the Degree of Master of Science in Nursing to The Tamil Nadu Dr. M. G. R. Medical University, Chennai, under the Registration No. **30106222**.

College Seal:

Signature……..

Prof. M. Kandasamy, M.Sc(N)., (Ph.D).,

Principal,

Sara Nursing College,

Dharapuram,

Tiruppur (Dt).

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Approved by the Dissertation Committee on: 02.02.2012

Signature of the Research Guide ……

Prof. M. Kandasamy, M.Sc(N)., (Ph.D).,
Principal,
Sara Nursing College,
Dharapuram,
Tiruppur (Dt).

Signature of the Clinical Specialty Guide ……

Mrs.Mary Sumathi,M.Sc(N).,
Reader,
HOD Department of OBG Nursing,
Sara Nursing College,
Dharapuram- 638673.

Signature of the Medical Expert …….

Dr.Mallikaswaminathan, MBBS., DGO.,
Obstetrician And Gynecologist,
Janani Hospital,
Dharapuram

Signature of the Internal Examiner with Date

Signature of the External Examiner with Date

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ABSTRACT

A study to compare the effectiveness of cabbage leaves Vs jasmine flowers on breast engorgement and pain among postnatal mothers in selected hospital at Kanyakumari District.

The Study was conducted at PPK hospital in Marthandam at Kanyakumari District. Permission was obtained from the medical superintended of the hospital before data collection. The objective of the study was explained to the Medical officer, other paramedical professionals and subjects to get their cooperation during the study. Oral consent was obtained from all subjects. This was a quasi experimental study design, 60 subjects were selected on the basis of convenience sampling technique. 30 of them were in Experimental Group I and 30 of them were in Experimental Group II. Demographic profile of each subject was recorded in validated subject data sheet.

The study was conducted in two phases. In the first phase, Pretest was done for 30 mothers in experimental group I by assessing the level of breast engorgement through observational check list and 6 point breast engorgement scale. The level of pain was assessed using visual analogue scale. For experimental group I one to two cabbage leaves were applied over the breast for 30 minutes with 8 hours interval for 2 consecutive days. Post test was done for this group at the completion of intervention. On completion of first phase, Pretest was done for 30 mothers in experimental group II and then fifty cm of strings of jasmine flowers was applied over the breast for 30 minutes with 8 hours interval for 2 consecutive days. Similarly the post test was done for experimental group II. The date was analyzed using descriptive and inferential statistics.

There was a significant difference (P <0.05) on level of breast engorgement and pain between experimental group I and II. The mean post test score of breast engorgement among experimental group I was 1.8(±1.73), whereas in Experimental group II it was 6.53(± 3.47). The mean post test score of pain among experimental group I was 0.67 (± 0.69), whereas in Experimental group II it was 3.23(± 0.49).There was a significant association between level of breast engorgement and pain with age, type of gravid, postnatal day and type of delivery of experimental group II. The findings of the study shows that cabbage leaves are more effective than Jasmine flower on breast engorgement and pain among postnatal mothers.

CHAPTER-I

INTRODUCTION

"A New born baby has only three demands,

They are warmth in the aims of its mother,

Food from breast and security in the knowledge of her presence.

Breast feeding satisfies all these"

-(Grandly Dick Read)

Child birth is a process beautifully designed by nature and the care following the birth of the baby also essential for the maintenance of health of both mother and child. Child birth is a transcendent event with meaning far beyond the actual physiologic process. The primiparous mother and the mother with inelastic breasts are likely to be involved in developing breast complications. The factors like exaggerated normal venous and lymphatic enlargement of the breasts which precedes lactation in turn prevents escape of milk from the lacteal system leads to engorgement of breast **(Marie, 2009).**

Breast engorgement is the most common complication occurs during the postnatal period. It is the disease condition occurs in the mammary glands by expanding veins and the pressure of new breast milk contained within them. The most common manifestations include considerable pain and feeling of tenderness in the breasts, generalized malaise, rise in temperature and painful breast feeding **(Wooldridge, 2006).**

Approximately two days after giving birth the woman's breasts fill with milk; this is a normal physiological process, and as part of this process the breasts become heavy and swollen. Breast engorgement occurs if the baby removes less milk from the breast when feeding than the amount that the mother produces. As well as causing breast engorgement, inadequate emptying of breasts can result in problems such as plugged milk ducts, breast infection and in sufficient milk supply **(Giuliani, 2004)**.

Due to improper infant sucking position, abrasion of the nipple and even mastitis can occur. If the baby cannot effectively suck, a negative feedback mechanism is activated, and breast milk excretion is suppressed. Inadequate breast milk intake will consequently occur and hinder normal infant growth. All these problems frustrate the mother and represent an important reason behind early abandonment of breastfeeding **(Cotterman, 2004).**

When engorgement occur gentle massage, frequent feeding, correct positioning and warm compresses to the breast have been advocated to relieve symptoms along with analgesia to relieve pain. Numerous strategies have been adopted over the years in the treatment of breast engorgement. These include kangaroo care, fluid limitation, binding the breasts or wearing a tight bra, application of Jasmine flower, hot and cold compresses, application of cabbage leaves **etc (De Oliveira, 2006)**.

Strings of jasmine flowers were used by the women to enhance their beauty and fragments. The wearing of the strings of jasmine flower on the breast of lactating mothers of some parts of south India is associated with increased lactation and mild analgesic **(Aswini Dutt, 2011**)

Lactation consultants frequently suggests compresses made from green cabbage leaves to reduce swelling in moderate to severe engorgement. The common green cabbage is used for engorgement therapy.The common green cabbage (brassica capitata) is used for engorgement therapy. Herbalists believe that cabbage has both antibiotic and anti-irritant properties. It is theorized, that this natural mixture of ingredients from Mother Nature's kitchen, helps decrease tissue congestion by dilating local capillaries, which improves the blood flow in and out of the area, allowing the body to reabsorb the fluid trapped in the breast **(Davis, 2000).**

Breast engorgement is a distressing condition for women trying to establish successful breastfeeding.Women cannot always breastfeed after birth due to the infant dies or are adopted, or the mother is too ill, or for the wellbeing of the mother or infant. HIV-positive mothers, particularly those not on antiretroviral drugs during pregnancy, avoid breastfeeding to reduce the risk of passing on the virus to their infants. Breast engorgement may mean that women fail to successfully start breastfeeding, cause them to give up breastfeeding, or serious illness can result, including breast infection. It is the major responsibility of the midwife to educate importance of breast feeding to prevent breast engorgement **(John wiley, 2010).**

There is insufficient evidence from trials to recommend the wide spread implementation of treatments for breast engorgement. At the same time, treatments such as cabbage leaves and jasmine flower applied to the breast may be soothing, are not harmful, and are cheap. While evidence of effectiveness of interventions is not strong, this study helps to find out the effectiveness of cabbage leaves and jasmine flower on breast engorgement and pain.

Need For The Study

Breast engorgement occurs most commonly between third and fifth postnatal day, more than two – thirds of women complaints of tenderness over the breast. About 72% to 85% of women are affected with breast engorgement**,** of that 20% of primipara mothers are affected in India **(wright, 2009)**.

Breast Engorgement is caused by insufficient breastfeeding and/or blocked milk ducts. Breast pain that interferes with successful breastfeeding leads to abandonment of exclusive breastfeeding. Severe engorgement may lead to mastitis and untreated engorgement puts pressure on the milk ducts often causing a plugged. Various strategies have been adopted over the years, for the treatment of breast engorgement. These include kangaroo care, fluid limitation, binding the breasts or wearing a tight bra, hot and cold compresses, application of cabbage leaves and jasmine flower **(Woolridge, 2006)**.

The problem of breast engorgement occurs around the third day of the postpartum period and is usually caused by giving prelacteal feeds, early removal, bottle feeding and other restrictions to feeding. It occurs in 30%(1 – 3 mothers per day) of primigravida women, the consequence of which are lactation mastitis leading to breast abscess that may require surgical intervention and in some cases it results in septicaemia **(Emmanuel.K,2005)**.

The overall conclusions of the Cochrane Review show that although some interventions may be promising, there is no sufficient evidence from well designed trials on any intervention to justify widespread uptake of that intervention. More

research is needed on treatments for this painful and distressing condition**. (John wiley, 2010).**

The mother of today has adopted to the recent trends of life style replacing traditional ones and also in order to maintain their body beauty, the mothers are not giving breast feeding, then the mother who is undergoing for certain complications such as (ante partum haemorrhage, malpresentation, fetal distress, pre-eclampsia, Rh-incompatibility) during pregnancy, labour the fetus may die in the womb itself. In such conditions the mother developing breast engorgement. If the breast engorgement is not treated properly it leads to breast abscess mastitis, breast cancer. Totally 1193 mothers were experimented mastitis, 5% developed breast abscess, 2.9% **(Ruth Lawrence, 2008).**

It therefore lowers the rate of illness and consequently the rate of hospital admission. Given the strong evidence of the benefits of breast feeding for women and babies the WHO recommends that, in all parts of the world, babies should be exclusively breastfed for the first six months “to achieve optimal growth, development and health”. **(WHO, 2003).**

The researcher selected cold cabbage leaves compression for reducing engorgement, because a study proved that, the cabbage leaves has action of both antibiotic and anti irritant properties. It is theorized that this natural mixture of ingredients helps decrease tissue congestion by dilating (opening) local capillary (small blood vessels) improving the blood flow in the area **(Anureg Srivastava).**

Medicinal use of Jasmine flower includes anti irritant, analgesics and antioxidant. It is proved that wearing strings of jasmine flower will increase lactation and ovulation. Therefore it is concluded that it will give pain relief to postnatal mother from breast engorgement. **(Dutt Aswini, 2010).**

Very few researches has been conducted to find out the for breast engorgement, the results are also inconclusive and conflicting, so the researcher selected cold cabbage leaves and jasmine flower on breast engorgement and pain to provide evidence for introducing this intervention in clinical practice.

Statement of the Problem

A study to compare the effectiveness of cabbage leaves Vs jasmine flowers on breast engorgement and pain among postnatal mothers in selected hospital at Kanyakumari District.

Objectives

- To assess the level of breast engorgement and pain among postnatal mothers of Experimental group I and II
- To compare the effectiveness of cabbage leaves Vs Jasmine flowers on breast engorgement and pain among postnatal mothers of Experimental group I and II.
- To associate the level of breast engorgement and pain with the selected Demographic variables among postnatal mothers of Experimental group I.

- To associate the Level of breast engorgement and pain with the selected Demographic variables among postnatal mothers of Experimental group II.

Hypothesis:

H_1: There will be significant difference between cabbage leaves and jasmine flowers on Breast engorgement and pain among post natal mothers of Experimental Group I and II at $P < 0.05$ level of significance.

H_2: There will be significant association between level of breast engorgement and pain with their selected demographic variable among postnatal mothers of Experimental Group I at $P < 0.05$ level of significance.

H_3: There will be significant association between level of breast engorgement and pain with their selected demographic variables among postnatal mothers of Experimental Group II at $P < 0.05$ level of significance.

Operational Definition

Effectiveness:

It refers to the statistically significant change in the level of breast engorgement and pain among postnatal mothers after application of cabbage leaves and Jasmine flower.

Cabbage leaves:

In this study cabbage leaves refers to common green cabbage leaves applied over the breast for 30 minutes with 8 hours interval for 2 consecutive days to reduce breast engorgement and pain.

Jasmine flowers:

Jasmine flowers refer to sweet smelling flowers applied over the breast for 30 minutes with 8 hours interval for 2 consecutive days to reduce breast engorgement and pain.

Breast engorgement:

Breast engorgement refers to swelling over a breast as a result of sudden increase in milk volume measurable in terms of observational checklist and point breast engorgement scale.

Pain:

Pain refers to the experience felt by the post natal mother as a result of swelling over the breast measured in terms of visual analogue scale.

Postnatal mothers:

Postnatal mothers refer to Primi para mothers with breast engorgement and pain within fifth postnatal day.

Assumption:

- Cabbage leaves and jasmine flowers help to reduce breast engorgement and pain.

- There is no side effect in application of cabbage leaves and jasmine flower over the breast.
- Most of the post-natal mothers may have breast engorgement due to excessive secretion of breast milk.

Delimitation:

- Data collection is limited to 4 weeks only
- The study was delimited only to Primi Postnatal mothers.

Conceptual Framework:

A Conceptual framework is interrelated concept or abstractions that are assembled together in some rationale scheme by virtue of their relevance to common theme (**Polit and Hungler, 1995**)

The Conceptual frame work for study was adapted from the king's goal attainment theory given by Imogene King. King's theory offers insight into nurses' interactions with individuals and groups within the environment, High lights the importance of client's participation in decision that influences care and focuses on both the process of nurse-client interaction and the outcomes of care.

Major Concepts and Definitions

1. Interaction

In this study it is a process of perception and communication between the researcher and the samples, represented by verbal and non verbal behaviour, goal directed towards reduction in breast engorgement.

2. Communication

It is a process of exchange of information between the researcher and he sample.

3. Perception

In this study it refers Assessment of Breast engorgement·

4. Transaction

It is a process of Purposeful interaction leading to reduction of breast engorgement.

5. Role

A set of behaviours expected of person's occupying a position in a social system.

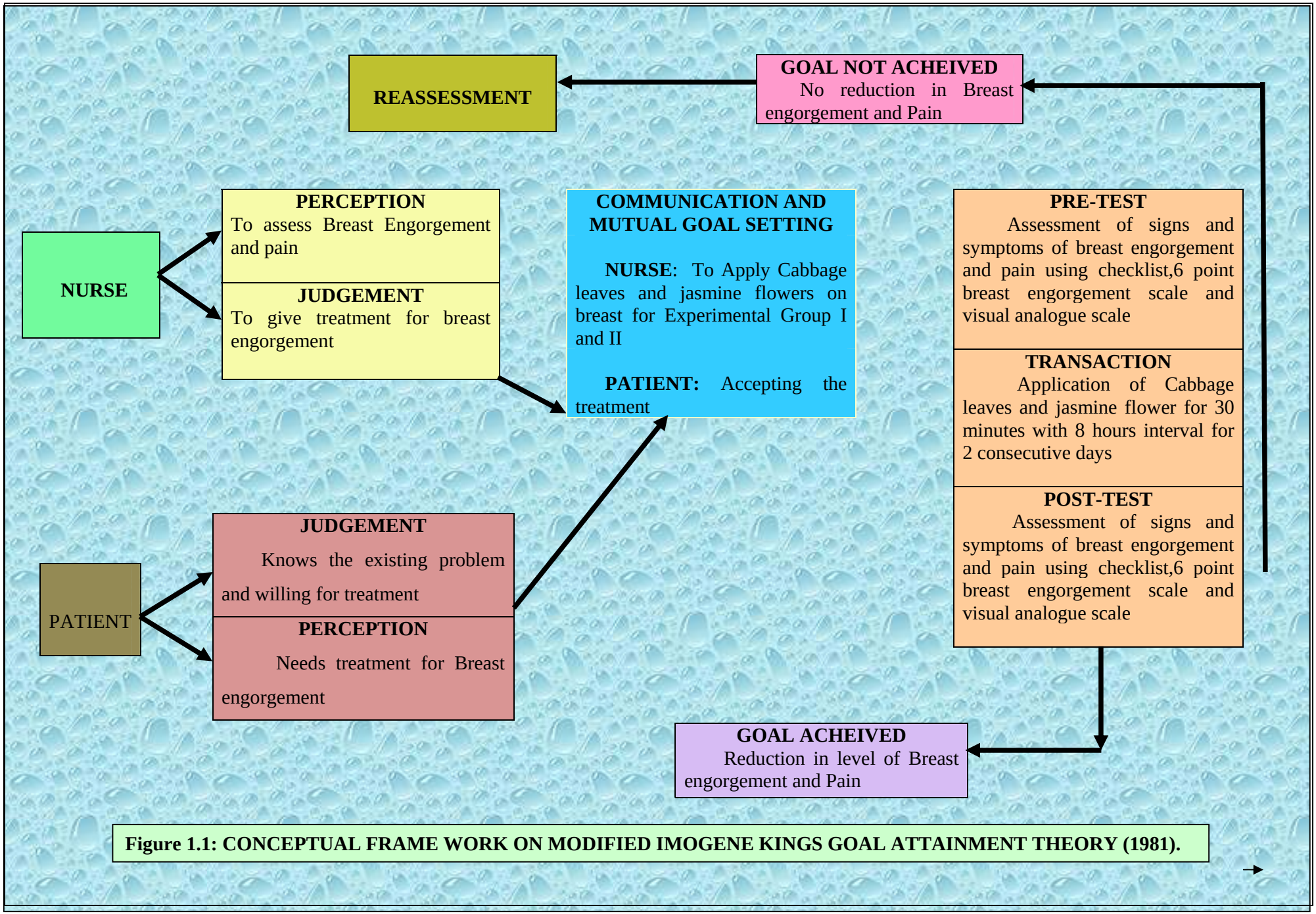

Figure 1.1: CONCEPTUAL FRAME WORK ON MODIFIED IMOGENE KINGS GOAL ATTAINMENT THEORY (1981).

CHAPTER-II

REVEIW OF LITERATURE

According to Polite and Hunger (1999), researchers often undertake a literature review to familiarize themselves with the knowledge base. The term literature review refers to the activities involved in identifying and searching for the information on a topic, the term is also problem. The available literature and studies are organized under the following headings.

I. Studies related to Breast engorgement and pain

II. Studies related to Cabbage leaves on Breast engorgement

III. Studies related to Jasmine flower on Breast engorgement

Over View:

Breast engorgement is defined as the swelling and distension of breasts, which is one of the most common problems of postpartum women during early breastfeeding **(Lawrence, 2005)**. It often peaks on the third to fifth day after childbirth and then gradually subsides with time. However, it may persist as long as 2 weeks after childbirth **(Riordan, 2005).**

The main reasons breast engorgement breastfeeding **(Wright, Rice and wells, 1996)** occur include the following

(a) lack of direct stimulation to the breast due to discontinuance of natural,

(b) delay in breastfeeding

(c) inadequate breastfeeding,

(d) limited breastfeeding time and frequency,

Breast engorgement involves three elements: congestion and increased vascularity, accumulation of milk, and edema secondary to the swelling and obstruction of drainage of the lymphatic system by vascular increases and fullness of the alveoli. Therefore, the breast becomes hot, painful, and hard; milk does not flow; and the mother is thirsty and experiences pain when breasts are touched **(Chang, 2007).**

The most serious effect of breast engorgement is that it prevents the baby from keeping the nipple and areola in his or her mouth, therefore preventing effective breast milk flow. This leads to severe breast engorgement, which can cause great discomfort **(Riordan, 2005).** Many solutions to breast engorgement for breastfeeding women have been proposed in the literature. These include heat therapy prior to breastfeeding (hot packs and warm water baths), cold therapy (refrigerated bags of vegetables), cabbage compression, Application of jasmine flower, breast massage and milk expression, ultrasound therapy, and even anti-inflammatory medications **(Chang, 2007).**

I. Studies related to Breast engorgement and its management

Pillitri Adele, (2010) .A women's breast become fuller, larger and firmer. In many women, breast distention becomes marked and this often is accompanied by a feeling of heat or throbbing pain .Breast tissue may appear reddened, simulating an acute inflammation or infectious process .The distention is not limited to the milk ducts, but it occurs in the surrounding tissue as well, because blood and lymph enter the area to contribute fluid to the formulation of milk, This feeling of tension in the breast on the third or fourth day after birth is breast engorgement.

Weight, (2008). Conducted study on Efficacy report of the whittle stone breast as a treatment for breast engorgement. The sample of 20 women, who has postpartum, t swelling and painful breast was selected and assessed by the six point breast engorgement scale. After using WBE the mother got relief from breast engorgement.

Storr Gailblair, (2006). conducted study on Prevention of nipple tenderness and breast engorgement in the past partum period. A study was conducted to identify an effective method of preparation for breast feeding and to develop measurement tool for nipple tenderness and breast engorgement for use in a clinical setting .A sample of 25 in Experimental group and 25 in Control group were selected. The study is conducted by preparing nipple and messaging one breast either the left or right, but not the other breast or nipple. Nipple tenderness and breast engorgement11were recorded on five point scales. Analysis of the data reviews that tenderness and engorgement were decreased in the prepared massaged breast.

K. Emmanuel, (2005). conducted a study on nursing intervention to postnatal mothers with breast engorgement. They have conducted a study on breast engorgement in case study method. The finding of the study reveals that breast engorgement is preventable and the nursing personnel should show keen interest in the prevention of it. Early diagnosis, timely and appropriate nursing intervention is vital in the management of breast engorgement.

Pamela D. Hill Sharron S. Humenick, **(2004).** conducted a study on the occurrence of breast engorgement This study describes breast engorgement during days 1-14 postpartum of them 114 for first time and second time vaginal- and

cesarean-delivery breastfeeding mothers. Most mothers reported experiencing their most intense engorgement after hospital discharge. Previous breastfeeding experience of the mother is a more critical variable than parity in predicting engorgement. Second time breastfeeding mothers experienced engorgement sooner and more severely than did first time breastfeeding mothers, regardless of delivery method. Anticipatory guidance by the care provider is discussed in an effort to enhance the experience of the breastfeeding.

Snowden, (2001). conducted a randomized controlled clinical study on 424 women to test the effectiveness of eight different breast engorgement solutions, including oxytocin, ice packs, cabbage compression, ultrasound therapy, and anti-inflammatory medications such as Denizen and Kim tab. Results indicated that only anti-inflammatory medications (Denizen, odds ratio [OR] = 3.6, 95% CI = 1.27-10.26; Kim tab, OR = 8.02, 95% CI = 2.76-23.3) relieved symptoms effectively.

Haeih, (2001). Conducted a study on comparison of the effects of two breast care methods-one using a moist heating pad and the other using a moist hot towel. A total of 146 breastfeeding mothers participated in the study (94 in the towel group and 52 in the pad group). Results revealed no difference in newborn body weights between the two. The mothers in the pad group felt more comfortable, convenient, and private than did those in the towel group. However, there are two major limitations of the heating pad. First, the shape of the heating pad cannot be adjusted to the contours of the breast. Second, the pad covers the entire breast, including the nipple, which may overheat and damage the nipple.

Hillenbrand, (2002). Breast engorgement may affect the area around the nipple and areola only or the entire breast, and may affect one breast only, or both. Once engorgement occurs, swelling around the nipple may make it even more difficult for the baby to latch-on and feed successfully, and this may make the engorgement worse. This problem may be compounded if concern that the baby is not getting enough milk or breast pain and swelling, discourage women from continuing breastfeeding.

Molly babi, (1998) conducted a study of the postnatal and neonatal health problems and home remedies used during puerperium. The study was conducted using the descriptive survey method. The sample consisted of 100 postnatal mothers who had normal deliveries and an alive baby between the 3rd postnatal day and 6th week of puerperium. In this study they have selected health problems like after pains, backache, pain in the legs, shivering breast engorgement, fatigue, lack of sleep. They have used home remedies like massage, oil both, applying jasmine flower etc. The findings of the study reveals that all mothers used some form of home remedies for relieve themselves.

Yvonne Me serve, C.N.M., M.S, (1993).conducted a study on Management of postpartum breast engorgement in non breastfeeding women by mechanical extraction of milk the purpose of this study was to test the effectiveness of milk removal as a method of reducing the discomfort of postpartum breast engorgement in non breastfeeding women. The course of breast involution was followed in 13 women. Minimal engorgement was experienced by 46% of the subjects. A control group (N = 3) who experienced engorgement and followed standard management

practice was compared to an experimental group (N = 4) who used a hand-operated pump to relieve engorgement symptoms. The subjects in the experimental group experienced a shorter, more comfortable course of breast involution. They took no analgesia and used no other treatment for breast discomfort. There was no evidence of rebound engorgement or lactation stimulation. Although statistical inference is not possible due to a small sample, the results suggest that mechanical removal of milk is an effective way to increase the comfort and decrease the symptoms of engorgement in women who do not breastfeed their infants.

Chiu, Jin-Yu; Gau, Meei-Li; Kuo, Shu-Yu; Chang, Yung-Hsien; Kuo, (1992). conducted a study on Effects of Gua - Sha Therapy on Breast Engorgement: A Randomized Controlled Trial. The purpose of this study was to determine the effects of two breast care methods, scraping (Gua - Sha) therapy (administered to the experimental group) and traditional breast care (i.e., massage and heating; administered to the control group).A randomized controlled trial was conducted on 54 postpartum women at a Level III medical teaching hospital**.** The results showed no statistical differences between the two groups at baseline. Body temperature, breast temperature, breast engorgement, pain levels, and discomforting levels were statistically different between the two groups at 5 and 30 min after intervention (p < .001). The results of generalized estimating equation analysis indicated that, with the exception of body temperature, all variables remained more significant (p < .0001) to improving engorgement symptoms in the experimental group than those in the control group.

Mangesi L, Dowswell T, (1992). conducted a study on Treatment for breast engorgement in breastfeeding women. The aim of the review was to examine treatments used to relieve the symptoms of breast engorgement. A randomized controlled trials was used in this study involving 744 women. Studies examined a range of different treatments for breast engorgement including acupuncture, cabbage leaves applied to the breasts, cold gel packs, pharmacological treatments and ultrasound. For some interventions (ultrasound, cabbage leaves, and oxytocin) there was no strong evidence that interventions led to a more rapid resolution of symptoms, as in these studies women tended to have improvements in pain and other symptoms over time whether or not they received active treatment. There was evidence from one study that, compared with women receiving routine care, women receiving acupuncture had greater improvements in symptoms in the days following treatment, although there was no evidence of a difference between groups by six days, and the study was not large enough to be able to detect meaningful differences for other outcomes such as breast abscess. The overall conclusions of the review are that although some interventions may be promising, there is not sufficient evidence from well designed trials on any intervention to justify widespread uptake of that intervention.

II.Studies Related to Cabbage leaves on Breast Engorgement.

Jay Elizabeth, (2009). conducted study on do cabbage leaves really help to relieve engorgement. The sample is 60 in experimental group and 60 in control group. The findings found o be the percentage of women who reported experiencing engorgement is after the 1st feed 54% of the cabbage group and 57% of the control group, after the 3rd feed 49% of the cabbage group and 51% of the control group and

after the 4th feed 45% of the cabbage group and 50% of the control group. cabbage leaves have better result in reducing engorgement.

Davis Marie, (2009). conducted study on Engorgement ,the common green cabbage is used for engorgement therapy among 120 postnatal mothers. Cabbage is known to contain sinigrin rapine, mustard oil, magnesium, orylate and sulphur heterosides. The results shows that cabbage has both antibiotic and anti irritant properties. It helps decrease tissue congestion by dilating local capillaries, which improves the blood flow in and out of the area, allowing the body to reabsorb the fluid trapped in the breast. Cabbage may also have a type of drawing or wicking action, that helps move trapped fluid.

Arora Smriti, Vatsa Manju et. al, (2007). conducted a study on cabbage leaves Vs jasmine flower in treatment of breast engorgement in the post natal wards of the All India Institute of Medical Sciences. The study comprises of totally 60 mothers; 30 in the experimental group and 30 in the control group. The data was analyzed using STRATA and result revealed that both the cold cabbage leaves and hot and cold compress are equally effective in reducing breast engorgement ($p= 0.07$)

Gobka Roberts N,(2007). A study to compare the use of chilled cabbage leaves to chilled gel packs among postnatal mothers, The sample of 34 lactating women were selected and applied chilled cabbage leaves on one breast and chilled gel packs on another breast. It is found that pain was relieved within 1-2 hours with both treatment .but mothers preferred the cabbage leaves. The results shows that 68% relief within 1 to 2 hours at ($P<0.05$)

Fiona, (2006). conducted a study on the effectiveness of cabbage leaves extract with that of hot compress in treating breast engorgement in lactating women. In a double pretest-posttest design 18 received cabbage leaves extract and 21 received hot compress .Both treatment were found significantly effective a p(<0.05).

V C Nikodem, D Danziger, et,al, (2004). A randomized, controlled trial was conducted to evaluate the effect of cabbage leaves on mothers' perceptions of breast engorgement and the influence of this treatment on breastfeeding practices. The sample of 120 breastfeeding women within 72 hours postpartum, were randomly allocated to an experimental group who received application of cabbage leaves to their breasts, or to a control group who received routine care. The experimental group tended to report less breast engorgement, but this trend was not statistically significant. At six weeks, women who received the cabbage leaf application were more likely to be breastfeeding exclusively. The results shows that76 and 58 percent (35/46 Vs 29/50; P = 0.09), and their mean duration of exclusive breastfeeding was longer (36 Vs 30 days; P = 0.04).

Smith, Sandra MPH CHE, (2004). The Cochrane Pregnancy and Childbirth group maintains a registry of randomized and quasi-randomized clinical trials. Two researchers searched the Cochrane database and located one trial of cabbage leaves used for breast engorgement .A control group received routine breast care. The experimental group used cabbage leaves and reported less breast engorgement than controls, but the trend did not reach statistical significance. At six weeks the group using cabbage leaves was more likely to be breast feeding exclusively (p = .09) and their mean duration of exclusive breast feeding was significantly longer than controls (p = .04).

Newman Jack, (2002). conducted a study on cabbage leaves for engorgement, in his article; severe engorgement of the breast on the third or fourth day of postpartum can usually be prevented by getting the baby latched on and drinking well from the very beginning. If the mother does become engorged, cabbage leaves seem to help decrease the engorgement more rapidly than ice packs or other treatment.

K L Roberts, M Reiter, D Schuster, (1997). This study compared the effectiveness of chilled and room temperature green cabbage leaves in reducing the discomfort of breast engorgement in postpartum mothers. Twenty-eight lactating women with breast engorgement used chilled cabbage leaves on one breast and room-temperature cabbage leaves on the other for a two-hour period. Pre-treatment pain levels were compared with post-treatment levels for both conditions. There was no difference in the post-treatment ratings for the two treatments; mothers reported significantly less pain with both treatments.

Roberts KL, et al. (1998). conducted study on the effectiveness of cabbage leaf extract was compared with that of a placebo in treating breast engorgement in lactating women. In that 21 participants received a cream containing cabbage leaf extract, while 18 received placebo cream with the two groups showing no difference on all out women measures. Mother perceived both were effective in relieving discomfort. Feeding had a greater effect than the application of cream on relieving discomfort and decreasing tissue hardness. It is therefore recommended that lactation consultants encourage mother to breast feed if possible to discomfort.

Sandra Smith, (1997). conducted study on Cabbage leaves for treatment and prevention of breast engorgement, here the experimental group received cabbage leaves and control group received regular breast care. At six weeks the group using cabbage leaves was more likely to be breast feeding exclusively (p=0.09) and their mean duration of exclusive breast feeding was significantly longer than control (p=0.04).Researchers concluded that, cabbage leaves gives better results than normal breast care.

III.Studies related to Jasmine flowers on breast engorgement

Pankaj Shrivastiv, (2008) .conducted a study on The efficacy of jasmine flowers (JasminumSambac) applied to the breasts to suppress puerperal lactation was compared that of Bromocriptine. Effectiveness of both regimens was monitored by serum prolactin levels, clinical evaluation of the degree of breast engorgement and milk production and the analgesic intake. While both bromocriptine and jasmine flowers brought about a significant reduction in serum prolactin, the decrease was significantly greater with bromocriptine. However, clinical parameters such as breast engorgement, milk production and analgesic intake showed the 2 modes of therapy to be equally effective. Jasmine flowers seem to be an effective and inexpensive method of suppressing puerperal lactation and can be used as an alternative in situations where cost and non availability restrict the use of bromocriptine.

George k, (2007). conducted a study to assess the effectiveness of jasmine flower applied to the breast to suppress the puerperal lactation. Effectiveness of regimen was monitored by serum prolactin level, clinical evaluation of the degree of breast engorgement and milk production, brought about a significant results at P(<0.06) level of significance.

Prentie. J. Wildie, (2000). conducted a descriptive study on traditional intervention for breast engorgement with the aims to assess the effectiveness of traditional home remedial measures like application of Jasmine flower and hot water application among 50 mothers with breast engorgement and found that jasmine flower was been effective in reducing breast engorgement.

CHAPTER-III

RESEARCH METHODOLOGY

Research methodology includes Research approach, Research design, Variables Description of setting, Population, Sampling, Criteria for sample selection. It further deals with Description of tool, Content validity, Reliability, Pilot study and method of data collection.

Research approach:

An evaluative and comparative approach was used in this study to compare the effectiveness of cabbage leaves and Jasmine flowers on Breast engorgement and pain.

Research design:

A quasi- experimental study design was used in the study.

E_1	O1	X_1	O2 O3
E_2	O1	X_2	O2 O3

E_1 – Experimental group I

E_2 – Experimental group II

X_1 – Application of cabbage leaves in breast

X_2 – Application of Jasmine flowers in breast

O – Pretest on breast engorgement and pain

O_1 – Post test on first day of Intervention

O_2 – Post test on second day of Intervention

Variable:

Independent variable: Application of cabbage leaves and jasmine flowers.

Dependent variable : Breast engorgement and pain.

Description of study setting:

The study was conducted in postnatal wards and post operative wards of PPK Hospital in Marthandam at Kanyakumari district. It is located about 350 km away from Sara nursing college Dharapuram. It is a 350 bedded hospital in that an average of 10-15deliveries was conducted per day.

Population:

The target population for this study was postnatal mothers.

SAMPLING

Sample:

The sample of the study was postnatal mothers with breast engorgement and pain who was admitted in postnatal wards and post operative wards of PPK hospital, Marthandam and those who met the inclusion criteria.

Sample size:

The total sample size was 60. Among them 30 were in Experimental Group I and 30 were in Experimental Group II.

S**ampling technique:**

Convenience sampling technique was used in this study.

CRITERIA FOR SAMPLE SELECION:

The sample was selected based on the following inclusion and exclusion criteria.

Inclusion criteria:

- Post natal mothers with Breast engorgement and pain.
- Primi Para mothers
- Post-natal mothers within fifth day of post-natal period.
- Postnatal mothers who are willing to participate in data collection procedure.

Exclusion criteria:

- Postnatal mothers with other breast disorders such as mastitis, breast cancer and breast abscess.
- Mothers who are receiving Lactation Suppressant.
- Mothers who are allergic to cabbage leaves and jasmine flowers.

DESCRIPTION OF TOOL:

SECTION I: Demographic profile

A structured Interview Schedule was used to assess the demographic data of the postnatal mothers such as age, education, occupation, income, religion, type of family, post natal day and type of delivery.

SECTION II: Check list

It comprised of 10 signs and symptoms of breast engorgement .A score 1was given if signs of Breast engorgement present and 0 was given if it is not present. So

the total possible score was 10.Score of each subject was calculated and interpreter as follows

Score	Description
0	No Breast Engorgement
1-3	Mild Breast Engorgement
4-7	Moderate Breast Engorgement
8-10	Severe Breast Engorgement

SECTION III: Modified breast engorgement scale

It is a Modified tool comprised of 6 signs to assess breast engorgement, For the presence of each sign the score given is 1and 0 was given if it is not present.The otal possible score is 6. Score of each subject was calculated and interpreted as follows.

Score	Description
1	Normal
2-3	Mild Engorgement
4-5	Moderate Engorgement
6	Severe Engorgement

SECTION IV: Visual analogue scale:

It is a standardized tool constructed by **Polit and Beck, (2004)** to assess pain. It was divided into 6 categories score and the total possible score was 6.Score of each subject was calculated and interpreted.as follows

Score	Description
1	No Pain
2	Mild Pain
3	Moderate Pain
4	Severe Pain
5	Very Severe pain
6	Worse Pain

Validity :

For content validity 4 experts (3 experts from the department of obstetrics and gynecological nursing, 1 from senior Doctor of obstetrics and gynecological department) were requested to give their opinion about the content areas and its relevance and appropriateness of the items. Suggestions were incorporated.

Reliability

To ensure the reliability of the tool, it has been administered to 6 postnatal mothers with breast engorgement and pain. The reliability for observational check list and breast engorgement scale was established by using Inter rater method. The reliability coefficient was r= 0.886. Hence the tool is highly reliable.

Pilot Study

In order to find out feasibility, relevance and practicability of the tool, pilot study was conducted for a period of 1 week from 16.6.2011 to 23.6.2011 in Government hospital at Dharapuram in Thiruppur district. The tool was administered to 6 postnatal mothers with breast engorgement and pain. The study was found feasible to conduct.

METHOD OF DATA COLLECION:

Ethical Consideration:

Formal permission was obtained from he chairman of PPK hospital Marthandam. Oral consent of each individual was obtained before data collection.

Data Collection Period:

The data collection was done for a period of 4 weeks from 29.6.2011 to 27.7.2011.

Data Collection Procedure:

The data collection was done at PPK hospital in Marthandam at Kanyakumari District. Permission was obtained before data collection. The objective of the study was explained to the Medical officer, other paramedical professionals and subjects to get their cooperation during the study. Oral consent was obtained. This was a quasi experimental study design, 60 subjects were selected on the basis of convenience sampling technique. 30 of them were in Experimental Group I and 30 of them were in Experimental Group II. Demographic profile of each subject was recorded in validated subject data sheet.

The study was conducted in two phases. In the first phase, Pretest was done for 30 mothers in experimental group I by assessing the level of breast engorgement through observational check list and 6 point breast engorgement scale. The level of pain was assessed using visual analogue scale. For experimental group I one to two cabbage leaves were applied over the breast for 30 minutes with 8 hours interval for 2 consecutive days. Post test was done for this group at the completion of intervention.

On completion of first phase, Pretest was done for 30 mothers in experimental group II and then fifty cm of strings of jasmine flower was applied over the breast for 30 minutes with 8 hours interval for 2 consecutive days. Similarly the post test was done for experimental group II. The data was analyzed using descriptive and inferential statistics.

Plan for Data Analysis

The data was analyzed by using descriptive and inferential statistics. The following plans for data analysis were developed, Frequency distribution, percentage was used for categorical data. Independent 't' test to compare the effectiveness of cabbage leaves and jasmine flower. Chi square analysis was used to find out the association of level of breast engorgement and pain with their selected demographic variables such as age, education, occupation, income, religion, type of family, type of gravida, post natal day and type of delivery.

CHAPTER-IV

ANALYSIS AND INTERPRETATION

Analysis of data is a general way which involves a number of closely related operations, which performed, with the purpose of summarizing the collected data, organizing these in such a manner that they answer to research questions.

Korlinger describes data analysis as categorizing, ordering, manipulating and summarizing the data to obtain answer to research questions. Data analysis was conducted to reduce, organize and give meaning to the data. The data were collected, analyzed and interpreted according to the objectives of the study.

This chapter presents the analysis and interpretation of data collected from 60 mothers with breast engorgement were selected and intervention was given .The results obtained were classified and tabulated and the following analysis were performed in fulfilling the objectives of the study.

The data analysis is presented in the following sections.

Section- A : Distribution of samples according to their demographic variables.

Section –B **:** Pretest and Posttest score of breast engorgement and pain among postnatal mothers of Experimental group I and II.

Section-C : Comparison of effectiveness of cabbage leaves Vs jasmine flower on breast engorgement and pain among postnatal mothers of Experimental group I and II.

Section-D : Association between level of breast engorgement and pain among postnatal mothers with their selected demographic variables of Experimental group I.

Section-E : Association between level of breast engorgement and pain among postnatal mothers with their selected demographic variables Experimental group II.

SECTION-A

TABLE-4.1 Distribution of samples according to the demographic variables

n=60

Sl. No	Demographic variables	Experimental group I (n=30)		Experimental group II (n=30)		Total (n=30)	
		(f)	(%)	(f)	(%)	(f)	(%)
1	**Age:**						
	a. 18-21 Years.	8	26.7	7	23.3	15	25
	b. 22-25 Years.	17	56.7	10	33.3	27	45
	c. 26-29 Years.	3	10	11	36.7	14	23.3
	d. 30Years and above	2	6.6	2	6.7	4	6.7
2	**Education:**						
	a. No Formal Education	-	-	-	-	-	-
	b. Primary School	-	-	-	-	-	-
	c. Higher Class	6	20	7	23.3	13	21.7
	d. Higher Secondary	14	46.7	17	56.7	31	51.7
	e. Graduates	10	33.3	6	20	16	26.6
3	**Occupation:**						
	a. Home Maker.	16	53.3	12	40	28	46.7
	b. Daily Wage worker	-	-	-	-	-	-
	c. Technical worker.	8	26.7	10	33.3	18	30
	d. Professional worker.	6	20	8	26.7	14	23.3

4	**Income:**						
	a. Below 3000	-	-	-	-	-	-
	b. 3001 - 5000	-	-	10	33.3	10	16.7
	c. 5001- 10000	22	73.3	13	43.3	35	58.3
	d. Above 10001	8	26.7	7	23.3	15	25
5	**Religion:**						
	a. Hindu	5	16.7	12	40	17	28.3
	b. Christian	23	76.7	16	53.3	39	65
	c. Muslim	2	6.6	2	6.7	4	6.7
	d. Others	-	-	-	-	-	-
6	**Type of family:**						
	a. Nuclear	26	86.7	25	83.3	51	85
	b. Joint	4	13.3	5	16.7	9	15
	c. Extended Family	-	-	-	-	-	-
7	**Post natal day:**						
	a. Second day	-	-	1	3.3	1	1.67
	b. Third day	9	30	-	-	9	15
	c. Fourth day	21	70	29	96.7	50	83.3
	d. Fifth day	-	-	-	-	-	-
8	**Type of delivery:**						
	a. Normal Vaginal Delivery	5	16.7	7	23.3	12	20
	b. Normal vaginal delivery with episiotomy	10	33.3	8	26.7	18	30
	c. Forceps or vacuum	-	-	-	-	-	-
	d. LSCS	15	50	15	50	30	50

The table4.1 shows subjects 17(56.7%) were between 22-25 years of Experimental group I, 11 (33.3%) were between 26-29 years of Experimental group II. With regard to educational status subjects 14(46.7%) were with Higher secondary education of Experimental group I, 17(56.7%) were with Higher secondary education of Experimental II. Regard to Occupation 16 (53.3%) were Home maker of Experimental group I, 12(40%) were of Experimental II.

Most of the subjects 22 (73.3%) had family income between Rs.5001-Rs.10000 of Experimental group I, 13(43.3%) had family income between Rs.3001-Rs.5000 of Experimental II. Among them 23(76.7 %) were Christians of Experimental group I, and 16(53.3%) were Christians of Experimental II. Regarding the type of family 26 (86.7%) were living in nuclear family of Experimental group I and 25 (83.3%) were living in nuclear family of Experimental II.

Regarding the type of gravida 24(80%) of women were second gravida mothers of Experimental group I, 16(53.3%) were second gravid mothers of Experimental group II. Among the subjects 21 (70%) were in second postnatal day of Experimental group I, 29 (96.7%) were in third postnatal day of Experimental group II. Regarding the type of delivery, 15(20%) were in Lower segment caesarian section of Experimental group I, 18 (50%) were in Lower segment caesarian section of Experimental group II.

SECTION- B

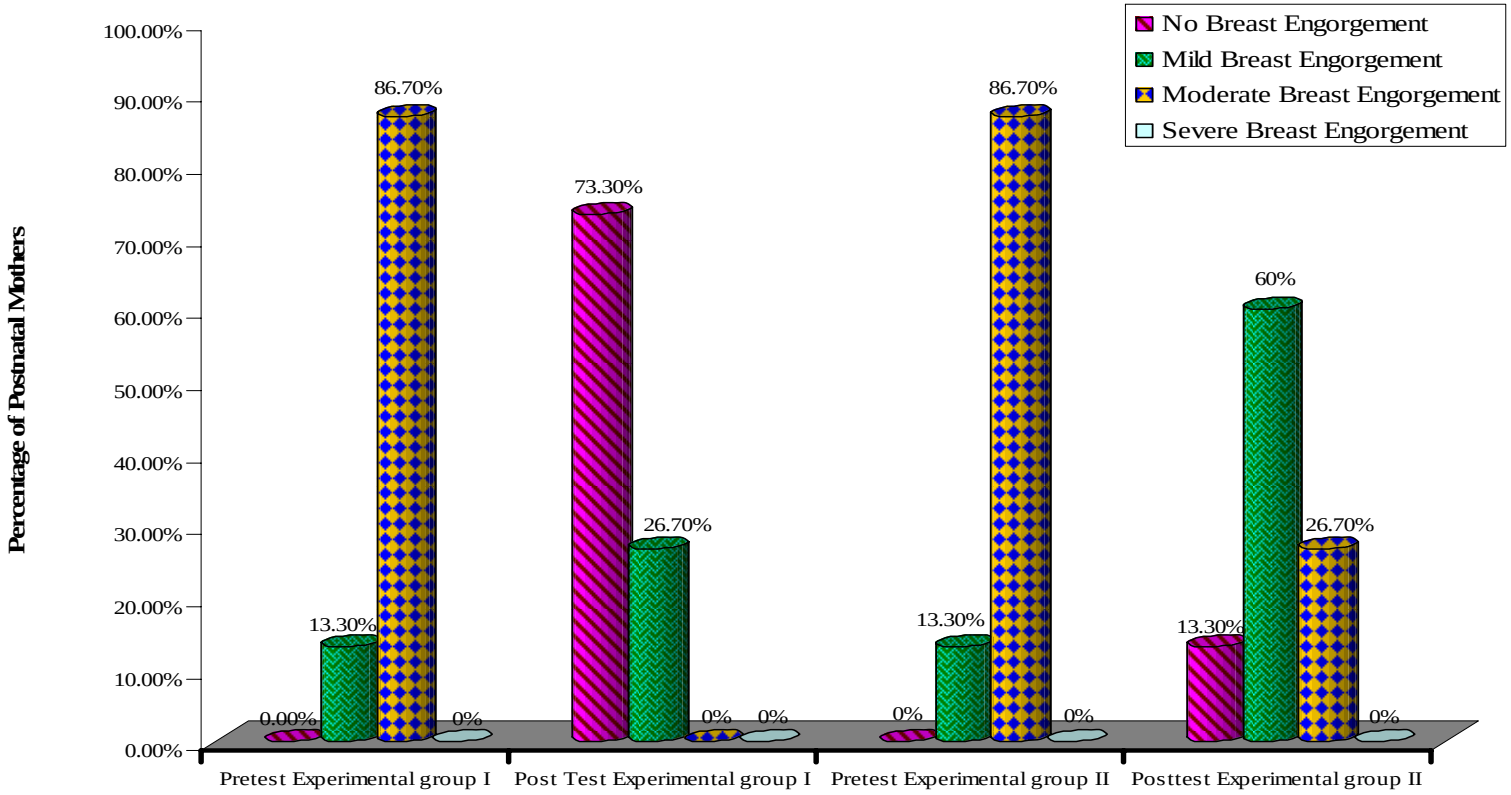

Figure-4.1: Pretest and Posttest score of breast engorgement and pain among postnatal mothers of Experimental group I and II.

The figure 4.1 shows that in Experimental Group I 13.3% (4) mothers had mild breast engorgement, 86.7% (26) had moderate breast engorgement in pretest and 73.3%(22)had no breast engorgement ,26.7%(8) had mild breast engorgement in post test.

The findings shows that in Experimental Group II 13.3% (4) mothers had mild breast engorgement, 86.7% (26) had moderate breast engorgement in pretest and 13.3%(4)had no breast engorgement ,60%(18) had mild breast engorgement, 26.7%(8) had moderate breast engorgement in post test.

SECTION- C

Table-4.2: Comparison of Effectiveness of cabbage leaves Vs jasmine flowers on breast engorgement and pain among postnatal mothers of Experimental group I and II.

Variables	Max Score	Experimental group I		Experimental group II		't' value
		Mean	S.D	mean	S.D	
Breast engorgement Score	16	1.8	1.73	6.53	3.47	2.436*
Pain score	6	0.67	0.69	3.23	0.49	16.58*
Total Score	22	2.23	2.56	9.8	4.37	8.18*

(P <0.05) level of significance

The Table 4.2 Shows that there was a significant difference (P <0.05) on level of breast engorgement and pain between experimental group I and II. The mean post test score of breast engorgement among experimental group I was 1.8(±1.73), whereas in Experimental group II it was 6.53(±3.47). The mean post test score of pain among experimental group I was 0.67 (±0.69), whereas in Experimental group II it was 3.23(±0.49).

The t value shows that cabbage leaves are more effective than jasmine flower in reduction of breast engorgement with the significant result (8.81) which is greater than the table value (1.671) at p 0.05

Hence H_1 is retained.

SECTION- : D

Table-4.3: Association between level of breast engorgement and pain among postnatal mothers with selected demographic variables of Experimental group I.

n=30

Sl. No	Demographic variables	Experimental group I				Chi - square
		Normal		Mild		
		(f)	(%)	(f)	(%)	
1	**Age:**					
	a. 18-21 years.	4	13.3	4	133	
	b. 22-25 years.	14	46.7	3	10	3.75
	c. 26-29 years.	2	6.7	1	3.3	
	d. 30 years and above	2	6.7	-	-	
2	**Education:**					
	a. No Formal Education	-	-	-	-	
	b. Primary School	-	-	-	-	
	c. Higher Class	2	6.7	4	133	0.42
	d. Higher Secondary	4	13.3	10	33.3	
	e. Graduate	2	6.7	8	26.7	
3	**Occupation:**					
	a. Home Maker.	4	13.3	12	40	
	b. Daily Wage Worker.	-	-	-	-	0.1
	c. Technical Worker.	2	6.7	6	20	
	d. Professional Worker	2	6.7	4	13.3	

4	**Income:**					
	Below 3000	-	-	-	-	
	3001 - 5000	-	-	-	-	0.012
	5001- 10000	16	53.3	6	6	
	Above 10001	6	20	2	2	
5	**Religion:**					
	Hindu.	3	10	2	6.7	
	Christian	5	16.7	18	60	5.27
	Muslim.	-	-	2	6.7	
	Others	-	-	-	-	
6	**Type of family:**					
	Nuclear	19	63.3	7	23.3	
	Joint	3	10	1	3.3	0.506
	Extended Family	-	-	-	-	
7	**Post natal day:**					
	First day	-	-	-	-	
	Second day	-	-	-	-	
	Third day	15	50	6	20	0.13
	Fourth day	7	23.3	2	6.7	

8	**Type of delivery:**					
	Normal Vaginal Delivery	4	13.3	1	3.3	
	Normal Vaginal Delivery With Episiotomy	7	23.3	3	10	
	Forceps Or Vacuum	-	-	-	-	0.138
	LSCS	11	36.7	4	50	

(P <0.05) level of significance

The table-4.3 shows that there was no significant association between level of breast engorgement and demographic variables (such as age, educational status, family income, religion, type of family, type of gravid, post natal day and type of delivery) of Experimental group I

SECTION- E

Table 4.4: Association between level of breast engorgement and pain among postnatal mothers with their selected demographic variables Experimental group II. n=30

Sl. No	Demographic variables	Experimental group II						Chi - Square
		Normal		Mild		Moderate		
		f	%	f	%	f	%	
1	**Age:**							
	a. 18-21 Years	2	6.7	2	6.7	3	10	
	b. 22-25 Years.	1	3.3	4	13.3	5	16.7	
	c. 26-29 Years.	1	3.3	10	33.3	-	-	13.08*
	d. 30 Years And Above	-	-	2	6.7	-	-	
2	**Education:**							
	a. No Formal Education	-	-	-	-	-	-	
	b. Primary School	-	-	-	-	-	-	
	c. Higher Class	1	3.3	4	13.3	2	6.7	3.75
	d. Higher Secondary	1	3.3	12	40	4	13.3	
	e. Graduate	2	6.7	2	6.7	2	6.7	
3	**Occupation:**							
	a. Home Maker.	3	10	6	20	3	10	
	b. Daily Wage Worker.	-	-	-	-	-	-	
	c. Technical Worker.	-	-	8	26.7	2	6.7	5.856
	d. Professional Worker	1	3.3	4	13.3	3	10	

4	**Income:**							
	a. Below 3000	-	-	-	-	-	-	
	b. 3001 - 5000	1	6.7	8	26.7	1	3.3	4.832
	c. 5001- 10000	3	10	6	20	4	13.3	
	d. Above 10001	-	-	4	13.3	3	10	
5	**Religion:**							
	a. Hindu.	1	3.3	6	20	5	16.7	
	b. Christian	3	10	10	33.3	3	10	
	c. Muslim.	-	-	2	6.7	-	-	3.717
	d. Others	-	-	-	-	-	-	
6	**Type Of Family:**							
	a. Nuclear	3	10	16	53.3	6	20	
	b. Joint	1	3.3	2	6.7	2	6.7	1.5006
	c. Extended Family	-	-	-	-	-	-	
7	**Post Natal Day:**							
	a. Second day.	-	-	-	-	-	-	
	b. Third day	-	-	-	-	-	-	9.23*
	c. Fourth day	1	3.3	-	-	-	-	
	d. Fifth day	3	10	18	60	8	26.7	
8	**Type of delivery:**							
	a. Normal Vaginal Delivery	1	3.3	4	13.3	2	6.7	
	b. Normal Vaginal Delivery With Episiotomy	3	10	2	6.7	3	10	8.604*
	c. Forceps Or Vacuum	-	-	-	-	-	-	
	d. LSCS	-	-	12	40	3	10	

(P <0.05) level of significance

The table-4.4 shows that there was a significant association between level of breast engorgement and pain with age, postnatal day and type of delivery of experimental group II. The findings of the study shows that cabbage leaves are more effective than Jasmine flower on breast engorgement and pain among postnatal mothers.

CHAPTER-V

DISCUSSION

This chapter presents the interpretation of the statistical findings. It has been discussed based on the objectives of this study was to compare the effectiveness of cabbage leaves Vs jasmine flowers among post natal mothers in selected hospital at Kanyakumari District.

A comparative and evaluative approach was used for the present study. The study population comprised of post natal mothers with breast engorgement. The sample size is 60. A convenience sampling technique was used to collect the data. The data collection tools used were Demographic variables, observational checklist and Breast engorgement scale was used to evaluate the level of effectiveness of Cabbage leaves and Jasmine flower on Breast engorgement.

Objective 1 :- To assess the level of breast engorgement and pain among postnatal mothers of experimental group I and II.

The findings shows that the subjects 4(13.3%) had mild breast engorgement, 26(86.7%) moderate breast engorgement in pretest and 22(73.3%)had no breast engorgement, 8(26.7%) had mild breast engorgement in post test of Experimental group

Objective 2 :- To compare the effectiveness of cabbage leaves Vs jasmine flower on breast engorgement and pain among postnatal mothers of experimental group I and II.

There was a significant difference (P <0.05) on level of breast engorgement and pain between experimental group I and II. The mean post test score of breast engorgement among experimental group I was 1.8(±1.73), whereas in Experimental group II it was 6.53(±3.47). The mean post test score of pain among experimental group I was 0.67 (±0.69), whereas in Experimental group II it was 3.23(±0.49).

H_1 : There will be significant difference in the level of breast engorgement and pain among post natal mothers of experimental Group I and II at P < 0.05 level of significance.

Therefore hypothesis $H_1$was Retained.

The findings were congruent with the study conducted by Nikodem A randomized, controlled trial was conducted to evaluate the effect of cabbage leaves on mothers' perceptions of breast engorgement and the influence of this treatment on breastfeeding practices. The greater breastfeeding success in the experimental group may have been due to some beneficial effect of cabbage leaf application.

The findings were congruent by the study conducted by George k (2007) to assess the effectiveness of jasmine flower applied to the breast to suppress the puerperal lactation. Effectiveness of regimen was monitored by serum prolactin level, clinical evaluation of the degree of breast engorgement and milk production, brought about a significant results.

Objective 3 :- **To find out the association between level of breast engorgement and pain with selected demographic variables among postnatal mothers experimental group I.**

The calculated chi- square value was less than the tabulated value at 0.05 levels, there was no significant association between level of breast engorgement and demographic variables (such as age, educational status, family income, religion, type of family, type of gravid, post natal day and type of delivery) of Experimental group I.

H_2 : There will be significant association between level of breast engorgement and pain with demographic variables of experimental group I at $P < 0.05$ level of significance.

Hence H_2 was Rejected

Objective 4 :- **To find out the association between level of breast engorgement and pain with selected demographic variables among postnatal mothers of experimental group II.**

There was a significant association between level of breast engorgement and pain with age, type of gravid, postnatal day and type of delivery of experimental group II. The findings of the study shows that cabbage leaves are more effective than Jasmine flower on breast engorgement and pain among postnatal mothers.

H_3 : There will be significant association between level of breast engorgement and pain with demographic variables of experimental group II at p 0.05 level of significance.

Therefore hypothesis $H_3$was Retained.

The findings were congruent with the study conducted by Pamela D. Hill Sharron S. Humenick, (2004). On the occurrence of breast engorgement this study describes breast engorgement during days 1-14 postpartum of 114 first and second time vaginal- and cesarean-delivery breastfeeding mothers. Most mothers reported experiencing their most intense engorgement after hospital discharge. Previous breastfeeding experience of the mother is a more critical variable than parity in predicting engorgement. Second time breastfeeding mothers experienced engorgement sooner and more severely than did first time breastfeeding mothers, regardless of delivery method.

CHAPTER-VI

SUMMARY CONCLUSION, IMPLICATION AND RECOMMENDATION

This chapter deals with summary of the study findings and its implications for nursing and health care services. It clarifies the implications and recommendations given for different areas like nursing education, nursing practice, administration for health care delivery system and nursing research.

SUMMARY OF THE STUDY

The purpose of the study was to compare the effectiveness of cabbage leaves Vs jasmine flowers on breast engorgement and pain. A quasi- experimental study design was used in the study among 60 postnatal mothers with breast engorgement at selected hospital in Kanyakumari District.

MAJOR FINDINGS OF THE STUDY

- The subjects 17(56.7%) were between 22-25 years of Experimental group I, 11 (33.3%) were between 26-29 years of Experimental group II. With regard to educational status subjects 14(46.7%) were with Higher secondary education of Experimental group I, 17(56.7%) were with Higher secondary education of Experimental II. Regard to Occupation 16 (53.3%) were Home maker of Experimental group I, 12(40%) were of Experimental II.
- Most of the subjects 22 (73.3%) had family income between Rs.5001-Rs.10000 of Experimental group I, 13(43.3%) had family income between Rs.3001- Rs.5000 of Experimental II. Among them

23(76.7 %) were Christians of Experimental group I, and 16(53.3%) were Christians of Experimental II. Regarding the type of family 26 (86.7%) were living in nuclear family of Experimental group I and 25 (83.3%) were living in nuclear family of Experimental II.

- Regarding the type of gravida 24(80%) of women were second gravida mothers of Experimental group I, 16(53.3%) were second gravid mothers of Experimental group II. Among the subjects 21 (70%) were in second postnatal day of Experimental group I, 29 (96.7%) were in third postnatal day of Experimental group II. Regarding the type of delivery, 15(20%) were in Lower segment caesarian section of Experimental group I, 18 (50%) were in Lower segment caesarian section of Experimental group II.
- The findings shows that in Experimental Group I 13.3% (4) mothers had mild breast engorgement, 86.7% (26) had moderate breast engorgement in pretest and 73.3%(22)had no breast engorgement, 26.7%(8) had mild breast engorgement in post test.
- The findings shows that in Experimental Group II 13.3% (4) mothers had mild breast engorgement, 86.7% (26) had moderate breast engorgement in pretest and 13.3%(4)had no breast engorgement, 60%(18) had mild breast engorgement, 26.7%(8) had moderate breast engorgement in post test.
- There was a significant difference ($P < 0.05$) on level of breast engorgement and pain between experimental group I and II.
- The mean post test score of breast engorgement among experimental group I was 1.8(±1.73), whereas in Experimental group II it was

6.53(±3.47). The mean post test score of pain among experimental group I was 0.67 (±0.69), whereas in Experimental group II it was 3.23(±0.49).

- There was a significant association between level of breast engorgement and pain with age, postnatal day and type of delivery of experimental group II. The findings of the study shows that cabbage leaves are more effective than Jasmine flower on breast engorgement and pain among postnatal mothers.

CONCLUSIONS:

These findings provided Statistical evidence supporting that application of Cabbage leaves and Jasmine flower may be used as an effective technique in the management of breast engorgement. By using this nurses can handle breast engorgement problems more effectively in primary care and hence help patients both physically and psychologically.

NURSING IMPLICATIONS

The findings of this study had implications in various areas of nursing i.e., nursing practice, administration, education and nursing research.

IMPLICATION IN NURSING PRACTICE:-

- Nurse can do breast examination during postnatal period for identification of breast engorgement.
- Nurse has to encourage the mother to feed he baby frequently to prevent breast engorgement and pain.
- Nurse can teach the mothers to take natural remedies for breast engorgement

IMPLICATION IN NURSING EDUCATION;-

- Nurse educator should be given in-service education to update their knowledge regarding treatments of breast engorgement.
- Nurse educator can educate the post natal mothers regarding the onset of breast engorgement and its treatment
- Nursing students must be specially trained to assess the changes in the breast through breast examination. So that it will help them to plan for appropriate care.

IMPLICATION IN NURSING ADMINISTRATION:-

- Nurse administrators should arrange continuing education programme for nurses regarding breast examination of post natal mothers and detection of breast engorgement.
- Nurse administrators encourage the nurses to prepare adequate assessment tool for assessing breast engorgement and pain.

RECOMMENDATIONS:-

- A study can be conducted on assessing knowledge, attitude and practice of mothers regarding breast engorgement.
- Comparative study can be done among breast feeding mothers with breast engorgement and non breast feeding mothers with breast engorgement.
- The same study can be done for longer period of time with large group for better generalization.
- The same study can be conducted between primipara and multipara mothers

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ANNEXURE- A

SARA NURSING COLLEGE

(Recognised by Govt. of Tamil Nadu, Affiliated to
T.N. Dr. M.G.R. Medical University & Approved by Indian Nursing Council)

Palani Main Road, Manakadavu,
Dharapuram - 638 673,Tirupur District,
Tamil Nadu, South India.

Phone : 04258-244208, Fax : 04258-244254
E-mail : saranursingcollege@gmail.com
website : www.saranursingcollege.com

From,

The Principal,
Sara Nursing college,
Dharapuram.

Date:
Lr.No.SNC.79A/05/11

To,

THE ADMINISTRATOR
PPK HOSPITAL
MARTHANDAM
KANYAKUMARI DISTRICT.

Respected sir,

Ms. N.V. Brinda is a bonafide student of Sara Nursing College, Dharapuram, doing her M.Sc(N) Programme in Nursing. She is conducting a research on

"A Study to evaluate the effectiveness of cabbage leaves verses jasmine flower on breast engorgement and pain among postnatal mothers in Selected Hospital at Kanyakumari District. The research project is to be submitted to "The Tamilnadu Dr. M.G.R Medical University" as a partial fulfillment of the university requirements for the award of M.Sc(N) Degree .The Researcher is anticipating that this project will be beneficial in improving the nursing care among postnatal mothers at your esteemed institution.

As part of the study she needs to observe the selected subjects in terms of reducing Breast Engorgement and Pain and document the collected data for analysis and report.

Hence I request your kind consent for her to conduct the study from 20th June to August 4th at your esteemed Institution. Further details of the proposed project outcome will be furnished by the researcher in person. The hospital norms, policies and ethics will be respected and strictly adhered by the researcher throughout the study period.

Thanking You

Principal 03/06/11

SARA NURSING COLLEGE
Tirupur Dist
638 673
MANAKADAVU · DHARAPURAM

for PRINCIPAL
Sara Nursing College,
Dharapuram - 638 673.

PPK HOSPITAL
Main Road, Marthandam - 629 165.

270135
(04651) 273245
273255
Fax (04651) 273535

Dr. P.P.K. Vijayakumar M.B.B.S., F.C.C.P.
Director

Dr. Santosh Thangavel M.D (Gen. Med.)
Dr. G. Balamurali M.B.B.S., M.S.
Dr. J. Sheban M.B.B.S., D.C.H. P.A.L.S.
Dr. R. Suneer M.B.B.S., M.S., (E.N.T.)
Dr. T. Chezhian M.B.B.S., Dip. U.S.G.
Dr. V. Mathivanan M.B.B.S.
Dr. J. Danie Nesakumar M.B.B.S.
Dr. M. Sudha Rani B.D.S.
Dr. V. Antony David M.D., D.M. (Neuro)
Dr. Jacob Justin M.D., D.M. (Cardo)
Dr. D. Felsit Punitha M.B.B.S., D.G.O.
Dr. Divya Ranjith M.B.B.S., M.D. (O&G)
Dr. P. Ilayaselvan M.B.B.S., M.S. Ortho.
Dr. K. Radha Krishnan M.B.B.S., D.A.
Dr. M. Karunakaran D.A.M.
Dr. J. Auspus M.B.B.S.
Dr. C.S. Archana M.B.B.S.
Dr. Jithika Chezhian M.B.B.S., D.G.O.,D.N.B. (Radiology)
Dr. A. Prabaharan M.S., Mch (Gastro)
Dr. T. Muthu Rethnam M.S. Mch (Neuro)
Dr. Frank Davis Daniel M.S. Mch (Uro)

Date : 26/07/2011

TO WHOMSOEVER IT MAY CONCERN

This is to certify that Ms. **N.V. BRINDA**, II year M.Sc. (Sara Nursing College Dharapuram) Nursing has completed her research study in this Hospital from 29/06/2011 to 28/07/2011. The statement of the study is "**A study to evaluate the effectiveness of cabbage Leaves Vs Jasmine flower on Breast engorgement at PPK Hospital Marthandam**". She has conducted her study successfully. Her character and conduct were good during this program.

I wish her good luck

P.P.K. HOSPITAL PIN : 629 165 MARTHANDAM

Administrative Officer
A. MATHIVANAN MBA
ADMINISTRATIVE OFFICER
PPK HOSPITAL
MARTHANDAM - 629 165

ANNEXURE- B

SECTION:I

DEMOGRAPHIC VARIABLES

1. Sample Number:

2. Age:

a. 18 – 21 years ( )

b. 22 – 25 years ( )

c. 26 – 29 years ( )

d. 30 years and above ( )

3. Education:

a. No Formal education ( )

b. Primary School ( )

c. Higher Class ( )

d. Higher secondary ( )

e. Graduates ( )

4. Occupation:

a. Home Maker ( )

b. Daily Wage Worker ( )

c. Technical Worker ( )

d. Professional Worker ( )

5. Income:

a. Below 3000 ( )

b. Rs. 30001–Rs.5000 ( )

c. Rs. 5001 – Rs.10000 ( )

d. Rs. 10001 and above ( )

6. Religion:

a. Hindu ( )

b. Christian ( )

c. Muslim ( )

d. Others ( )

7. Type of family:

a. Nuclear ( )

b. Joint ( )

c. Extended family ( )

8. Postnatal day:

a. Second day ( )

b. Third day ( )

c. Fourth day ( )

d. Fifth day

9. Type of Delivery:

a. Normal Vaginal Delivery ( )

b. Normal vaginal delivery with Episiotomy ( )

c. Forceps or Vacuum Delivery ( )

d. Lower segment caesarean section ( )

SECTION II:

CHECK LIST:

ASSESSMENT OF BREAST ENGORGEMENT

Sl.No	Signs And Symptoms	Pretest Score		Posttest Score			
		Present	Absent	Day 1		Day 2	
				P	A	P	A
1	Tenderness over the breast						
2	Redness over the breast						
3	Shiny skin						
4	Breast warm to touch						
5	Lumpy when touched						
6	Increased body temperature						
7	Tender lymph nodes						
8	Flushed nipples						
9	Edema over the breast						
10	Spontaneous ejection of milk						

SCORE:

Present : 1

Absent : 0

DESCRIPTION:

1-3 : Mild Breast Engorgement

4-6 : Moderate Breast Engorgement

7-10: Severe Breast Engorgement

SECTION III:

MODIFIED BREAST ENGORGEMENT SCALE

SL. No	Description	Score
1	Soft ,No change in breast	1
2	Slight change in breast	1
3	Firm non tender breast	1
4	Firm beginning tenderness in breast	1
5	Firm, tender	1
6	Very firm , Very tender	1

SCORE:

1 – Normal

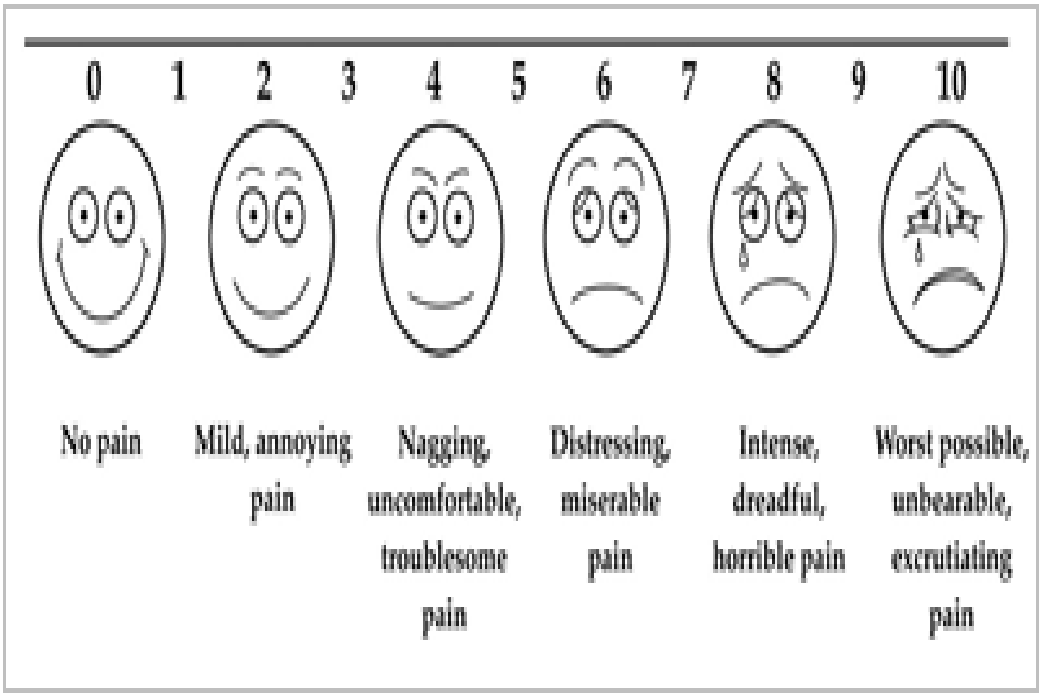
2-3 - Mild Engorgement

4-5 - Moderate Engorgement

6 – Severe Engorgement

SECTION IV:

PAIN ASSESSMENT- VISUAL ANOLOGUE SCALE:



SCORE:

No Pain	- 0
Mild Pain	- 1-2
Moderate Pain	- 3-4
Severe Pain	- 5-6
Very Severe pain	-7-8
Worse Pain	- 9-10

ANNEXURE - C

APPLICATION OF CABBAGE LEAVES

Equipment:

1. Bowl with wet cotton
2. Cabbage
3. Knife
4. Kidney tray

Testing allergic to cabbage:

Take a small amount of crushed fresh cabbage, put it on the delicate skin of the forearm, and wrap guaze round it to keep it in place. If before no reaction in 1 or 2 hours, assume that no allergic to cabbage.

Procedure:

- Take fresh green cabbage, remove the core and gently peel individual leaves away from the centre of the head pulling outward
- Thoroughly wash the leaves
- Just before use, crush the veins in the leaf with a rolling pin or slice off the tops of the vein with a sharp knife
- Drape several leaves over the breast.
- Use enough cabbage leaves to cover all the engorged tissue
- Leave the compress on until the leaves become wilted, about 20- 30 minutes
- Repeat application two times a day

After care:

- Clean the breast with wet cotton
- Advice the mother to give breast feeding

APPLICATION OF JASMINE FLOWERS

Equipment:

1. Bowl with wet cotton
2. Strings of jasmine flower
3. Knife
4. Kidney tray
5. Measuring scale

Procedure:

- Take fresh strings of jasmine flower
- Thoroughly wash the flower
- Drape 50 cm of strings of jasmine flower over the breast
- Leave the compress on until the leaves become wilted, about 20- 30 minutes
- Repeat application two times a day

After care:

- Clean the breast with wet cotton
- Advice the mother to give breast feeding

ANNEXURE – D

LETTER REQUESTING SUGGESTION FOR ESTABLISHING CONTENT VALIDITY

From

N.V.BRINDA,
II year M.Sc(N),
Sara Nursing College,
Dharapuram.

To

Respected Sir / Madam,

Subject : Letter requesting opinion and suggestions from experts for establishing content validity of the tool.

I am a II Year M.Sc (N) Nursing student in Sara Nursing College. As a partial fulfillment of Masters Degree in nursing, I have selected the topic mentioned below for the research project to be submitted to "The Tamil Nadu Dr.M.G.R. Medical University Chennai".

Topic: "A study to compare the effectiveness of cabbage leaves Vs jasmine flowers on breast engorgement and pain among post natal mothers in selected hospital at Kanyakumari District".

Enclosed here with: 1. Proposal
2. Tool

May I request you to kindly validate the following enclosure and give your expert opinion and suggestion for necessary modifications of the tool.

Thanking you in Anticipation

Place: Your's sincerely,
Date: N.V.Brinda

ANNEXURE – E

CERTIFICATE OF VALIDATION

This is to Certify that the tool developed by **Ms N.V.BRINDA,** II year M.Sc(N) of Sara Nursing College On a Topic "**A study to compare the effectiveness of cabbage leaves Vs jasmine flowers on breast engorgement and pain among post natal mothers in selected hospital at Kanyakumari District",** has been validated by the undersigned. The Suggestions and modifications given by me will be incorporated by the investigator in collaboration with their respective guide.

Name: Signature:

Designation:

Date:

ANNEXURE – F

LIST OF EXPERTS

1. Dr.Mallika Swaminathan MBBS.DGO
   Consultant and Obstetrician &Gynecologist
   Janani Hospital
   Dharapuram.

2. Prof.Irene light M.sc(N)
   Vice Principal,
   Dr.G.Sakunthala college of Nursing,
   Trichy.

3. Prof.Glory.M.Sc(N)
   HOD Department of Obg
   Bishops college of nursing
   Dharapuram.

4. Prof.TheresM.Sc(N)
   Principal,
   Kerai tamil selvan,
   Puthukottai

5. Prof. Renuka M.Sc(N)
   HOD Department of OBG,
   Kovai Medical Centre, College of Nursing,
   Coimbatore.

ANNEXURE – G

ENGLISH EDITING CERTIFICATE

I here by certify that, I have edited the work of Ms. **N.V.BRINDA** II year MSc(N)., student of Sara Nursing college, Dharapuram who is under dessertation work on "A study to compare the effectiveness of cabbage leaves Vs jasmine flower on treatment of breast engorgement and pain among post natal mothers in selected hospital at kanyakumari district".

Date:

Signature

S. Saminathan selvaraj,
M.A., M.Ed., M.Phil.,
P.G.Assistant (Economics)
St.Xaviers Higher Secondary School
Puthakudy - 621 111.
Trichy (Dt)

ANNEXURE – H

PHOTOS

APPLICATION OF CABBAGE LEAVES

APPLICATION OF JASMINE FLOWER