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**Dr. Tamilselvi S**  
Associate Professor,  
Department of Community  
Health Nursing, Saveetha  
College of Nursing Saveetha  
Institute of Medical and  
Technical Science, Chennai,  
Tamil Nadu, India

**Ananthi S**  
B.Sc. Nursing Final Year,  
Saveetha College of Nursing  
Saveetha Institute of Medical  
and Technical Science,  
Chennai, Tamil Nadu, India

**Rangila R**  
B.Sc. Nursing Final Year,  
Saveetha College of Nursing  
Saveetha Institute of Medical  
and Technical Science,  
Chennai, Tamil Nadu, India

**Corresponding Author:**  
**Dr. Tamilselvi S**  
Associate Professor,  
Department of Community  
Health Nursing, Saveetha  
College of Nursing Saveetha  
Institute of Medical and  
Technical Science, Chennai,  
Tamil Nadu, India

## A study to assess the knowledge regarding breast engorgement and its associated risk factors among postnatal mothers

**Dr. Tamilselvi S, Ananthi S and Rangila R**

### Abstract

Breast feeding is an unequal way of providing ideal food for healthy growth and development of baby. It is also an integral part of the reproductive process with important implication for the health of the mothers. The main reason for considering the breast feeding as important is that, it is an essential time of bonding between mother and baby. Breast feeding provides close physical contact and help mother and baby become acquainted. Breast milk is the primary source of nutrition for newborn before they are able to eat and digest other foods. It contains enough nutrition needed for growth and development of the baby. The National Family Health Survey conducted in 2015–2016 reports that the painful breast is the most common reason for giving up breast feeding in first two weeks after the birth. One factor that leads to such pain can be “breast engorgement”. It is reported that 72%–85% of mothers are affected by breast engorgement. It occurs within three-six days after delivery. Breast engorgement can occur any time during lactation when milk is not transferred from the breast. Not all babies are able to feed at the breast due to prematurity, illness, abnormalities, separation from their mothers, which can lead to breast engorgement. So, it is important to follow proper breast feeding techniques to prevent breast engorgement, the commonest problem in the early postnatal period. The high incidence rate of breast engorgement is due to poor knowledge regarding care of breast and breast engorgement, hence, it is important to assess the knowledge level of the postnatal woman regarding breast engorgement. Breast engorgement is a physiological condition during the two weeks of child birth in which there is lymphatic and vascular congestion and presence of new milk. Breast feeding can be emotionally demanding and physically exhausting. Breast feeding is natural but first time mothers don't know the breast feeding. Almost all the mothers experience doubts about their ability to care for their newborns. Feeding is the way which is helpful for the growth and development of the infants and prevent the mothers from breast related problems. The present study aims to assess the knowledge regarding breast engorgement and its associated risk factors among postnatal mothers. A quantitative research design was conducted among 60 postnatal mothers. Convenient sampling technique was used to select samples. A semi-structured interview was used to collect demographic data. A structured questionnaire containing 15 questions were given to the mother to assess the knowledge on breast engorgement among postnatal mothers. The study result show significant improvement in the knowledge among postnatal mothers at the level of  $p < 0.05$ . This reveals that out of total 60 samples 30 samples (50%) were have inadequate knowledge, 25 samples (25%) were have moderate knowledge, and 5 samples (8%) were have adequate knowledge on breast engorgement among postnatal mothers.

**Keywords:** Breast engorgement and post natal mothers

### Introduction

Breast engorgement is a physiological condition during the first two weeks of child birth in which there is lymphatic and vascular congestion and pressure of new milk. It is associated with hard, painful, throbbing, aching, and tender breasts, which may result in women needing analgesia, developing mastitis or temporarily or permanently stopping breastfeeding. The incidence of breast engorgement all over the world is 1:8000 and in India it is 1:6500. Engorgement symptoms occur most commonly once lactation is established generally between post-natal days 3 and 5, with more than two - third of women with tenderness on day 5 but some as late as days 9–10. The nurse should understand the effect of breast engorgement on the mother and recognize its influence on the baby [3].

Breastfeeding is natural but first time mothers don't know the breast feeding properly. Proper education and encouragement provide knowledge and is helpful for mother and their child. After delivery engorgement of breast and breast swelling are two main causes which can lead

to painful breast. After delivery there are various problems which affect mother's and baby's health so there is great need of giving attention and provide solution and treatment related to the breast. Feeding is the way which is helpful for the growth and development of the infant and prevent mothers from the breast related problems. Breastfeeding is the way to development and provide proper care to babies and helps baby from the disease and also provide full nutrition [4].

Breast feeding is essential for the physical and mental health of the child as well as the mother. But in some situations, women experience troubles with breastfeeding at the start of lactation, with one of those being breast engorgement. The engorgement process is triggered by intensified lactogenesis causing from a reduced blood level of steroids hormones in postpartum women and with increased prolactin concentration [5].

Breast engorgement is a physiological state that is characterized by painful swelling of the breasts as a result of a sudden increase in milk volume, vascular and lymphatic congestion, and interstitial edema during the first 14 days after childbirth, this conditions is caused by insufficient breastfeeding and/or obstruction in milk ducts. Breast pain during breastfeeding is a common problems that interferes with successful breastfeeding leading to exclusive giving up of breastfeeding [6]. Breast engorgement is an accumulation of increased amount of blood and other body fluids, as well as milk. The engorged breast becomes very full, tender and lumpy. The common causes of engorged breasts are giving placental feeds, delayed initiation of breastfeeds, early removal of the baby from the breast, bottle feeding and any restrictions on breastfeeding [7].

Breast feeding is one of the first bonding experience between mother and baby." Breast is the best" says British medical journal of breast feeding. Breast feeding empowers women. Breast feeding the baby brings joy to the mother which cannot be expressed by words. The feeling the mothers gets when she continues to nourish her baby at her breast and see the baby grow and thrive on breast milk is awesome [8].

Deep breast pain, in most cases responds to improvement in breastfeeding technique and is thus likely to be due to raised intra ductal pressure caused by inefficient milk removal. Although it may occur during the feed it typically occurs afterwards, and thus can be distinguished from the sensation of the let-down reflex, which some mother's experience as a fleeting pain [9].

Breast infection is a serious and painful complications of the puerperium. The organism causing breast infection are often passed between baby and mother, therefore preventive education is vital. The midwife may consider it appropriate to interweave discussion related to postnatal maternal diet

and fluids intake into this part of the assessment [10].

The purpose of the study [1]. to assess the demographic variables among postnatal mothers [2]. To assess the knowledge on breast engorgement among postnatal mothers. [3]. To determine the association between level of knowledge and selected baseline variables.

**Methods and Materials**

A quantitative research design was conducted among 60 postnatal mothers. Convenient sampling technique was used to select samples. The criteria for sample selection are Mothers who are willing to participate in the study. Postnatal mothers who are present during data collection Mothers who were able to communicate in Tamil and English. Exclusion criteria for the samples are Mothers who are not interested in this study. Before commencing the data collection, authorized setting permission was obtained from the medical administrative officer. 60 samples were selected in hospital. The purpose of the study was explained. The demographic variables were collected. A semi-structured interview was used to collect demographic data. A structured questionnaire containing 15 questions were given to the mother to assess the knowledge on breast engorgement among postnatal mothers. The study result show significant improvement in the knowledge among postnatal mothers at the level of  $p < 0.05$ . This reveals that out of total 60 samples 30 samples (50%) were have inadequate knowledge, 25 samples (25%) were have moderate knowledge, and 5 samples(8%) were have adequate knowledge on breast engorgement among postnatal mothers.

**Result and Discussion**

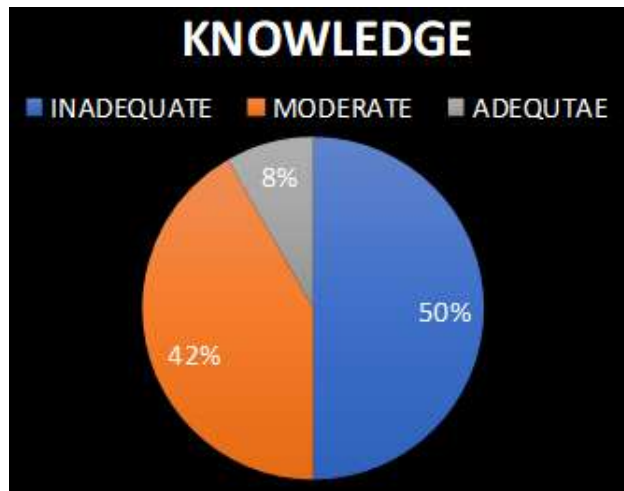
Among 30 samples, that majority of the women 49(81%) were belongs to 20-30 years, 10(17%) were belongs <20 years and 1(2%) were belongs to >31 years. Regarding educational status 19(32%) were belongs to graduate, 18(30%) were belongs to secondary level, 12(20%) were belongs to primary level and 11(18%) were belongs to illiterate level. Regarding occupation 46(77%) were belongs to housewife and 14(23%) were belongs to working. Regarding gravid arum 45(75%) were belongs to primi, 14(23%) were belongs to second and 1(2%) were belongs to multi gravid arum. Regarding postnatal day 27(45%) were belongs to 4th day, 19(32%) were belongs to 3rd day and 14(23%) were belongs to 5th day. Regarding feeding started 46(77%) were belongs to 1-2 hours, 10(17%) were belongs to 1 hour and 4(6%) were belongs to 3 hours. Regarding duration 41(68%) were belongs to 10-20 mints, 11(18%) were belongs to 20-30 mints and 8(14%) were belongs to 0-10 mints. Regarding frequency 35(58%) were belongs to >2 hours and 25(42%) were belongs to <2 hours.

**Table 1:** Frequency and percentage distribution to assess the knowledge on breast engorgement among postnatal mothers

Knowledge on Breast Engorgement among Postnatal Mothers	Inadequate		Moderate		Adequate	
	NO	%	NO	%	NO	%
	30	50%	25	42%	5	8%

The table shows that the 30(50%) were belongs to inadequate knowledge, 25(42%) were belongs to moderate

knowledge and 5(8%) were belongs to adequate knowledge.



**Fig 2:** Assess the knowledge on breast engorgement among postnatal mothers.

**Table 2:** This Section Deals With Associate Selected Demographic Variables of Postnatal Mother Regarding Breast Engorgement

S.no	Demographic variables	Inadequate		Moderate		Adequate		CHI Square
		No	%	No	%	No	%	
<b>Age</b>								
1.	a) < 20 years	6	10%	3	5%	1	1.6%	X2=11.98
	b) 20-30 years	24	40%	22	36.6%	3	5%	DF=4
	c) >31 years	0	0	0	0	1	1.6%	P=0.0175 <b>Significant</b>
<b>Education</b>								
2.	a) Illiterate	6	10%	4	6.6%	1	1.6%	X2=9.704
	b) Primary	7	11.6%	3	5%	2	3.3%	DF=6
	c) Secondary	12	25%	5	8.3%	1	1.6%	P=0.137
	d) Graduate	15		13	21.6%	1	1.6%	<b>NOT SIGNIFICANT</b>
<b>Occupation</b>								
3.	a) House wife	22	36.6%	22	36.6%	2	3.3%	X2=5.739
	b) working	8	13.3%	3	5%	3	5%	DF=2 P=0.0567 <b>Not Significant</b>
<b>Gravida</b>								
4.	a) Primi	23	38.3%	22	36.6%	0	0	X2=23.582
	b) second	7	11.6%	3	5%	4	6.6%	DF=4
	c) multi	0	0	0	0	1	1.6%	P=0.00009 <b>Significant</b>
<b>Postnatal day</b>								
5.	a) 3 <sup>rd</sup> day	14	23.35	5	8.3%	0	0	X2=16.123
	b) 4 <sup>th</sup> day	15	25%	10	16.6%	2	3.3%	DF=4
	c) 5 <sup>th</sup> day	1	1.6%	10	16.6%	3	5%	P=0.0028 <b>Significant</b>
<b>Feeding standard</b>								
6.	a) 1-hour	4	6.6%	3	5%	3	5%	X2=8.312
	b) 1-2 hour	23	3.8%	21	35%	2	3.5%	DF=4
	c) 3 hour	3	5%	1	1.6%	0	0	P=0.0807 <b>Not Significant</b>
<b>Duration</b>								
7.	a) 0-10 minutes	4	6.6%	4	6.6%	0	0	X2=2.785
	b) 10-20 minutes	20	33%	18	30%	3	5%	DF=4
	c) 20-30 minutes	6	10%	3	5%	2	3.5%	P=0.5944 <b>Not Significant</b>
<b>Frequency</b>								
8.	a) < 2 hour	15	25%	7	11.6%	3	5%	X2=3.47
	b) > 2 hour	15	25%	18	30%	2	3.3%	DF=2 P=0.1764 <b>Not Significant</b>

The table Shows that is association between the demographic variable of postnatal mother regarding Breast Engorgement. There was statistically significant found in significant age, significant postnatal day and significant

gravida.

The study supported by Evans et al., (2008) conducted “retrospective study to find the reason for breast engorgement” researcher selected 100 samples in Ireland.

Samples in the study were selected by the convenience sampling technique. Study concluded that poor attachment leading to milk stasis and engorgement might be more likely to occur on the side that was more difficult to feed. It shows the frequency of breast engorgement in left or right breast has no significant difference was observed. 3% - 52% of case involves engorgement in the right breast and 38%- 52% of case involves engorgement in the left breast and 3% - 12% of cases involve bilateral engorgement <sup>[11]</sup>.

The study supported by Mallikarkuna (2008) conducted “a descriptive study on breast feeding Problems in the first six months of life in rural Karnataka” total sample of 420 mothers selected by interview method. study showed that onset of breast feeding problem occurred in 31.7% of women during first month of life, 76.9% in the first week, 7.7% in second week, 15.4% in third week, insufficient milk was reported by 53.6% while 23.1% had problems like sore nipple, mastitis and engorgement.

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