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To Assess the knowledge and Practice regarding Prevention and Management of Breast Engorgement among Primipara Mothers

Soibam Sushma Devi[1], Amandeep Kaur[2]
[1]*Research Scholar, Department of nursing, Himalayan University, Itanagar*
[2]*Research Supervisor, Department of nursing, Himalayan University, Itanagar*

Abstract: *Breast engorgement is a medical condition in which the breasts get too full of milk. It causes the breasts to be hard, painful, and tight, and it makes it hard to breastfeed. Aim of the study: To assess the knowledge and practice regarding prevention and management of Breast engorgement among primipara mothers. Design: a quasi-experimental design was utilized in this study. Study sample: The Non-probability, convenience sampling technique among 150 primipara mothers. Setting: selected Maternity Hospitals at Imphal East, Manipur. tool of data collection: I Structured knowledge questionnaire II Observational checklist. Results: It shows significant improvement in the knowledge among primipara mothers at the level of $p<0.05$. This reveals that out of total 150 samples none of them have inadequate knowledge, 17 samples (11.3%) were having moderate knowledge and 133 samples (88.66%) were having adequate knowledge on breast engorgement among primipara mothers.*

Keywords: *Breast engorgement, breastfeed, and primipara mothers*

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I. Introduction:

Women's experience of health and disease differ from those of men, due to unique biological, social and behavioural conditions. Women's health is an example of population health, the health of a specific defined population. Women's health has been described as "a patchwork quilt with gaps". Although many of the issues around women's health relate to their reproductive health, including maternal and child health, genital health and breast health and endocrine health, including menstruation, birth control and menopause. A broader understanding of women's health to include all aspects of the health of women has been urged, replacing "Women's Health" with "The Health of Women".[1]

Williams et al (1998), One of the important and special characteristic features of a mammal is giving birth and feeding the baby. Breastmilk is the Cinderella substance of the decade and is the nature's most precious gift to the new born and equivalent to which is yet to be innovated by our scientific community despite tremendous advances in science and technology.[2]

Engorgement can happen in one or both breasts. It can cause pain and swelling that sometimes goes all the way up to the armpit. It can also make the breasts feel hot or lumpy, and the skin of the breasts may look shiny and feel stretched, and the nipples may become hard and flat. Engorgement can cause the body temperature to rise to between 99^0F and 101^0F. In addition to being unpleasant, breast engorgement can make it hard to breast feed, which can make the situation worse. If the nipples are flatter and the breast tissue is tougher, it could be hard for the baby to latch on. This might make the nipples uncomfortable. Also, if the baby's latch isn't good, she's less likely to take in enough milk. This means that engorgement might lead to blocked milk ducts, mastitis, and less milk output if it is not treated.[3]

Although breast engorgement is one of the most common challenges breast-feeding mothers face, not all women experience it. If a baby is well-fed and the mother does not experience uncomfortable swelling. She may not recognise engorgement as the change from colostrum to mature milk. However, proper breast emptying during the first two weeks is essential for developing the prolactin receptors that regulate milk production throughout the duration of breastfeeding. Swollen breast tissue can be effectively treated with cold compresses or cabbage leaves, or both. As with any other swollen tissue, applying heat will draw more fluid to the affected area and is counterproductive. Engorgement reduces milk flow because swelling tissue compresses the milk ducts, not because the mother lacks the let-down or milk ejection reflex. Important for long-term milk supply are frequent, efficient feedings and/or milk expression to address engorgement.[4]

Prevention is still the best medicine for engorged breast and other breast-feeding's problems. Over time, various ways to avoid breast cancer have been found. These include limiting fluid intake, expressing

colostrum before birth, massaging the breasts before and after birth, binding the breasts, and wearing a tight bra. With early frequent feedings, self-demand feedings, limitless sucking times, and babies that display optimal suckling practices, mothers have fewer severe kinds of engorgement. Cable and Davis, 1997; Nikodem, 2006; Salhan, 2007; Davidson et al., (2008) Wilson & Lowdermilk, 2006).[5]

Reverse pressure softening can be used to push back the fluid that has built up behind and around the nipple and relieve the pressure. The breast tissue then becomes softer, allowing baby to attach more easily. There are a few different ways to reverse the pressure –

- 2-handed 1-step method- With fingernails short and fingertips curved, push in with each one touching the side of the nipple. Hold for 1-3 minutes or more until the tissues softens.
- 2-handed 2-step method- Use 2 or 3 straight fingers on each side, first knuckles touching the nipple. Push in and hold for 1-3 minutes or more. Repeat above and below the nipple.
- 1-handed 'flower hold'- With fingernails short and fingers curved, push in around the nipple in a circle. Hold for 1-3 minutes or more. A hand mirror can use to see areola more easily.[8]

Several pharmaceutical and nursing interventions can alleviate breast engorgement when it is noticeable. To reduce pain, the primary pharmacological therapies consist of regular analgesia for twenty four to 48 hours. The mother can take acetaminophen (Tylenol) for breast discomfort (Fraser et al., 2004).[6] Use of an anti-inflammatory agent (Danzen) significantly improved symptomsIbuprofen may help reduce pain and swellingassociated with engorgement (Litteleton & Engebretson, 2005).[7] The use of an oxytocin nasal spray right before feeding a newborn to relieve breast fullness or to help milk flow at the start of the breastfeeding period. (Snowden et al., 2001).[9]

For nursing measures, a lot of different ways to treat engorgement have been suggested, such as hot compresses, hot showers, soaking the breasts in a bowl of hot water, cold compresses after feedings, cold packs before feedings, ice packs, frozen bags of vegetables, both hot and cold therapy, binding the breasts, manual expression, mechanical expression, lymphatic breast massage, frequent feedings, alternate massage, and chilled breasts. (Zagloul et al., 2020)[10]

Adequate management of engorgement is important for successful long-term lactation. The goal of treatment of breast engorgement is to relieve discomfort and control swelling. It includes, ice packs, an uplift support bra to minimize oedema & frequent feeding. New breastfeeding mothers have several options for relieving normal postpartum breast engorgement such as breast massage, application of warmth, cold compresses, and hand expression or use of a breast pump.[10]

II. Methods and Materials

A quantitative research design was conducted among 150 primipara mothers. Non-probability, convenience sampling technique was used to select samples. The inclusive criteria for sample selection are Primiparous mother who delivered a full term, healthy infant via spontaneous vaginal delivery or caesarean section. Primiparous women without a medical condition that would preclude nursing after delivery. Primiparous mother with ability to understand and communicate. Primiparous mother who has the intention to breastfeed. Primiparous mother who was willing to participate. Exclusive criteria for the samples are Primiparous mothers received lactation suppressants for breast engorgement. Primiparous mothers with any systemic illness & obstetrical complication. Primiparous mothers who was taking alternative therapy for breast engorgement. Primiparous mothers who was upset and not cooperative. Primiparous mothers who was not willing to take part in this study. Before commencing the data collection, authorized setting permission was obtained from institutional review board/ethical committee and obstetrical and gynaecological department of selected Hospital, Manipur. 150 samples were selected in hospitals.

Need of the study

Engorgement has been described as "the swelling and distension of breasts, usually in the early days of starting to breastfeed, caused by vascular dilation and the arrival of the first milk." In 1951, Newton and Newton2 came up with the idea that milk caused the alveoli to get bigger, which put pressure on the ducts around them. This, in turn, put pressure on the blood vessels and lymphatic system.[11]

The occurrence of engorgement may depend on the management of breastfeeding during the first few days after birth. Engorgement happens less frequently when newborns nurse for longer durations within the first 48 hours and when mother and infant are rooming in. The continuum of engorgement, ranging from normal physiologic breast fullness to severe symptomatic engorgement, poses a challenge when analysing the incidence and treatment choices for this illness. In addition, the availability of optimum breastfeeding management and support in some healthcare facilities may minimise the incidence of major symptoms in comparison to less supportive surroundings.[11]

Breast feeding is the best approach to provide nutrients for healthy growth and development in newborn infants. Colostrum is the first milk produced by the mother shortly after delivery, and it is ideal for

infants due to its high concentration of antibodies. WHO and UNICEF suggest initiating breastfeeding as soon as feasible after delivery and continuing exclusive nursing until 6 months of age. The infant must be breastfed on demand, day and night.[12]

According to the 2018 global breastfeeding scorecard, less than fifty percent of newborns worldwide initiate breastfeeding during the first hour after birth. In addition, only 41% of infants younger than six months are exclusively breastfed, well below the global goal of 70% by 2030. Although more than two-thirds of moms continue nursing for at least one year, by age 2 just 45 percent of children are still breastfed.[12]

Breast engorgement is a prevalent issue among postpartum women around the world. Engorgement is a painful, uncomfortable condition in which the breasts swell and become distended, typically during the initial days of breastfeeding. Various non-pharmaceutical therapies can provide relief from breast engorgement.[13]

In India, the incidence rate of breast engorgement is 1:6500, compared to 1:8000 globally. Symptoms of engorgement are most prevalent 18 between days 3 and 5, with more than two-thirds of women experiencing soreness on day 5 and a few as late as days 9–10. Two thirds of women exhibit at least mild symptoms. Less engorgement is connected with longer duration of breastfeeding during the first 48 hours. From 0 to 4 days postpartum,20% of postnatal mothers, particularly first-time mothers, experience breast engorgement.[13]

Indrani D and Soumya MV (2019) The prevalence of Breast engorgement among women of breastfeeding moms with breast engorgement and pain was determined using an observational research. The study shows that between 60 and 75 percent of nursing mothers has breast engorgement. Breast engorgement is a significant concern for nursing moms and can lead to a variety of complications, including obstructed milk ducts, feeding difficulties, decreased milk, ejection reflex, infection, breast inflammation, and sore/cracked nipples.[14]

Pradnya Ravindra Gavhale and Shalini Haridas Moon (2021) An interventional study was done to find out how well lactational counselling works to keep new moms' breasts from getting too full. On day 1, all new moms had normal breast engorgement scores. On day 2, 92.5% of new moms had normal scores and 7.5% had mild 5 scores. On day 3, 77.5% of new moms had normal scores, 15% had mild scores, and 7.5% had moderate scores. On day 4, 7.5% of new moms had mild scores and 7.5% had moderate scores. Using the chi-square test, there was no significant difference 2 between the breast engorgement score on day 1 and day 2 (2 = 3.11, p = 0.07), however there was a difference between day 1 and day 3 (2 = 10.14, p = 0.006) and between day 1 and day 4 (2 = 11.43, p = 0.003). 3 This study shows that on the first and second day, there was no difference, but on the third and fourth day, there was a big difference. Breast engorgement score went down after counselling about breastfeeding. Counseling on how to breastfeed is crucial if you don't want your breasts to get too full.[15]

From the above studies and statistical data, it is cleared that breast engorgement occurs commonly in postpartum mothers and if we ignore, it can develop into 1 mastitis, breast abscess and sore/cracked nipples etc. Therefore, more research is needed, so that delivery of therapy can become more certain and therapeutic effects get better defined in terms of the normalization of the pathologic process and the desirable reproductive function. So, the researcher keeping above view point in mind and get interested in conducting quasi experimental study to assess the effectiveness of regular breast feeding on prevention and management of Breast Engorgement among Primi mother in selected Maternity Hospitals.

Description of the tool

The tool consists of 3 sections covering the following areas:

Section- A: Structured questionnaire for collecting demographic data of the patients such as age, religion, education, occupation, postnatal day, feeding started, duration, frequency, type of family, family income, age of marriage, nature of menstrual cycle, nature of menstrual flow, nature of socio-economic status, previous knowledge and source of information.

Section–B: Structured knowledge questionnaire on knowledge regarding Breast engorgement

A structured knowledge questionnaire used to assess the knowledge of primipara mother regarding Breast engorgement and its prevention and management consist of knowledge questionnaire on general information about Breast engorgement i.e. {meaning, incidence, causes, sign and symptoms, and test used} and about management of Breast engorgement i.e. {medicine, and preventive measures}.

Section–C: The observational checklist to assess the practice of regular breast feeding.

S No.	Assessment tool	Yes	%	No	%
Getting ready to feed					
1.	Mother is relaxed and comfortable				
2.	Breast is not restricted by clothing				
3.	Breast full, soft and rounded, no skin redness				

4.	Nipples prominent, not cracked or bruised				
Latching on					
5.	Baby reaches for the breast, roots opens wide				
6.	Tongue movement explores the breasts.				
7.	Baby's body is in a straight line				
8.	Baby comes to the breast, chin and bottom lip first.				
9.	Upper lip opposite the nipple before latching on				
10.	There may be signs of milk release				
The feed itself					
11.	The baby is held securely, with touching and eye contact from mother				
12.	Baby is held close to mother's body, whole body supported, not just head or shoulders				
13.	Head slightly extended, chin touching breast				
14.	Baby stays attached, does not slip off				
15.	Calm and alert, though eyes may close towards end of feed				
16.	Lower lip curled out				
17.	If visible, more areola above the baby's top lip				
18.	Cheeks rounded, not sucked in, no clicking sounds				
19.	Slow deep sucks, bursts with pauses				
20.	Rhythmic swallowing seen and heard				
21.	Baby releases breast spontaneously at end of feed				
After the feed					
22.	Evidence of milk transfer – milk in the baby's mouth and around the nipple				
23.	Nipple undamaged, normal shape and colour				
24.	Areola – no bruising or compression marks				
25.	Breast softer				
26.	Contented baby				
27.	Does baby breast feed 8 times or more in 24 hours				

III. Result:

The data collected were edited, tabulated, analyzed, interpreted and findings were presented in the form of tables and diagrams represented under the following headings.

Section 1: Description of demographic variables.

Section 2: 2.1: Assessment of knowledge and practice regarding the prevention and management of breast engorgement among primipara mothers before and after planned teaching programme.

2.2: Effectiveness of planned teaching programme.

Section 3: Association of pretest knowledge regarding the prevention and management of breast engorgement among primipara mothers with selected demographic variables.

Section 4: The observational checklist to assess the practice of regular breast feeding

Section 1: Description of demographic variables of primipara mothers.

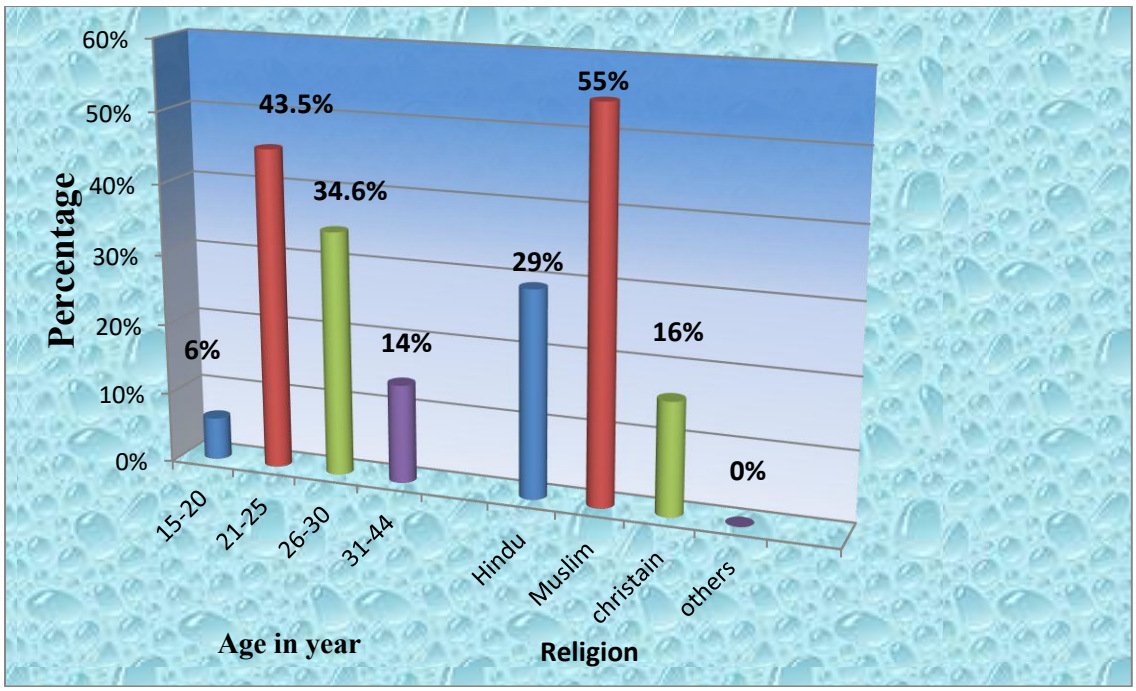
Table 1.1: Frequency and percentage distribution of demographic variables of primipara mothers

n=150

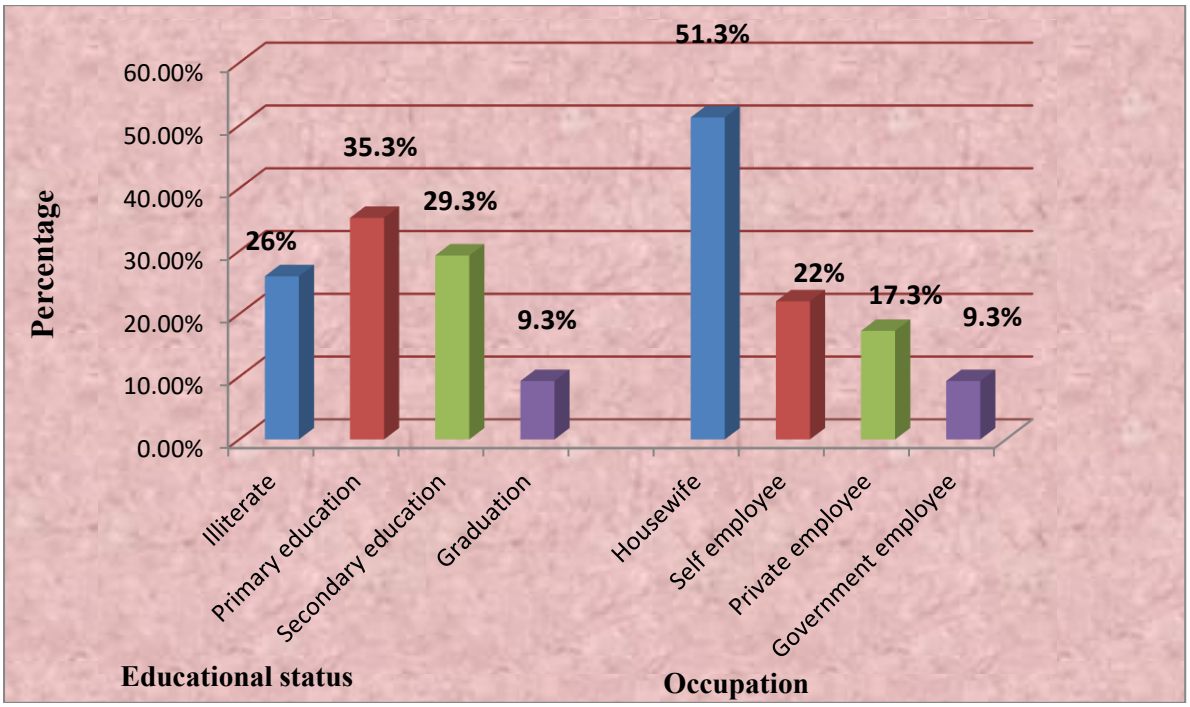
Sl.No	Demographic variable	Frequency	Percentage (%)
1.	Age in year 15-20 21-25 26-30 31-44	 09 68 52 21	 06 45.3 34.6 14
2.	Religion Hindu Christian Muslim Others	 44 24 82 0	 29.3 16 54.6 0
3.	Educational Status		

	Illiterate Primary education Secondary education Above Graduation	39 53 44 14	26 23.3 29.3 9.3
4.	Occupation Housewife Self-employee Private employee Government employee	 77 33 26 14	 51.3 22 17.3 9.3
5.	Type of family Nuclear Joint	 88 62	 58.6 41.3
6.	Family income per month Rs. 1000-3000 Rs.3001-5000 Rs. 5001-7000 Above 7000	 54 0 0 96	 36 0 0 64

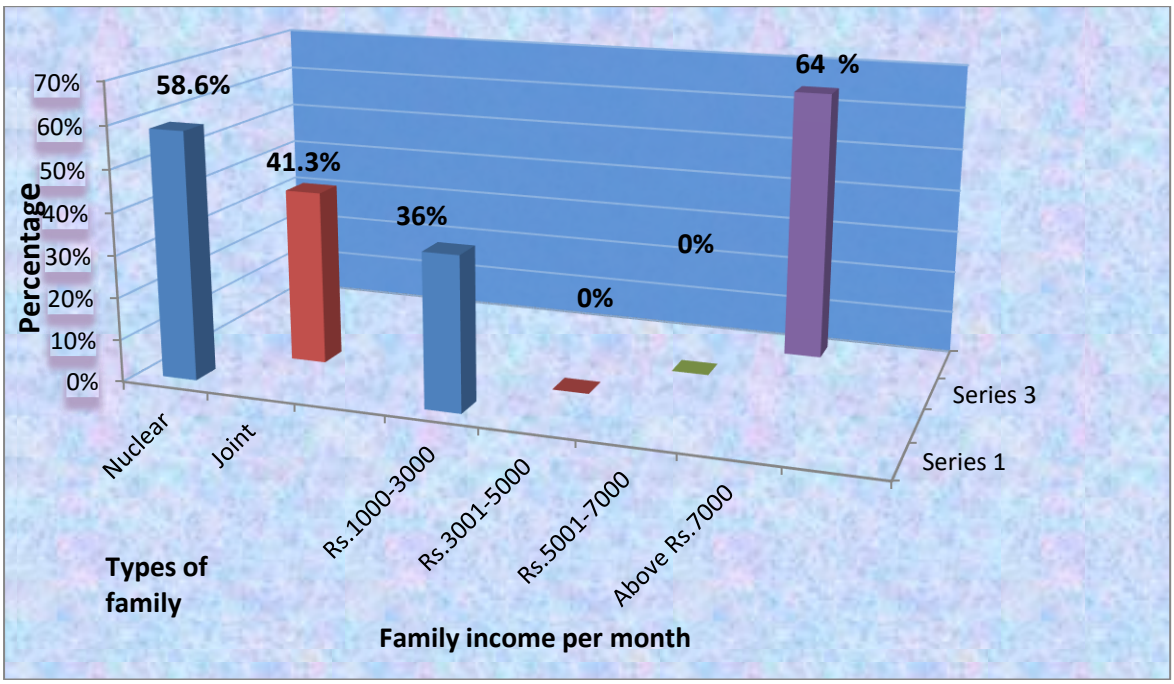
The above table revealed that the majority of primipara mothers 68 (45.3%) were in the age group of 21-25 years, 52 (34.6%) were in the age group of 26-30 years, 21 (14%) were in the age group of 31-44 years and 09 were age group of 15-20 years. With regard to religion, 44 (29.3%) of primipara mothers belong to Hindu, 24 (16%) of primipara mothers belong to Christian and 82 (54%) of primipara mothers belong to Muslim. Regarding the educational status, 53 (35.3%) had primary education, 44 (29.3%) had secondary education, 39(26%) were illiterate and 14 (9.3%) were graduated and above. With regard to occupation, 77 (51.3%) were housewives, 33 (22%) were self employee, 26 (17.3%) were private employee and 14 (9.3%) were government employees. Majority 88 (58.6%) of primipara mothers belong to nuclear family and 62 (41.3%) of primipara mothers belong to joint family. With regard to family income per month, 96(64%) were getting above Rs. 7000 and 54 (36%) were getting in between Rs. 1000-3000.



Graph 1: Distribution of subject by age and religion



Graph 2: Distribution of subject by educational status and occupation.



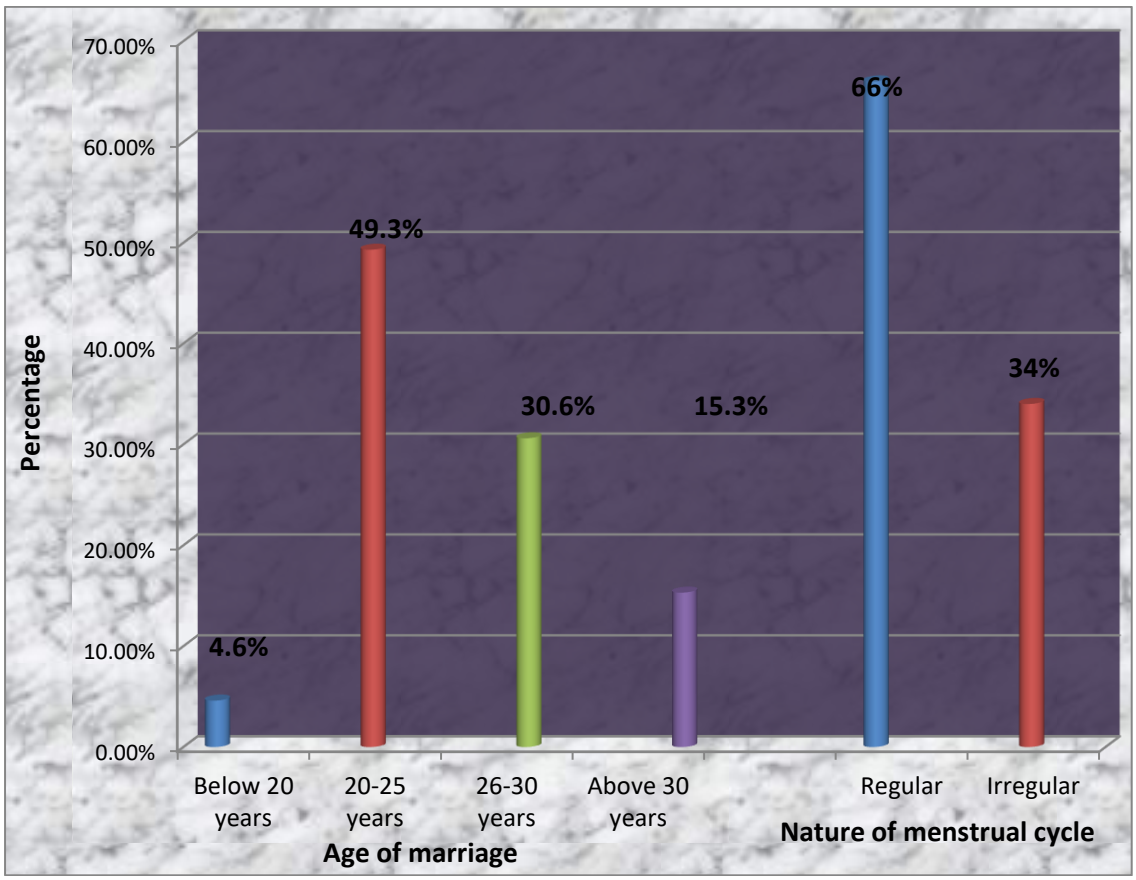
Graph 3: Distribution of subjects by type of family and family income per month.

Table 1.2: Frequency and percentage distribution of demographic variables of young women.
n=150

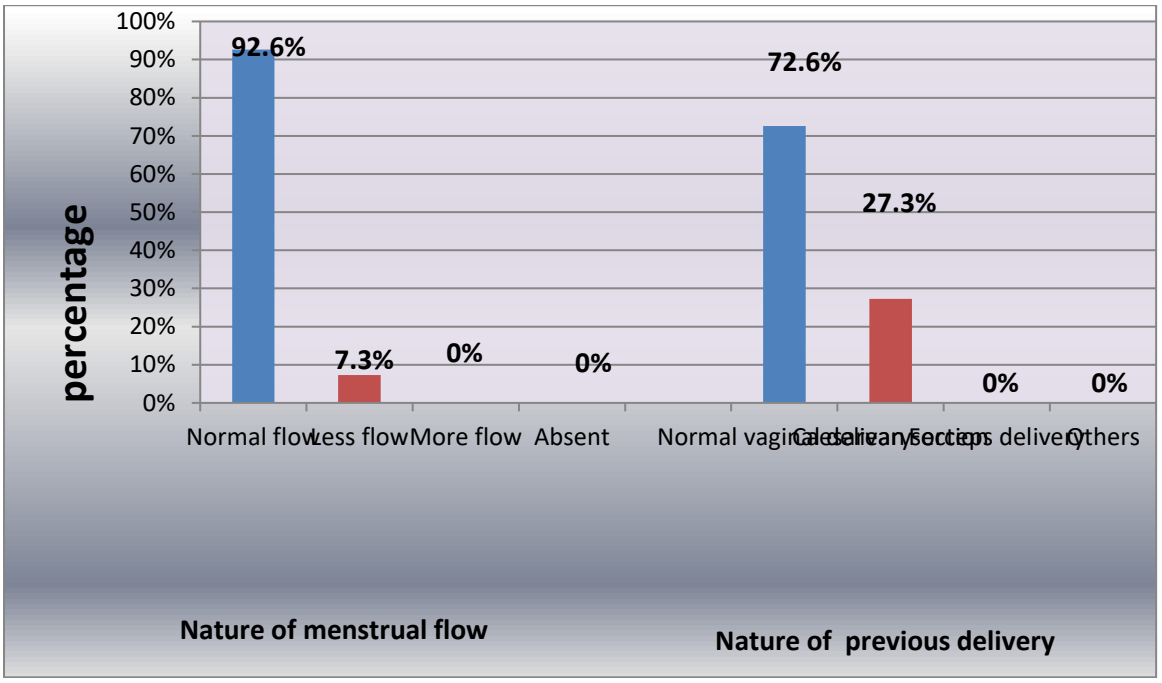
Sl.No	Demographic variable	Frequency	Percentage (%)
7.	Age at marriage		
	Below 20 years	07	4.6
	20-25 years	74	49.3
	26-30 years	46	30.6
	Above 30 years	23	15.3
8.	Nature of menstrual cycle		
	Regular	99	66
	Irregular	51	34

9.	Nature of menstrual flow Normal flow Less flow More flow Absent	 139 11 0 0	 92.6 7.3 0 0
10.	Nature of previous delivery Normal vaginal delivery Caesarean section Forceps delivery Others	 109 41 0 0	 72.6 27.3 0 0
11.	Nature of socio-economic status Adequate facilities are available Inadequate facilities are available	 106 44	 70.7 29.3
12.	Have you heard of genital tuberculosis Yes No	 12 138	 8 92
	If yes, source of information Health professionals Family members Friend Mass media	 12 0 0 0	 8 0 0 0

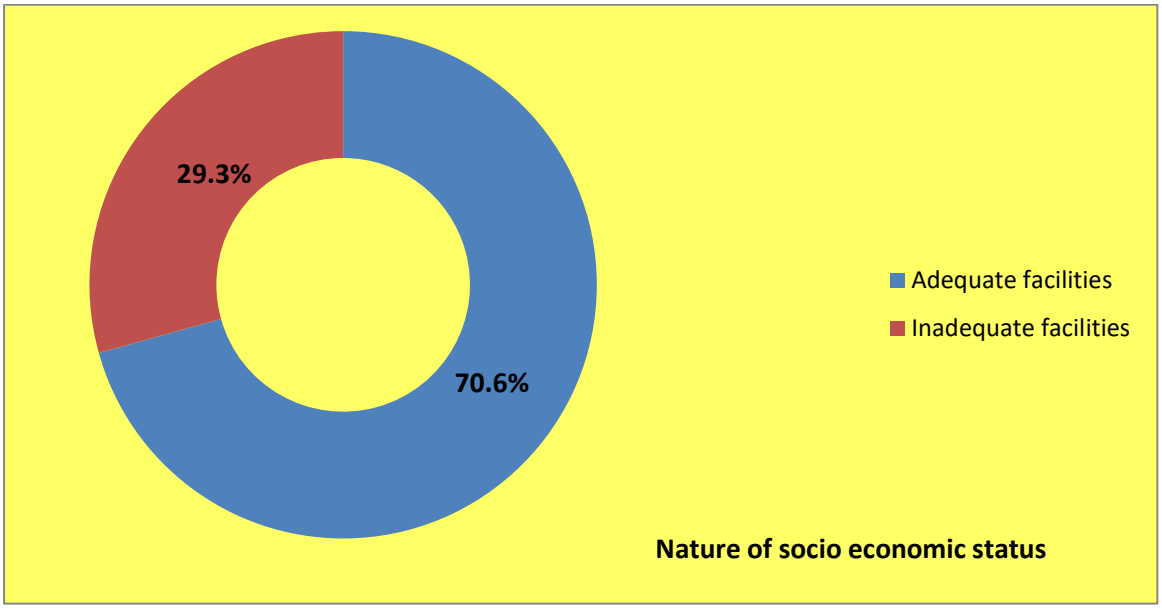
The above table 1.2 revealed that majority 74 (49.3%) of them got married 20-25 years of age, 46 (30.6%) got married at 26-30 years of age, 23 (15.3%) got married at above 30 years and 7 (4.6%) got married at below 20 years of age. With regard to the nature of menstrual cycle 99 (66%) had regular and 51 (34%) had irregular menstrual cycle. Majority 139 (92.6%) of primipara mothers belong to normal flow of menstruation, 11(7.3%) belong to less flow of menstruation and none of the primipara mothers have excessive flow and absence of menstruation. With regard to the nature of present delivery 109(72.6%) got normal vaginal delivery, 41(27.3%) got caesarean section and none of them got forceps delivery and others. Regarding the nature of socio economic status, majority 106(70.6%) got adequate facilities and 44(29.3%) got inadequate facilities.



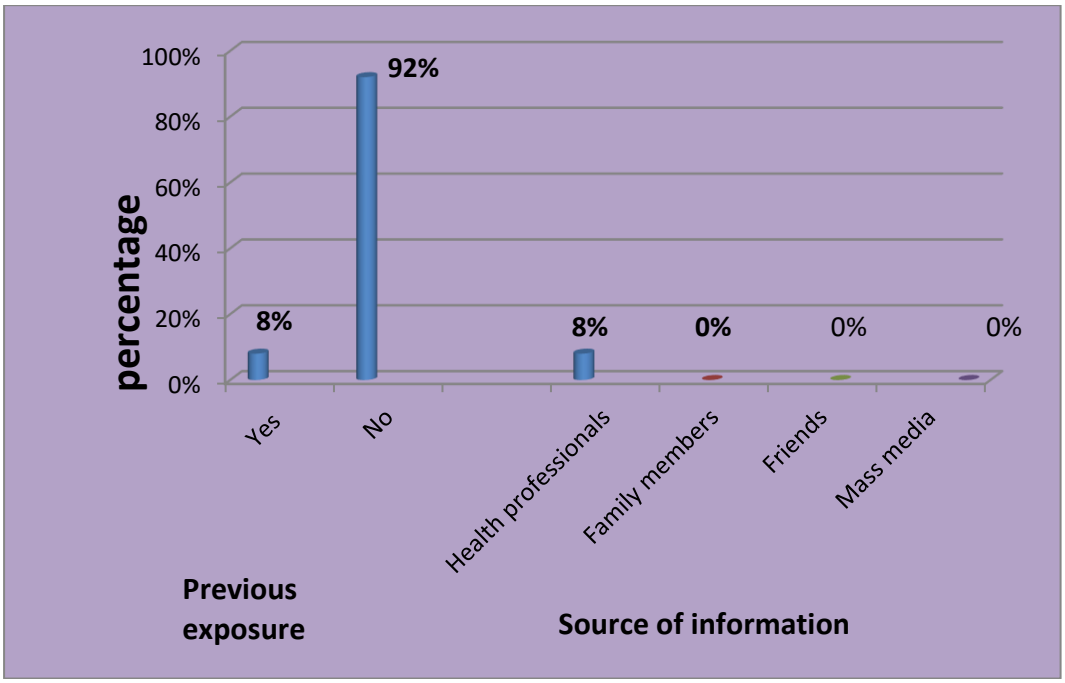
Graph 4: Distribution of subjects by age of marriage and nature of menstrual cycle



Graph 5: Distribution of subjects by nature of menstrual flow and nature of delivery



Graph 6: Distribution of subject by nature of socio economic status



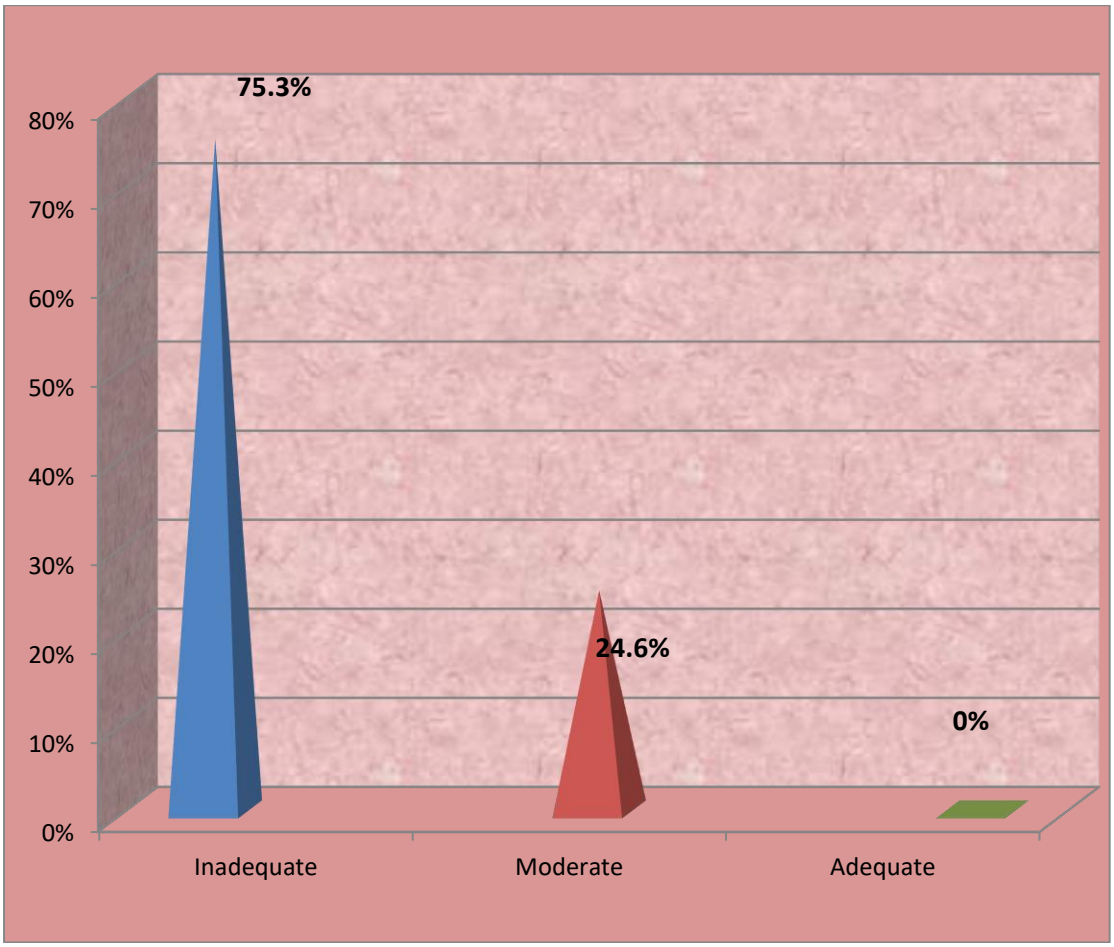
Graph 7: Distribution of subjects by previous knowledge and source of information.

Section 2: Assessment of knowledge before and after PTP.

Table–2.1.1: Percentage and frequency distribution of primipara mothers on knowledge regarding prevention and management of breast engorgement before PTP. n=150

Level of Knowledge	Classification of Respondents	
	Pre test	
	Number	Percentage
Inadequate (0-29%)	113	75.3
Moderate (30-59%)	37	24.6
Adequate (60-100 %)	0	0

The above table 2.1.1 showed that 113 (75.3%) of the primipara mothers had inadequate knowledge, 37 (24.6%) of the primipara mothers had moderate knowledge and none of the young women had adequate knowledge in the pretest.



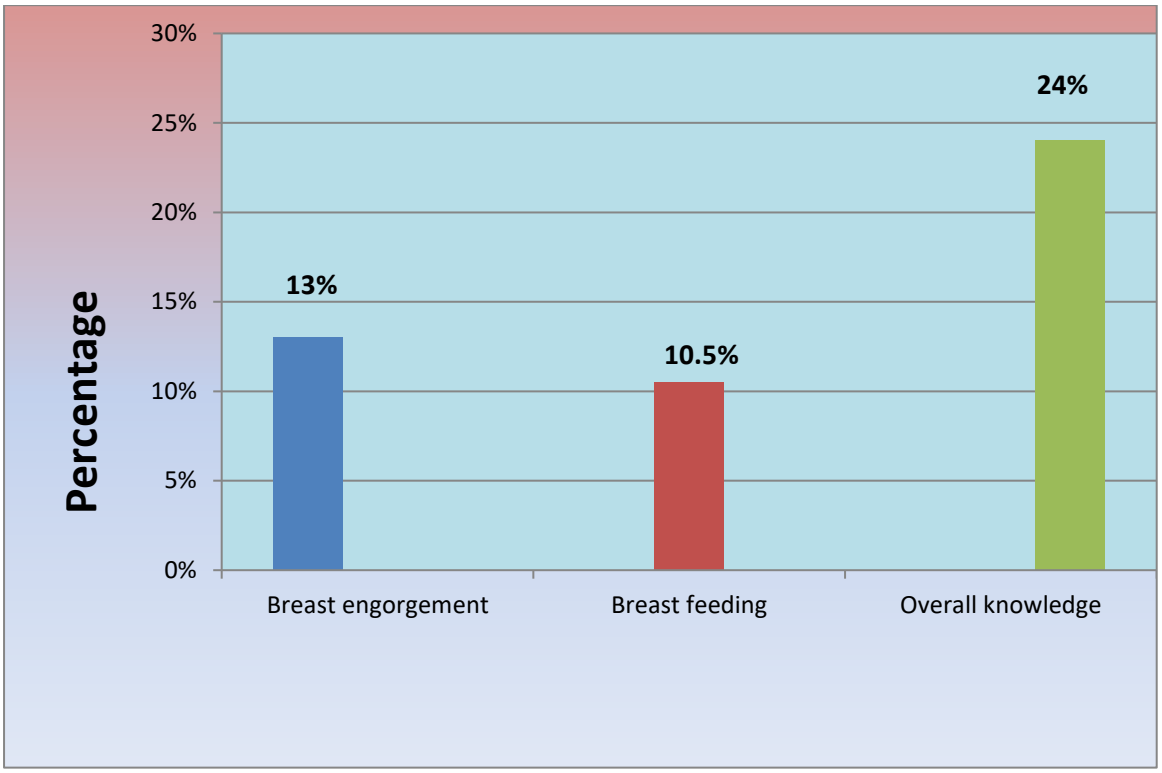
Graph 8: Distribution of level of knowledge before PTP.

Table-2.1.2: Mean, Standard Deviation and mean percentage of knowledge of primipara mothers regarding prevention and management of breast engorgement before PTP.

n=150

Sl. No.	Aspects of knowledge	Statements	Max. Score	Range Score	Respondents Knowledge		
					Mean	SD	Mean (%)
1.	About breast engorgement	25	25	2-8	4.78	1.64	13
2.	About the breast feeding	10	10	2-9	3.7	2.03	10.5
3.	Overall knowledge	35	35	4-13	8.53	2.6	24

The above table 2.1.2 revealed that the maximum score about breast engorgement was 25 and about breast feeding was 10. The range score about breast engorgement was 2-8 and about breast feeding was 2-9. Mean score about breasr engorgement was 4.78 and about the breast feeding was 3.7. The SD about breast engorgement was 1.64 and about the management of breast feeding was 2.03. Mean percentage score about breast engorgement was 13 and about the breast feeding was 10.5. The overall knowledge maximum score was 35, range score was 4-13 and the overall knowledge score obtained by the subjects in the pre-test was 8.53 with standard deviation of 2.6.

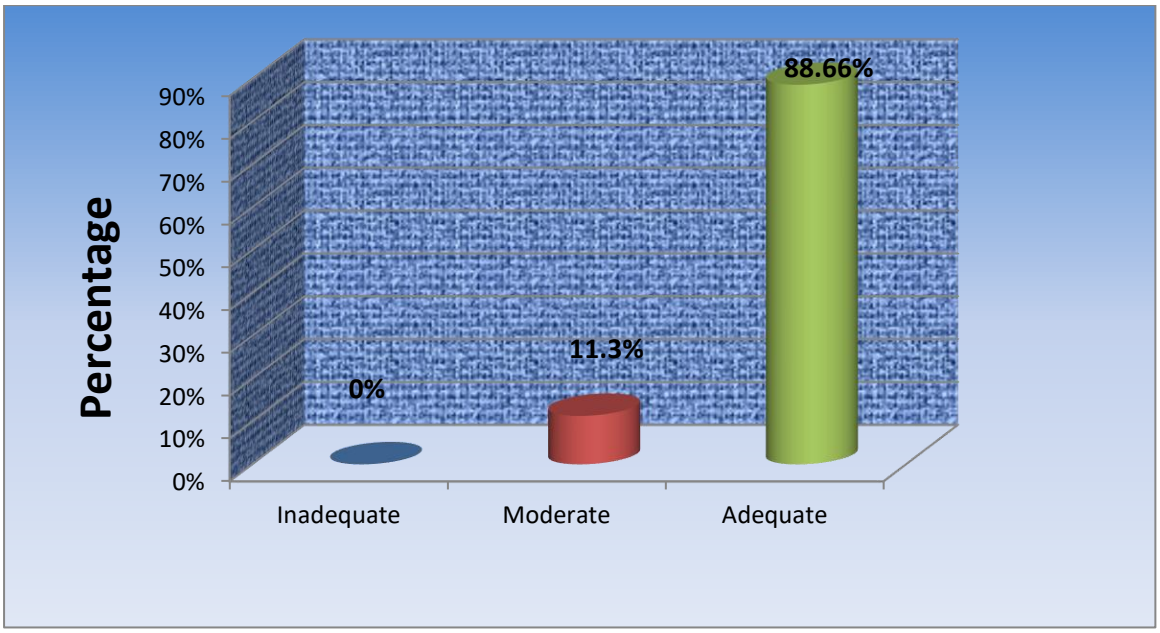


Graph 9: Distribution of subjects for knowledge regarding prevention and management of breast engorgement before PTP.

Table–2.1.3: Percentage and frequency distribution of primipara mothers on knowledge regarding prevention and management of breast engorgement after PTP. n=150

Level of Knowledge	Classification of Respondents	
	Post test	
	Number	Percentage
Inadequate (0-29%)	0	0
Moderate (30-59%)	17	11.3
Adequate (60-100 %)	133	88.66

The above table 2.1.3 showed that 133 (88.66%) of the primipara mothers had adequate knowledge, 17 (11.3%) of the primipara mothers had moderate knowledge and none of the primipara mothers had inadequate knowledge in the posttest.



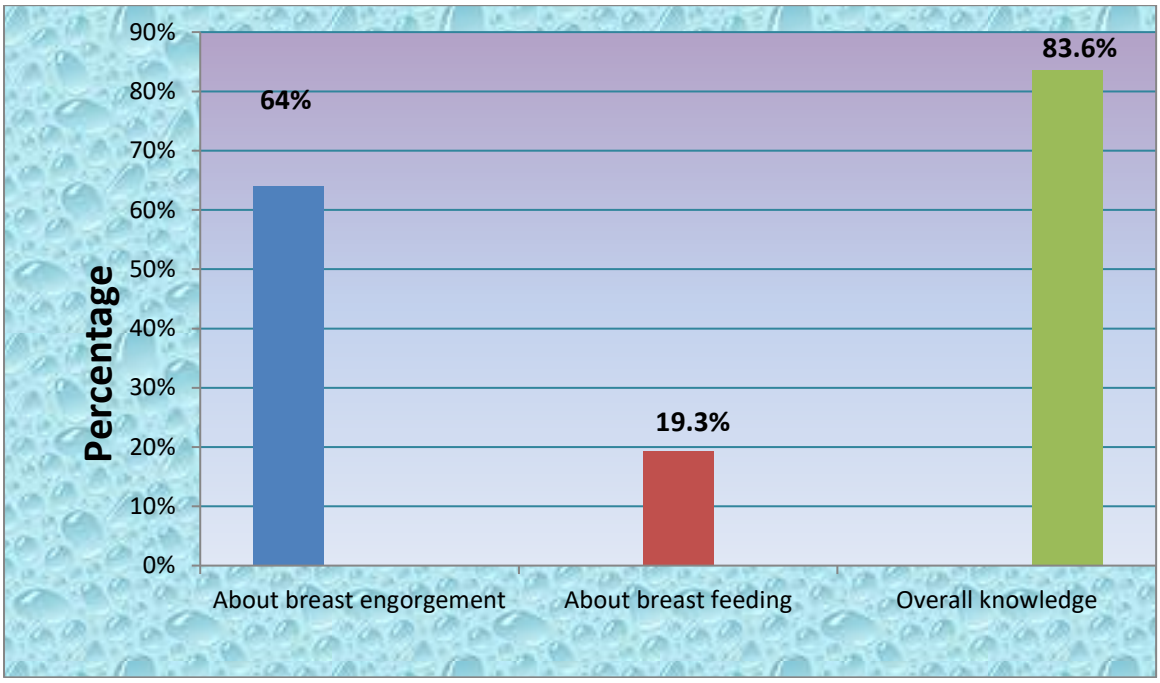
Graph 10: Distribution of subjects for knowledge level after PTP.

Table -2.1.4: Mean Standard Deviation and mean percentage for the level of knowledge of primipara mothers regarding prevention and management of breast engorgement after PTP.

n=150

Sl.No.	Aspects of knowledge	Statements	Max. Score	Range Score	Respondents Knowledge		
					Mean	SD	Mean (%)
1.	About breast engorgement	25	25	19-24	22.5	1.43	64
2.	About breast feeding	10	10	0-10	6.76	2.5	19.3
3.	Over all knowledge	35	35	20-34	29.28	2.89	83.6

The above table 2.1.4 revealed that the maximum score about breast engorgement was 25 and about breast feeding was 10. The range score about breast engorgement was 19-24 and about the breast feeding was 0-10. Mean score about breast engorgement was 22.5 and about the breast feeding was 6.78. The SD about breast engorgement was 1.43 and about the breast feeding was 2.5. Mean percentage score about breast engorgement was 64 and about the breast feeding was 19.3. The overall knowledge maximum score was 35, range score was 20-34 and the overall knowledge mean score obtained by the subjects in the post-test was 29.28 with standard deviation of 2.89.



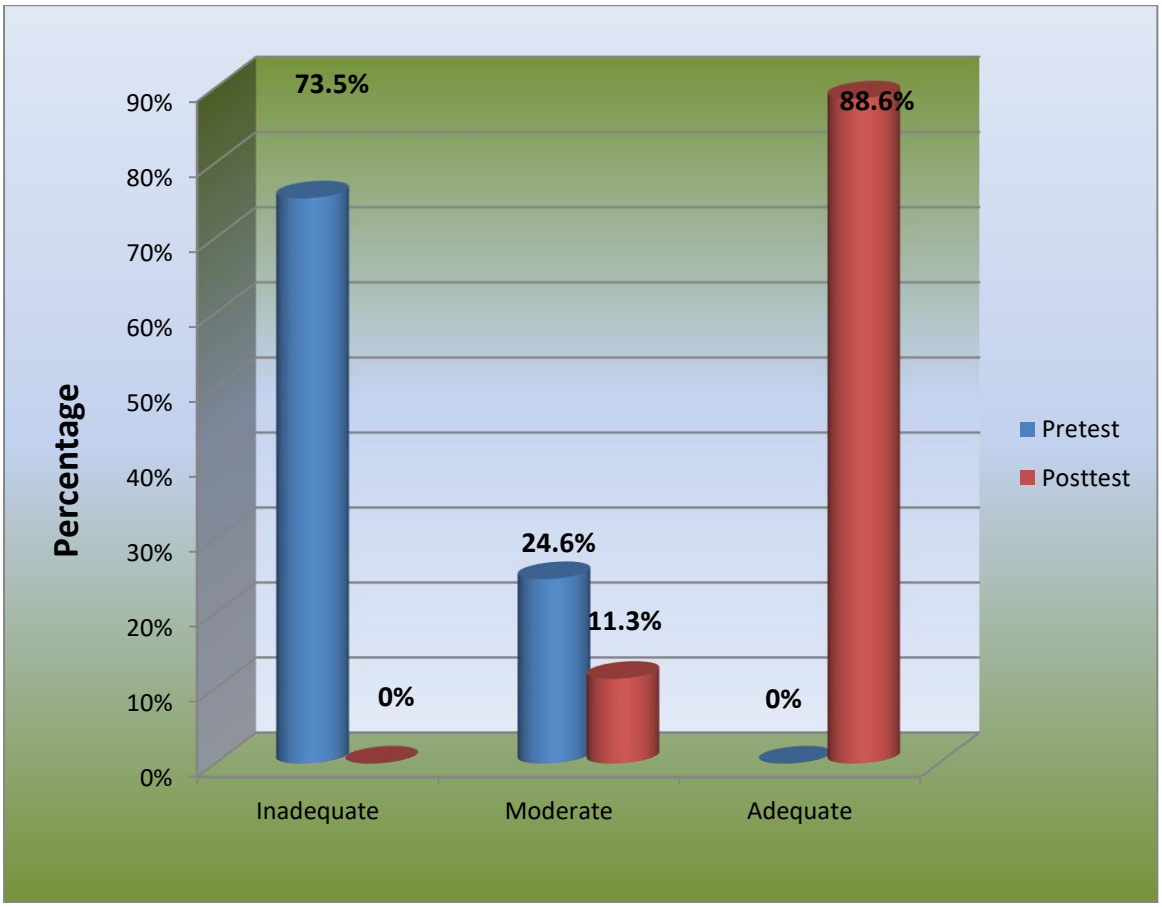
Graph 11: Distribution of subjects for knowledge regarding the prevention and management of Breast Engorgement among Primipara mothers after PTP.

Table–2.1.5: Percentage and frequency distribution of primipara mothers on knowledge regarding prevention and management of Breast Engorgement before and after PTP.

n=150

Knowledge	Respondents Knowledge			
	Pre test		Post test	
	No.	%	No.	%
Inadequate (0-29%)	113	75.3	0	0
Moderate (30-59%)	37	24.6	17	11.3
Adequate (60-100%)	0	0	133	88.66

Table 2.1.5 revealed that in the pretest 113 (75.3%) of the primipara mothers had inadequate knowledge, 37 (24.6%) of the primipara mothers had moderate knowledge and none of the primipara mothers had adequate knowledge. In the posttest 133 (88.66%) of the primipara mothers had adequate knowledge, 17 (11.3%) of the primipara mothers had moderate knowledge and none of the primipara mothers had inadequate knowledge.



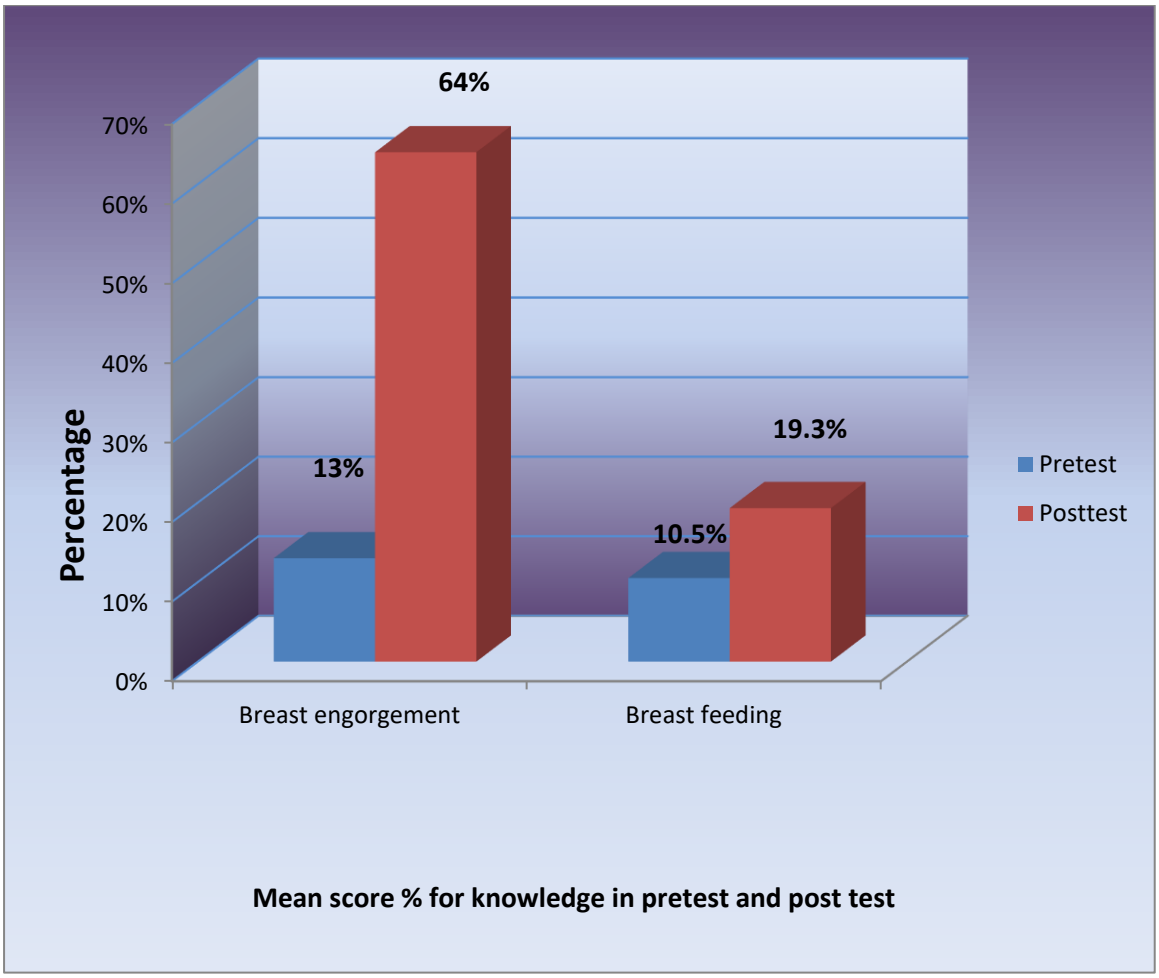
Graph 12: Distribution of knowledge before and after PTP.

Table 2.1.6: Mean, mean percentage and gain in mean score percentage for Knowledge of primipara mothers regarding prevention and management of breast engorgement before and after PTP.

n=150

Sl.No.	Aspect of knowledge	Maximum Possible score	Pretest		Post test		Gain in mean score percentage
			Mean	Mean score %	Mean	Mean score %	
1.	About breast engorgement	25	4.78	13	22.5	64	51%
2.	About breast feeding	10	3.7	10.5	6.76	19.3	8.8%
3.	Over all knowledge	30	8.53	24	29.28	83.6	59.6%

The above table 2.1.6 revealed that the maximum score about breast engorgement was 25 and about breast feeding was 10 both in pretest and post test. In the pretest mean score about breast engorgement was 4.78 and about the breast feeding was 3.7. Mean percentage score about breast engorgement was 13% and about the breast feeding was 10.5%. In the posttest mean score about breast engorgement was 22.5 and about the breast feeding was 6.76. Mean percentage score about breast engorgement was 64% and about the breast feeding was 19.3%. The gain in mean score percentage about breast engorgement was 51% whereas gain in mean score percentage about the breast feeding was 8.8%. With regard to the overall knowledge maximum score was 30, the overall knowledge mean score obtained by the subjects in the pre-test was 8.53 whereas in the posttest was 29.28, mean score percentage in the pretest was 24% whereas in the posttest was 83.6%. The overall gain in mean score percentage was 59.6%.



Graph 13: Gain in mean score percentage for knowledge regarding the prevention and management of breast engorgement among primipara mothers before and after PTP.

Section 2.2: Effectiveness of Planned teaching programme.

Table 2.2.1: Mean and SD of knowledge scores before and after PTP and statistical significance.

n=150

Sl.No.	Aspects of knowledge	Pretest		Post test		paired 't' value	P value
		Mean	SD	Mean	SD		
1.	About breast engorgement	4.78	1.64	22.5	1.43	126.42*	P<0.05
2.	About breast feeding	3.7	2.03	6.76	2.5	15.3*	P<0.05
3.	Over all knowledge	8.53	2.6	29.28	2.89	69.1*	P<0.05

Note: *- Significant at 5% level for 149 df (i.e. P<0.05)

Hypothesis Testing

In order to evaluate the effectiveness of PTP on knowledge and practice of the subjects regarding prevention and management of breast engorgement. The following research hypothesis was formulated.

Research Hypothesis-1

H_1: There is a significant difference between mean pre and posttest level of knowledge and practice regarding prevention and management of breast engorgement among primipara mothers.

Null Hypothesis:

H_{o1}: There is no significant difference between pre and post test level of knowledge and practice regarding prevention and management of breast engorgement among primipara mothers.

The above table 2.2.1 represented the mean pre and post test knowledge regarding prevention and management of breast engorgement. The paired t-test was carried out and it was found to be invariably significant at $P< 0.05$ level, hence null hypothesis (H_{01}) is rejected and research hypothesis (H_1) was accepted. It is evident that the Planned Teaching Programme (PTP) is significantly effective on improving the knowledge regarding prevention and management of breast engorgement among primipara mothers..

Section-3: Association between knowledge with selected demographic variables of primipara mothers.

Table 3.1.1: Association between knowledge and selected demographic variables of age, religion, education, occupation, type of family and family income. n=150

Demographic variables	Sample (n)		Knowledge level of Respondents				Knowledge level of Respondents				Chi-square χ^2 value	
			Pre test				Post test					
	No. (150)	%	<Median		≥ Median		≥ Median		<Median			
			No. (113)	%	No. (37)	%	No. (133)	%	No. (17)	%	Pre test	Post test
1.Age (years) 15-20	09	06	7	6.1	2	5.4	5	3.7	4	23.5	2.25 df=3 NS	10.03 df=3 S
21-25	68	45.3	52	46	16	43.2	61	45.8	7	41.1		
26-30	52	34.6	41	36.2	11	29.7	47	35.3	5	29.4		
31-44	21	14	13	11.5	8	21.6	20	15	1	5.8		
2.Religion Hindu	44	29.3	34	30	10	27	42	31.5	2	11.7	4.42 df=2 NS	9.6 df=2 S
Muslim	82	54.6	65	57.5	17	45.9	74	55.6	8	47		
Christian	24	16	14	12.3	10	27	17	12.7	7	41.1		
Others	-	-					-	-	-	-		
lucation												1.7
Illiterate	39	26	30	26.5	9	24.3	34	25.5	5	29.4	0.13 df=3 NS	df=3 NS
Primary	53	5.3	40	35.3	13	35.1	45	33.8	8	47		
Secondary	44	29.3	33	29.2	11	29.7	41	30.8	3	17.6		
Graduation and above	14	9.3	10	8.8	4	10.8	13	9.7	1	5.8		
Occupation House wife	77	51.3	60	68.1	17	45.9	65	48.8	12	70-.5	1.48 df=3 NS	10.04 df=3 S
Vegetable saleswomen	33	22	24	21.2	9	24.3	28	21	5	29.4		
Private employee	26	17.3	17	15	9	24.3	26	19.5	0	0		
Government employee	14	9.3	12	10.6	2	5.4	14	10.5	0	0		
ype of family Nuclear	88	58.6	64	56.6	24	64.8	81	60.9	7	41.1	0.73 df=1 NS	2.3 df=1 NS
Joint	62	41.3	49	43.3	13	35.1	52	39	10	58.8		
6. Family Income(Rs/month) 1000-3000	54	36	35	30.9	19	51	50	37.5	4	23.5	4.95 df=3 NS	1.28 df=3 NS
3001-5000	0	0	0	0	0	0	0	0	0	0		
5001-7000	0	0	0	0	0	0	0	0	0	0		
Above 7000	96	64	78	69	18	48	83	62.4	13	76.4		

Note: S-Significant at 5% level ($p<0.05$); NS- Not significant at 5% level ($p>0.05$).

Table 3.2.1: Association between knowledge and selected demographic variables of age of marriage, nature of menstrual cycle, nature of menstrual flow, nature of present delivery, nature of socio-economic status and previous knowledge and source of information. n=150

Demographic variables	Sample (n)		Knowledge level of Respondents				Knowledge level of Respondents				Chi-square χ^2 -value	
			Pre test				Post test					
			< Median		≥ Median		≥ Median		< Median			
	No. (150)	%	No. (113)	%	No. (37)	%	No. (133)	%	No. (17)	%	pre test	post test
7.Age of marriage Below 20	7	4.6	6	5.3	1	2.7	3	2.2	4	23.5	5.2 df =3 NS	22.16 df =3 S
20-25 years	74	49.3	58	51.3	16	43.2	61	45.8	13	76.4		
26-30 years	46	30.6	36	31.8	10	27	46	34.5	-	-		
Above 30 years	23	15.3	13	11.5	10	27	23	17.2	-	-		
8.Nature of menstrual cycle Regular	99	66	78	69	21	56.7	89	66.9	10	58.8	1.84 df =1 NS	0.19 df =1 NS
Irregular	51	34	35	30	16	43.2	44	33	7	41.1		
9.Nature of menstrual flow Normal flow	139	92.6	105	92.9	34	91.8	127	95.4	12	70.5	.095 df =3 NS	1.59 df =3 NS
Scanty flow	11	7.3	8	7.0	3	8.1	6	4.5	5	29.4		
More flow												
Absent	-	-					-	-	-	-		
10.Nature of present delivery Normal vaginal delivery	109	72.6	85	75.2	24	64.8	101	75.9	8	30.7	1.47 df =3 NS	6.4 df =3 NS
Caesarean Section	41	27.3	28	24.7	13	35.1	32	24	9	69.2		
Forceps delivery	-	-					-	-	-	-		
Others	-	-					-	-	-	-		
11.Nature of socio-economic status Adequate facilities are available	106	70.6	80	70.9	26	70.2	100	75.1	6	35.2	.0041 df =1 NS	11.81 df =1 S
Inadequate facilities areavailable	44	29.3	33	29.2	11	29.7	33	24.8	11	64.7		
12.Have you heard of breast engorgement	12	8	6	5.5	6	16.2	6	4.5	6	35.2	5.47 df = 1 S	18.49 df =1 S
	138	92	107	94.6	31	83.7	127	95.4	11	64.7		
yes, the sources of information Health professionals	6	4	6	5.5			6	4.5	0	0	12 df = 3 S	12 df =3 S
Family members	6	4	0	0	6	16.2	0	0	6	35.2		
Friend	-	-					-	-	-	-		
Mass media	-	-					-	-	-	-		

Research Hypothesis – 2:
H_2: There is significant association between pre-test knowledge and practice regarding prevention and management of breast engorgement among primipara mothers with their selected demographic variables.

Null Hypothesis - 2:
H_{02}: There is no significant association between pretest knowledge regarding prevention and management of breast engorgement among primipara mothers with their selected demographic variables.

The result of the Chi-square analysis presented in table 3 shows the association of level of pre-test and post test knowledge with selected demographic variables. It is evident from the above table that there is significant association with the variables like age, religion, occupation, age of marriage, nature of menstrual flow, nature of socio economic status and previous knowledge & source of information. And it is evident from the above table that there is no significant association with the variables like education, types of family, family income, nature of menstrual cycle, nature of present delivery.

Section 4: The observational checklist to assess the practice of regular breast feeding.

S No.	Assessment tool	Yes	%	No	%
Getting ready to feed					
1.	Mother is relaxed and comfortable	127	84.6	23	15.3
2.	Breast is not restricted by clothing	139	92.6	11	7.3
3.	Breast full, soft and rounded, no skin redness	86	57.3	64	42.6
4.	Nipples prominent, not cracked or bruised	84	57.3	66	44
Latching on					
5.	Baby reaches for the breast, roots opens wide	121	80.6	29	19.3
6.	Tongue movement explores the breasts.	112	74.6	38	25.3
7.	Baby's body is in a straight line	93	62	57	38
8.	Baby comes to the breast, chin and bottom lip first.	88	58.6	62	41.3
9.	Upper lip opposite the nipple before latching on	84	56	66	44
10.	There may be signs of milk release	98	65.3	52	34.6
The feed itself					
11.	The baby is held securely, with touching and eye contact from mother	121	80.6	29	19.3
12.	Baby is held close to mother's body, whole body supported, not just head or shoulders	113	75.3	37	24.6
13.	Head slightly extended, chin touching breast	103	68.6	47	31.3
14.	Baby stays attached, does not slip off	83	55.3	67	44.6
15.	Calm and alert, though eyes may close towards end of feed	113	75.3	37	24.6
16.	Lower lip curled out	82	54.6	68	45.3
17.	If visible, more areola above the baby's top lip	74	49.3	76	50.6
18.	Cheeks rounded, not sucked in, no clicking sounds	36	24	114	76
19.	Slow deep sucks, bursts with pauses	98	65.3	52	34.6
20.	Rhythmic swallowing seen and heard	114	76	36	24
21.	Baby releases breast spontaneously at end of feed	98	65.3	52	34.6
After the feed					
22.	Evidence of milk transfer – milk in the baby's mouth and around the nipple	88	58.6	62	41.3
23.	Nipple undamaged, normal shape and colour	139	92.6	11	7.3
24.	Areola – no bruising or compression marks	116	77.3	34	22.6
25.	Breast softer	87	58	63	42
26.	Contented baby	109	72.6	41	27.3
27.	Does baby breast feed 8 times or more in 24 hours	115	76.6	35	23.3

The above table shows the different practices by primipara mothers. Around 84.6% primipara mothers is relaxed and comfortable, 92.6% of primipara mothers Breast is not restricted by clothing and 57.3% of primipara mothers have nipple prominant and no skin rashes while getting ready to feed. Regarding latching on

80.6% babies reaches for the breast, roots openswide and 65.3% primipara mothers have signs of milk release. 80.6% babies held securely, with touching and eye contact from mother. Around 92.6% primipara mothers has nipple undamaged, normal shaped and colour. 72.6% primipara mothers has contented baby after the feed and 76.6% primipara mothers breast feed 8 times or more in 24 hours.

IV. Conclusion

The present study was undertaken to assess the effectiveness of the planned teaching programme regarding the prevention and management of breast engorgement among primipara mothers age between 15-44 years in selected area in Imphal East Manipur. The study was conducted in the Kripadarsini adavanced hospital and JNIMS Hospital. The data was collected from 150 primipara mothers by using Structured Interview Schedule before and after the planned teaching programme. Non-probability convenience sampling technique was used to select the samples. The findings of the study have been discussed with reference to the objectives, hypothesis and with findings of the other studies. The data is organized, analyzed and presented in two parts. The findings revealed that the gain in mean score of overall level for knowledge of primipara mothers between pre-test with post-test was 59.6% with't' test value of 69.1 which was highly significant at 5% .

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