



A STUDY TO ASSESS THE EFFECTIVENESS OF OLIVE OIL MASSAGE IN REDUCING BREAST ENGORGEMENT AND PAIN AMONG POSTNATAL MOTHERS IN SELECTED HOSPITALS OF BONGAIGAON DISTRICT, ASSAM.

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ABSTRACT

Background: The postpartum period which begins right after the baby is born and lasts up to 6 weeks is a crucial time for recovery. During this time, some women may experience issues which can range from minor discomforts to more serious health concern which like breast engorgement, postpartum hemorrhage and infections like sepsis. Studies show that breast engorgement affects 72%-85% of mothers, typically occurring within 3 to 6 days after giving birth. **Objectives:** To assess the effectiveness of olive oil massage in reducing breast engorgement and pain among the postnatal mothers. **Method:** Pre experimental research design (one-group pretest-post-test design) was adopted for the study. 60 postnatal mothers with breast engorgement and pain were selected by purposive sampling technique. The study was conducted in Bongaigaon Civil Hospital, Assam. The tools for data collection were structured interview questionnaire (socio-demographic variables and clinical variables). Six point engorgement scale and Numerical Pain Rating Scale was used to assess breast engorgement and pain before and after intervention. Olive oil massage was applied two times in a day for three days and post-test was done on 4th day. **Result:** Data were analyzed by descriptive and inferential statistics through SPSS version 24. Findings of the study revealed before the intervention mean breast engorgement score was 4.53(SD=0.872) and after intervention mean breast engorgement score was 1.68 (SD=0.676) with mean difference of 2.85. Mean scores before and after intervention was compared using paired t test with calculated value ($t=27.63$, $df=59$, $p=1.864 \times 10^{-35}$) indicates statistically highly significant. It also revealed that before intervention mean pain score was 4.05 ± 0.8718 and after intervention mean pain score was 0.6 ± 0.6938 with mean difference was 3.45. Mean scores before and after intervention was compared using paired t test with calculated value ($t=44.9539$, $df=59$, $p=2.392 \times 10^{-47}$) indicates statistically significant. **Conclusion:** The present study to assess the effectiveness of olive oil massage in reducing breast engorgement and pain among postnatal mothers in selected hospitals of Bongaigaon District, Assam. The result revealed that olive oil massage had significant effect in reducing breast engorgement and also pain. Moreover, it is easy to apply and not harmful.

Key words: Effectiveness, Olive oil massage, Breast Engorgement, Pain, Postnatal mother

INTRODUCTION

Breast milk is the ideal food for a healthy newborn. It is the best gift a mother can give to her baby. It provides all the essential nutrients needed for a baby's healthy growth and development from birth to six months of age. All the nutrients that breast milk contains is in proper proportion and in a form that is easily digested and absorbed by the baby. Infants should be exclusively breastfed for the first six months of life. That reveals that the joy after suffering. But labor does not come to the end with child birth. The mothers do suffer much difficulty after child birth.¹

Childbirth is a journey of creating new life. Motherhood makes this journey memorable and happy. During pregnancy the mother and baby are considered as single unit because the baby gets the essential nutrition from mother through the placenta. At birth this bond is replaced by breastfeeding. Breastfeeding saves lives. A mother who is breastfeeding for the first time is in a vulnerable position and requires support, encouragement and knowledgeable assistance. There are many possible breast abnormalities that breast feeding mothers may encounter.²

The treatment for breast engorgement can be divided into medical and non-medical methods. Medical methods include administration of proteolytic enzymes such as serrapeptase, protease and subcutaneous oxytocin. To administer tablet bromocriptine 2.5 mg daily for 2-3 days in obstinate cases where the breast remains tight in spite of sucking and expression. Analgesic may also be administered.⁵

Olive oil contains MUFA (Mono Unsaturated Fatty Acids). It acts as sensual massage oil, which enriches the body with good fats and lower the effect of bad cholesterol, reduces bad cholesterol levels, strengthen immunity and faster healing. It makes blood vessels more elastic and even help to fight breast cancer. Olive oil breast massage has not any side effect, it is cost effective easy method of treating breast engorgement and pain and also effective for sore nipples.⁵

NEED OF THE STUDY:

Breastfeeding her child is the most natural thing for every mother. Breastfeeding is a unique experience which should be valued and supported by both maternity and neonatal caregivers. Breast pain during breastfeeding is a common problem that leading to breast engorgement.

The breast is engorged if the mother is unable to feed the baby frequently or thoroughly enough to drain the breast in the first few days after birth. This is very important even though only a small amount of milk production right after delivery.⁸ Engorgement can make it hard for the baby to breastfeed well. If the breast feels hard, swollen, throbbing, lumpy, overly full or painful, it's probably engorged.

Lin CX and Lu YY (2023) conducted a comparative study to evaluate the effectiveness of olive oil and breast milk in treating nipple soreness in breastfeeding mothers during the early postpartum period. This quasi-randomized controlled trial took place in a maternity ward of a medical centre in northern Taiwan, recruiting 80 breastfeeding mothers who were randomly assigned to either the olive oil or breast milk group. The study measured nipple pain intensity and soreness scores at 24, 48 and 72 hours after delivery using a visual analogue scale. The Generalized Estimating Equation model was used to analyse the post-intervention outcomes. Results showed that both groups reported a significant increase in nipple pain intensity and soreness at all-time points, but the differences between the olive oil and breast milk groups were statistically insignificant ($p > 0.05$). The study concluded that olive oil has effects similar to breast milk for treating nipple pain and soreness, with most mothers providing positive feedback on its use. Therefore, olive oil is suggested as a safe, accessible alternative for breastfeeding mothers dealing with nipple pain and soreness in the early breastfeeding period.¹⁷

RESEARCH METHODOLOGY

The present study was conducted to evaluate the effectiveness of olive oil massage application in reducing breast engorgement and pain among the postnatal mothers using a pre experimental research design (one group pre-test-post-test design).

RESEARCH APPROACH: Quantitative research approach

RESEARCH DESIGN: Pre-experimental one group pre-test post-test design

Theoretical Framework: The researcher adopted modified Ernestine Wiedenbach's helping art of clinical nursing theory model for conceptual framework.

SETTING OF THE RESEARCH STUDY: Post-natal ward of Bongaigoan Civil Hospital, Assam

POPULATION: Postnatal mothers admitted in Bongaigoan Civil Hospital, Assam

TARGET POPULATION: All the postnatal mothers undergone normal vaginal delivery and LSCS.

ACCESSIBLE POPULATION: Postnatal mothers with breast engorgement and pain admitted in Bongaigoan Civil Hospital, Assam

SAMPLE SIZE: 60

SAMPLING TECHNIQUE : Non Probability Purposive Sampling Technique

TOOLS OF DATA COLLECTION: Demographic variables, clinical variables, six point engorgement scale and numerical pain rating scale

PRE-TEST: Assessment of breast engorgement and pain using Six point engorgement scale and Numerical pain rating scale.

Intervention: Application of Olive oil massage twice a day with four hours' interval for a duration of 10 minutes for 3 consecutive days.

Post-test: Assessment of breast engorgement and pain using Six point engorgement scale and Numerical pain rating scale on 4th day.

DATA ANALYSIS: Descriptive and inferential statistics

Result

Analysis of the collected data was done using SPSS version 18 version.

Table 1: Frequency and percentage distribution of level of breast engorgement among the postnatal mother before and after intervention.

Level of breast engorgement	Pre intervention		Post intervention	
	<i>f</i>	Percentage(%)	<i>f</i>	Percentage(%)
No engorgement	0	0	26	43.33
Mild engorgement	8	13.33	34	56.67
Moderate engorgement	45	75	0	0
Severe engorgement	7	11.67	0	0

The data presented on table 1 include that during the pre-intervention majority 45 (75%) of the postnatal mothers had moderate breast engorgement, 8(13.33%) had mild breast engorgement and 7(11.67%) had severe breast engorgement.

The data presented in table1 also included that during post-intervention majority 34 (56.67%) of the postnatal mothers had mild breast engorgement, 26 (43.33%) of post-natal mothers had no breast engorgement.

Table 2: Frequency and percentage distribution of level of pain among the postnatal mothers before and after intervention.

Level of pain	Pre intervention		Post intervention	
	<i>f</i>	Percentage(%)	<i>f</i>	Percentage(%)
No pain	0	0	31	51.67
Mild pain	17	28.33	29	48.33
Moderate pain	43	71.67	0	0
Severe pain	0	0	0	0

The data presented on the table 2 shows that in pre-intervention majority 43 (71.67%) of the postnatal mothers had moderate pain and 17 (28.33%) had mild pain.

The post-intervention shows majority 31(51.67%) of the postnatal mothers had no pain and 29 (48.33%) had mild pain.

n=60

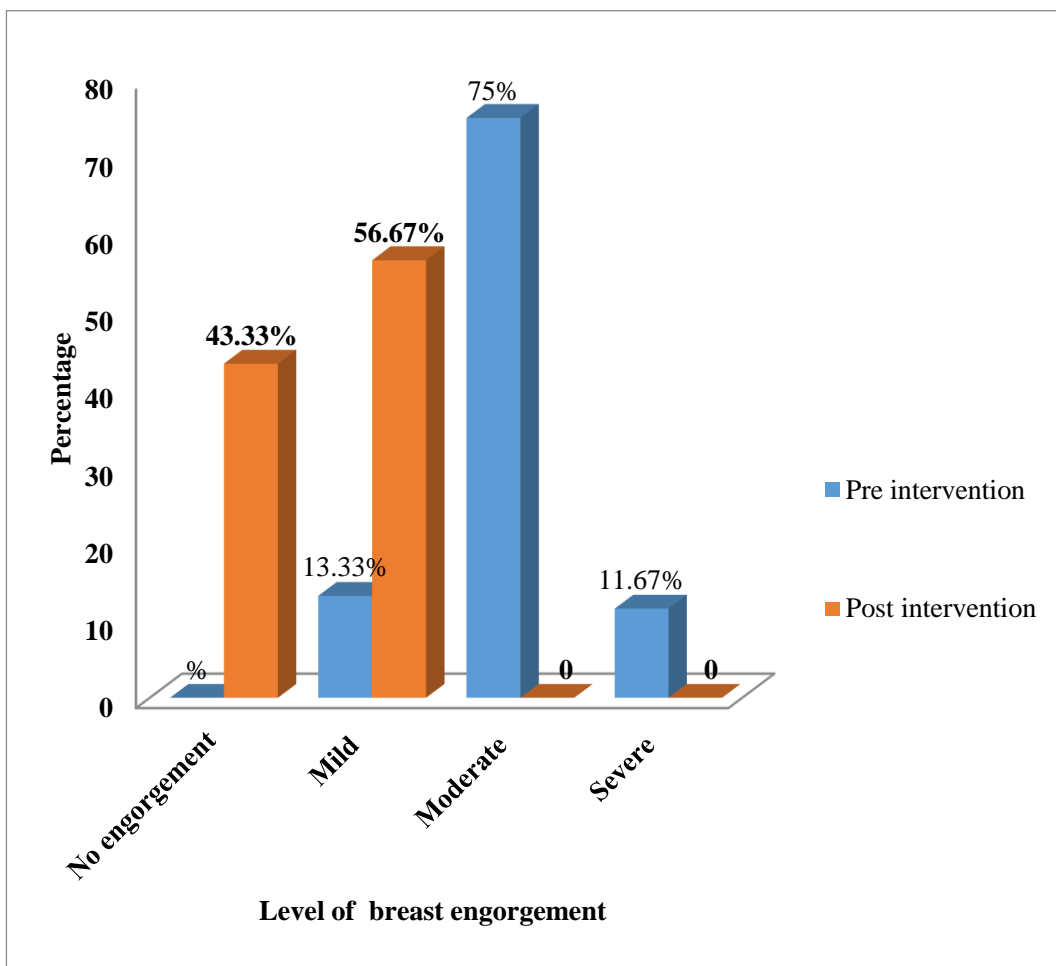


Figure 1: Frequency and percentage distribution of the pre and post intervention the level of breast engorgement among the postnatal mother

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n=60

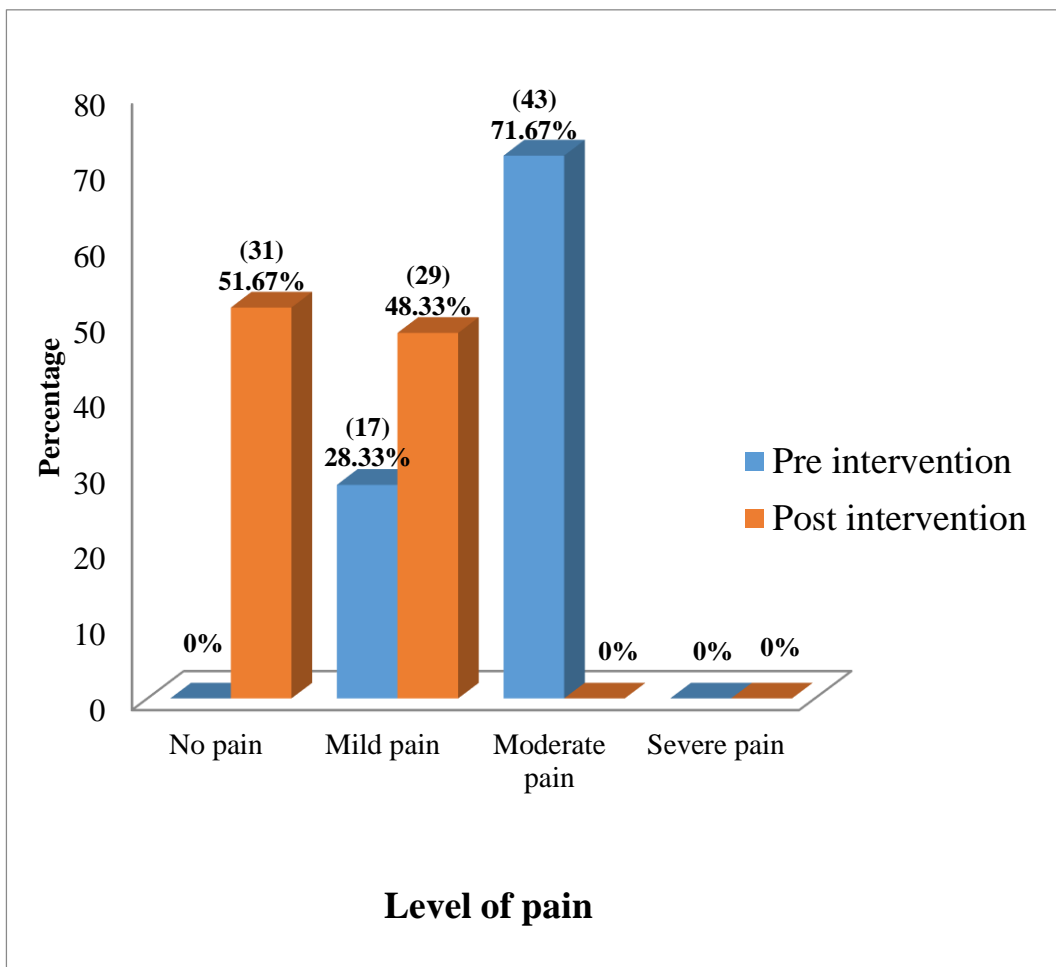


Figure 2: Frequency and percentage distribution of pre intervention and post intervention level of pain among the postnatal mothers.

Effectiveness of olive oil massage application on reducing breast engorgement and pain among the postnatal mother

TABLE 3: Effectiveness of olive oil massage application on reducing breast engorgement among the postnatal mothers.

6 point engorgement scale						
	Mean	SD	Mean D	t-value	df	p-value
Pre-test	4.533	0.87269	-2.85	27.6353	59	1.864*10 ^{^(-35)} **
Post test	1.683	0.67627				

**=P<0.05 significant level

NS = non significant

The data on Table 3 depicts that the effectiveness of olive oil massage application on reducing breast engorgement among the postnatal mothers showed that before intervention mean breast engorgement score was 4.53(SD=0.872) and after intervention mean breast engorgement score was 1.68 (SD=0.676) with mean difference of 2.85. Mean scores before and after intervention was compared using paired t test with calculated value (t=27.63, df=59, p=1.864*10^{^(-35)}) indicates statistically highly significant.

n=60

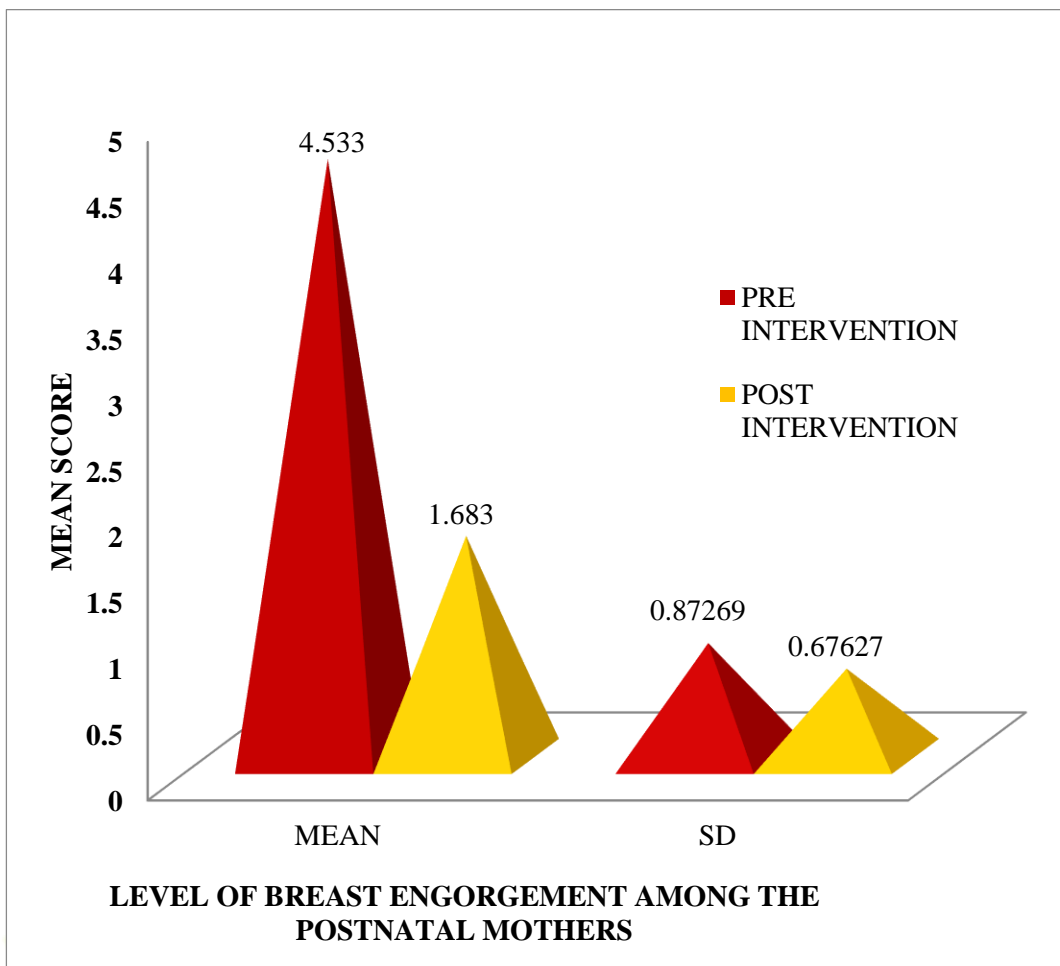


Fig3: Distribution of mean score and SD of pre intervention and post intervention level of breast engorgement among the postnatal mothers.

Table 4: Effectiveness of olive oil massage application on reducing pain among the postnatal mothers.

Numerical pain rating scale						
	Mean	SD	Mean D	t-value	df	p-value
Pre-test	4.05	0.87188	-3.45	44.9539	59	2.392*10 ⁽⁻⁴⁷⁾ **
Post test	0.6	0.69380				

**=P<0.05 significant level NS = non significant

The data on Table 4 depicts that effectiveness of olive oil massage application on reducing pain among the postnatal mothers showed that before intervention mean pain score was 4.05±0.8718 and after intervention mean pain score was 0.6±0.6938 with mean difference was 3.45. Mean scores before and after intervention was compared using paired t test with calculated value (t=44.9539, df=59, p=2.392*10⁽⁻⁴⁷⁾) indicates statistically significant.

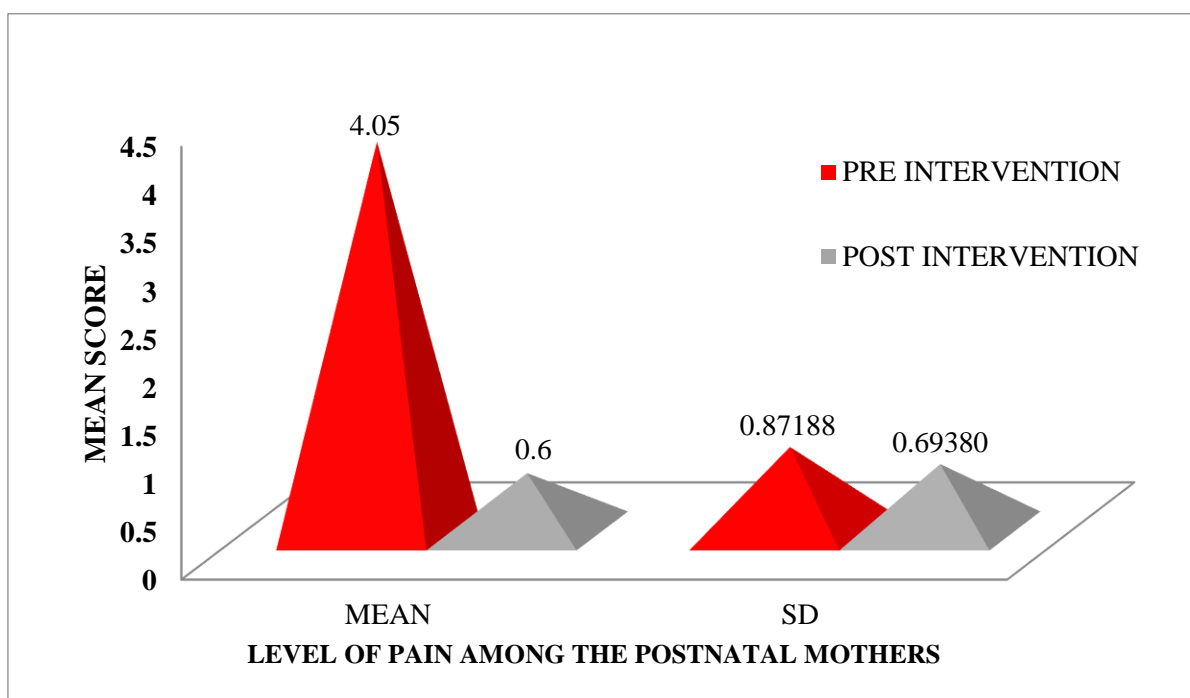


Fig4:

Distribution of mean score and SD of pre intervention and post intervention level of pain among the postnatal mothers.

DISCUSSION

- In this study, the mean post intervention score of breast engorgement is 1.68 with standard deviation (SD) 0.676 which is lower than the mean 4.53 pre intervention score of breast engorgement with standard deviation (SD) 0.872 which indicates highly statistically significant.
- In this study, post intervention mean score of pain is 0.6 with standard deviation (SD) 0.6938 which is lower than the pre intervention mean score that was 4.05 with standard deviation (SD) 0.8718 with negative mean difference of 3.45 which indicates highly statistically significant.
- The chi-square values of association between breast engorgement score and sociodemographic variables revealed that age ($\chi^2=11.64$, $df=6$, $p\text{-value}=0.0006$), education ($\chi^2=7.777$, $df=10$, $p\text{-value}=0.0053$), occupation ($\chi^2=4.144$, $df=6$, $p\text{-value}=0.0418$), type of family ($\chi^2=6.671$, $df=4$, $p\text{-value}=0.0098$), religion ($\chi^2=4.275$, $df=2$, $p\text{-value}=0.0387$) were statistically significant at $p<0.05$ level of significance. The additional association between pain and socio demographical variables like, education ($\chi^2=6.701$, $df=5$, $p\text{-value}=0.0096$) and religion ($\chi^2=9.492$, $df=1$, $p\text{-value}=0.002$) were found to be statistically significant at $p<0.05$ level of significance.
- The chi-square values of association between six point breast engorgement score and clinical variables revealed that day of post-natal period ($\chi^2=5.344$, $df=5$, $p\text{-value}=0.0208$), condition of nipple ($\chi^2=7.586$, $df=4$, $p\text{-value}=0.0059$), parity ($\chi^2=7.724$, $df=4$, $p\text{-value}=0.0054$) duration of feeding ($\chi^2=12.81$, $df=4$, $p\text{-value}=0.0389$) were statistically significant at $p<0.05$ level of significance. The additional association between numerical pain score and clinical variables like, days of postnatal period ($\chi^2=4.8$, $df=3$, $p\text{-value}=0.028$) and mode of delivery ($\chi^2=4.266$, $df=2$, $p\text{-value}=0.0003$) were found to be statistically significant at $p<0.05$ level of significance.

CONCLUSION

The present study to assess the effectiveness of olive oil massage in reducing breast engorgement and pain among postnatal mothers in selected hospitals of Bongaigaon District, Assam. The result revealed that olive oil massage had significant effect in reducing breast engorgement and also pain. Moreover, it is easy to apply and not harmful. The health of the woman is much important to

have family integrity. This study further revealed that there was significant association between the pre assessment level of breast engorgement and pain with sociodemographic variables and clinical variables.

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