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A Study to Assess the Effectiveness of Almond Oil Massage on Promotion of Breast Milk Secretion among LSCS Mother in Selected Hospital Dehradun

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ABSTRACT:

Background: Pregnancy is one of the most meaningful and beautiful phases in a woman's life. It is the time when a new life begins to grow inside the mother's womb. LSCS mothers often experience anxiety, postoperative pain, and emotional stress, which can inhibit milk secretion. Almond oil contains natural emollients and mild aromatherapeutic properties that promote relaxation. Massage with almond oil helps in Reducing cortisol, promoting calmness and comfort, enhancing maternal confidence in breastfeeding, Lower stress levels directly support oxytocin release, facilitating milk let-down.

Objective: The objective was to evaluate the effectiveness of almond oil massage on promoting breast milk secretion among LSCS mothers in experimental group.

Methodology: One group pretest post-test design was adopted. Sample was collected by using purposive sampling technique. 60 LSCS mother were selected out of which 30 were experimental group and 30 were control group.

Results: The paired t test value ($t=2.045$), This indicates a statistically significant increase in breast milk levels after the intervention. Conclusion:

INTRODUCTION

The time a fetus develops inside a woman's womb is called pregnancy, usually lasting about 40 weeks from the last menstrual period to delivery. A caesarean section — or C-section — is a surgical procedure for delivering a baby through an incision in the mother's abdomen and uterus. Generally, a caesarean section is performed when a vaginal delivery is not possible or is unsafe for the mother, the baby, or both. Breastfeeding is widely recognized as the healthiest method for infant nutrition, promoting growth, immune defence, and psychological development. It offers benefits like reduced infant mortality, enhanced cognitive growth, and lower maternal cancer risks. Breastfeeding provides essential nutrients for infants and strengthens the mother-child bond. Promoting breastfeeding is a goal of the World Health Organization. Almond oil massage, a traditional herbal practice, boosts milk production by increasing prolactin hormone secretion. Studies show that massaging with almond oil, rich in oleic and linolenic acids, enhances milk production and flow.

Almond oil contains essential fatty acids like oleic and linolenic acid, which are beneficial for skin and hair health. It's often used for moisturizing and improving skin tone, reducing dark circles, and soothing dry skin. Almond oil can strengthen hair, reduce dandruff, and promote shine. Used in massages to relax muscles and improve circulation. Using your fingertips, very lightly massaging from the top of your breast down and over the nipple. Then pressing firmly on your breast and massage in a circular motion to encourage milk towards your nipples. Studies suggest it may enhance breast milk production when used in

massages. In lactating mothers, almond oil is believed to soften breast tissue, reduce engorgement, and facilitate milk flow. Its non-irritating and hypoallergenic properties make it suitable for topical application during the postnatal period. Traditional practices in India have long advocated almond oil massage for enhancing breast milk secretion.

Objective:

1. To assess the breast milk secretion among LSCS mothers experimental & control group in terms of pretest.
2. To evaluate the effectiveness of almond oil massage on promoting breast milk secretion among LSCS mothers in experimental group.
3. To assess the post test score on promotion of breast milk secretion in experimental and control group.
4. To find out the association between pretest score of breast milk secretion with selected demographic variables.

MATERIAL AND METHODS:

Research methodology:

A quasi-experimental research design, pre-test, post-test control group design, was used for the study. This study includes dividing the sample into two groups that is Experimental group (LSCS mothers receiving almond oil massage) and Control group (LSCS mothers receiving routine postnatal care) each having equal number of samples that is N=30. Almond oil massage was administered to the experimental group after the LSCS delivery, whereas the control group received routine care. Data were analysed using descriptive and inferential statistics.

SETTING OF THE STUDY

The study was conducted in the postnatal ward of SHRI MEHANT INDRESH HOSPITAL in Dehradun, Uttarakhand. The hospital is a multi-specialty hospital Patel Nagar Dehradun, Uttarakhand. It is 1500 bedded hospital. The average monthly normal spontaneous full term vaginal delivery is 140-160.

The setting was chosen due to availability of LSCS mothers, feasibility of data collection, and the feasibility of conducting the study and the expected co-operation from the authorities in getting permission for study.

SAMPLING TECHNIQUE

The sampling technique used for this study was non probability purposive sampling technique. The eligible participants were mothers undergone LSCS delivery. Purposive sampling techniques were used to draw the samples, and LSCS mothers there who fulfilled the inclusion criteria were included in this study. Totally 60 LSCS mothers were selected. Out of 60 LSCS mothers 30 of them were in experimental group 30 of them in control group. Non-probability purposive sampling technique was used to select the samples based on inclusion and exclusion criteria.

Instruments

Data were collected using the following tools

Section A: Demographic variables (age, qualification, occupation, family income, marital status, personal habits, diet, place of living). The responses of the samples will be obtained through a structured questionnaire.

Section B

Part-1: The LATCH breastfeeding Assessment tool as: Inadequate (0-5), Moderate (6-7), Adequate (8-10)

Part-2: Structured breastmilk adequacy rating scale interpreting scores 15-25 = POOR, 26-35 = AVERAGE, 36-45 = GOOD

Ethical Consideration

The study was accepted by our research committee and formal permission was obtained from the principle of Sri Guru Ram Rai University College of Nursing Patel Nagar, Dehradun, to conduct research study in SMIH Hospital Dehradun. Written permission was obtained from the medical superintendent of the hospital prior to the data collection. confidentiality was assured to all subject to get their cooperation informed consent of each subject was obtained before administering research tools to them and subject were informed that their participation was voluntary and had the freedom to withdraw from the study.

RESULT:

TABLE-1 Respondent Post test LATCH level on Breast feeding among Control and Experimental group

LATCH Level	Scores	Respondents				χ^2
		Control		Experimental		Test
		Number	Percent	Number	Percent	
Inadequate	0 – 5	22	73.3	0	0.0	18.88*
Moderate	6 – 7	8	26.7	12	40.0	
Adequate	8 – 10	0	0.0	18	60.0	
Total		30	100.0	30	100.0	

Significant at 5% level, χ^2 (0.05, 2df) = 5.991

Table 1 shows the comparison of respondent Post test LATCH level on Breast feeding among Control and Experimental group. In the experimental group none of the respondent 0% reported inadequate LATCH, 12 respondent (40%) moderate LATCH, and the majority i.e. 18 respondents (60%) reported adequate LATCH. The chi square test value (χ^2 (0.05, 2df) = 5.991) indicates that the difference in Post test latch level between the two groups as statistically non-significant.

Table-2: Over all Pretest and Post test Mean LATCH scores on Breast feeding among Experimental group

N=30

Aspects	Max. Score	LATCH Scores				Paired 't' Test
		Mean	SD	Mean (%)	SD (%)	
Pre test	10	3.67	1.81	36.7	18.1	11.04*
Post test	10	7.73	1.53	77.3	15.3	
Enhancement	10	4.07	2.02	40.7	20.2	

* Significant at 5% level, t (0.05, 29 df) = 2.045

Table 2 shows Overall Pretest and Post test Mean LATCH scores on Breast feeding among Experimental group before and after the intervention. The maximum possible score was 10.

In the pre-test, the mean LATCH score was 3.67 (SD = 1.81) with a mean percentage of 36.7%, indicating Less LATCH score levels before the intervention. In the post-test, the mean of LATCH Score increases to 7.73 (SD=1.53) with a mean percentage of 77.3 %. The calculated enhancement (increase in LATCH) was 4.07points.

TABLE 3: Overall Pretest and Post test Mean LATCH scores on Breast feeding among Control group

N=30

Aspects	Max. Score	LATCH Scores				Paired 't' Test
		Mean	SD	Mean (%)	SD (%)	
Pre test	10	2.90	1.81	29.0	18.1	1.85 NS
Post test	10	3.20	1.90	32.0	19.0	
Enhancement	10	0.30	0.79	3.0	8.9	

NS: Non-significant, t (0.05, 29 df) = 2.045

Table 3 shows Overall Pretest and Post test Mean LATCH scores on Breast feeding among Control group before and after the intervention period. The maximum possible score was 10.

In the pre-test, the mean LATCH was 2.90 (SD=1.81) with a mean percentage of 29.0%. In

the posttest, the mean LATCH score was 3.20 (SD = 1.90) with a mean percentage of 32%.

The calculated enhancement increases LATCH score was only 0.30 points, corresponding to 3.0% improvement. The paired 't' test value ($t = 2.045$) was not significant at the 0.05 level, indicating there was no meaningful change in LATCH score levels from pre-test to post-test in the control group.

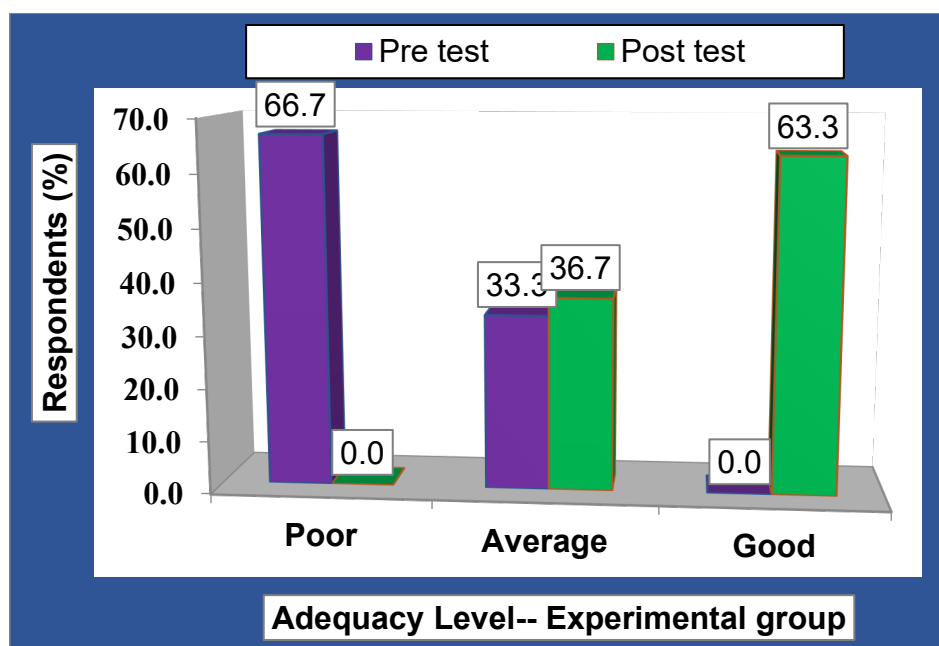


Figure-1: Over all Pretest and Post test Mean scores on Breast milk adequacy among Experimental group

Table 4: Classification of Respondent Pretest and Post test Breast milk adequacy level among Experimental group

N=30

Aspects	Max. Score	Adequacy Scores				Paired 't' Test
		Mean	SD	Mean (%)	SD (%)	
Pre test	45	23.53	2.85	52.3	6.3	70.32*
Post test	45	37.97	2.67	84.4	5.9	
Enhancement	45	14.43	1.14	32.1	2.5	

* Significant at 5% level,

$t(0.05, 29 \text{ df}) = 2.045$

Table-4: shows Overall Pretest and Post test Mean on Breast milk adequacy among Experimental group before and after the intervention. The maximum possible score was 10.

In the pre-test, the mean Breast milk adequacy was 23.53 (SD = 2.85) with a mean percentage of 52.3%, indicating Less Breast milk adequacy levels before the intervention. In the post-test, the mean of Breast milk adequacy increases to 37.97 (SD=2.67) with a mean percentage of 84.4 %. The calculated enhancement (increase in Breast milk adequacy level) was 14.43 points.

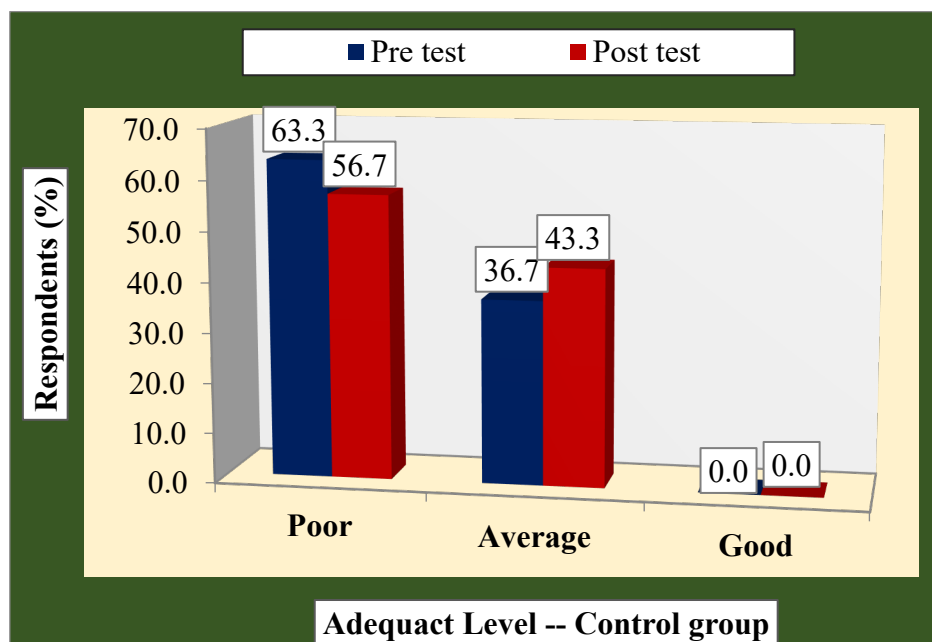


Figure. 2: Classification of Respondent Pretest and Post test Breast milk adequacy level among Control group

Table-5: Over all Pretest and Post test Mean scores on Breast milk adequacy among Control group

N=30

Aspects	Max. Score	Adequacy Scores				Paired 't' Test
		Mean	SD	Mean (%)	SD (%)	
Pre test	45	23.40	3.01	52.0	6.7	1.91 NS
Post test	45	24.40	2.98	54.2	6.6	
Enhancement	45	1.00	0.87	2.2	6.3	

NS: Non-significant,

$t(0.05, 29 \text{ df}) = 2.045$

Table -5: Shows Over all Pretest and Post test Mean scores on Breast milk adequacy among Control group before and after the intervention period. The maximum possible score was 10.

In the pretest, the mean Breastmilkadequacy was 23.40 (SD=3.01) with a mean percentage of 52.0%. In the posttest, the mean breastmilk adequacy score was 24.40 (SD = 2.98) with a mean percentage of 54.2%. The calculated enhancement increases Breastmilkadequacyscore was only 1.00 points, corresponding to 2.2%improvement. The p aired 't' test value ($t = 2.045$) was not significant at the 0.05 level, indicatingtherewasnomeaningfulchangeinBreastmilkadequac yscore levels from pe-test to post-test in the control group.

DISCUSSION

Description of level of breast milk adequacy among LSCS mother among experimental group and control group in term of pretest. The present study demonstrated a significant improvement in respiratory parameters following balloon blowing therapy. The two groups were comparable at baseline, with mean scores and no statistically significant difference. This baseline similarity strengthens the interpretation that the subsequent difference in outcomes was associated with the additional intervention, although the quasi-experimental design and convenient sampling limit causal certainty. In the pre-test, 20 respondents (66.7%)

experienced, 10 respondents (33.3%) reported moderate level, and none reported good breast milk adequacy. After the intervention, in the post-test, the breast milk adequacy level distribution shifted—0 respondents (0.0%) reported poor breast milk adequacy, 11 respondents (36.7%) reported average level, and 19 respondents (63.3%) reported good breast milk adequacy level. The calculated chi-square value ($\chi^2 = 39.05$) was higher than the table value ($\chi^2 = 5.991$, $df = 1$) at 0.05 level of significance. And the paired t test value ($t = 2.045$), This indicates a statistically significant increase in breast milk levels after the intervention. Therefore, Hypothesis 3 is accepted.

Priti Bhatt (2022) conducted with the objective to assess the breast milk secretion before application of almond oil massage among LSCS mothers. The study design was a pre-experimental, one group pre-test post-test research design. 40 samples of LSCS mothers who fulfil the inclusive criteria were selected based on non-probability purposive sampling, after getting informed consent from the study participant, the almond oil massage was administered to LSCS mothers at Shri Shankaracharya Medical College and Research centre, Bhilai C.G. The study findings reveal that the pre-test score regarding breast milk secretion is 12(30%) sample were in inadequate, 24(60%) were moderate and 4(10%) adequate. In post-test score majority 33(82.5%) were in adequate, 7(17.5%) sample were in moderate and 0 (0%) were in inadequate. The 't' value 13.35 (df.39) was greater than table value (2.02) at 0.05 level of significance.

The above study was supported by a study conducted **Asharani MAHTO, Susan KONDA (2025)** on a randomized pretest–post-test control group design was conducted among 60 primigravida mothers post-LSCS, randomly assigned to experimental ($n = 30$) and control ($n = 30$) groups. The experimental group received three daily almond oil breast massages (5–10 mL; 5 min/breast) for 3 days; controls received routine care. Breast milk adequacy was measured using a validated 16-item rating scale at baseline and day 4 post-intervention. Results: The mean breast milk adequacy scores increased from 29.30 ± 1.915 to 39.80 ± 1.690 in the experimental group ($t = 22.15$, $P 0.05$). Post-test scores between the two groups differed significantly between groups ($t = 19.282$, $P < 0.001$).

The significant improvement observed in the experimental group suggests that Almond oil massage among LSCS mothers may be considered a useful supportive intervention for improving and promoting breast milk adequacy among LSCS mothers. Further studies using objective pulmonary function measures, standardized intervention protocols, larger sample sizes, and randomized allocation are recommended to establish the effectiveness of almond oil massage for promotion of breast milk.

CONCLUSION

The study concluded that both experimental and control group were compared in their demographic and obstetric characteristics during pretest. Almond oil massage was found to be highly effective in promotion of breast milk among LSCS mothers, as the experimental group reported significantly increase in breast milk while no meaningful changes were observed in control group. The association between pretest milk secretion and selected demographical variables was not significant, indicating sample homogeneity. Overall, the findings suggest that almond oil massage is simple, safe and non-pharmacological intervention that can be effectively incorporated into maternity care to increase the breast milk among LSCS mothers.

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