To Assess the Efficacy of Lactational Counseling for Prevention of Breast Engorgement

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Authors' contributions

This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.

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ABSTRACT

Background: Breast engorgement is a swollen, painful breast and overfilling with breast milk. In lactating mothers this condition is common during the puerperal period. Breast engorgement developed inside the breast due to expansion and pressure exerted by the synthesis and storage of breast milk. It is also a main factor in altering the ability of the infant to latch-on. Engorgement changes the shape and curvature of the nipple region by making the breast inflexible, flat, hard, and swollen. The nipples of an engorged breast are flat or inverted. Sometimes it may lead to striae on nipples, mainly a preceding symptom of mastitis.

Objective:
1. To assess the effectiveness of lactational counseling on prevention of breast engorgement among postnatal mother.
2. To find out association between lactational counselling of breast engorgement with selected demographic variables.

Methodology: A study will be conducted in AVBR Hospital Sawangi Meghe, Wardha. The 40 postnatal mothers will be selected as the study sample according to the inclusion/exclusion criteria. Sample size will be calculated by using formula. In this study non probability purposive sampling technique will be used. In this study researcher will provide lactational counselling among postnatal mother after delivery. In lactational counselling researcher provide counselling regarding the

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1. INTRODUCTION

Breast engorgement is a swelling and inflammation of breast that results in painful, tender breasts. It’s caused by an increase in blood flow and milk supply in breasts, and it developed in the first days after childbirth. This usually occurs when a mother breast makes more milk than her baby uses. Mother breasts may become firm and swollen, which can make it hard for the baby to breastfeed [1].

Breast feeding is one of the arts of postnatal mother. Breast feeding is help to create bonding between child and mother [2]. Breast feeding help to prevent infection & some medical problems like breast engorgement [3].

Breastfeeding is the widely recommended way of nourishing a newborn. Breast engorgement is a postnatal disease that affects lactating women. Engorgement causes a lot of pain and tightness, which is one of the main reasons that people stop lactating early. Many different therapies for breast engorgement were tested and studied. Lactational counseling can help mothers to get more understanding about how to reduce breast engorgement and improve the feeding habits of their new-borns.

Breast massage is a simple, easily available, and inexpensive way of reducing breast engorgement.

Engorgement must be managed properly by using long-term breastfeeding. The objective of breast engorgement therapy is to reduce pain and reduce edema. Ice packs, an uplift support bra should be used to reduce edema, inflammation. Breast massage, application of warmth, cold compresses, hand expression, or the use of a breast pump are all alternatives for new breastfeeding women to relieve typical postnatal breast engorgement.

Breast engorgement occur when mother milk first comes out from breast during the first few days after delivery [4]. Main causes of breast engorgement are, if mother immediately stop breastfeeding, when mother immediately starts lactating less than usual, when the child is starting to eat solid foods or when the child is sick & baby has a poor demand of milk [5]. Most of the postnatal mother faced such type of problem during lactating [6]. Mammary gland starts producing milk 2 to 5 days following the baby is born. It is the common sign for mother to feel the breasts heavy, warm, and inflamed when milk came out of breast [7]. Breastfeeding is important for mother and children. It will minimize health related problem [8], many factors are affect the exclusive breast-feeding practices that factors are education, residential area, understanding level of mother, cultural factors [9] some public health issues are there during lactation such as initiation of breast feeding, duration, exclusively breast feeding [10] lactational counseling is important for postnatal mother to reduce the medical problems [11] lactational counselling and prenatal teaching is important and necessary for postnatal mother to gain the knowledge regarding breastfeeding or lactation because of lack of knowledge many mother faced some problems and many mothers has quarries with the help of lactational counseling this problem will solve. It will help to prevent breast engorgement [12]. The nipples can stretch, tight & flat which is difficult to baby to suckling the milk.

Rationale of study: Postnatal lactational counselling prevent the breast engorgement and it will help to higher weight gain in a child and lesser chances of mixed feeding in the neonatal period. Counseling is an ability to talk with people who have a counsellor they have experience and let them know how to do breastfeeding. Lactational counselling will provide to postnatal mothers. It will help to postnatal mother to learn new thing about breast feeding practices.

2. METHODOLOGY

The research will focused on the hospital basis. It is going to be collected data from 1st march to 20th march 2020 in AVBR Hospital Sawangi,
Meghe Wardha respectively. Research approach interventional evaluatory approach, Research design pre experimental post-test design will be use. Samples 40 post-natal mother will be used by using non probability purposive sampling technique. A structured questionnaire including Socio demographic & breast engorgement assessment scale will be use. This tools will be validated from 12 experts. The process for data collection permission will be obtained from concerned authorities of the selected hospital. Lactational counseling will provided by the researcher (Nurse) to postnatal mother after delivery. Nurse role is counsellor so that nurse can provide counseling. In lactational counselling importance of breastfeeding, how breastfeeding works, breastfeed technique, Clinical Practice this topic will be cover. After providing lactational counseling than assessment of breast engorgement will done according to breast engorgement assessment scale after delivery for 4 days.

Hypothesis:

H 1: There will be significant difference between the prevention of breast engorgement among postnatal mother after lactational counselling.

Inclusion Criteria:

- Postnatal mother in selected area who are given their consent for participation in the study.
- Postnatal mother who are available at the time of data collection.
- Postnatal mother who can understand and write English, Marathi.

Exclusion criteria:

- Postnatal mother excluded who had a high-risk of pregnancy & complicated delivery.
- Postnatal mother excluded whose baby admitted to NICU.
- Postnatal mother who have already attended similar type of study.
- Postnatal mother those are suffering from breast engorgement and received the treatment of breast engorgement.

Sample Size: 40 postnatal mother selected from AVBR Hospital Sawangi Meghe Wardha.

Prevalence rate is 75 %

\[ P = \frac{75}{100} = 0.75 \]

\[ Q = 100 - 75 = 25 \]

\[ L = \text{Allowable error} = 20\% \]

\[ n = \frac{4PQ}{(L)^2} = \frac{4 \times 75 \times 25}{(15)^2} = \frac{7500}{225} = 33.33 \]

The sample size is extended to 40

Interventions: Lactational Counseling

Outcome measures:

Primary outcome: To evaluate the effectiveness of lactational counselling.

Secondary outcome: Prevention of breast engorgement.

Clinical outcomes: assessment of breast engorgement is done according to breast engorgement scale.

Assessment of adverse event: On the basis of previous study no any adverse event was observed.

Data management and monitoring: Demographic variables are age (year), Education, Occupation, Monthly income, Type of family, parity, Area of residence, condition of baby. Will be recorded.

2.1 Statistical Analysis

The data will be analysed according to study objectives & analysed the data by utilising descriptive and inferential statistics and analysis will present in the form of tables, graphs and diagram. SPSS software will use for statistical analysis.
3. EXPECTED OUTCOMES/RESULTS

The goal of the research is to prevent the breast engorgement. Identify the effect of lactational counselling on prevention of breast engorgement. The outcome of research should be lactational counselling is effective for prevention breast engorgement among postnatal mother.

4. DISCUSSION

The research project will be related to effectiveness of lactational counselling on prevention of breast engorgement. In this study sample size will be 40 postnatal mothers selected from A V B R H Sawangi Meghe, Wardha. Sample size is calculated by using formula and non-probability purposive sampling technique will be used and sample will be collected according to inclusion and exclusion criteria. Structure questionnaires of demographic variables and breast engorgement assessment scale, this tool will use for data collection. Pre experimental post-test design will used. Intervential evaluatory approach will use. Population is postnatal mother. Study should be analysed by SPSS software. According to this study the result of the study should be that lactational counselling is effective for prevention breast engorgement among postnatal mother. Lactational counselling providing the knowledge to mother about breast feeding practices it will help to prevent the breast engorgement. Due to lack of knowledge regarding breast feeding practices the breast engorgement will develop.

According to another study, which conducted in Sri Ramachandra University, Porur, Chennai in 2012-13. The purpose of the research project was to find out the lactational counselling of effectiveness on prevention of breast engorgement & improving newborn feeding habits between postnatal mothers. This study stated that educating the mothers it is effective for postnatal mother to prevent the breast engorgement & improve newborn feeding habits between postnatal mothers and lactational counselling is effective for prevention of breast engorgement[13].

A research was conducted in Kochi. This research is focus on evaluation of the prenatal education on breast engorgement for prevention and management of breast engorgement. In this study pre-post-test control design has been used. Convenient sapling technique was used. Structure questionnaire, observational checklist and breast-feeding assessment tools. These three tools are used for data collection method and the result of the study was the incidence of cases of the breast engorgement is minimise in experimental group than the control group. the study conclude that prenatal teaching was effective in current research for preventing the breast engorgement as well as decrease the impact of breast engorgement in post - natal mother [14].

Breast engorgement is measured by using a six-point score scale (grade). Breast engorgement scale developed by Hill. P. D. & Humenick (1994). The hospital breast engorgement evaluation will be conducted by the researcher and outcome will be presented and evaluate on the basis of the breast engorgement assessment scale.

Grade and score six indicate that severe breast engorgement & score one suggested that breast is normal there is no engorgement. Increased score and grade suggested that increased the frequency of the breast engorgement.

The research was conducted to determine the efficacy of lactational counseling on prevention of breast engorgement among primigravida. In this study non-equivalent quasi experimental post-test control group design was used and the structure questionnaire and breast engorgement assessment scale were used as tools. In control

Table 1. Grade (scale) for measurements of breast engorgement

| score (grade) | 1\(^{st}\) day | 2\(^{nd}\) day | 3\(^{rd}\) day | 4\(^{th}\) day |
|--------------|---------------|---------------|---------------|---------------|
| Score 1: -- soft |               |               |               |               |
| Score 2: -- slight changes in breast |               |               |               |               |
| Score 3: -- firm, non-tender breast |               |               |               |               |
| Score 4: -- firm, beginning tender in a breast |               |               |               |               |
| Score 5: -- firm, tender |               |               |               |               |
| Score 6: -- very firm, very tender highest |               |               |               |               |
group researcher provide general treatment and in experimental group they will provide lactational counseling. And in experimental group after providing lactational counseling breast

**Fig. 1. Research design**

**INPUT**

**THROUGHPUT**

**OUTPUT**

**LACTATIONAL COUNSELING ON PREVENTION OF BREAST ENGORGEMENT**
- Important of breast feeding
- Local breastfeeding situation
- How the breastfeeding works
- Breastfeeding technique

**EXAMINATION**
- Assessing the practices of post-natal mother regarding breastfeeding
- Assessing breast engorgement

**RESULT**
Breast engorgement
- Present
- Absent

**EXAMINATION**
- Assessing the practices of post-natal mother regarding breastfeeding
- Assessing breast engorgement

**INPUT**

**THROUGHPUT**

**OUTPUT**

**LACTATIONAL COUNSELING ON PREVENTION OF BREAST ENGORGEMENT**
- Important of breast feeding
- Local breastfeeding situation
- How the breastfeeding works
- Breastfeeding technique

Feedback
engorgement will be tested on the basis of breast engorgement assessment scale. There is significant difference will be seen in breast engorgement and variables. The result of this study was the lactational counseling will effective for prevention of breast engorgement this is proved from this study [15].

5. CONCLUSION

Conclusion will be drawn from result and analysis of the study.

CONSENT AND ETHICAL APPROVAL

Advance permission must be taken from the samples and taken from postnatal moth. Due permissions will be taken from concerned authorities of the institutes/hospitals where study is to be conducted. Individual consent will be taken from postnatal mothers. Informal and written consent must be taken from the samples and identify that the samples will be kept confidential.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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