EFFECTIVENESS OF PRENATAL LACTATION COUNSELLING ON BREASTFEEDING PRACTICES, BREAST ENGORGEMENT AND NEWBORN FEEDING BEHAVIOUR AMONG POSTNATAL MOTHERS AT AIIMS JODHPUR.

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Master of Science in Nursing

(Obstetrics & Gynecology Nursing)

By

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I hereby declare that the thesis entitled “Effectiveness of prenatal lactation counselling on breastfeeding practices, breast engorgement and new born feeding behaviour among postnatal mothers at AIIMS Jodhpur” is a bonafide work carried out by me under the guidance of Mr. Himanshu Vyas, Associate Professor, College of Nursing, All India Institute of Medical Sciences (AIIMS), Jodhpur (Rajasthan). No part of this thesis has formed the basis for the award of any degree previously.

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LIST OF ABBREVIATIONS USED

AIIMS – All India Institute of Medical Sciences

df - Degree of freedom

f - Frequency

IBFAT- Infant breastfeeding assessment tool

LSCS- Lower segment caesarian section

NICU- Neonatal intensive care unit.

NFHS- National family health survey

OPD – Out Patient Department

SD- Standard deviation

UNICEF- United Nations Children's Fund

WHO- World Health Organization

ABSTRACT

BACKGROUND: Breastfeeding is the best way of providing the nutrients to young infants for their healthy growth and development. WHO and UNICEF recommended that the breastfeeding should be initiated as early as possible after delivery and exclusive breastfeeding till 6 months of age. The proper positioning of baby and mother makes the breastfeeding effective. Generally, poor technique and lack of support cause sore or cracked nipples and breast engorgement. Thus, most of the problems can be prevented if baby is attached correctly during the initial feeds.

MATERIAL AND METHODS: The research design chosen for the study was quasi- experiment posttest only control group research design. 60 primigravidae in the age group 18-35years with gestational age ≥36 weeks seeking antenatal care at antenatal OPD AIIMS Jodhpur were selected by consecutive sampling technique. The experimental group received two lactation counselling sessions of 30 minutes each one week apart (in person/video call), whereas control group received the routine care. Breastfeeding practices, breast engorgement and newborn feeding behaviour were assessed on the 3rd postnatal day using breastfeeding practices checklist, breast engorgement scale and newborn feeding behaviour assessment tool respectively.

RESULT: The study findings reveal that there is significant improvement in breastfeeding practices ($t=7.18$, $p=0.00$), breast engorgement ($t=2.41$, $p=0.01$) and newborn feeding behaviour ($t=5.24$, $p=0.00$), which proves that the prenatal lactation counselling was effective in improving breastfeeding practices, newborn feeding behaviour and reducing breast engorgement. In experimental group, it was found that there was no significant association of breastfeeding practices, breast engorgement and newborn feeding behaviour with demographic variables. Whereas, in control group none of demographic variables were found to be significantly associated with breastfeeding practices and newborn feeding behaviour except type of family while breast engorgement was found to be significantly associated with duration of marriage at $p<0.05$ level of significance.

CONCLUSION: The study concluded that the prenatal lactation counselling was effective on improving breastfeeding practices, breast engorgement and newborn breastfeeding behaviour among primigravidae.

Keywords: Breast engorgement, newborn feeding behaviour, breastfeeding practices, prenatal lactation counselling.

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CHAPTER 1

INTRODUCTION

INTRODUCTION

“Given a choice each and every baby prefers breast milk because this is what is the healthiest.”

BACKGROUND:

Breastfeeding is the best way of providing the nutrients to young infants for their healthy growth and development. Breastfeeding is the ideal food for infants as it is safe, clean and contains antibodies which protect the infants from various childhood illnesses.[1]

Colostrum is the first milk that is produced by the mother soon after birth and is ideal for the newborn as rich in antibodies. WHO and UNICEF recommended that the breastfeeding should be initiated within one hour after delivery and exclusive breastfeeding till 6 months of age. The baby should be breastfed on demand including day and night. Bottles, teats or pacifier should not be used and breastfeeding should be continued up to 2 years of age. Initiate safe and nutritious complimentary feeding at six months with breastfeeding.[2] According to WHO, only 44 % of infants were breastfed till six months completely worldwide from 2015 to 2020.[1] In 2019, 47 million under five years of age are wasted, 14.3 are severely wasted whereas 38.3% million were obese and 144 million were stunted.[1]

Twenty percentage of newborn deaths can be prevented by starting breastfeeding within one hour. First milk is extremely beneficial as it decreases newborn deaths. But, colostrum is discarded in many cultures because of conventional faith.

Exclusive breastfeeding can prevent infants' death due to diarrhea and pneumonia.

According to National Family Health Survey 4 in India less than fifty percentage mothers give breastfeed to their babies within one hour of birth, around eighty percentage deliveries take place in health facilities and half of the children were exclusively breastfed during first six months of life. A national breastfeeding promotion programme has been launched by Ministry of Health and Family Welfare to enhance infant and young child feeding.[2]

There are various benefits of breastfeeding such as it decrease the incidence of diarrhea, vomiting, asthma, lower respiratory tract infections, necrotizing enterocolitis, eczema, sudden infant death syndrome, childhood leukemia, type 2 diabetes. Also, postnatal mothers have the advantages of breastfeeding like decreased incidence of breast engorgement, postpartum bleeding, help in birth spacing, and lower risks of developing breast and ovarian cancers, promotes faster return of mother's pre-pregnancy weight.[3]

Exclusive breastfeeding is not practiced by a lot of mothers. There are various reasons for early discontinuation of breastfeeding like inadequate milk supply, breast pain, improper positioning, problems with the infant latching or suckling, lack of confidence in mothers' ability to breastfeed, and lack of support. These problems can be reduced if the women is educated about the advantages of breastfeeding and prepared psychologically for exclusive breastfeeding in prenatal period.

In Rajasthan, breastfeeding rates are low due to many factors like maternal mental makeup, awareness and low education. So, mothers needs help and support for successful breastfeeding. Counselling has been shown to be effective intervention to extend rates of early initiation of breastfeeding, reduce rates of prelacteal feeding and increase rates of exclusive breastfeeding.[3]

According to global breastfeeding score card 2018, globally, rates of breastfeeding are far lower than is needed to optimally protect the health of women and their children. Less than fifty percentage of newborns start breastfeeding in the first hour of birth. 41% of infants under 6 months of age are exclusively breastfed, far short of the 2030 global target of 70%. While over two-thirds of mothers continue breastfeeding for at least one year, by two years of age, breastfeeding rates drop to 45%.[4]

Breast milk provides all the nutrients that a baby need for the first six months of life to grow and develop. Globally, 820,000 children under the age of five could be saved by optimum breastfeeding every year. [5]

Pregnancy and post-partum period is time of great transition in women's life. It is complex to understand relationship between post-partum care breastfeeding and infant wellbeing.

Breastfeeding initiation, duration and the age at which weaning started are the foremost factors which affect the breastfeeding efficacy. Different religions and communities follow different breastfeeding practices. There are various factors that affect the breastfeeding practices like socio-economic factors, psychological

status, religion & culture, low education status of mothers, area of residence (rural) and mother's occupation in India.[6]

Breastfeeding 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 beginning of feeding and one of them is engorged breast. The engorgement process is triggered by increased lacto genesis due to reduced steroid hormones in postpartum women and with elevated concentrations of prolactin.[7]

After delivery, there is an increment in milk production on second and third day. At this time if baby is not fed in every two hours and not well positioned on breast then milk starts to accumulate in the alveoli that made the breast swollen, hard, warm and painful and is termed as an engorged breast.

The breast engorgement incidence is 1:8000 globally, and 1:6500 in India.[7] Mostly after 3 days of delivery, sign and symptoms develop. More than two thirds of women have tenderness. If the newborn is breastfed frequently the chances of having breast engorgement are reduced. 20% primigravidae mothers are affected with breast engorgement in first four days of postnatal period. Some of the postnatal mothers may have fever.[7] Due to increased secretions, the enlarged alveoli causes damage to milk secreting glands that leads to flattening of nipples or inverted nipples, making difficult the newborn to suck the milk.

Newborn are only ready to suck and swallow liquids due to their restricted development. Their ability to feed well at birth are often credited a mix of reflexive

responses that allows them to locate the source of nourishment, suck, and swallow the liquid.[8]

The proper positioning of baby and mother makes the breastfeeding effective. The positioning and attachment of baby to the breast during breastfeeding are correlated with various types of nipple trauma. So, correct latching during breastfeeding makes the suckling successful. Generally, poor technique and lack of support cause sore or cracked nipples and breast engorgement. So, most of the problems can be escaped if baby is attached correctly at first and early feeds.[5]

Malnutrition is associated with poor feeding practices. India has maximum number of under five deaths and underweight children. National Family Health Survey III showed that thirty percentage infants at 6 months age are underweight. Malnourishment is prevalent among 45% of children under 3 years of age. This is due to inadequate feeding practices. Position of the mother and adequate attachment of the baby decides breastfeeding practices.[9]

NEED OF THE STUDY:

Breastfeeding is an art and skill which need to be learnt and mastered. This skill has to be learnt and followed by mothers not only to feed their infants but also to avoid breastfeeding complications. One of the important steps in breastfeeding technique is helping the baby to attach on breast properly. A good latch eliminates the problem of sore nipples and proper breastfeeding reduces the chances of other breastfeeding complication.[10]

Some primiparous inexperienced mothers need some help and should be made aware about the importance of breastfeeding and its techniques during antenatal period, so as to prevent complications in the later periods. Many primiparous mothers start breastfeeding with minute support and understanding of breast feeding process. Proper breastfeeding techniques such as carrying the baby, various breastfeeding positions, posture and adequate latching is essential for breastfeeding the baby and all most all of the mothers in world are enough to breastfeed their babies. Basic breastfeeding technique prevents many breastfeeding problems.[11]

A study was carried out among 300 women to determine the efficacy of antenatal and postnatal counselling on breastfeeding practices at Nagpur. The study revealed that in study group the rate of exclusive breastfeeding were relatively high (98.6%) as compared to control group (85.6%) at six months.[12]

A study on assessment of knowledge and newborn feeding pattern regarding breastfeeding, showed that more than fifty percentage postnatal mothers and less

than half of mothers had below average and average knowledge regarding breastfeeding, respectively. Only few mothers had good knowledge regarding breastfeeding. Less than one third, more than one third and nearly half of newborn babies had adequate, moderate and inadequate feeding pattern, respectively.[5]

A study was carried out to determine the breastfeeding practices of mothers related to attachment, correct position and effective suckling. The study results showed that poor positioning and attachment was observed more in primigravidae than multigravida mothers. Poor position was related to cracked nipples and mastitis. It has been found that there was a need of support and guidance in primigravidae mothers regarding breastfeeding techniques.[32]

It is highly observed that primigravidae mothers usually have doubts and fears related to proper breastfeeding and they have huge concerns about the optimum care that has to be given to the newborn babies. For this, they need to be adequately educated and helped in preventing breast feeding problems.

Breast engorgement incidence rate is high in primiparous mothers. So, if proper counselling is provided during antenatal period then the breastfeeding practices can be improved and breastfeeding problems can be solved. Therefore, this study aim to determine the effect of prenatal lactation counselling on breastfeeding practices, breast engorgement and newborn feeding behaviour among postnatal mothers.

AIM:

The aim of this study is to determine the effect of lactation counselling on breastfeeding practices, breast engorgement and newborn feeding behaviour.

STATEMENT OF PROBLEM:

Effectiveness of prenatal lactation counselling on breastfeeding practices, breast engorgement and newborn feeding behaviour among postnatal mothers at AIIMS Jodhpur.

OBJECTIVES:

1. To assess and compare breastfeeding practices among postnatal mothers in experimental and control group.
2. To assess and compare breast engorgement among postnatal mothers in experimental and control group.
3. To assess and compare new born feeding behaviour among postnatal mothers in experimental and control group.
4. To determine the association of breastfeeding practices, breast engorgement and new born feeding behaviour with selected demographic variables of postnatal mothers.

OPERATIONAL DEFINITIONS:

- Prenatal: In this study prenatal is the time period after completion of 36 weeks of gestation to delivery.

- Lactation counselling: It included 2 sessions of counselling of 30 minutes each.

  In first session, anatomy and physiology of breast, importance of breastfeeding, techniques of breastfeeding including breastfeeding positions, latching and WHO recommended breastfeeding practices were discussed.

  In the next session, new born feeding behaviour, breast engorgement and its prevention and management was discussed, which was taken one week apart.

- Breastfeeding practices: Breastfeeding practices refers to the expressed practices of mothers regarding breastfeeding. This was assessed by structured breastfeeding practices checklist on 3rd postpartum day and was interpreted as good, fair and poor practices.

- Breast engorgement: Breast engorgement is an accumulation of milk in the breast that leads to edema and swelling and pain. It was assessed on 3rd postpartum day by breast engorgement scale and was interpreted as no engorgement and with breast engorgement.

- Newborn feeding behaviour: Newborn feeding behaviour includes looking for readiness to feed, rooting, fixing and sucking pattern of newborn which was assessed on 3rd postpartum day by using infant breastfeeding assessment tool (IBFAT) that is a standardized tool and was interpreted as effective vigorous feeding, moderate effective feeding and poor feeding.

- Postnatal mother: In this study, postnatal mother is a woman who has delivered her first baby by normal vaginal delivery at AIIMS Jodhpur.

HYPOTHESES:

NULL HYPOTHESIS

The hypothesis is tested at $p \leq 0.05$ level of significance.

H01: There is no significant difference in breastfeeding practices among postnatal mothers in experimental and control group.

H02: There is no significant difference in breast engorgement among postnatal mothers in experimental and control group.

H03: There is no significant difference in newborn feeding behaviour among postnatal mothers in experimental and control group.

H04: There is no significant association of breastfeeding practices, breast engorgement and newborn feeding behaviour with selected socio-demographic variables of postnatal mothers in experimental and control group.

ALTERNATIVE HYPOTHESIS

The hypothesis is tested at $p \leq 0.05$ level of significance.

HA_1: There is a significant difference in breastfeeding practices among postnatal mothers in experimental and control group.

HA_2: There is a significant difference in breast engorgement among postnatal mothers in experimental and control group.

HA_3: There is a significant difference in newborn feeding behaviour among postnatal mothers in experimental and control group.

HA_4: There is a significant association of breastfeeding practices, breast engorgement and newborn feeding behaviour with selected socio-demographic variables of postnatal mothers in experimental and control group.

DELIMITATIONS:

The study was delimited to the antenatal mother whose gestational age ≥ 36 weeks who are seeking antenatal care at AIIMS Jodhpur.

SUMMARY:

This chapter dealt with the background, need, statement of problem, objectives, operational definitions, hypotheses and delimitation of the study.

CHAPTER-2

REVIEW OF LITERATURE

REVIEW OF LITERATURE

The review of literature refers to both the activities involved in searching for the information on a given topic as well as actual written report that summarizes the states of existing knowledge research problem.

The review of literature provides an overview of what work has been already done, who are the key researchers who did that work, which of the questions are already answered regarding a particular area of research interest, what methods and methodologies were used to answer the particular questions and what are the prevailing theories and hypothesis.

The review of literature also provides a solid background for a research study. The literature review arouse the reader to be updated with state of research in a field and any contraindications that may exist which challenge findings of other research studies.

Various research has been conducted to assess effect of lactation counselling on breastfeeding practices, newborn feeding behaviour and breast engorgement. For the purpose of easy compilation the review of literature has been categorized under following sections:

Section 1: Review related to incidence and prevalence of breast problems

Section 2: Review related to breastfeeding practices and effectiveness of counselling/health teaching on breastfeeding practices

Section 3: Review related to effectiveness of lactation counselling/health teaching on breast engorgement

Section 4: Review related to effectiveness of intervention package for management of breast engorgement.

Section 5: Review related to effectiveness of lactation counselling/health teaching on latching

Section 6: Review related to effectiveness of lactation counselling/health teaching on breastfeeding practices, breast engorgement and newborn feeding behaviour

SECTION 1: REVIEW RELATED TO INCIDENCE AND PREVALENCE OF BREAST PROBLEMS

A descriptive study was conducted to determine the prevalence of breast engorgement among 90 mothers at Saveetha hospital and Saveetha rural health centre in Tamilnadu. Result showed that prevalence of breast engorgement was 65%-75%among lactating mothers. Conclusion showed that breast engorgement is a big problem in lactating mothers that can lead to feeding difficulties, clogged milk ducts, poor milk letdown reflex, cracked nipples and inflammation of breast.[13]

A hospital based study was conducted on breastfeeding practices and problems among 112 postnatal mothers in KIMS Hubli, Hospital. The result showed that about forty percentage subjects initiated breast feeding within 1 hour of birth and more than fifty percentage of the infants received exclusive breast feeding. The major reasons for early weaning were low milk supply and undesirable growth of

baby and the most common cause of delay in initiation of breastfeeding were caesarian section and delivery complication .Only 27 (24.1%) babies were given pre-lacteal feed. Conclusion shown that information should be provided to mothers regarding breastfeeding.[6]

SECTION 2: REVIEW RELATED TO BREASTFEEDING PRACTICES AND EFFECTIVENSS OF LACTATION COUNSELLING/ HEALTH TEACHING ON BREASTFEEDING PRACTICES

A cross sectional study was done to determine the impact of lactation counselling on breast feeding practices among postnatal mothers in labour room and postnatal wards in Telangana. Results revealed that more (88 %) mothers in intervention group has started breastfeeding compared to control (67%). Support of family members & hospital staffs had positive impact on breastfeeding. 71% of intervention and 89 % mothers of control group felt breast feeding should be carried on two years and more.[14]

A randomized control trial carried out on “The effect of lactation counselling on breast feeding among 3rd trimester mothers admitting for delivery at SMS Medical College, Rajasthan.” A total no. of 2460 samples were taken in the study out of which 1230 put in control group and 1230 in study group. The study result showed that study group had early initiation, higher breast-feeding rates at discharge and follow up. The study concluded that the lactation counselling greatly affect the breastfeeding rates.[4]

An interventional study was carried out to assess efficacy of counselling on breast feeding practices among pregnant mothers. Result showed that there was significant increase in early initiation and exclusive breastfeeding since birth in study group than in control group. Majority of mothers at the end of 1st, third and all most all mothers at sixth month were practicing exclusive breastfeeding in case group. Exclusive breastfeeding was more in primiparous than in multiparous at end of 1st, 3rd and 6th month respectively. The study concluded that counselling had impact on early initiation of breastfeeding and on exclusive breastfeeding .[15]

A quasi-experimental study was conducted on effect of health education on breast feeding initiation techniques among postnatal mothers. Total 414 babies were taken by random sampling techniques. Results showed that there was improvement after health education related to positioning and attachment of the babies during breastfeeding. It was observed that overall body positioning was statistically significant ($p<0.001$) and 43.3% improvement was seen. The study concluded that health teaching on breastfeeding initiation techniques was significant.[16]

A study was conducted to determine the practices of breastfeeding among the lactating mothers in Patiala. Results showed that less than half of mothers started breastfeeding within an hour after birth. More than half of mothers had not given first milk while fifty percent mothers gave prelacteal feeds. Exclusive breastfeeding till 6 months was given by less than fifty percentage mothers. Conclusion showed that breastfeeding practices were not best; hence teaching regarding the right practices of breastfeeding was recommended.[17]

An interventional study was conducted to determine the effect of educational intervention on breastfeeding practices in tertiary care hospital, Gwalior Madhya Pradesh. The study results revealed that 76.8% mothers in study group and 10.56% in control group initiated breastfeeding early, 83% mothers were practicing exclusive breastfeeding compared to 63%, and 49% at 1st and 6 months in control group. Effect of counselling in study group for exclusive breastfeeding was more in primiparous (70.83% and 91.30%) than in multiparous (29.16% and 60.41%) at 1 and 6 months respectively. The study concluded that antenatal counselling was effective in improving exclusive breastfeeding.[30]

A cross-sectional study on breastfeeding practices was conducted among lactating mothers. Results revealed that eighty percentage show initiation of breastfeeding within 6 hours of delivery, half of mother's breastfed child on demand and 35.35% had breastfed every 2 hourly. 58.58% mothers had given only breastmilk till 6 months and 64.15% mothers gave first breast milk to their babies. Study concluded that the counselling should be continued after delivery of baby about newborn care, initiation of breastfeeding, advantages and duration of breastfeeding, importance of colostrum feeding and weaning.[18]

A descriptive study was carried out on knowledge and practice of colostrum and exclusive breast feeding at Puducherry. 50 mothers of children below 6 months were selected by using non probability convenient sampling technique. Results revealed that 15(30%), more than half and few mothers had adequate, moderate and inadequate knowledge regarding colostrum feeding and exclusive breast feeding, respectively. Around seventy percentage samples had fed the colostrum

and breastmilk in urban area and in rural area only few had fed the colostrum and breastmilk.[19]

SECTION 3: REVIEW RELATED TO EFFECTIVENESS OF LACTATION COUNSELLING ON BREAST ENGORGEMENT

A quasi experimental study was executed to determine effect of prenatal teaching on prevention of breast engorgement among sixty mothers in AIMS, Kochi. Convenience sampling technique was used to select the sample. The design used was pre-test post-test control group design. The result showed that the mean post-test knowledge level of study group was more than control group (20.76 v/s10.03). The study concluded that teaching had impact on prevention of engorgement.[20]

SECTION 4: REVIEW RELATED TO EFFECTIVENESS OF INTERVENTION PACKAGE FOR MANAGEMENT OF BREAST ENGORGEMENT.

A quasi-experimental study was conducted to determine effect of chilled cabbage leaves application on breast engorgement among forty post-natal mothers in selected hospital of Navi Mumbai. Subjects were selected by convenient sampling technique. The study revealed that there was a reduction in breast engorgement after intervention and statistically verified. The study concluded that application of chilled cabbage leaves are effective in reduction of breast engorgement.[21]

A quasi-experimental study carried out to compare the effect of cabbage leaves vs. hot and cold compresses in the treatment of breast engorgement at AIIMS, New Delhi. The study result showed that both hot & cold compression and cabbage

leaves were effective in reducing pain and breast engorgement. Cold cabbage leaves and hot & cold compression were both equally effective in decreasing breast engorgement, but application of hot & cold compresses was more effective than cold cabbage leaves.[22]

A study was conducted to determine the effectiveness of hospital based teaching programme on knowledge regarding home management for breast engorgement among postnatal mothers. Pre-experimental one group pretest and posttest design was adopted. 60 subjects were selected by purposive sampling technique. Result showed that the mean knowledge score in pre-test 8.2±1.7 was lesser than the post-test mean score 17.7±5.6. A significant difference was observed between postnatal mother's level of knowledge regarding home management for breast engorgement with their education and type of hospital visit. Conclusion showed hospital based teaching had impact on knowledge regarding home management for breast engorgement among postnatal mothers.[23]

A study on effectiveness of planned teaching on knowledge regarding prevention and management of selected breast complications was conducted among 50 antenatal mothers. Non probability convenience sampling technique was used. Result interpreted that in pretest, mean knowledge was 10.4 and in post-test 19.20 regarding prevention and management of selected breast complications. The study concluded that planned teaching had impact on knowledge of antenatal mothers regarding prevention and management of breast complications.[24]

A study was carried out to determine the efficacy of lactational counselling on knowledge of postnatal mothers regarding breast engorgement at Sree Balaji Medical College and hospital in Chennai. Pre-experimental, one group pretest post- test research design without control group was taken. 30 samples were taken using convenient sampling technique. Results revealed that in the pre-test, 10 post-natal mother had adequate knowledge, 11 post-natal mother had moderately adequate knowledge and 09 post-natal mother had inadequate knowledge regarding breast engorgement. And in post-test 10 post-natal mother had adequate knowledge, 11 post-natal mother had moderately adequate knowledge and 09 post-natal mother had inadequate knowledge regarding breast engorgement. Conclusion shown that counselling had impact on knowledge on breast engorgement.[25]

A quasi-experimental study was conducted to determine the efficacy of hot application along with breast massage on breast engorgement among 60 postnatal mothers. Result interpreted that there was reduction in breast engorgement after intervention. Thus the conclusion drawn that both hot application and breast massage were effective in reducing the breast engorgement.[28]

SECTION 5: REVIEW RELATED TO EFFECTIVENESS OF LACTATION COUNSELLING/HEALTH TEACHING ON LATCHING

A community-based cross-sectional study was carried out to assess the effect of latching and its impact on health status of the child among 1267 children at Ambala, Haryana. The study results revealed that only thirty percentage mothers

initiated breastfeeding within 1 hour of delivery. Mothers with high parity had better positioning scores as compared to mothers with low parity. Children who suffered from diarrhea and acute respiratory infection had poor positioning. The study concluded that mothers should be educated about latching.[9]

A descriptive study was done to assess knowledge and newborn feeding pattern regarding breast feeding among postnatal mother in Ambala, Haryana. 80 samples were taken by purposive sampling technique. The study results revealed nearly half of postnatal mothers initiated breastfeeding within one hour. More than half of the postnatal mothers were having below average level of knowledge regarding breastfeeding. Less than half babies had inadequate feeding pattern.[5]

SECTION 6: REVIEW RELATED TO EFFECTIVENESS OF LACTATION COUNSELLING/HEALTH TEACHING ON BREASTFEEDING PRACTICES, BREAST ENGORGEMENT AND NEWBORN FEEDING BEHAVIOUR

A systemic review on efficacy of lactational counselling on breast engorgement and new born feeding behaviour among postnatal mothers at Teerthanker Mahaveer College of Nursing, Moradabad. Comprehensive systematic search of published literature and journal articles from Pubmed, Ebsco, were used. Search strategy specific to each database was used. A data base search of articles published in various journals from 2002 to 2018 was included. These studies revealed that educating the mothers were effective in reducing the breast engorgement and improving the new born feeding behaviour among postnatal mothers.[26]

A study was carried out to assess the efficacy of counselling on newborn feeding behaviour and breast engorgement at Sri Ramachandra hospital. Nonequivalent quasi-experimental posttest control group design was adopted. 60 primigravidae were taken by purposive sampling technique. Result revealed that among primigravidae, the difference was significant. Thus the study proved that lactation counselling had an impact on newborn breastfeeding behaviour and breast engorgement.[11]

A quasi-experimental study was conducted to assess the effect of counselling and mobile phone support to maintain exclusive breastfeeding in the community after delivery at the Centre for Woman and Child Health, Savar, Bangladesh. The study results revealed that more than half infants were exclusively breastfed in the pre-intervention phase, whereas in intervention phase more than three fourths infants were exclusively breastfed. The study concluded that integration of hospital support and mobile phone counselling in the community retained higher rates of exclusive breastfeeding in the community.[27]

CHAPTER 3

METHODOLOGY

METHODOLOGY

For any research work the methodology of the investigation is of vital importance. Foundations of research are built and conducted over a structure called methodology and a valid study will always adapt encouraging research methodology.

Research methodology is a way to systematically solve research problems. It includes the steps, procedures and strategies for gathering and analyzing the data in a research investigation.

In this chapter, the researcher explains research approach, research design, setting, sample and sampling technique, data collection tool, content validity, ethical consideration, reliability of tool, pilot study, procedure for data collection and plan of data analysis and interpretation.

Research approach:

It is an important element of the research process which governs the research designs. It involves the description of the plan to investigate the phenomenon under which method is study carried out.

In the view of the nature of the problem and to accomplish objectives of the current study "Quantitative Research Approach" was considered appropriate.

Research Design:

A research design refers to the researcher's overall plan for obtaining answer to the researcher's questions for testing the research. It incorporates some of the most important methodology decisions that the researchers make in conducting in a research study.

For the present study, "Quasi-experimental Posttest Only Control Group Design" was considered appropriate as it aimed to assess effectiveness of prenatal lactation counselling on breastfeeding practices, breast engorgement and new-born feeding behaviour among postnatal mothers.

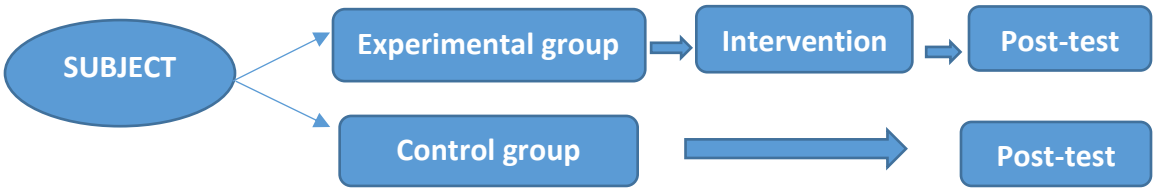

Figure 1: Schematic presentation of post-test only control group design

Study setting:

The selection of the appropriate setting of the study is important because the setting can influence the way people behave or feel and how they respond. The setting of the study is the physical location and conditions in which data collection take place in a study.

The current study was conducted at Antenatal OPD and postnatal ward of All India Institute of Medical Sciences, Jodhpur.

All India Institute of Medical Sciences (AIIMS), Jodhpur is a tertiary health care

institution of national importance with total bed strength of 960. On an average of 750 women visits to antenatal OPD and of 250 deliveries in a month before pandemic covid-19. After March 2020, around 20 antenatal women coming to OPD daily as telemedicine consultation facilities are provided by AIIMS, Jodhpur.

Population:

Population refers to the entire aggregation of cases that meets designated sets of criteria. The need for defining a population for a research project arises out of the requirements to specify the group to which the results of study can be applied. The target population for the present study were primigravidae women.

The accessible population of the current study comprised of the primigravidae women whose gestational age was 36 weeks or above seeking antenatal care at OPD of AIIMS, Jodhpur.

Variables:

A variable is any quality of an organism, group or event or environment that takes on different values. For the present study, demographic variables and research variables are used.

Demographic variables: Age (in years), education, occupation, religion, type of family.

Research Variables:

- Independent variable: in this study, the independent variable is prenatal lactation counselling.

- Dependent variable: In this study the dependent variables are breastfeeding practices, breast engorgement and newborn feeding behaviour among postnatal mothers.

Sample and Sampling Technique:

A sample is a subset of a population that is used to represent the entire group as a whole. “A sample is a small proportion of population selected for the observation and analysis”.[29]

In the present study, women who are primigravidae and who fulfilled the inclusion criteria were selected as a sample and were followed till 3rd postpartum day.

Sample size:

Sample size is calculated through comparison of two means in cases and control formula.[32]

n= $\{(SD_1)^2 + (SD_2)^2\}^2 \{Z_{1-\alpha/2} + Z_{1-\beta}\}^2 / d^2$

d = difference in means of two group (effect size=10.73)[20]

SD_1 - SD of Group 1 (3.232)

SD_2 = SD of Group 2 (2.69)

$Z_{1-\beta}$ = It is the desired power

$Z_{1-\alpha/2}$ = Critical value and a standard value for the corresponding level of confidence. (At 95% CI it is 1.96).

According to this formula, the sample size is 22. Therefore, considering certain attrition, the sample figure was rounded off to 30. So, a total sample size of 60 was selected, 30 samples in each experimental and control group.

Sampling technique:

Sampling is the process of selecting a representative segment of the population under study. Sampling is necessary because it is more economical and efficient to work with the small group of elements, it improves the quality of data and results in the precision and accuracy of data. It also helps in quick study results.

Sampling was done through non-probability consecutive sampling technique which enrolls all available subjects who fulfill the present inclusion criteria.

Criteria for sample selection:

These criteria specify the characteristics that people in the population must possess in order to be included in the study.[29]

It consists of two parts: -

Inclusion Criteria

Study includes:-

- The primigravidae women in the age group 18-35years with gestational age ≥36 weeks seeking antenatal care at Antenatal OPD AIIMS Jodhpur.
- Those who are planning to deliver at AIIMS Jodhpur.

Exclusion Criteria

Study excludes:-

- Mothers whose baby is admitted in NICU after delivery.
- Mothers with still born if any.
- Mother who end up in LSCS.

Development and description of tools:

The most important and crucial aspect of any investigation is the collection of the appropriate information, which provides necessary data for the study. The formal procedures researchers develop to guide the collection of data in a standardized fashion. The type of data collection required depends upon the nature of data to gather to answer the research questions.

Based on objectives of study, the following tools were used to obtain required information. The data was collected in 4 parts. (Annexure- VI)

Table 1: Description of tools

S.NO.	TOOL	PURPOSE	TECHNIQUE OF DATA COLLECTION
1.	Socio-demographic variables	To obtain the socio-demographic data.	Interview technique
2.	Breastfeeding practices checklist	To assess the breastfeeding practices	Interview technique
3.	Breast engorgement assessment scale (standardized scale)	To assess the breast engorgement.	Observation technique
4.	New born feeding behaviour assessment scale (IBFAT)	To assess the newborn feeding behaviour.	Observation technique

Part A: Demographic variables

The tool was developed by researcher to assess socio-demographic and obstetric data. It consist of 06 items seeking information on background data such as age, education, occupation, religion, duration of marriage, type of family and period of gestation. Instructions were given to the respondents and data was collected by researcher through interview technique. (Annexure-VI (Part-1))

PART B: Breastfeeding Practices checklist

The tool was developed by researcher to assess the breastfeeding practices. It consists of 15 questions. The question item no.2, 3, and 13 are negative response items and remaining items are positive response items. Right answer was scored as 1 and wrong answer scored as 0. Maximum possible score is 15 and minimum score is 0. Interview technique was used to ask the mother about expressed breastfeeding practices. (Annexure-VI (Part-2)).

The level of Breastfeeding Practice based on the practice scores was interpreted as:

Table 2: Interpretation of Level of Breastfeeding Practices

Level of practice	Score
Good	>75% (12-15)
Fair	50-75% (8-11)
Poor	<50% (0-7)

Part C: Breast engorgement assessment scale

Breast engorgement assessment scale is a standardized tool developed by Hill P.D. and Humenick to assess the breast engorgement. It is a 6 point breast engorgement scale. The highest score 6 indicates severe breast engorgement and minimum score 1 indicate that the mother is free from breast engorgement. The prior permission was taken to use this standardized scale (Annexure-VI (Part-3)). Observation technique was used to assess breast engorgement among postnatal mothers.

Part D: New born feeding behaviour assessment scale

New born feeding behaviour assessment scale (IBFAT- infant breastfeeding assessment scale) is a standardized tool developed by M. Kay Matthews. It is used to assess the feeding behaviour of newborn. IBFAT assigns a score, 0, 1, 2, or 3 to four factors. Scores range from 0 to 12. The score was interpreted as vigorous effective feeding (10-12), moderate effective feeding (7-9) and poor feeding (0-6). The prior permission was taken to use this standardized scale (Annexure- VI (Part-4)) .Observation technique was used to assess new born feeding behaviour.

Validity of tool:

Validity of instrument refers to the degree to which an instrument measures what it is supposed to be measuring.

The content validity of the tool was established by taking expert's opinion. A total of 7 experts' opinion was taken. The tool was circulated to medical and nursing faculty of Obstetrics and Gynaecology working in the Institute of National importance.

Self-structured breastfeeding practices checklist's content validity was determined by S-CVI/Avg (scale-level content validity index), (validity 1), which means tool was valid as validity S-CVI/Avg range from 0.9 to 1. Tools were found to be valid in terms of relevance, adequacy and appropriateness. (Annexure V)

Reliability of tool:

It is a degree of consistency and accuracy with which an instrument measures the attributes for which it is designed to measures. Self-structured expressed breastfeeding practice questionnaire tool's internal consistency was determined by Kuder Richardson 20 (reliability 0.75), that means tool was reliable as reliability range from 0.70 to 1. The inter-rater reliability of breast engorgement assessment scale (Hill P.D. And Humenick Breast Engorgement Scale) was 0.94 [34] and new born feeding behaviour assessment (M. Kay Matthews IBFAT scale) scale's inter-rater reliability was 0.91.[33]

The tools were found to be clear and understandable. There was no problem to assess the breastfeeding practices, breast engorgement and new-born feeding behaviour.

Ethical consideration:

Ethical aspects for the current study:

1) Ethical approval was taken from institutional ethical committee AIIMS Jodhpur. (Certificate reference no.- AIIMS/IEC/2020-21/3003) Dated: 12/10/2020. (ANNEXURE- 1)

2) Informed consent was obtained from each study subjects involved in the study.

3) All the study subject were informed about their participation in the research, objectives of the study, duration of their involvement and probable use of findings of the study.
4) Confidentiality of data was maintained and the study subjects were given full autonomy to withdraw from the study at any time.

Pilot study:

Pilot study was conducted among 10 primigravidae (5 in each group) with gestational age ≥36 weeks seeking antenatal care at Antenatal OPD AIIMS Jodhpur from 07/09/2020 to 21/09/2020. The study subjects were approached and explained about purposes of study. Data were collected on the 3rd postnatal day in postnatal ward using breastfeeding practices checklist, breast engorgement scale and newborn feeding behaviour assessment tool, respectively. Data was collected from interview and observation method. Data were analyzed using descriptive and inferential statistics. Result of the pilot study indicated that study was found feasible, practical and counselling session were understandable to primigravidae. Average 10-15 minutes were taken to collect data from each mother. These mothers were excluded during main data collection of the study.

Due to covid-19 pandemic, difficulty was faced in enrolling the mothers for pilot study.

Data collection procedure:

Step 1:

- The formal permission was obtained to conduct the study from the concerned authorities of the institute. Data collection was carried out from 22/09/2020 to 15/12/2020. After explaining about the purpose of study, consent was obtained from participants who fulfill inclusion criteria of the study. Sample was selected through consecutive sampling technique.
- Then, participants were allotted to experimental group first and then control group to avoid contamination of the study subjects.
- Data collection procedure was explained to each participant of the study. Confidentiality of the data was ensured to all participants.

Step 2: The researcher collected data related to socio-demographic variables by interview technique in experimental and control group.

Step 3: Prenatal lactation counselling was provided to primigravidae women in experimental group. Individual counselling technique was followed in which one mother was counselled at a time. Researcher had counselled the mother in experimental group regarding anatomy and physiology of breast, importance of breastfeeding, breastfeeding practices, breastfeeding techniques including baby's positioning, latching (attachment), , and breastfeeding positions (sitting positions include cradle hold, cross-over hold, football hold) and side-lying position and newborn feeding behaviour, prevention and management of breast engorgement (hot and cold application, application of cabbage leaves, massage and expression

of milk) in 2 sessions of 30 minutes one week apart (in person/video call). After completion of the session, opportunity was provided to each study participant in the experimental group to clarify their doubts. For control group, the participants had followed routine schedule of care.

Step 4: After delivery, mothers in experimental and control group were assessed for breastfeeding practices, breast engorgement, and new born feeding behaviour on 3rd postpartum day.

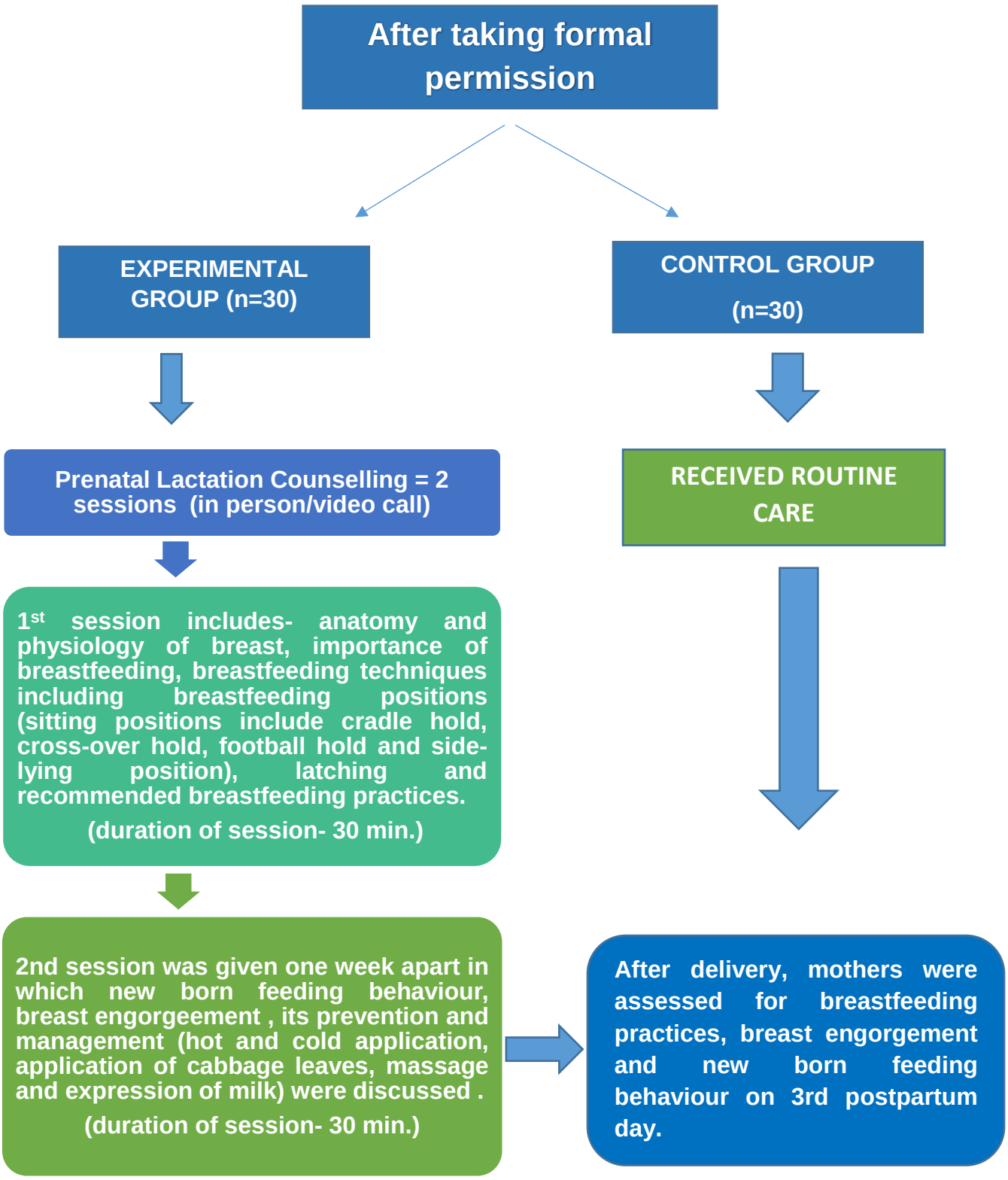

FIGURE 2 : Schematic presentation of data collection procedure.

Plan for data analysis:

Data analysis is the schematic organization and synthesis of research data and the testing of research objectives using those data. It was planned to analyze the data on the basis of objectives.

The following plan of analysis was developed with opinion of experts based on the objectives of the study:

Descriptive statistics: Mean, frequency and percentage, standard deviation used to describe the sample characteristics, breastfeeding practices, breast engorgement and new born feeding behaviour.

Inferential statistics: t-test was used to determine the significant difference between the means of breastfeeding practices score, breast engorgement score, new born feeding behaviour score in experimental and control group. Chi-square test and Fisher-exact test used to determine the association of breastfeeding practices, breast engorgement and new born feeding behaviour with socio-demographic variables in both experimental and control group.

Summary

The research methodology gives an overview of entire process taking a research problem in scientific and systematic manner. This chapter dealt with the methodology adopted for the study. It included research approach, research design, variables under study, population, setting, sample and sampling technique, description and development of tool, content validity, reliability, ethical consideration, pilot study, procedure for data collection and plan for data analysis.

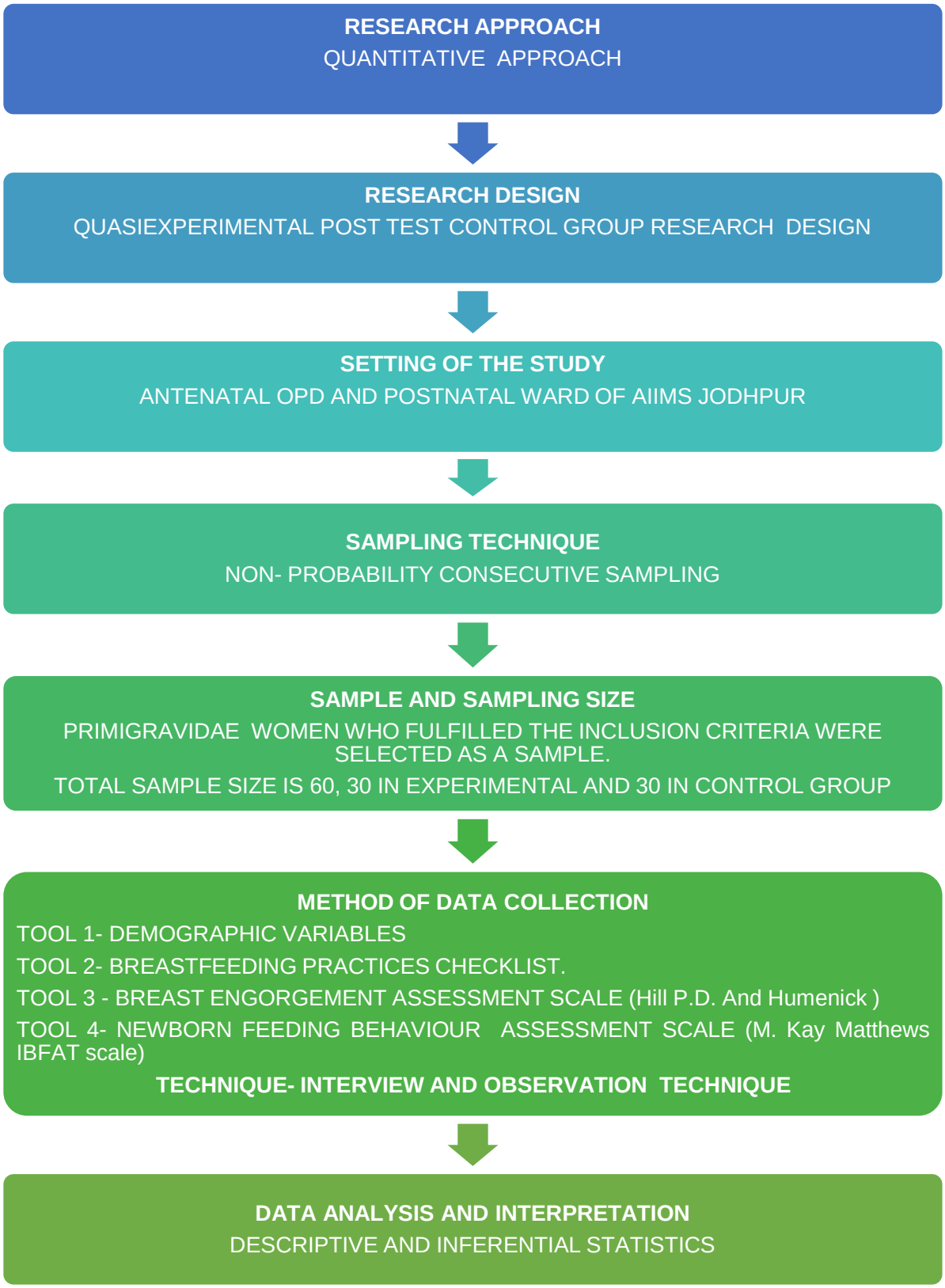

FIGURE 3: Schematic presentation of research methodology

CHAPTER- 4

ANALYSIS, INTERPRETATION AND DISCUSSION

Analysis, Interpretation and Discussion

This chapter deals with the result & discussion based upon analysis of data. Analysis and interpretation of data is the important phase of research process which involves the computation of certain measures along with searching for patterns of relationships that exist among data groups. The purpose of the data analysis is to reduce data to an understandable and interpretable form so that the results obtained can be examined and interpreted. Analysis and interpretation of data was done in accordance with objectives of the study. Analysis and interpretation of the data includes compilation, editing, coding, classification and presentation of data.

Data analysis is the systematic organization and synthesis of research data and testing of research hypothesis. Interpretation is the process of making sense of the results of the study and examining their implications.

The analysis is based on the following objectives of the study:-

The objectives of study were:

- To assess and compare breastfeeding practices among postnatal mothers in experimental and control group.
- To assess and compare breast engorgement among postnatal mothers in experimental and control group.
- To assess and compare new born feeding behaviour among postnatal mothers in experimental and control group.

- To determine the association of breastfeeding practices, breast engorgement and new born feeding behaviour with selected demographic variables of postnatal mothers.

Organization and presentation of data:

Data was collected from postnatal mothers regarding breastfeeding practices, breast engorgement and new born feeding behaviour. All data was tabulated and summarized in the Microsoft excel sheets and analyzed & interpreted by employing descriptive and inferential statistics. The p-value <0.05 was considered as significant in the present study.

The analysis of data is presented in the following sections:

Section I: Description of sample characteristics.

Section II: Assessment and comparison of breastfeeding practices among postnatal mothers in experimental and control group.

Section III: Assessment and comparison of Breast engorgement among postnatal mothers in experimental and control group.

Section IV: Assessment and comparison of Newborn feeding behaviour among postnatal mothers in experimental and control group.

Section V: Association of breastfeeding practices, breast engorgement and newborn feeding behaviour among postnatal mothers with selected demographic variables in experimental and control group.

Section 1: Description of sample characteristics

The samples were drawn from primigravidae mothers whose gestation is ≥ 36 weeks at AIIMS, Jodhpur. The sample consists of 60 primigravidae mothers. The sample characteristics are described in terms of age, education, occupation, religion, duration of marriage and type of family. Data was tabulated and analyzed to obtained frequency and percentage distribution.

Table 3: Frequency and percentage distribution of sample characteristics based on demographic variables in experimental and control group.

N=60

Demographic variables	Experimental group f (%) (n=30)	Control group f (%) (n=30)	χ^2 CHI-SQUARE	p-value
AGE (Years)				
18-25	15(50)	18(60)		
26-35	15(50)	12 (40)	0.606	0.43^{NS}
Mean±SD	(25.63±3.24)	(24.7±2.49)		
EDUCATION				
No formal education	1(3.3)	1(3.3)		
Till Secondary	5(6.7)	11(36.7)	6.535	0.08^{NS}
Graduate	9(30)	12(40)		
Post-graduate	15(60)	6(20)		
OCCUPATION				
Homemaker	25(83.4)	27(90)		
Job	5(16.6)	3(10)	0.576	0.44^{NS}
RELIGION				
Hindu	24(80)	30(100)		
Muslim	3(10)	----	--------	
Any other	3(10)	----		
DURATIONOF MARRIAGE (Years)				
<1	5(16.7)	3(10)		
1-3	16(53.3)	17(56.7)	1.1136	0.77^{NS}
3-5	7(23.3)	9(30)		
>5	2(6.7)	1(3.3)		
TYPE OF FAMILY				
Nuclear	3(10)	2(6.7)		
Joint	25(83.3)	24(80)	0.887	0.64^{NS}
Extended	2(6.7)	4(13.3)		

*NOTE- level of significance p<0.05, NS - non significant, *- significant*

Data presented in table 3 revealed that the half of the samples (50%) in experimental group and 60% samples in control group belonged to the age group of 18-25years and mean age in experimental and control group were 25.63 and 24.7 years, respectively. More than half of the samples (60%) in experimental group were post-graduated, whereas in control group 40% of the samples were

graduated. Majority of samples (83.3%) in experimental group and 90% samples in control group were homemaker. Majority of samples (80%) in experimental group were Hindu, whereas in control group all of them (100%) were Hindu. More than half of samples (53.7%) in experimental group and 56.7% samples in control group were having duration of marriage 1-3 years. Majority of samples (83.3%) in experimental group and 80% samples in control group were having joint family. Chi-square was computed for experimental and control group subjects to determine both groups are similar in sample characteristics before the administration of intervention. The findings revealed that both groups were similar in sample characteristics.

OBSTETRIC DETAILS:

TABLE 4: Frequency and percentage distribution of primigarvidae women's gestation age in experimental and control group

Gestational age in weeks	Experimental group (f) (%) (n=30)	Control group (f) (%) (n=30)
a. 36-37 weeks	17(56.7)	1(3.3)
b. 37weeks+1day-38 weeks	11(36.7)	11(36.7)
c. 38weeks+1day-40 weeks	2(6.7%)	18(60)
Mean±SD	(37.19±0.65)	(38.41±0.80)

Data presented in table 4 depicts that more than half of samples (56.7%) in experimental group were in the gestational age group 36-37 weeks and 60% of the samples in control group were in the gestational age group 38-40 weeks, and mean gestation age score in experimental and control group were 37.19 and 38.41, respectively.

Section II: Assessment and comparison of breastfeeding practices among postnatal mothers in experimental and control group.

Objective:

To assess and compare breastfeeding practices among postnatal mothers in experimental and control group.

Hypothesis:

$H0_1$: There is no significant difference in breastfeeding practices among postnatal mothers in experimental and control group.

TABLE 5: Frequency and percentage distribution of breastfeeding practices in experimental and control group

N=60

S. no.	Items	Experimental (n=30) f(%) Yes	Control (n=30) f(%) Yes
1.	Did you Initiate breastfeeding within one hour?	22(73.3%)	13(43.3%)
2.	Did you discard the colostrum?	0	6(20%)
3.	Did you give ghutti, honey, plain water, sugar water or any other milk to your baby?	6(20%)	15(30%)
4.	Do you remain calm and relax while breastfeeding your baby?	22(73.3%)	21(70%)
5.	Do you breastfeed your baby every 2 hours?	30(100%)	23(76.6%)
6.	Do you breastfeed your baby on demand during day and night?	29(96.6%)	19 (63.3%)
7.	Do you allow the baby to feed on one breast till baby stops sucking and releases the breast?	28 (93.3%)	19 (63.3%)
8.	Do you offer the other breast for the next feed?	30(100%)	29(96.6%)
9.	Do you ensure the baby's mouth widen and majority of areola is inside the baby's mouth while breastfeeding?	26(86.6%)	10(33.3%)
10.	Do you burp the baby immediately after breastfeeding?	23(76.6%)	11(36.7%)
11	Do you clean your breasts each time before and after feeding the baby?	5(16.6%)	0
12.	Do you keep the baby's head, neck, and body in the same plane?	20(66.6%)	13(43.3%)
13.	Do you use artificial pacifiers or teats for your baby?	0	0
14.	Does the baby able to establish effective sucking pattern on both breasts (initial rapid sucks then slower sucks with pauses)?	28(93.3%)	16(53.3%)
15.	Do you monitor the urine frequency and pattern of sleep after each feed to assess the adequacy of milk intake?	18(60%)	12(40%)

Table 5 describes the itemwise details of breastfeeding practices in experimental and control group. 73.3% mothers in experimental group and 30% in control group

initiated breastfeeding within in one hour. No one had discarded the colostrum in experimental group. More than half (73.3%) mothers in experimental group and 70% mothers in control group remained calm and relax while breastfeeding the baby. All of the mother in experimental group and 76.6% mothers in control group breastfed their baby in every two hours. All most all of the mother (96.6%) in experimental group and more than half (63.3%) in control group breastfed the baby on demand during day and night. All most all of the mother (93.3%) in experimental group allowed the baby to feed on one breast till baby stops sucking and releases the breast.

All of the mother in experimental group and all most all of the mother (96.6%) in control group offered the other breast for the next feed. 86.6% mothers in experimental ensured the baby's mouth widen and majority of areola is inside the baby's mouth while breastfeeding. More than half (76.6%) mothers in experimental group burped the baby immediately after breastfeeding. More than half (66.6%) mothers in experimental group kept the baby's head, neck, and body in the same plane. None of the mothers in both groups used artificial pacifiers or teats for their baby. All most all of the baby (93.3%) in experimental group were able to establish effective sucking pattern on both breasts (initial rapid sucks then slower sucks with pauses).

Table 6: Assessment and comparison of breastfeeding practices in experimental and control group.

N=60

Level of Breastfeeding practice (score)	Experimental group (n=30)		Control group (n=30)		df	t-value	p-value
	f (%)	Mean ± SD	f (%)	Mean ± SD			
POOR (<8)	1 (3.3%)	11.83 ±2.46	14 (46.6%)	6.7 ± 3.04	58	7.18	0.00*
FAIR (8-11)	10 (33.3%)		16 (53.4%)				
GOOD (>11)	19 (63.4%)		0				

Maximum score – 15, Minimum score - 0

*NOTE- level of significance p<0.05, NS - non significant, *- significant*

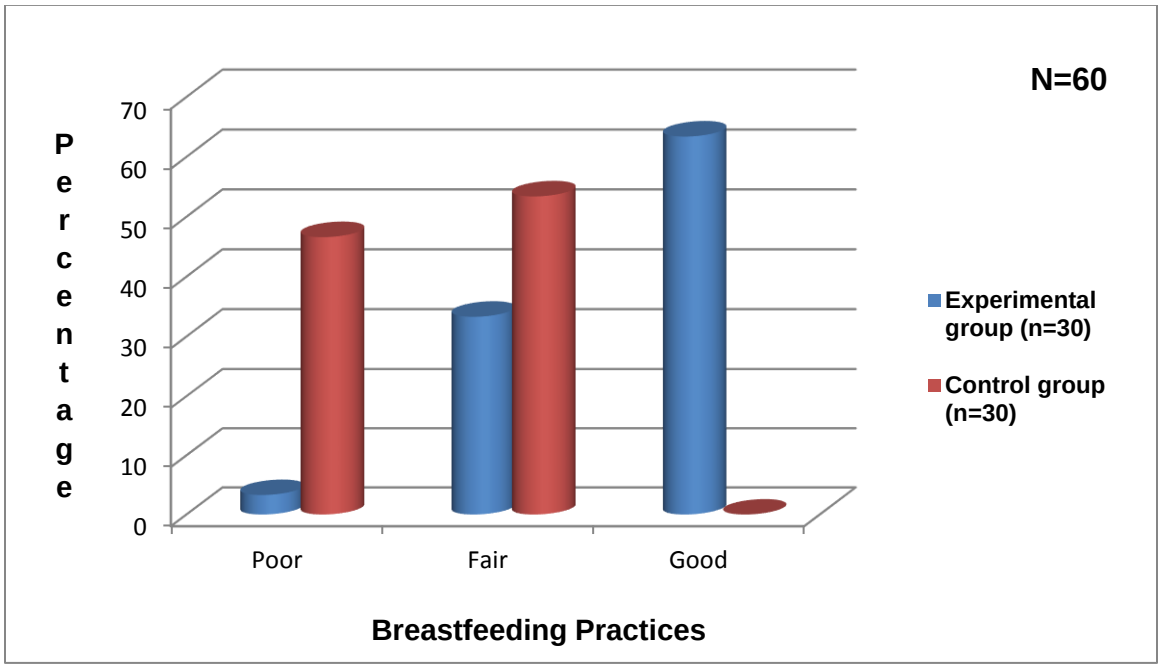

Figure 4: **Level of breastfeeding practices in experimental and control group**

Data presented in table 6 and figure 4 depict, 63.4% mothers had good breastfeeding practices, 33.3% mothers had fair breastfeeding practices and 3.3% mothers had poor breastfeeding practices in experimental group and whereas in control group, 53.4% mothers had fair breastfeeding practices, 46.4% mothers had

poor breastfeeding practices and none of mother had good breastfeeding practices. The mean breastfeeding practices score is higher in experimental group (11.83±2.46) as compared to (6.7 ± 3.04) in the control group. For testing the hypothesis, unpaired t-test was used and findings revealed that there was a highly significant difference observed between the experimental and control breastfeeding practices score ($t=7.18$, $p<0.05$). Hence researcher rejected the null hypothesis and concluded that prenatal lactation counselling was effective in improving breastfeeding practices among postnatal mothers in experimental group.

Section III: Assessment and comparison of breast engorgement among postnatal mothers in experimental and control group

Objective:

To assess and compare breast engorgement among postnatal mothers in experimental and control group.

Hypothesis:

$H0_2$: There is no significant difference in breast engorgement among postnatal mothers in experimental and control group.

Table 7: Assessment and Comparison of breast engorgement in experimental and control group.

N=60

Breast engorgement Score (1-6)	Experimental group (N=30) f (%)	Mean ± SD	Control group (N=30) f (%)	Mean ± SD	df	t-value	p-value
Free from breast engorgement (1)	22 (73.4%)	1.4±1.5	13 (43.3%)	2.4±1.7	58	2.41	0.01*
With breast engorgement (2-6)	08 (26.6%)		17(56.7%)				

*NOTE- level of significance p<0.05, NS - non significant, *- significant*

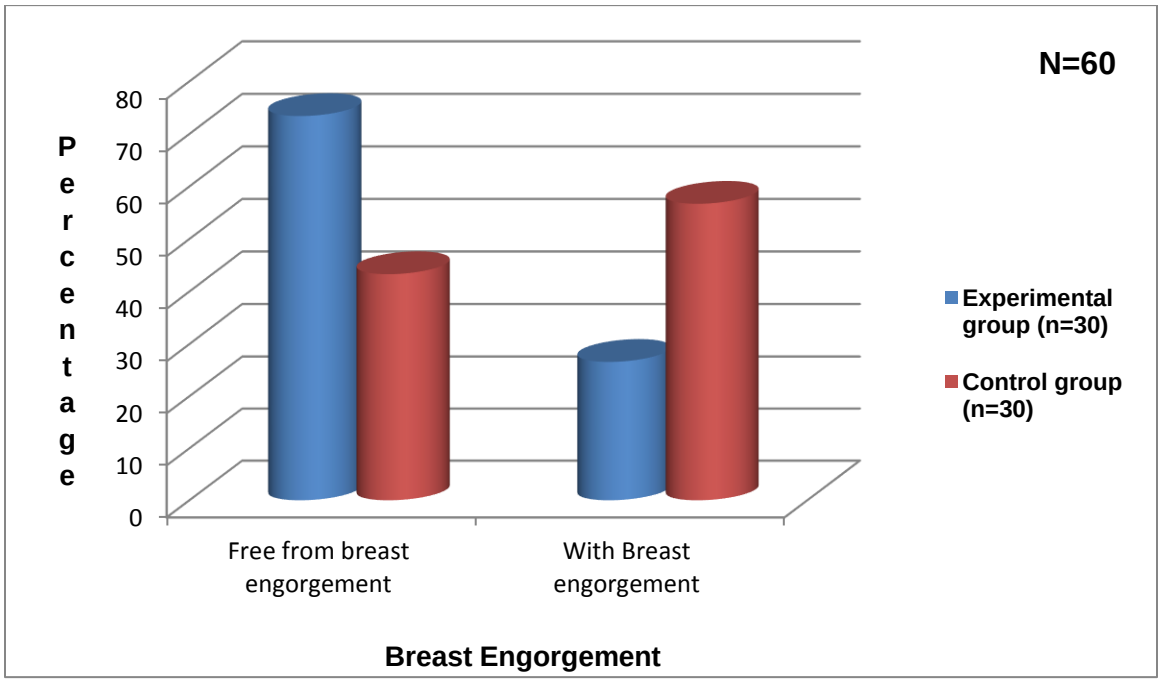

Figure 5: Level of Breast engorgement in experimental and control group

Data presented in table 7 and figure 5 depict, In experimental group, 73.4% mothers had no breast engorgement, 26.7% mothers had breast engorgement and

whereas in control group 56.7% mothers had breast engorgement, 43.3% mothers had no breast engorgement. The table shows that the mean score (1.4±1.5 vs 2.4±1.7) is lower in experimental group than control group. The mean breast engorgement score (2.4±1.7) conclude that more mothers had breast engorgement in control group. For testing the hypothesis, an unpaired t-test was used and findings revealed that there was a significant difference observed between the experimental and control group ($t=2.41$, $p<0.05$). Hence researcher rejected the null hypothesis and concluded that prenatal lactation counselling was effective in reducing breast engorgement among postnatal mothers.

Section IV: Assessment and comparison of newborn feeding behaviour among postnatal mothers in experimental and control group

Objective:

To assess and compare newborn feeding behaviour among postnatal mothers in experimental and control group.

Hypothesis:

$H0_3$: There is no significant difference in newborn feeding behaviour among postnatal mothers in experimental and control group.

Table 8: Assessment and comparison of newborn feeding behaviour among experimental and control group

N=60

New born feeding behaviour	Experimental (n=30)		Control (n=30)		df	t-value	p-value
	f(%)	Mean ± SD	f(%)	Mean ±SD			
Poor feeding (0-6)	2(6.6%)		10 (33.3%)				
Moderate effective feeding (7-9)	8(26.7%)	9.66 ±2.24	19(63.4%)	6.43 ±2.52	58	5.24	0.00*
Vigorous effective Feeding (10-12)	20 (66.7%)		1 (3.3%)				

*NOTE- level of significance p<0.05, NS - non significant, *- significant*

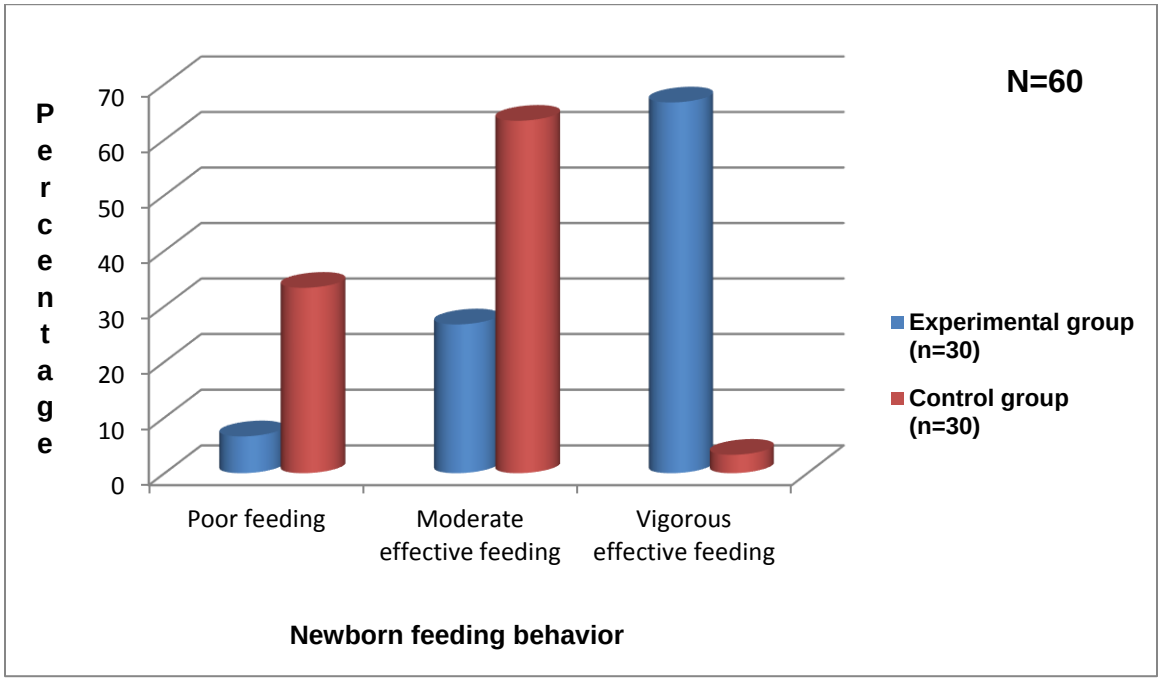

Figure 6: Level of newborn feeding behaviour in experimental and control group.

Data presented in table 8 and figure 6 depict that in experimental group, 66.7% newborns had vigorous feeding, 26.6% had moderate effective feeding and 6.7% had poor effective feeding and whereas in control group, 63.4% had moderate effective feeding, 33.3% newborns had poor feeding, and 3.3% had vigorous effective feeding. The mean feeding behaviour score in experimental group (9.66±2.24) is higher as compared to mean feeding behaviour score (6.43±2.52) in control group. For testing the hypothesis, an unpaired t-test was used and findings revealed that there was a highly significant difference observed between new born feeding behaviour score in experimental and control group ($t=5.24$, $p<0.05$). Hence, researcher rejected the null hypothesis and concluded that prenatal lactation counselling was effective in improving new born feeding behaviour among postnatal mothers in experimental group.

Section V: Association of breastfeeding practices, breast engorgement and newborn feeding behaviour among postnatal mothers with selected demographic variables in experimental and control group.

Objective:

To determine the association of breastfeeding practices, breast engorgement and newborn feeding behaviour with selected demographic variables of postnatal mothers.

TABLE-9: Association of expressed breastfeeding practices score among postnatal mothers with selected demographic variables.

N=60

Demographic variables	Expressed breastfeeding practice score (experimental) (n=30)		Df/chi-square/ fisher test /p-value	Expressed breastfeeding practice score (control) (n=30)		Df/chi-square/ fisher test /p-value
	Fair (8-11) (f)	Good (>11) (f)		Poor (<8) (f)	Fair (8-11) (f)	
Age[#](years)			1	9	9	1
18-25	6	9	0.144	5	7	0.201
26-35	5	11	1.00[NS]			0.72[NS]
Gestational age in weeks						
36-37 weeks	5	12	2	1	0	
37 weeks+1 day – 38 weeks	5	6	1.235 0.616[NS]	3	8	2 3.224
38 weeks +1 day – 40 weeks	1	1		10	8	0.18[NS]
Education						
No formal	1	0		1	0	
education	2	3	3	5	6	3
Till Secondary	4	5	2.67	5	7	1.364
Graduate	4	11	0.43[NS]	3	3	0.94[NS]
Post-graduation						
Occupation[#]						
Housemaker	10	15	1	13	14	1
Job	1	4	0.718 0.62[NS]	1	2	0.238 1.00[NS]
Religion:						
Hindu	9	15	2	14	16	
Muslim	0	3	2.538	--	--	---
Any other	2	1	0.32[NS]	--	--	
Duration of marriage(years)						
<1	1	4	3	1	2	3
1-3	6	10	2.573	9	8	1.454
3-5	4	3	0.47[NS]	4	5	1.00[NS]
>5	0	2		0	1	
Type of family						
Nuclear	1	2	2	0	2	2
Joint	9	16	0.624	10	14	5.862
Extended	1	1	1.0[NS]	4	0	0.03*

*NOTE- level of significance p<0.05, NS - non significant, *- significant, # - chi-square test*

NOTE: Good score has been removed while finding out the association with demographic variables in control group as there was no subject in the good score category and Fair and poor score clubbed together as only one sample had poor breastfeeding practices in experimental group.

Table 9 depicts none of the demographic variables were significantly associated with breastfeeding practices in experimental group at $p<0.05$ level of significance and none of the demographic variables were significantly associated with breastfeeding practices except type of family in control group at $p<0.05$ level of significance. Thus, the null hypothesis was partially rejected.

TABLE-10: Association of breast engorgement score among postnatal mothers with selected demographical variables of experimental and control group.

N=60

Demo Graphic Variables	Breast engorgement score (experimental) (n=30)		df/ fisher -exact test/p -value	Breast engorgement score (control) (n=30)		df/ fisher-exact test /p-value
	Free from breast engorgement (1) (f)	With breast engorgement (2-6) (f)		Free from breast engorgement (1)(f)	With breast engorgement (2-6)(f)	
Age*(years)*						
18-25	13	2	1	6	12	1
26-35	09	6	2.727 0.21^{NS}	7	5	1.833 0.264^{NS}
Gestational age in weeks						
36-37 weeks	12	5	2	0	1	2
37 weeks+1 day – 38 weeks	8	3	0.557 1.00^{NS}	4 9	7 9	1.266 0.83^{NS}
38 weeks +1 day – 40 weeks	2	0				
Education						
Illiterate	0	1		1	0	
Till Secondary	4	1	3	3	8	3
Graduate	7	2	2.610	6	6	2.767
Post-graduation	11	4	0.52^{NS}	3	3	0.46^{NS}
Occupation						
Homemaker	17	8	1	12	15	1
Job	5	0	2.182 0.28^{NS}	1	2	0.136 1.00^{NS}
Religion						
Hindu	18	6	2	13	17	
Muslim	3	0	2.962	--	--	
Any other	1	2	0.31^{NS}	--	--	----
Duration of marriage(year)						
<1	4	1	3	2	1	3
1-3	13	3	1.584	4	13	6.565
3-5	4	3	0.79^{NS}	6	3	0.04*
>5	1	1		1	0	
Type of family						
Nuclear	2	1	2	2	0	2
Joint	19	6	3.799	11	13	5.018
Extended	1	1	0.13^{NS}	0	4	0.06^{NS}

*NOTE- level of significance p<0.05, NS - non significant, *- significant*

Table 10 shows that none of the demographic variables were significantly associated with breast engorgement in experimental group at $p<0.05$ level of significance and none of the demographic variables were significantly associated with breast engorgement in control group at $p<0.05$ level of significance except duration of marriage. Thus, the null hypothesis was partially rejected.

TABLE-11: Association of newborn feeding behaviour among postnatal mothers with selected demographic variables.

N=60

Demographic Variables	Newborn feeding behaviour (experimental) N=30			df/fisher-test /p-value	Newborn feeding behaviour (control) n=30			df/ fisher-test /p-value
	Poor effective feeding (0-6)	Moderate effective feeding (7-9)	Vigorous effective feeding (10-12)		Poor effective feeding (0-6)	Moderate effective feeding (7-9)	vigorous effective feeding (10-12)	
***Age**:*								
18-25years	0	5	10	2	6	12	0	2
26-35years	2	3	10	2.145 0.43^{NS}	4	7	1	1.535 0.54^{NS}
Gestational age in weeks								
36-37 weeks	2	0	15		1	0	0	
37 weeks+1 day – 38 weeks	0	7	4	4 15.713 0.00*	4	6	1	4 5.614 0.27^{NS}
38 weeks +1 day – 40 weeks	0	1	1		5	13	0	
Education								
No formal education	0	0	1	6	0	1	0	6
Till Secondary	0	2	3	4.323 0.79^{NS}	4	7	0	6.245 0.54^{NS}
Graduate	1	1	7		5	6	0	
Post-graduation	1	5	9		1	5	1	
Occupation								
Homemaker	1	7	17	2	8	18	1	2
Job	1	1	3	2.0170 .50^{NS}	2	1	0	2.41 0.34^{NS}
Religion:								
Hindu	2	5	17	4	10	19	0	
Muslim	0	1	2	3.628	0	0	0	
Any other	0	2	1	0.58^{NS}	0	0	0	
Duration of marriage								
<1 year	0	2	3	6	0	3	0	6
1-3 year	0	3	13	9.133	7	10	0	6.618
3-5 year	1	2	4	0.09^{NS}	3	5	1	0.54^{NS}
>5 year	1	1	0		0	1	0	
Type of family								
Nuclear	0	1	2	4	0	1	1	4
Joint	2	6	17	2.314	7	17	0	9.609
Extended	0	1	1	0.83^{NS}	3	1	0	0.02*

*NOTE- level of significance p<0.05, NS - non significant, *- significant*

Table 11 clearly reveals that none of the demographic variables were significantly associated with newborn feeding behaviour except gestation age in experimental group at $p<0.05$ level of significance And none of the demographic variables were significantly associated with newborn feeding behaviour except type of family in control group at $p<0.05$ level of significance. Thus, the null hypothesis was partially rejected.

MAJOR FINDINGS OF THE STUDY: -

- Half of the samples (50%) in experimental group and 60% samples in control group were belonged to the age group of 18-25years. More than half of samples (56.7%) in experimental group were in the gestational age group 36-37 weeks and 60% of the samples in control group were in the gestational age group 38-40 weeks. All most half of the samples (60%) in experimental group were post-graduated, whereas in control group 40% of the samples were graduated. Majority of samples (83.3%) in experimental group and 90% samples in control group were homemaker. Majority of samples (80%) in experimental group were Hindu, whereas in control group all of them (100%) were Hindu. More than half of samples (53.7%) in experimental group and 56.7% samples in control group were having duration of marriage 1-3 years. Majority of samples (83.3%) in experimental group and 80% samples in control group were have joint family.
- 63.4% mothers had good breastfeeding practices, 33.3% mothers had fair breastfeeding practices and 3.3% mothers had poor breastfeeding practices in experimental group and whereas in control group, 53.4% mothers had fair

breastfeeding practices, 46.6% mothers had poor breastfeeding practices and none of mother had good breastfeeding practices.

- In experimental group, 73.4% mothers had no breast engorgement, 26.6% mothers had breast engorgement and whereas in control group 56.7% mothers had breast engorgement, 43.3% mothers had no breast engorgement.
- In experimental group, 66.7% newborns had vigorous feeding, 26.6% had moderate effective feeding and 6.7% had poor effective feeding and whereas in control group, 63.4% had moderate effective feeding, 33.3% newborns had poor feeding, and 3.3% had vigorous effective feeding.

Findings related to association of breastfeeding practices, breast engorgement and new born feeding behaviour with selected socio-demographic variables.

- None of the demographic variables were significantly associated with breastfeeding practices, breast engorgement and newborn feeding behaviour in experimental group whereas in control group none of the demographic variables were significantly associated with breastfeeding practices and newborn feeding behaviour except type of family at p value 0.03 and 0.02, respectively while breast engorgement was significantly associated with duration of marriage at p value 0.04.

DISCUSSION

Discussion is organized based on objectives, hypothesis and findings of the studies. The main objective of the study was to find out the effect of prenatal lactation counselling on breastfeeding practices, breast engorgement and newborn feeding behaviour among postnatal mothers. The study was carried out at antenatal OPD and postnatal ward, All India institute of Medical Sciences, Jodhpur among 60 primigravidae mothers, 30 in each group.

The study presented that, half of the samples and 60% samples in experimental and control group respectively, were belonged to the age group of 21-25years and 83.3% samples in experimental and 90% samples in control group were homemaker, a similar study conducted in that 53.3% samples in experimental group and 50% in control group were in the age group of 23-27 years and 83.3% samples in experimental and 90% samples in control group were homemaker.[11] A similar study conducted by **Mise P, etal.** reported that majority (93%) of the samples were in the age group of 21-30 years, 96.2% were Hindu and 93.1% were homemakers in experimental group.[6]

Current study findings reported that 73.3% and 43.3% primigravidae in experimental and control group respectively, initiated breastfeeding within one hour. These study results are consistent with study conducted by **Das G., etal**, where 76.8% mothers initiated breastfeeding early in experimental group and 10.56% in control group.[30] Also similar study reported by **Mohd Junaid, Patel J.** showed that 78.28% mothers initiated breastfeeding early.[23] **Kannaiah B, etal** reported that early initiation of breastfeeding was observed in 88% mothers in

intervention group compared to 67% in control group.[20] A study conducted by **Gupta A, etal** showed that 73.4% mothers in intervention and 33.6% in control group initiated breastfeeding within first hour of birth.[31]

Present study findings reported that 73.3% mothers initiated breastfeeding within one hour, all of them gave colostrum, only 20% gave prelacteal feeds, 86.6% had good attachment and 76.6% burped the baby immediately after feeding in experimental group. A similar study conducted by **Chethana K, etal**. showed that 60.7% mothers initiated breastfeeding within one hour, 95.3% mothers had given colostrum, 25.2% gave prelacteal feeds, 85% had good attachment and 84.1% practiced burping after feeding who received antenatal counselling.[35]

The current study presented that 63.4% mothers had good breastfeeding practices, 33.3% mothers had fair and 3.3% mothers had poor breastfeeding practices in experimental group. A similar study conducted by **Thomas S, etal** that showed that 85% had reported good breastfeeding practices, 14% had average breastfeeding practices and no one had poor breastfeeding practices in post-test in interventional group.[36]

Present study showed that prenatal lactation counselling was effective in reducing breast engorgement (p=0.00), and 56.7% mothers had breast engorgement in control group whereas in experimental group only 26.7% had breast engorgement, similar findings were reported by **Padmasree S.R., etal,** showed that the 63.3% of the mothers had breast engorgement in control group whereas in study group was 13.3%, that showed in experimental group significant decrease in occurrence of breast engorgement (p=0.00).[14]

The present study findings states that 33.3% newborns had poor feeding behaviour in control which is consistent with the findings of the study conducted by **Devi S., etal** that showed 47.5% babies had inadequate feeding pattern.[5]

The present study result concluded that prenatal lactation counselling was effective in reducing breast engorgement, new born feeding behaviour among postnatal mothers in experimental group ($p<0.05$). A similar study was conducted by **Reena, etal**. , showed that all mothers were free from breast engorgement on 3rd postnatal day (p-0.000) and adequate newborn feeding behaviour (p=0.000) on 3rd postnatal day in experimental group.[11]

Summary:

This chapter dealt with analysis and interpretation of data, major findings of the study and discussion.

CHAPTER 5

SUMMARY, CONCLUSION AND RECOMMENDATION

SUMMARY, CONCLUSION AND RECOMMENDATION

This chapter gives a brief account of the present study including conclusion from the findings, limitations, implications of the study and recommendation for the future research.

SUMMARY:

The present study was conducted to assess the effectiveness of prenatal lactation counselling on breastfeeding practices, breast engorgement and newborn feeding behaviour among postnatal mothers. A Quasi- Experiment Posttest only control group research design was chosen for the study. The primigravidae in the age group 18-35years with gestational age ≥36 weeks seeking antenatal care at Antenatal OPD AIIMS Jodhpur were selected by consecutive sampling technique. The study group received two lactation counselling sessions of 30 minutes each one week apart (in person/video call), whereas control group received the routine care. Breastfeeding practices, breast engorgement and newborn feeding behaviour were assessed on the 3rd postnatal day using breastfeeding practices checklist, breast engorgement scale and newborn feeding behaviour assessment tool in experimental and control group. Data were analyzed by using SPSS version 26 with appropriate descriptive and inferential statistics.

CONCLUSION:

The present study concluded that prenatal lactation counselling was found to be effective in improving breastfeeding practices, newborn feeding behaviour and reducing breast engorgement. Significant statistical difference was found in

breastfeeding practices, breast engorgement and newborn feeding behaviour of experimental and control group. In experimental group, it was found that there was no significant association of breastfeeding practices, breast engorgement and newborn feeding behaviour with demographic variables. Whereas, in control group none of demographic variables were significantly associated with breastfeeding practices and newborn feeding behaviour except type of family while breast engorgement found significantly associated with duration of marriage at 0.05 level of significance.

IMPLICATION OF THE STUDY IN NURSING:

- Nursing is an art and science, as a science of nursing is based upon a body of knowledge that is always changing with new discoveries and motivation. When nurses integrate the science and art of nursing into their practice, the quality of care provided to the patients is at a level of excellence that benefits them in innumerable ways.
- The findings of the present study have implications for nursing practice, nursing education, patient education, nursing research and nursing administration.

NURSING PRACTICE:

Health teaching is an integral component of nursing practice. Hence apart from incidental teaching, nursing personnel should plan for counselling sessions for lactating mothers at AIIMS, Jodhpur. They should teach the mother about the normal anatomy and physiology of breast and importance of breastfeeding, breastfeeding technique including various breastfeeding positions and latching,

recommended breastfeeding practices, newborn feeding behaviour include readiness to feed, feeding cues, rooting, fixing (latch on) and sucking pattern, breast engorgement, prevention of breast engorgement and various ways to treat or manage the breast engorgement.

Research based nursing practice is a need of the hospital. On the basis of research, the hospital nursing care practices should be modified. Counselling should be provided to the antenatal women regarding breastfeeding during their antenatal visits.

NURSING EDUCATION:

The student nurses of today are the staff nurses, educators, administrators, supervisors of future; this study has implications in nursing education as well. The nursing education should emphasis on the importance of health education by student nurses in antenatal clinics during antenatal postings. New innovative ways should be taught to them. Nursing education should emphasis on more on preparing prospective nurse to impart the information on lactation counselling and its benefits. Prenatal lactation counselling can be incorporated in the maternity nursing curriculum.

NURSING ADMINISTRATION:

The concept of extended and expanded role of the nurse offers many opportunities for a nurse administrator to improve the quality of life of postnatal mother. The nurse administrator should co-ordinate their work along with the preventive and promotive aspects of care. Nursing administration should provide necessary facilities and opportunities for nursing students and staff to equip themselves with

improving the breastfeeding practices, newborn feeding behaviour and breast engorgement among lactating mother. Antenatal visit plans can include prenatal lactation counselling sessions.

NURSING RESEARCH:

One of the main aim of the nursing research is to contribute knowledge to the body of nursing to expand and broaden the scope of nursing. This is possible only if nurses are taking initiative to conduct further research. In nursing research, new researchers can use this study for identifying the factors that affect the breastfeeding practices and newborn feeding behaviour. More focus should be done on improving the breastfeeding practices.

LIMITATIONS:

The limitations of the study were:

- Expressed breastfeeding practices were checked by a checklist due to practice constraints it could not be observed directly.

RECOMMENDATION:

- The study can be replicated on a large sample of primigravidae women coming to various hospitals in Jodhpur to make the generalizations.
- A similar study can be conducted to assess and compare the effectiveness of prenatal lactation counselling on breastfeeding practices, breast engorgement and newborn feeding behaviour in mother who end up in normal vaginal delivery and LSCS.

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ANNEXURES

ANNEXURE- I

ETHICAL CLEARANCE CERTIFICATE& RESEARCH SETTING PERMISSION LETTER

अखिल भारतीय आयुर्विज्ञान संस्थान, जोधपुर
All India Institute of Medical Sciences, Jodhpur
संस्थागत नैतिकता समिति
Institutional Ethics Committee

No. AIIMS/IEC/2020/ 3084 **Date: 01/06/2020**

ETHICAL CLEARANCE CERTIFICATE

Certificate Reference Number: **AIIMS/IEC/2020-21/**3003

Project title: **"Effectiveness of prenatal lactation counselling on breastfeeding practices, breast engorgement and newborn feeding behaviour among postnatal mothers at AIIMS Jodhpur"**

Nature of Project:	**Research Project Submitted for Expedited Review**
Submitted as:	**Student Research Project, as a part of Academic Programme**
Investigator:	**Nisha Yadav**
Supervisor:	**Mr. Himanshu Vyas**
Co-Supervisor:	**Dr. Manu Goyal & Mrs. Mamta**

Institutional Ethics Committee after thorough consideration accorded its approval on above project.

The investigator may therefore commence the research from the date of this certificate, using the reference number indicated above.

Please note that the AIIMS IEC must be informed immediately of:

- Any material change in the conditions or undertakings mentioned in the document.
- Any material breaches of ethical undertakings or events that impact upon the ethical conduct of the research.

The Principal Investigator must report to the AIIMS IEC in the prescribed format, where applicable, bi-annually, and at the end of the project, in respect of ethical compliance.

AIIMS IEC retains the right to withdraw or amend this if:

- Any unethical principle or practices are revealed or suspected
- Relevant information has been withheld or misrepresented

AIIMS IEC shall have an access to any information or data at any time during the course or after completion of the project.

Please Note that this approval will be rectified whenever it is possible to hold a meeting in person of the Institutional Ethics Committee. It is possible that the PI may be asked to give more clarifications or the Institutional Ethics Committee may withhold the project. The Institutional Ethics Committee is adopting this procedure due to COVID-19 (Corona Virus) situation.

If the Institutional Ethics Committee does not get back to you, this means your project has been cleared by the IEC.

On behalf of Ethics Committee, I wish you success in your research.

Dr. Praveen Sharma
Member Secretary
Member secretary
Institutional Ethics Committee
AIIMS,Jodhpur

Basni Phase-2, Jodhpur, Rajasthan-342005, **Website:** www.aiimsjodhpur.edu.in, **Phone:** 0291-2740741 Extn. 3109
Email: ethicscommittee@aiimsjodhpur.edu.in

ANNEXURE II

A LETTER REQUESTING OPINION AND SUGGESTION AND EXPERTS FOR CONTENT VALIDITY OF TOOL

From:
Nisha Yadav
M.Sc. Nursing 1st year
College of Nursing, AIIMS, Jodhpur
To,

_____

_____

Subject: Expert Opinion on Validity of self-structured tool.

Respected Sir/Madam,

I Nisha Yadav student of MSc Nursing at College of Nursing, AIIMS, Jodhpur, have undertaken the following topic for research project: **"**Effectiveness of Prenatal Lactation Counselling on Breastfeeding Practices, Breast Engorgement and Newborn Feeding Behaviour among Postnatal Mothers at AIIMS Jodhpur**",** under the supervision of Mr. Himanshu Vyas, Associate Professor, College of Nursing, AIIMS Jodhpur.

Objectives of the study are:

- To assess and compare breastfeeding practices among postnatal mothers in experimental and control group.
- To assess and compare breast engorgement score among postnatal mothers in experimental and control group.
- To assess and compare new born feeding behaviour among postnatal mothers in experimental and control group.

- To determine the association of breastfeeding practices, breast engorgement and new born feeding behaviour with selected demographic variables among postnatal mothers.

I request you to kindly go through the tool and give your opinion for any modification and improvement needed. Your esteemed opinion and critical comments will provide the required direction and contribute immensely to the quality and content of my final research.
Looking forward to your expert guidance and suggestions.

Thanking you in anticipation
Yours Sincerely

Nisha Yadav

ANNEXURE III

COLLEGE OF NURSING

ALL INDIA INSTITUTE OF MEDICAL SCIENCES, JODHPUR

RESEARCH PROJECT

CERTIFICATE OF CONTENT VALIDITY

I, Dr. / Mr./ Mrs. ……. hereby certify that the tool for data collection of the research project titled **"**Effectiveness of prenatal lactation counselling on breastfeeding practices, breast engorgement and newborn feeding behaviour among postnatal mothers at AIIMS Jodhpur**"** prepared by Nisha Yadav is found to be valid and up to date.

Place:

Date:

Name, Signature & Seal of Validator

ANNEXURE –IV

LIST OF EXPERTS FOR TOOL VALIDATION

S.NO.	NAME OF EXPERT
1.	Dr. Pratibha Sharma Associate Professor, Department of OBG AIIMS, Jodhpur
2.	Dr. Shashank Shekhar Professor, Department of OBG AIIMS, Jodhpur
3.	Dr. Manisha Jhirwal Assistant Professor, Department of OBG AIIMS, Jodhpur
4.	Ms. Prabha kumari Lecturer , College of Nursing, RML, New Delhi
5.	Mrs. D Kanitha Lecturer, College of Nursing, NIMHANS
6.	Mrs. Prasuna Assistant Professor, College of Nursing, AIIMS, Rishikesh
7.	Dr. Meenakshi Gothwal Associate Professor, Department of OBG AIIMS, Jodhpur

ANNEXURE V

PERMISSION TO USE BREAST ENGORGEMENT SCALE

Requesting for taking permission to use breast engorgement scale for my research study.
5 messages

NISHA YADAV <nishagirdhwal@gmail.com> Mon, Jan 20, 2020 at 10:13 AM

To: Pamela.Hill@trinitycollegeqc.edu

Respected ma'am
This is Nisha Yadav, student of Msc. Nursing 1st year at college of nursing, AIIMS Jodhpur Rajasthan India. I want to take permission to use the 6 point breast engorgement scale as a tool for my study. Kindly share the breast engorgement scale to me .
Thank you
Nisha Yadav
AIIMS Jodhpur
Rajasthan India.

Hill, Pamela D. <Pamela.Hill@trinitycollegeqc.edu> Mon, Jan 20, 2020 at 9:13 PM

To: NISHA YADAV <nishagirdhwal@gmail.com>

Thank you for your request. I have attached the article that contains the engorgement scale that was used in this study. Hope this is helpful.

Best regards,
Pam Hill

Pamela D. Hill, PhD, RN, FAAN |**Professor**
Trinity College of Nursing & Health Sciences
2122 25th Avenue
Rock Island, IL 61201
✆: (309) 779-7702
Pamela.Hill@trinitycollegeqc.edu

From: NISHA YADAV <nishagirdhwal@gmail.com>
Sent: Sunday, January 19, 2020 10:43 PM
To: Hill, Pamela D. <Pamela.Hill@trinitycollegeqc.edu>
Subject: Requesting for taking permission to use breast engorgement scale for my research study.

ANNEXURE VI

PERMISSION TO USE INFANT BREASTFEEDING ASSESSMENT TOOL

Requesting to use IBFAT scale for my research study.
5 messages

NISHA YADAV <nishagirdhwal@gmail.com> Tue, Jan 28, 2020 at 9:20 AM
To: matthews@mun.ca

Good morning mam
This is Nisha Yadav student of msc nursing 1st year at AIIMS JODHPUR RAJASTHAN INDIA. I want to take permission to use this scale. Kindly give me permission to use this scale.
Thank you
Nisha YADAV

---

matthews@mun.ca <matthews@mun.ca> Wed, Jan 29, 2020 at 3:33 AM
To: NISHA YADAV <nishagirdhwal@gmail.com>

Good morning.

You have my permission to use this scale.

Mary K Matthews

ANNEXURE–VII

INFORMED CONSENT FORM

Title of the project: ‘‘Effectiveness of prenatal lactation counselling on breastfeeding practices, breast engorgement and newborn feeding behaviour among postnatal mothers at AIIMS JODHPUR”.

Name of the investigator: Nisha Yadav

Sample identification No:_____

I_____ w/o_____

R/o_____ give my full, free, voluntary consent to be a part of this study ‘‘Effectiveness of prenatal lactation counselling on breastfeeding practices, breast engorgement and newborn feeding behaviour among postnatal mothers at AIIMS Jodhpur’’

the procedure and nature of which has been explained to me in my own language to my full satisfaction. I confirm that I have had the opportunity to ask questions.

I understand that my participation is voluntary and I am aware of my right to opt out of the study at any time without giving any reasons. I understand that the information collected about me and any of my medical records may be looked at by responsible individual from AIIMS Jodhpur or from regulatory authorities. I give permission for these individuals to have access to my records.

Date : _____

_____

Place : _____ Signature/Left thumb impression

This to certify that the above consent has been obtained in my presence.

Date : _____ _____

Place : _____

Signature of Investigator

सूचित सहमति पत्र

परियोजनाकाशीर्षक :

अन्वेषककानाम :

पहचान संख्या :

मैं_____ पुत्र/

पत्नी/पुत्री_____निवासी_____

_____

“एम्स जोधपुर में प्रसवोत्तर माताओं के बीच स्तनपान प्रथाओं, स्तन वृद्धि और नवजात खिला व्यवहार पर प्रसव पूर्व स्तनपान परामर्श की प्रभावशीलता” नामक अध्ययन जिसकी प्रक्रिया और प्रकृति मुझे मेरी अपनी भाषा में पूर्ण संतुष्टि के साथ समझा दी गयी है, मैं भाग लेने के लिए अपनी पूर्ण, स्वतंत्र एवं स्वेच्छिक सहमति देता/ देती हूँ। मैं पुष्टि करता/ करती हूँ कि मुझे सवाल पूछने का अवसर दिया गया है। मैं समझता/ समझती हूँ कि मेरी भागीदारी स्वैच्छिक है और मैं अपने इस अधिकार से अवगत हूँ की मैं किसी भी समय बिना कोई कारण दिए इस अध्ययन से अपना नाम वापस ले सकता/सकती हूँ। मैं समझता/ समझती हूँ कि मेरे बारे में एकत्र जानकारी एम्स जोधपुर के किसी भी जिम्मेदार व्यक्ति द्वारा या नियामक अधिकारियो द्वारा देखी जा सकती है। मैं उपरोक्त व्यक्तियों को मेरे द्वारा दी गई जानकारी देखने कीअनुमति देता/ देती हूँ।

दिनांक: _____

_____

स्थान: _____

हस्ताक्षर

यह प्रमाणित है कि उपरोक्त सहमति मेरी उपस्थिति में प्राप्त की गयी है।

दिनांक: _____

_____

स्थान: _____

हस्ताक्षर अन्वेषक

ANNEXURE VIII

PARTICIPANT INFORMATION SHEET (ENGLISH)

Principal Investigator: Ms. Nisha Yadav

Title: "Effectiveness of prenatal lactation counselling on breastfeeding practices, breast engorgement and newborn feeding behaviour among postnatal mothers at AIIMS Jodhpur**."**

Purpose: To assess the effectiveness of prenatal lactation counselling on breastfeeding practices, breast engorgement and newborn feeding behaviour among postnatal mothers at AIIMS Jodhpur**.**

Eligibility criteria for participation:- You are eligible for the study as because you are -

1. Primigravidae mothers with gestational age ≥36 weeks seeking antenatal care at Antenatal OPD AIIMS Jodhpur.
2. Planning to deliver at AIIMS Jodhpur.

Rights to participate and withdrawal: It is completely up to you whether to participate or not to participate. You may withdraw from the study at any time and for any reason or no reason. Information that has been collected about you, prior to your withdrawal, will continue to be used in the data analysis but no new information will be collected from you.

Risk in taking part in this study: The study involves no risk rather than benefitting to you.

Complaints and compensation: You will not face any complications due to this study, still if you have any complaints as a result of this study you should contact the study investigator.

Concerns about the conduct of this study: This study has been approved by the Institutional Ethics Committee (IEC).

Measure to protect confidentiality: Only the researcher will know whether or not you are participating in this study. Any identifiable information that is collected about you in connection with this study will remain confidential and will be disclosed only with your permission, or except as required by law. Only the researcher will assess your details and results.

Contact person for further enquiry: If you would like to know at any stage please do not hesitate to contact the study investigator.

Thank you for taking the time to consider this study.

If you wish to take part, please sign the attached consent form. This information sheet is for you to keep.

प्रतिभागी सूचना पत्र

मुख्य जाँचकर्ता :सुश्री निशा यादव

शीर्षक: एम्स जोधपुर में प्रसवोत्तर माताओं के बीच स्तनपान प्रथाओं, स्तन वृद्धि और नवजात आहार के व्यवहार पर प्रसव पूर्व स्तनपान परामर्श की प्रभावशीलता।

उद्देश्य: एम्स जोधपुर में प्रसवोत्तर माताओं में स्तनपान परामर्श के प्रभाव का स्तनपान कराने वाली प्रथाओं, स्तन वृद्धि, नवजात आहार के व्यवहार पर आकलन करना

भागीदारी के लिए योग्यता : - आप अध्ययन के लिए पात्र हैं क्योंकि आप हैं -

1. प्राइमरीग्रिडाइ माताएं जिनकी गर्भावधि उम्र ≥36 सप्ताह तक हो और जो प्रसव पूर्व ओपीडी एम्स जोधपुर में प्रसव पूर्व देखभाल करा रही हो ।
2. एम्स जोधपुर में जन्म देने की योजना बना रही हो ।

भाग लेने या ना लेने के अधिकार: यह पूरी तरह से आप पर निर्भर है कि भाग लेना है या नहीं। आप किसी भी समय और किसी भी कारण या बिना किसी कारण के अध्ययन से हट सकते हैं। आपकी निकासी से पहले आपके बारे में जो जानकारी एकत्र की गई है, उसका डेटा विश्लेषण में उपयोग किया जाता रहेगा, लेकिन आपसे कोई नई जानकारी एकत्र नहीं की जाएगी।

इस अध्ययन में भाग लेने में जोखिम: अध्ययन में आपके लिए लाभ उठाने के बजाय कोई जोखिम शामिल नहीं है।

शिकायतें और मुआवजा: इस अध्ययन के कारण आपको किसी भी जटिलता का सामना नहीं करना पड़ेगा, फिर भी यदि आपको इस अध्ययन के परिणामस्वरूप कोई शिकायत है तो आपको अध्ययन अन्वेषक से संपर्क करना चाहिए।

इस अध्ययन के संचालन के संबंध में अभिरुचि: इस अध्ययन को संस्थागत नैतिकता आयोग (IEC) द्वारा अनुमोदित किया गया है।

गोपनीयता: केवल शोधकर्ता को पता होगा कि आप इस अध्ययन में भाग ले रहे हैं या नहीं। इस अध्ययन के सिलसिले में आपके बारे में एकत्र की गई कोई भी पहचान योग्य जानकारी गोपनीय रूप से समाप्त हो जाएगी और केवल आपकी अनुमति से, या कानून द्वारा आवश्यक को छोड़कर खुलासा किया जाएगा। केवल शोधकर्ता के पास आपके विवरण और परिणामों का आकलन होगा।

आगे की पूछताछ के लिए संपर्क व्यक्ति: यदि आप किसी भी स्तर पर जानना चाहते हैं तो कृपया अध्ययन अन्वेषक से संपर्क करने में संकोच न करें।

इस अध्ययन पर विचार करने के लिए समय निकालने के लिए धन्यवाद।यदि आप भाग लेना चाहते हैं, तो कृपया संलग्न सहमति पत्र पर हस्ताक्षर करें।यह सूचना पत्र आपके पास रखने के लिए है|

ANNEXURE IX

TOOLS

Part 1: Demographic variables

भाग 1: जनसांख्यिकीय चर

Instructions: This section consist of 09 question related to demographic variables. Please provide the following information by marking tick (√) the correct answer. All information will be kept confidential.

निर्देश: इस खंड में जनसांख्यिकीय चर से संबंधित प्रश्न हैं। कृपया सही उत्तर पर टिक (**)** अंकित करके निम्नलिखित जानकारी प्रदान करें। सभी सूचनाएं गोपनीय रखी जाएंगी।

कोड संख्या:

S. No.	ENGLISH	HINDI
1	Age in years -…….. a) 18-25 year b) 26-35 year	वर्षों में आयु - …… क)18-25 वर्ष ख) 26-35 वर्ष
2	Education a) Illiterate b) Till Secondary c) Graduation d) Post- graduate	3. शिक्षा का स्तर– क(अनपढ़ ख(माध्यमिक तक घ(स्नातक और ऊपर
3	Occupation a) Homemaker b) Job	व्यवसाय - क(गृहनी ख(नौकरी
4	Religion a) Hindu b) Muslim c) Any other	धर्म - क(हिन्दू ख(मुस्लिम ग(कोई अन्य
5	Duration of marriage- a) <1 year b) 1-3 year c) 3-5 year d) >5 year	शादी की अवधि- क(<1 वर्ष ख(1-3 वर्ष ग) 3-5 वर्ष घ) >5वर्ष
6	Type of Family a) Nuclear b) Joint c) Extended	परिवार का प्रकार - क(एकल परिवार ख(संयुक्त परिवार ग(विस्तरत परिवार

PART-2

BREASTFEEDING PRACTICE CHECKLIST

Instructions: This section consist of structured checklist of 15 questions related to expressed breastfeeding practice. Right answer was scored as 1 and wrong answer was be as 0. Maximum possible score is 15 and minimum score is 0. Please provide the answer by saying Yes or No. All information was kept confidential.

निर्देश: इस खंड में व्यक्त स्तनपान अभ्यास से संबंधित 15 प्रश्नों की संरचित चेकलिस्ट शामिल है। सही उत्तर को 1 स्कोर दिया गया है और गलत उत्तर 0 को 1 स्कोर दिया गया है ।अधिकतम संभव स्कोर 15 है और न्यूनतम स्कोर 0. है। कृपया हां या नहीं कहकर उत्तर प्रदान करें। सभी जानकारी को गोपनीय रखा गया ।

S. no.	Items	YES	NO
1.	Did you Initiate breastfeeding within one hour? क्या आपने एक घंटे के भीतर स्तनपान शुरू किया?		
2.	Did you discard the colostrum? क्या आपने कोलोस्ट्रम को त्याग दिया?		
3.	Did you give ghutti, honey, plain water, sugar water or any other milk to your baby? क्या आपने अपने बच्चे को घूटी, शहद, सादा पानी, चीनी पानी या कोई अन्य दूध दिया है?		
4.	Do you remain calm and relax while breastfeeding your baby? क्या आप अपने बच्चे को स्तनपान कराते समय शांत और आराम करती हैं?		
5.	Do you breastfeed your baby every 2 hours? क्या आप अपने बच्चे को हर 2 घंटे में स्तनपान कराती हैं?		
6.	Do you breastfeed your baby on demand during day and night? अपने बच्चे को दिन और रात के दौरान मांग पर स्तनपान कराएं।		
7.	Do you allow the baby to feed on one breast till baby stops sucking and releases the breast? क्या आप बच्चे को एक स्तन पर दूध पिलाने की अनुमति देते हैं जब तक कि बच्चा दूध पीना बंद न कर दे और स्तन को छोड़ दे ?		
8.	Do you offer the other breast for the next feed? क्या आप अगले फ़ीड के लिए दूसरे स्तन की पेशकश करते हैं?		
9.	Do you ensure the baby's mouth widen and majority of areola is inside the baby's mouth while breastfeeding? क्या आप सुनिश्चित करते हैं कि बच्चे का मुंह चौड़ा हो और स्तनपान करते समय बच्चे के मुंह के अधिकांश हिस्से अंदर हों?		

10.	Do you burp the baby immediately after breastfeeding? क्या आप स्तनपान के तुरंत बाद बच्चे को डकार दिलवाते हैं ?		
11	Do you clean your breasts each time before and after feeding the baby? क्या आप बच्चे को दूध पिलाने से पहले और बाद में हर बार अपने स्तनों को साफ करते हैं?		
12.	Do you keep the baby's head, neck, and body in the same plane? क्या आप बच्चे का सिर, गर्दन और शरीर एक ही सतह में रखते हैं?		
13.	Do you use artificial pacifiers or teats for your baby? क्या आप अपने बच्चे के लिए कृत्रिम पैसिफ़ायर या टीट्स का उपयोग करते हैं?		
14.	Does the baby able to establish effective sucking pattern on both breasts (initial rapid sucks then slower sucks with pauses)? क्या बच्चा दोनों स्तनों से प्रभावी स्तनपान स्थापित करने में सक्षम है? (शुरू में तेजी से दूध पीना , फिर रुक रुक कर धीमी गति से दूध पीना)।		
15.	Do you monitor the urine frequency and pattern of sleep after each feed to assess the adequacy of milk intake? क्या आप दूध की पर्याप्तता का आकलन करने के लिए प्रत्येक फ़ीड के बाद मूत्र आवृत्ति व सोने के तरीके की निगरानी रखते हैं?		

Maximum possible score is 15 and minimum score is 0. The level of practice will be interpreted as good practice (>11), fair (8-11) and poor practice (<8). The level of Breastfeeding Practice based on the practice scores was interpreted as:

Level of practice	**Score**
Good	>75% (12-15)
Fair	50-75% (8-11)
Poor	<50% (0-7)

PART-3

BREAST ENGORGEMENT SCALE

Breast engorgement scale:

Breast engorgement will be assessed using 6 point breast engorgement scale devised by Hill.P.D. and Humenick (1994). Clinical breast assessment will be done by the investigator and the findings will be interpreted and scored as per the scale.

Score interpretation:

Score 1: Soft

Score 2: Slight changes in breast

Score 3: Firm, non-tender breast

Score 4: Firm, beginning tenderness in breast

Score 5: Firm, tender

Score 6: Very firm, very tender

Highest score of 6 indicates severe breast engorgement and lesser scores indicate reduction in severity of breast engorgement. Score of 1 indicate that the mother is free from breast engorgement. Increased score indicates the increased severity of breast engorgement.

PART-4

NEWBORN FEEDING BEHAVIOUR ASSESSMENT SCALE

Infant breastfeeding assessment tool – for newborn feeding behaviour

Matthews, M.K. (1988).

Score	3	2	1	0
Readiness to feed	Starts to feed readily without effort	Cannot be aroused	Cannot be aroused	Cannot be aroused
Rooting	Roots effectively at once	Needs some coaxing, prompting, or encouragement	Roots poorly even with coaxing	Did not try to root
Fixing (latch on)	Feeds immediately	Takes 3-10 minutes to start	Takes over 10 minutes to start	Did not feed
Sucking pattern	Sucks well on both breasts	Sucks on and off but needs encouragement	Weak suck, sucks on and off for short periods	Did not suck
Maximum possible	**12**	**8**	**4**	**0**

IBFAT assigns a score, 0, 1, 2, or 3 to four factors. Scores range from 0 to 12. Maximum possible score is 12.

Score Interpretation:

- Effective Vigorous feeding- 10-12
- Moderate effective feeding- 7-9
- Poor feeding – 0-6

ANNEXURE X

CERTIFICATE OF LANGUAGE VALIDITY OF THESIS (ENGLISH)

COLLEGE OF NURSING

ALL INDIA INSTITUTE OF MEDICAL SCIENCES, JODHPUR

RESEARCH PROJECT

CERTIFICATE OF LANGUAGE VALIDITY OF THESIS (ENGLISH)

I, Dr. Subhash Sharma hereby certify that the thesis titled "**Effectiveness of prenatal lactation counselling on breastfeeding practices, breast engorgement and newborn feeding behaviour among postnatal mothers at AIIMS Jodhpur**" prepared by Nisha Yadav is found to be valid and up to date.

Place: Rewari, Haryana

Date: 01-02-2021

Signature & Seal of Validator

CHAIRPERSON
DEPARTMENT OF ENGLISH
INDIRA GANDHI UNIVERSITY
MEERPUR REWARI
PIN-122502

ANNEXURE XI

LIST OF FORMULAS USED FOR DATA ANALYSIS

FORMULA 1: ARITHMETIC MEAN

$$\overline{X} = \frac{\sum X}{n}$$

FORMULA 2: UNPAIRED t-test

$$t = \frac{\overline{x_1} - \overline{x_2}}{\sqrt{\frac{S_1^{\,2}}{N_1} + \frac{S_2^{\,2}}{N_2}}}$$

FORMULA 3: Standard deviation

$$s = \sqrt{\frac{\sum (x - \bar{x})^2}{n - 1}}$$

FORMULA 4: Chi-square test

$$\chi^2 = \sum_i \frac{(O_i - E_i)^2}{E_i}$$

ANNEXURE-XII

CODING SHEET OF SOCIO-DEMOGRAPHIC AND OBSTETRICS VARIABLES

S.NO.	CONTENT	CODING
1	Age in years: a. 18-25 years b. 26-35 years	 1 2
2	Education a. Illiterate b. Till secondary c. Graduation d. Post-graduation	 1 2 3 4
3	Occupation a. Homemaker b. Job	 1 2
4	Religion a. Hindu b. Muslim c. Any other	 1 2 3
5	Duration of marriage a. <1 year b. 1-3 years c. 3-5 years d. >5 years	 1 2 3 4
6	Type of family: a. Nuclear b. Joint c. Extended	 1 2 3
7	Obstetric variable: Gestation age a. 36-37 weeks b. 37weeks+1day-38weeks c. 38weeks+1day-40 weeks	 1 2 3

SELF- STRUCTURED BREASTFEEDING PRACTICES CHECKLIST

S.No.	Breastfeeding practice	Coding
1	Good (12-15)	3
2	Fair (8-11)	2
3	Poor (0-7)	1

BREAST ENGORGEMENT ASSESSMENT SCALE

S.No.	Breast engorgement score	Coding
1	Free from breast engorgement (1)	2
2	With breat engorgement (2-6)	1

NEWBORN BREASTFEEDING BEHAVIOR ASSESSMENT SCALE

S.No.	Breastfeeding practice	Coding
1	Effective Vigorous feeding (10-12)	3
2	Moderate effective feeding (7-9)	2
3	Poor feeding (0-6)	1

ANNEXURE XIII

MASTER DATA SHEET OF DEMOGRAPHIC VARIABLES OF EXPERIMENTAL GROUP

S. No.	Age	Gestation age	Education	Occupation	Religion	Duration of marriage	Type of family
1	26	37	5	1	1	2	2
2	31	36	5	2	1	3	2
3	27	37	4	1	4	3	1
4	21	36	5	2	1	3	2
5	26	38	3	1	1	2	2
6	28	37.4	4	1	1	2	2
7	22	36.5	3	3	2	1	2
8	23	37	4	1	1	2	2
9	24	37	4	1	1	2	2
10	25	37	4	1	1	2	2
11	28	36.5	5	1	2	1	3
12	26	36.5	5	1	1	2	1
13	20	36.4	4	1	1	2	2
14	32	37.5	5	1	4	4	1
15	31	37	5	2	1	3	2
16	32	37	4	1	1	4	2
17	21	38	3	1	2	1	2
18	28	37.4	4	1	1	3	3
19	23	37	1	1	1	1	2
20	24	37.5	5	2	1	3	2
21	29	37	5	1	1	2	2
22	22	36.5	3	1	1	3	2
23	26	37	5	1	1	2	2
24	23	37.5	4	1	1	2	2
25	24	37.5	5	1	1	1	2
26	25	38	5	1	1	2	2
27	27	38.4	5	1	1	2	2
28	24	37.7	3	1	1	2	2
29	26	38	5	1	4	2	2
30	25	38.5	5	1	1	2	2
	M-25.63	M-37.19					
	S.d.-3.24	S.d.-0.65					

MASTER DATA SHEET OF DEMOGRAPHIC VARIABLES OF CONTROL GROUP

S.no.	Age	Gestation age	Education	Occupation	Religion	Duration of marriage	Type of family	monthly income	Area of residence
1	22	38.4	2	1	1	3	2	1	1
2	21	39	4	1	1	2	1	2	2
3	23	38.4	2	1	1	2	2	1	1
4	26	39	4	1	1	2	2	2	2
5	27	37.4	5	1	1	3	1	2	1
6	22	38.5	5	1	1	2	2	2	1
7	23	38	2	1	1	2	2	2	2
8	24	38.2	2	1	1	2	2	1	1
9	25	37	3	1	1	3	3	2	2
10	25	39	1	1	1	2	2	1	2
11	28	38.4	3	1	1	2	2	1	2
12	26	38	4	4	1	3	2	2	2
13	23	37.5	5	1	1	1	2	3	1
14	32	38.4	4	1	1	3	2	1	2
15	26	38	3	1	1	4	2	1	1
16	27	39	5	1	1	1	2	3	2
17	26	37.4	4	2	1	2	2	2	2
18	22	38.2	2	1	1	2	2	1	1
19	23	38.4	2	1	1	2	3	2	1
20	24	39	3	1	1	2	3	1	1
21	25	40	4	1	1	2	2	3	2
22	26	38	4	1	1	3	2	3	2
23	22	39	4	1	1	2	2	2	1
24	26	40	4	1	1	3	2	3	2
25	22	39	4	1	1	2	2	2	1
26	28	39	4	2	1	3	2	3	2
27	23	37.4	3	1	1	1	2	2	2
28	24	37.7	5	1	1	2	3	3	2
29	22	37.2	4	1	1	2	2	2	1
30	28	40	5	1	1	3	2	3	2
	M-24.7 S.d-2.49	M-38.41 S.d.- 0.80							

BREASTFEEDING PRACTICES OF EXPERIMENTAL GROUP

S.no.	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Total
1	0	1	1	1	1	1	1	1	0	1	1	1	1	1	1	13
2	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	14
3	0	1	0	1	1	1	1	1	0	0	0	0	1	0	0	7
4	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	14
5	0	1	1	0	1	1	1	1	1	1	0	0	1	1	1	11
6	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	14
7	1	1	1	0	1	1	1	1	1	1	0	1	1	1	1	13
8	1	1	0	1	1	0	1	1	1	1	1	0	1	1	0	11
9	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	14
10	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0	13
11	0	1	1	1	1	1	1	1	0	1	0	1	1	1	1	12
12	1	1	1	1	1	1	1	1	0	1	0	1	1	1	1	13
13	0	1	1	1	1	1	1	1	1	0	0	1	1	1	0	11
14	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	13
15	0	1	1	1	1	1	0	1	1	1	0	1	1	1	1	12
16	1	1	1	0	1	1	1	1	1	1	0	1	1	1	0	12
17	1	1	1	1	1	1	1	1	0	1	0	1	1	1	1	13
18	1	1	1	1	1	1	1	1	1	0	0	1	1	0	0	11
19	1	1	1	0	1	1	1	1	1	0	0	0	1	1	1	11
20	1	1	1	1	1	1	0	1	1	0	0	1	1	1	0	11
21	1	1	0	1	1	1	1	1	1	1	0	1	1	1	1	13
22	0	1	1	0	1	1	1	1	1	1	1	0	1	1	0	11
23	1	1	1	1	1	1	1	1	1	1	0	0	1	1	0	12
24	1	1	0	1	1	1	1	1	1	1	1	1	1	1	0	13
25	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	14
26	1	1	1	0	1	1	1	1	1	0	0	1	1	1	0	11
27	1	1	0	1	1	1	1	1	1	1	0	0	1	1	0	11
28	1	1	1	0	1	1	1	1	1	1	0	0	1	1	1	12
29	0	1	0	1	1	1	1	1	0	1	0	0	1	1	1	10
30	1	1	1	0	1	1	1	1	1	1	0	1	1	1	1	13

BREASTFEEDING PRACTICES OF CONTROL GROUP

S.no.	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Total
1	0	1	0	1	1	1	1	1	1	0	0	1	1	1	1	10
2	1	0	1	1	0	1	1	1	1	1	0	1	1	0	1	11
3	0	0	1	0	1	0	1	1	0	0	0	1	1	1	1	8
4	0	1	1	0	1	0	1	1	0	0	0	0	1	1	1	8
5	1	1	1	1	1	1	0	1	0	1	0	1	1	1	0	11
6	0	1	0	1	0	1	1	1	0	1	0	0	1	0	0	7
7	1	0	1	1	1	1	1	1	0	1	0	0	1	0	1	10
8	0	1	1	1	0	1	0	1	0	0	0	1	1	0	0	7
9	0	1	1	1	0	0	1	1	0	0	0	0	1	1	0	7
10	0	0	0	1	1	1	1	1	0	1	0	0	1	0	0	7
11	0	1	1	1	0	0	1	1	0	0	0	0	1	0	0	6
12	0	1	1	0	1	0	0	1	0	1	0	0	1	0	1	7
13	1	0	1	1	1	1	1	1	0	0	0	1	1	1	1	11
14	1	1	0	0	1	1	0	1	0	0	0	0	1	1	0	7
15	0	1	1	1	1	1	1	1	0	0	0	1	1	1	1	11
16	0	1	0	0	1	1	0	1	0	0	0	1	1	1	0	7
17	1	1	1	1	0	0	1	1	1	0	0	1	1	1	1	11
18	1	1	1	1	0	1	1	1	1	1	0	0	1	0	0	11
19	0	1	0	0	1	0	1	1	0	0	0	1	1	0	1	7
20	0	1	0	1	1	1	0	1	0	0	0	0	1	0	0	6
21	1	0	0	1	1	0	1	1	1	0	0	1	1	0	1	9
22	0	1	1	1	1	1	1	0	1	0	0	0	1	1	0	9
23	1	1	1	0	1	1	0	1	1	1	0	0	1	1	0	10
24	1	1	0	1	1	0	0	1	0	1	0	0	1	0	0	7
25	0	1	0	1	1	0	0	1	0	0	0	0	1	0	1	6
26	1	1	0	1	1	0	0	1	1	1	0	1	1	1	0	10
27	1	1	0	1	1	1	1	1	1	0	0	0	1	1	0	10
28	1	1	0	0	1	1	0	1	0	0	0	0	1	1	0	7
29	0	1	0	0	1	1	1	1	0	0	0	0	1	0	0	6
30	0	1	0	1	1	1	1	1	1	1	0	1	1	1	0	11

DATA SHEET OF BREAST ENGORGEMENT SCORE IN BOTH EXPERIMENTAL AND CONTROL GROUP

S.no.	Breast engorgement score (experimental group)	Breast engorgement score (control group)
1	1	1
2	1	1
3	3	3
4	1	2
5	1	1
6	1	2
7	1	3
8	1	2
9	1	3
10	1	1
11	1	3
12	2	4
13	1	2
14	1	1
15	1	1
16	1	1
17	1	2
18	3	4
19	2	3
20	1	3
21	2	1
22	3	1
23	1	1
24	1	3
25	1	3
26	1	1
27	3	1
28	1	4
29	3	4
30	1	1

DATA SHEET FOR NEWBORN FEEDING BEHAVIOUR IN EXPERIMENTAL GROUP

S. No.	readiness to feed	Rooting	Fixing	Sucking pattern	Max. Score
1	3	3	2	3	11
2	2	2	1	1	6
3	3	2	2	3	10
4	3	3	3	2	11
5	3	3	3	2	11
6	3	3	2	2	10
7	3	3	3	3	12
8	3	3	3	3	12
9	3	3	2	2	10
10	3	3	3	2	11
11	3	2	2	3	10
12	3	3	2	2	10
13	3	3	3	2	11
14	3	2	2	2	9
15	3	3	2	2	10
16	2	2	1	1	6
17	3	2	2	2	9
18	2	2	2	2	8
19	3	3	2	3	11
20	3	2	2	2	9
21	3	3	2	2	10
22	3	3	2	2	10
23	3	3	3	3	12
24	3	3	2	3	11
25	2	2	2	2	8
26	3	3	2	2	10
27	3	3	3	3	12
28	3	2	2	2	9
29	2	2	3	2	9
30	2	2	2	2	8

DATA SHEET OF NEWBORN FEEDING BEHAVIOUR IN CONTROL GROUP

S. No.	readiness to feed	Rooting	Fixing()	Sucking pattern	Max. Score
1	3	2	2	2	9
2	2	2	1	2	7
3	2	2	1	2	7
4	2	2	2	1	7
5	3	2	2	3	10
6	3	2	2	1	8
7	2	2	1	2	7
8	2	2	2	1	7
9	2	2	1	1	6
10	2	3	1	2	8
11	2	2	1	1	6
12	2	2	1	1	6
13	2	2	1	2	7
14	3	2	2	2	9
15	2	2	2	2	8
16	2	2	1	2	7
17	2	2	1	1	6
18	2	2	1	1	6
19	2	3	2	1	8
20	2	2	1	1	6
21	2	2	2	3	9
22	2	2	2	1	7
23	2	2	2	2	8
24	2	2	1	1	6
25	2	1	2	1	6
26	2	2	2	2	8
27	3	2	2	2	9
28	2	2	1	1	6
29	2	1	2	1	6
30	3	2	2	2	9

LACTATION COUNSELLING CONTENT

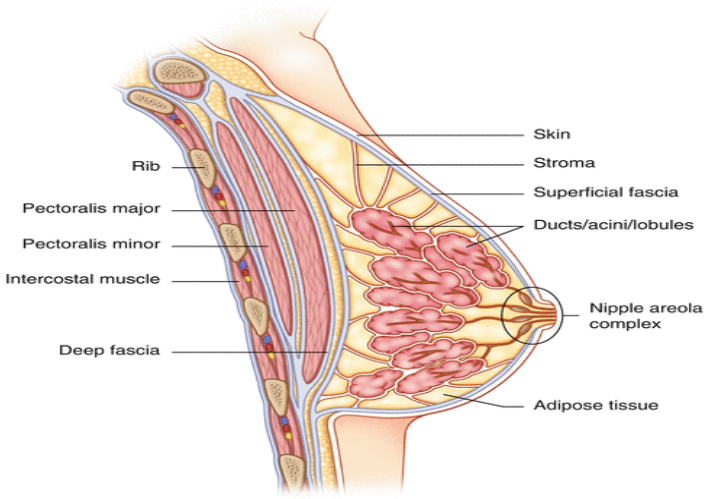
THE LACTATION COUNSELLING SESSION 1 INCLUDES:

- Anatomy and physiology of breast
- Importance of breast feeding
- Techniques of breastfeeding including breastfeeding positions, basic steps of breastfeeding and latching
- Recommended breastfeeding practices.

1. THE ANATOMY AND PHYSIOLOGY OF BREAST (स्तन की शारीरिक रचना और शरीर क्रिया विज्ञान)

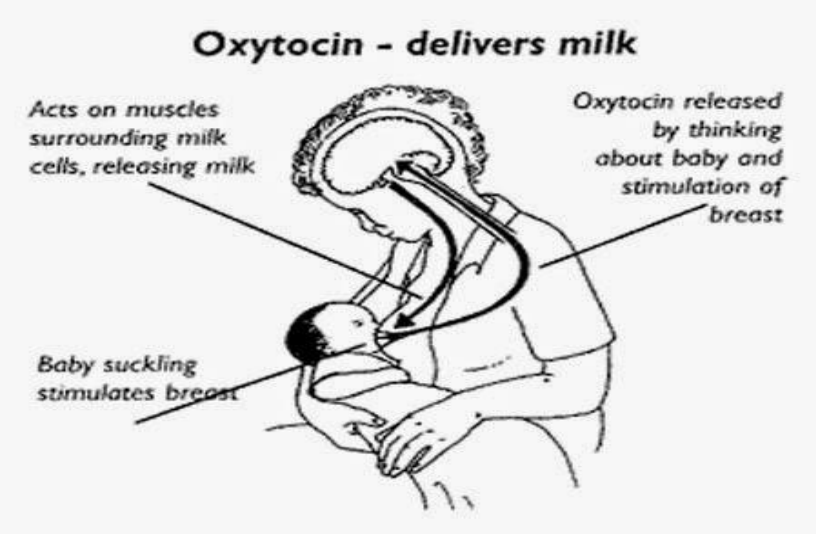
- The breasts comprise glandular, connective and fatty tissue. Within these tissues are milk-producing cells. Tiny openings in the nipple allow milk to flow. Surrounding the nipple is the areola, an area of darker skin that becomes both larger and darker during pregnancy. Montgomery glands located on the areola secrete a lubricant to help clean the area.

  स्तनों में ग्रंथि, संयोजी और वसा ऊतक होते हैं। इन ऊतकों के भीतर दूध बनाने वाली कोशिकाएं होती हैं। निप्पल में छोटे छोटे छेद से दूध बहने लगता है। निप्पल के चारों ओर एक गहरी त्वचा का क्षेत्र है जो गर्भावस्था के दौरान बड़ा और गहरा दोनों हो जाता है। क्षेत्र में स्थित मॉन्टगोमेरी ग्रंथियां क्षेत्र को साफ करने में मदद करने के लिए एक चिकनाई वाला पदार्थ का स्राव करती हैं।



- The hormone oxytocin is then released, helping to relax the mother, and causing the milk gland to contract and push milk out of the nipple. This is called letdown or milk ejection reflex. Letdown may take several minutes, especially when the mother is tired or tense.

  तब हार्मोन ऑक्सीटोसिन जारी किया जाता है, जिससे माँ को आराम मिलता है, और दूध ग्रंथि सिकुड़ जाती है और दूध को निप्पल से बाहर धकेल देती है। इसे लेटडाउन या मिल्क इजेक्शन रिफ्लेक्स कहा जाता है। लेटडाउन में कई मिनट लग सकते हैं, खासकर जब माँ थकी हुई या तनावग्रस्त होती है।



- Many factors affect let-down, including anxiety, pain, embarrassment, stress, cold, excessive caffeine use, smoking, alcohol, and some medicines. Mothers who have had breast surgery may have nerve damage that interferes with let-down.
  कई कारक चिंता, दर्द, शर्मिंदगी, तनाव, सर्दी, अत्यधिक कैफीन का उपयोग, धूम्रपान, शराब और कुछ दवाओं सहित लेट-डाउन को प्रभावित करते हैं। जिन माताओं की स्तन सर्जरी हुई है, उनमें तंत्रिका क्षति हो सकती है जो लेट-डाउन में हस्तक्षेप करती है।

2. IMPORTANCE OF BREAST FEEDING:

- **BREASTMILK FIGHTS DISEASE.**
  The antibodies in breastmilk protect babies from illness. This protection is unique and changes to meet your baby's needs. Research suggests that breastfed babies have lower risks of
  स्तन दूध में एंटीबॉडी शिशुओं को बीमारी से बचाते हैं। यह सुरक्षा अद्वितीय है और आपके बच्चे की जरूरतों को पूरा करने के लिए बदलती है। शोध बताते हैं कि स्तनपान करने वाले शिशुओं में इसके जोखिम कम होते हैं

  - Asthma
  - Childhood leukemia
  - Childhood obesity
  - Ear infections
  - Eczema (atopic dermatitis)
  - Diarrhea and vomiting
  - Lower respiratory infection
  - Necrotizing enterocolitis, a disease that affects the gastrointestinal tract in preterm infants
  - Sudden infant death syndrome (SIDS)
  - Type 2 diabetes

- दमा
- बचपन का ल्यूकेमिया
- बचपन का मोटापा
- कान के संक्रमण
- एक्जिमा (एटोपिक जिल्द की सूजन)
- दस्त और उल्टी
- कम श्वसन संक्रमण
- एन्ट्रोकॉलेटिंग एंटरोकॉलाइटिस, एक बीमारी है जो प्रीटरम शिशुओं में जठरांत्र संबंधी मार्ग को प्रभावित करती है
- अचानक शिशु मृत्यु सिंड्रोम (SIDS)
- मधुमेह प्रकार 2

➢ **BREASTFEEDING KEEPS MOTHER AND BABY CLOSE.**

Physical contact is important to newborns. It helps them feel more secure, warm, and comforted. Mothers also benefit from this closeness. The skin-to-skin contact boosts your oxytocin levels. Oxytocin is a hormone that helps breastmilk flow and can calm the mother.

नवजात शिशुओं के लिए शारीरिक संपर्क महत्वपूर्ण है। यह उन्हें अधिक सुरक्षित, गर्म और आराम महसूस करने में मदद करता है। माताओं को भी इस निकटता से लाभ होता है। त्वचा से त्वचा का संपर्क आपके ऑक्सीटोसिन के स्तर को बढ़ा देता है। ऑक्सीटोसिन एक हार्मोन है जो ब्रेस्टमिल्क के प्रवाह में मदद करता है और माँ को शांत कर सकता है।

➢ **OTHERS:** अन्य:

- Breastfeeding protects your baby from the risks of an unclean water supply.

  स्तनपान आपके बच्चे को अशुद्ध जल आपूर्ति के जोखिमों से बचाता है।

- Your milk is always at the right temperature for your baby. It helps to keep your baby's body temperature from dropping too low. Your milk is readily available without needing other supplies.

  आपका दूध आपके बच्चे के लिए हमेशा सही तापमान पर होता है। यह आपके बच्चे के शरीर के तापमान को बहुत कम करने में मदद करता है। अन्य आपूर्ति की आवश्यकता के बिना आपका दूध आसानी से उपलब्ध है।

- Breast milk provides all the nutrients that a baby needs for the first six months of life to grow and develop.

  स्तन का दूध उन सभी पोषक तत्वों को प्रदान करता है जो एक बच्चे को बढ़ने और विकसित होने के लिए जीवन के पहले छह महीनों के लिए चाहिए।

- Breast milk continues to provide high-quality nutrients and helps protect against infection up to two years of age or more.

  स्तन का दूध उच्च गुणवत्ता वाले पोषक तत्व प्रदान करता है और दो साल या उससे अधिक उम्र तक संक्रमण से बचाने में मदद करता है।

- Babies find breast milk easy to digest.

  शिशुओं को स्तन का दूध पचाने में आसान लगता है।

- Breastfeeding can contribute to birth spacing.

  स्तनपान जन्म स्थान में योगदान कर सकता है।

- Breastfeeding helps the mother's uterus to contract reducing the risk of bleeding after birth.

  स्तनपान से मां के गर्भाशय को जन्म के बाद रक्तस्राव के जोखिम को कम करने में मदद मिलती है।

- Breastfeeding lowers the rate of breast and ovarian cancer in the mother.

  स्तनपान कराने से माँ में स्तन और डिम्बग्रंथि के कैंसर की दर कम होती है।

- Breastfeeding promotes a faster return to mother's pre-pregnancy weight.

  स्तनपान कराने से माँ के गर्भ-पूर्व वजन में तेजी से वापसी होती है।

- Breastfeeding promotes the emotional relationship, or bonding, between mother and infant.

  स्तनपान माँ और शिशु के बीच भावनात्मक संबंध, या संबंध को बढ़ावा देता है।

- Breast feeding should be started within half an hour of birth as soon as possible after normal delivery where as in case of caesarian section delivery, within 4 hours. Rooming in and bedding should be done with mother and baby to prevent separation and promote breast feeding.
  जन्म के आधे घंटे के भीतर ही स्तनपान कराना शुरू कर देना चाहिए, सामान्य प्रसव के बाद जहां तक हो सके, सीज़ेरियन सेक्शन डिलीवरी के मामले में, 4 घंटे के भीतर। स्तनपान कराने और स्तनपान को बढ़ावा देने और स्तनपान को बढ़ावा देने के लिए माँ और बच्चे के साथ बिस्तर लगाना चाहिए।

BASIC STEPS FOR BREAST FEEDING (स्तनपान के लिए बुनियादी कदम:)

1. Make sure you're comfortable and well supported with pillows. Lean back rather than sit upright. सुनिश्चित करें कि आप तकियों के साथ सहज और अच्छी तरह से समर्थित हैं। सीधे बैठने के बजाय झुक कर बैठें।

2. Place your baby on your bare chest between your breasts, facing you. अपने बच्चे को अपनी छाती से लगा कर रखें ।

3. Your baby will start to move towards one breast. Support your baby with his shoulders and under his bottom (hold his head only if he needs it). वह एक स्तन की ओर बढ़ना शुरू कर देगा। अपने बच्चे को उसके कंधों के पीछे और उसके नीचे (उसके सिर को पकड़ें, अगर उसे उसकी ज़रूरत हो तो) का समर्थन करें।

4. Remain calm while breastfeeding the baby. बच्चे को स्तनपान कराते समय शांत रहें।

5. Your baby will most likely position herself on an angle, with her mouth near your nipple and her feet supported by your thigh or lap. Correct positioning is important because it will ensure correct attachment and effective suckling and prevent sore nipples and breast engorgement. Proper position of the baby while breastfeeding should ensure that:

   आपका बच्चा सबसे अधिक संभावना खुद को एक कोण पर रखेगा, उसके मुंह के साथ आपके निप्पल के पास और उसके पैर आपकी जांघ या गोद द्वारा समर्थित होंगे। सही स्थिति महत्वपूर्ण है क्योंकि यह सही लगाव और प्रभावी चूसना सुनिश्चित करेगी और गले में खराश और स्तन वृद्धि को रोक सकती है। स्तनपान करते समय शिशु की उचित स्थिति सुनिश्चित करनी चाहिए कि:

   - Baby's body is well supported.
     बच्चे का शरीर अच्छी तरह से समर्थित है।
   - The head, neck and the body of the baby are kept in the same plane.
     बच्चे के सिर, गर्दन और शरीर को एक ही तल में रखा गया है।
   - Entire body of the baby faces the mother.
     बच्चे का संपूर्ण शरीर माँ का सामना करता है।
   - Baby's abdomen touches mother's abdomen.
     बच्चे का पेट माँ के पेट को छूता है

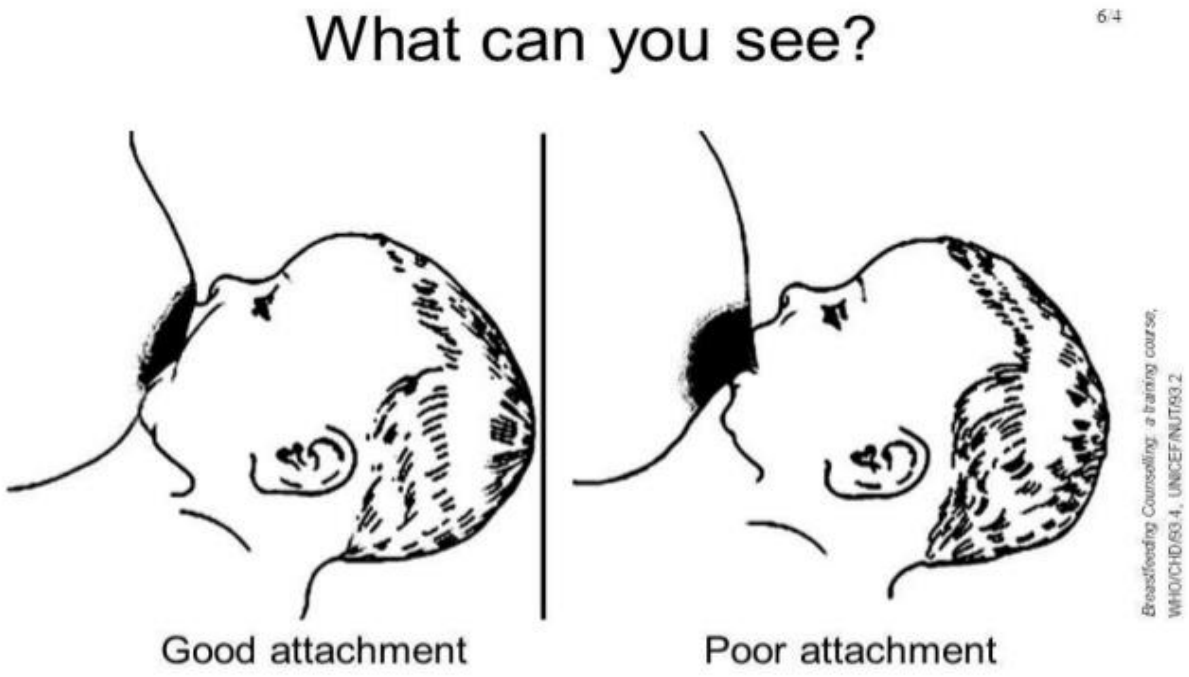
6. When your baby is just below your nipple, he'll dig his chin into your breast, reach up with an open mouth, attach to the breast and start sucking.

   जब आपका बच्चा आपके निप्पल के ठीक नीचे होता है, तो वह अपनी ठुड्डी को आपके स्तन में खोदता है, खुले मुंह के साथ ऊपर पहुंचता है, स्तन से जुड़ जाता है और चूसना शुरू कर देता है।

LATCHING

Latch refers to how the baby fastens onto the breast while breastfeeding. A good latch promotes high milk flow and minimizes nipple discomfort for the mother, whereas poor latch results in poor milk transfer to the baby and can quickly lead to sore and cracked nipples. In a good latch, both the nipple and a large portion of the areola are in the baby's mouth.

स्तनपान को संदर्भित करता है कि स्तनपान करते समय बच्चा स्तन पर किस तरह से उपवास करता है। एक अच्छी कुंडी उच्च दूध प्रवाह को बढ़ावा देती है और मां के लिए निप्पल की असुविधा को कम करती है, जबकि खराब कुंडी से बच्चे को खराब दूध हस्तांतरण होता है और जल्दी से गले में खराश और निप्पल हो सकते हैं। एक अच्छी कुंडी में, बच्चे के मुंह में निप्पल और एरोला का बड़ा हिस्सा दोनों होते हैं।



SIGNS OF GOOD ATTACHMENT:

- More of the areola is visible above the baby's top lip than below the lower lip;
- The baby's mouth is wide open;
- The baby's lower lip is curled outwards;
- The baby's chin is touching or almost touching the breast.

निचले होंठ की तुलना में शिशु के ऊपर वाले होंठ से घेरा ज्यादा दिखाई देता है

बच्चे का मुंह चौड़ा है;

बच्चे का निचला होंठ बाहर की ओर मुड़ा हुआ होता है;

बच्चे की ठोड़ी स्तन को छू रही है या लगभग छू रही है।

BREASTFEEDING POSITIONS:

1. **Cradle Hold (Tummy to Tummy)**

2. **Football hold**

3. Side lying position

4. Transitional hold or cross cradle hold

RECOMMENDED BREASTFEEDING PRACTICES:

- Initiate breastfeeding soon after (within half to one hour) birth.

  जन्म के तुरंत बाद (आधे से एक घंटे के भीतर) स्तनपान शुरू करें।

- Don't introduce ghutti, gripe water, honey or any other milk. They will reduce breast milk intake by the baby.

  घूटी, मीठा पानी, शहद या कोई अन्य दूध ना दें । वे बच्चे द्वारा दूध का सेवन कम कर देंगे।

- Ensure exclusive breastfeeding during first 6 months of life (feeding only breast milk and medications if required)

  जीवन के पहले 6 महीनों के दौरान अनन्य स्तनपान सुनिश्चित करें (यदि आवश्यक हो तो केवल स्तन का दूध और दवाइयाँ खिलाना)

- Breastfeed day and night on demand at least eight times or more per day. Allow baby to feed at one breast till the baby stops sucking and releases breast. Then offer him the other breast if the baby demands for more. However, if he does not feed from this breast now then offer this breast first at the next feeding session.

  प्रतिदिन कम से कम आठ बार या उससे अधिक मांग पर दिन और रात को स्तनपान कराएं। बच्चे को एक स्तन पर दूध पिलाने की अनुमति दें जब तक कि बच्चा दूध पीना बंद न कर दे और स्तन को छोड़ दे। यदि बच्चा अधिक मांगता है तो उसे दूसरे स्तन की पेशकश करें। हालाँकि, अगर वह अब इस स्तन से दूध नहीं पीता है, तो अगले स्तनपान सत्र में पहले इस स्तन की पेशकश करें।

- Burp the baby immediately after breastfeeding.

  बच्चे को स्तनपान कराने के तुरंत बाद डकार दिलायें।

- The adequacy of milk intake can be assessed by counting the number of wet diapers per day (6-8 times/day), and weight gain (20-30 gms a day in 1st 3-4 months after regaining birth weight).

  दूध के सेवन की पर्याप्तता का आकलन गीले डायपर की संख्या को गिणके (6-8 बार / दिन) और वजन नापने (जन्म के वजन को फिर से प्राप्त करने के बाद 3-4 महीने में एक दिन में 20-30 ग्राम) से किया जा सकता है।

- Initiate complimentary foods after six months of age.
  छह महीने की उम्र के बाद ऊपरी आहार शुरू करें।

- Continue breastfeeding up to 2 years of age or beyond, together with safe, nutritionally adequate, age appropriate, responsive complementary feeding starting in the sixth month**.**

- छठे महीने से सुरक्षित, पोषक रूप से पर्याप्त, उम्र के उपयुक्त, उत्तरदायी पूरक भोजन के शुरू होने के साथ, 2 वर्ष या उससे अधिक उम्र तक स्तनपान जारी रखें।

LACTATION COUNSELLING SESSION 2

The lactation counselling session 2 includes:

- New-born feeding behaviour
- Breast engorgement
- Prevention of breast engorgement
- Management of breast engorgement

Newborn feeding behaviour:

Most newborns need eight to 12 feedings a day — about one feeding every two to three hours. Look for early signs of readiness to feed or hunger, such as moving the hands to the mouth, sucking on fists and fingers, and lip smacking. Fussing and crying are later cues.

अधिकांश नवजात शिशुओं को एक दिन में आठ से 12 फीडिंग की आवश्यकता होती है - हर दो से तीन घंटे में लगभग एक फीडिंग। फ़ीड या भूख के लिए तत्परता के शुरुआती संकेतों को देखें, जैसे हाथों को मुंह में ले जाना, मुट्ठियों और अंगुलियों को चूसना और होंठों को सूंघना। रोना और रोना बाद में संकेत हैं।

Rooting

- Whether the baby Rooted effectively at once OR
- Needed coaxing, prompting or encouragement.
- Rooted poorly even with coaxing.
- Did not root.
- क्या बच्चा एक बार में प्रभावी रूप से जड़ें या
- जरूरत पड़ने पर सहवास, उत्साह या प्रोत्साहन दे।
- सहवास के साथ भी खराब तरीके से जड़ें।
- जड़ नहीं दी।

When your baby stops suckling, closes his or her mouth, he or she might be full — or simply taking a break. Try burping your baby or waiting a minute before offering your breast again.

जब आपका बच्चा चूसना बंद कर देता है, अपना मुंह बंद कर लेता है, तो वह भरा हो सकता है - या बस एक ब्रेक ले रहा है। अपने स्तन को फिर से पेश करने से एक मिनट पहले अपने बच्चे को डकार दिलवाने की कोशिश करें ।

Sucking pattern (चूसने वाला पैटर्न)

- Sucked well throughout on one or both breasts.
- Sucked on & off but needed encouragement
- Sucked poorly, weak sucking; sucking efforts for short periods.
- Baby did not suck.
- एक या दोनों स्तनों पर अच्छी तरह से चूसें।
- कभी दूध खींचता है ओर कभी नहीं पर उसमें भी प्रोत्साहन की जरूरत होती
- खराब तरीके से चूसा, कमजोर चूसने; छोटी अवधि के लिए चूसने के प्रयास।
- बच्चा नहीं चूसता था।

How long from placing baby on breast to latch & suck?

कितना समय बच्चे को स्तन के लगने ओर दूध खींचने में लगा?

- 0-3 min.
- 3-10 min.
- >10 min.
- Baby did not feed.

- 0-3 मिनट ।
- 3- 3- मिनट ।
- > 10 मिनट ।
- बच्चे ने दूध नहीं पिया।

BREASTFEEDING CUES

Developed by Women's and Newborn Services
Royal Brisbane and Women's Hospital

Early Cues - "I'm hungry"

Stirring

Mouth opening

Turning head
Seeking/rooting

Mid Cues - "I'm really hungry"

Stretching

Increasing physical movement

Hand to mouth

Late Cues - "Calm me, then feed me"

Crying

Agitated body movements

Colour turning red

Time to calm crying baby
- Cuddling
- Skin-to-skin on chest
- Talking
- Stroking

BREAST ENGORGEMENT

- The milk production increases during the second and third day after delivery. If feeding is delayed or infrequent or the baby is not well positioned at the breast, milk accumulates in the alveoli. Such a breast becomes, swollen, hard, warm and painful and is termed as an engorged breast.

  प्रसव के बाद दूसरे और तीसरे दिन दूध का उत्पादन बढ़ जाता है। यदि दूध पिलाने में देरी हो रही है या बच्चे को स्तनपान नहीं कराया जा रहा है, तो बच्चे को दूध नहीं मिलता है। ऐसा स्तन सूजन, कठोर, गर्म और दर्दनाक हो जाता है और इसे उकेरा हुआ स्तन कहा जाता है।

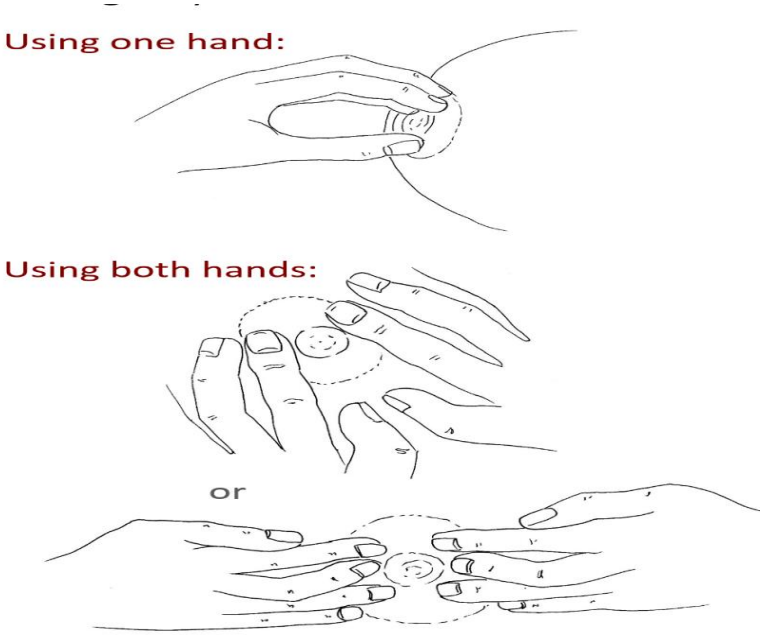
HOW TO PREVENT OR MINIMIZE ENGORGEMENT

- Breastfeed the baby every 2 hours. Don't skip feedings (even at night).
- हर 2 घंटे में बच्चे को स्तनपान कराएं । फ़ीडिंग को न छोड़ें (रात में भी)।
- Feed the baby on demand (baby's cues)
- बच्चे को माँग पर स्तनपान कराएं (बच्चे के संकेत)
- Allow baby to finish the first breast before offering the other side. Switch sides when baby pulls off or falls asleep.
  पहले बच्चे को एक स्तन से दूध पिलाएं फिर उसके बाद दूसरे स्तन से दूध पिलाएं । दूसरे स्तन से दूध तब पिलाएं जब बच्चा एक स्तन से दूध पीना बंद कर देता है या फिर सो जाता है
- Ensure correct latch and positioning so that baby is nursing well and sufficiently softening the breasts.
- बच्चे को सही तरीके से स्तन से लगाएं ताकि बच्चा अच्छे से दूध पी सके और स्तन नरम रह सके
- Avoid using pacifiers or bottles to supplement feedings.
- फीडिंग के लिए पेसिफायर या बोतलों का उपयोग करने से बचें।
- Express the milk if baby is not feeding properly.
- यदि बच्चा ठीक से दूध नहीं पी रहा है तो दूध को निकाल के बच्चे को पिलाएं
- Breastfeed often on the affected side to remove the milk and prevent your breast from becoming overly full.
- दूध निकालने के लिए अक्सर प्रभावित तरफ से स्तनपान करें, और अपने स्तन को अधिक भरा हुआ होने से रोकें।

TIPS FOR TREATING ENGORGEMENT (उत्कीर्णन के उपचार के लिए युक्तियाँ)

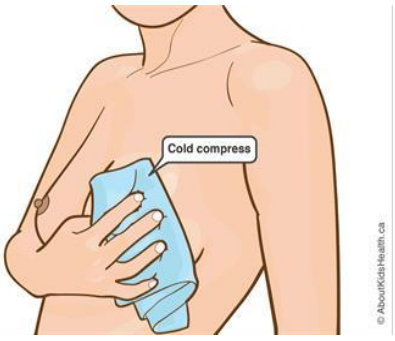
- Gentle breast massage from the chest wall toward the nipple area before nursing.

दूध पिलाने से पहले निप्पल क्षेत्र की ओर छाती वाले छेत्र व स्तन की की कोमल हाथों से मालिश करें।



- Cool compresses for up to 20 minutes before nursing.

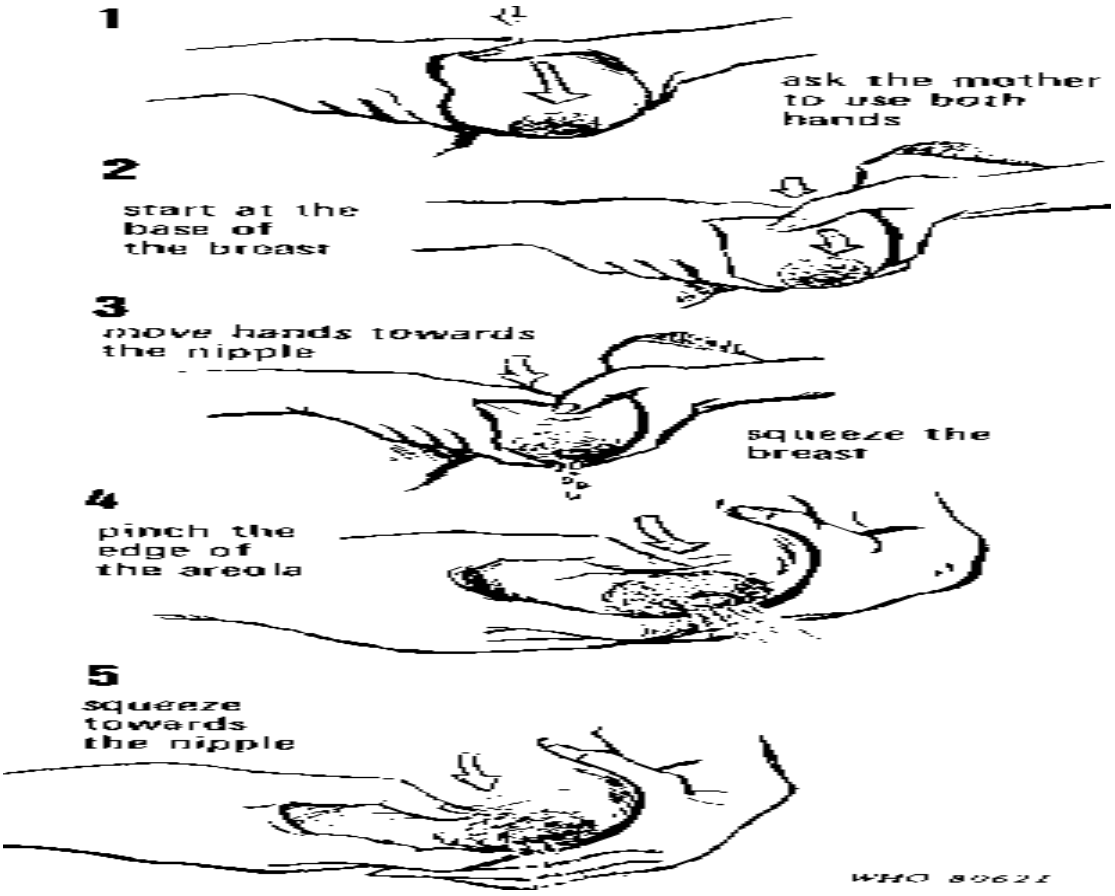
  दूध पिलाने से पहले 20 min तक ठन् पानी या बर्फ से सिकाई करें।



- Moist warmth for a few minutes before nursing may help the milk begin to flow.

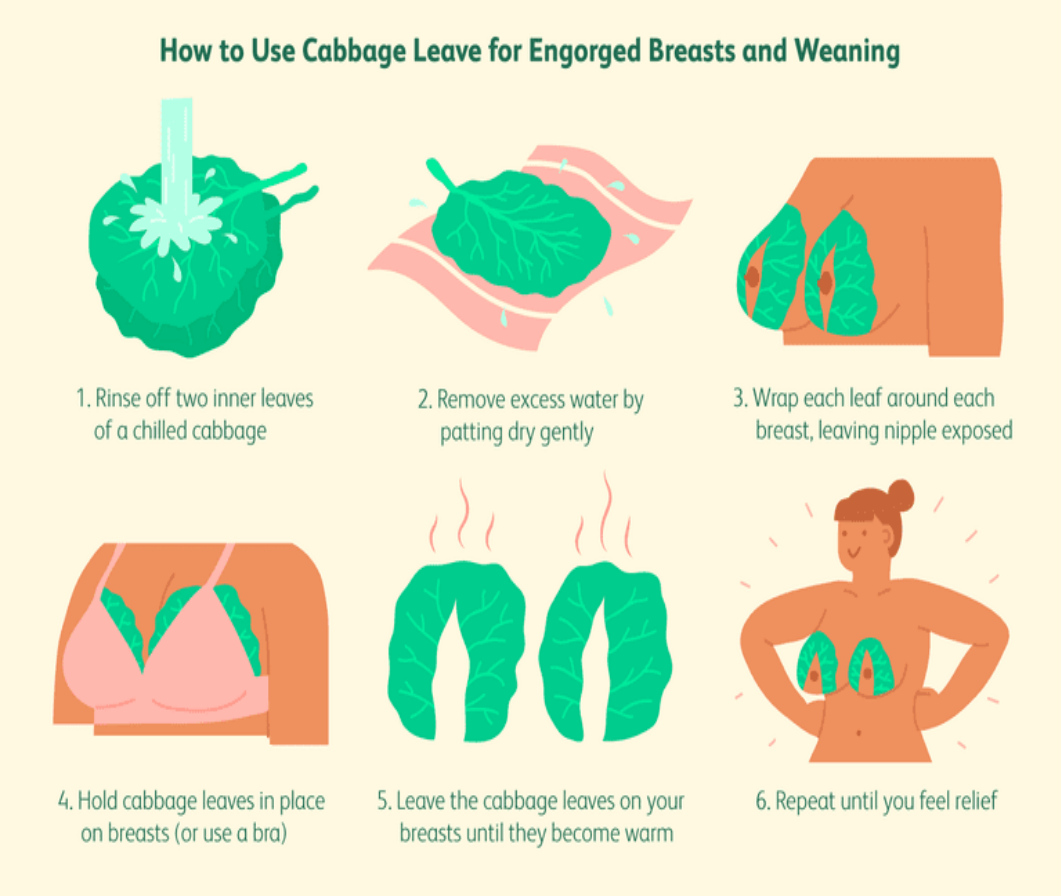
  दूध पिलाने से पहले कुछ मिनट के लिए नम गर्माहट दूध को प्रवाहित करने में मदद कर सकती है

Hand expression of milk (हाथ से दूध निकालें)



- Massaging the breast (from the chest wall toward the nipple area) is helpful prior to and during milk expression.

- दूध की अभिव्यक्ति से पहले और दौरान स्तन (छाती की दीवार से निप्पल क्षेत्र की) मालिश करना सहायक होता है।
- Cabbage leaf compresses can also be helpful.
- पत्ता गोभी के पत्तों का सेक भी मददगार हो सकता है।



- Wearing a well-fitting, supportive bra. Avoid tight/ill-fitting bras, as they can lead to plugged ducts and mastitis.
- कई माताओं को अच्छी तरह से फिटिंग, सहायक ब्रा पहनना सबसे अधिक आरामदायक होता है। तंग / बीमार-फिटिंग ब्रा से बचें, क्योंकि वे प्लग किए गए नलिकाओं और मास्टिटिस को जन्म दे सकते हैं।

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