

**EFFECTIVENESS OF VIRTUAL LACTATION MANAGEMENT UPON  
KNOWLEDGE AND LACTATION PRACTICE AMONG PRIMI LACTATING  
MOTHERS**

**BY  
ASWATHI NAIR . J.K**

**A DISSERTATION SUBMITTED TO THE TAMILNADU DR.M.G.R MEDICAL  
UNIVERSITY, CHENNAI, IN PARTIAL FULFILMENT OF THE  
REQUIREMENTS FOR THE DEGREE OF MASTER  
OF SCIENCE IN NURSING**

**APRIL 2014**

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MOTHERS**

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## DECLARATION

I hereby declare that the present dissertation entitled “**Effectiveness of virtual lactation management upon knowledge and lactation practice among primi lactating mothers**” is the outcome of the original research work undertaken and carried out by me under the guidance of **Dr. Latha Venkatesan** M.Sc (N)., M.Phil.(N), Ph.D.(N), Principal, Apollo College of Nursing, **Prof. Nesa Sathya Satchi** M.Sc (N)., Ph.D.(N), Apollo College of Nursing, Chennai. I also declare that the material of this has not formed in anyway, the basis for the award of any degree or diploma in this university or any other universities.

**M.Sc., (N) II Year**

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## **SYNOPSIS**

An Experimental Study to Assess the Effectiveness of Virtual Lactation Management Upon Knowledge and Lactation Practice Among Primi Lactating Mothers at Selected Hospitals, Chennai

### **The Objectives of the Study were**

1. To assess the level of knowledge on lactation before and after virtual lactation management among control and experimental group of primi lactating mothers.
2. To assess the lactation practice before and after virtual lactation management among control and experimental group of primi lactating mothers.
3. To determine the effectiveness of virtual lactation management upon lactation by comparing the level of knowledge and lactation practice before and after the virtual lactation management among control and experimental group of primi lactating mothers.
4. To determine the association between selected demographic variables and level of knowledge and lactation practice before and after virtual lactation management among control and experimental group of primi lactating mothers.
5. To determine the association between selected obstetrical variables and level of knowledge and lactation practice before and after virtual lactation management among control and experimental group of primi lactating mothers.
6. To determine the level of satisfaction regarding the virtual lactation management among the experimental group of primi lactating mothers

The conceptual framework for the study was developed based on the modified model of Wiedenbach's helping art of clinical nursing theory. An experimental study of pre-test and post-test design was used. The study included 60 primi lactating mothers selected by simple random sampling. The present study was conducted at Andhra Mahila Sabha Hospital, Chennai. The variables of the study were virtual lactation management, knowledge and lactation practice.

An extensive review of literature and guidance by experts laid to the foundation of development of demographic variable proforma, obstetric variable proforma, structured interview schedule, lactation practice observational checklist and rating scale on satisfaction of virtual lactation management. The data collection tools were validated and reliability was established. After two weeks of pilot study, then data collection for main study was conducted.

The level of knowledge and lactation practice was assessed for control and experimental group of primi lactating mothers. The Virtual lactation management of seven minutes duration was provided for the experimental group. Then the level of knowledge and lactation practice was assessed again after 7 days for both the groups. The level of satisfaction on virtual lactation management among the experimental group of primi lactating mothers was assessed after one week from intervention. The data obtained was analyzed using descriptive and inferential statistics.

### **Major Findings of the Study were**

- Majority of primi lactating mothers were 18 -23years old (76.66, 83.33%), Hindus (83.33%, 96.66%), qualified upto secondary education (60%, 63.33%), from nuclear family (90.00%, 80.00%), residing in urban area (100%, 100%).

Large percentage of them were unemployed (63.33%, 76.66%) in control group and experimental group respectively.

- Majority of primi lactating mothers had regular antenatal checkups (100%, 100%), none of the mothers had practiced antenatal nipple exercises (100%, 100%) and most of them did not have any complications during labour (86.66%, 93.33%). Majority of them practiced breastfeeding (93.33%, 96.66%) and most of them practiced demand feeding (36.66%, 43.33%). About more than half of the babies had an effective latch (50%, 56.66%) and good sucking (56.66%, 63.33%) in control and experimental group respectively.
- Majority of the primi lactating mothers had inadequate knowledge before intervention (80%, 93.33%) in the control and experimental group respectively and all of them had adequate knowledge (100%) in experimental group after intervention.
- The mean knowledge level was slightly high in the post test (M=10.8, SD=2.119) when compared to pre test (M=10.7, SD=2.246) in the control group where as the mean level of knowledge was high in the post test (M=23.3, SD=0.97) when compared to pre test (M=10.2, SD=1.81) in the experimental group.
- Majority of mothers in pre test had poor practice with regard to lactation (100%, 100%) in the control and experimental group. After the intervention the lactation practice was good in (63.33%) lactating mothers in experimental group. Hence null hypothesis H01 was rejected.
- The mean score of lactation practice in the experimental group was high in post test (M=19.13, SD=1.8) in comparison with pre test (M=7.3, SD=1.242).



Whereas in the control group there was only a minimal increase in the score of lactation practice (M=7.5, SD=1.403) during post test when compared with pre test (M=7.4, SD=1.518).

- There was no significant association between age in years, educational status, type of employment and type of family with level of knowledge in experimental and control group of primi lactating mothers. Hence null hypothesis  $H_{02}$  is retained.
- There was no association between age in years, educational status, type of employment and type of family and lactation practice in control group of primi lactating mothers but there is significant association between type of family and lactation practice in experimental group of primi lactating mothers. Hence null hypothesis  $H_{02}$  was partially rejected.
- There was no significant association between effective latch of the baby, type of delivery, initiation of breast feeding and frequency of feeding with level of knowledge and lactation practice in control and experimental group of primi lactating mothers. Hence the null hypothesis  $H_{03}$  was retained.
- All the participants in the experimental group were satisfied (100%) with the virtual lactation management intervention.

### **Recommendations**

- The same study can be conducted with large number of samples to generalize results.
- A comparison can be made between primi and multi gravidae mothers.
- The same study can be conducted in different settings.
- A comparison can be made between different types of educational programmes.

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# CHAPTER I

## INTRODUCTION

*“The new baby has only three demands they are warmth in the hands of mothers, food from her breast and security in the knowledge of her presence, the breast feeding satisfies all the three”*

**Grandly Dick Read**

### **Background of the Study**

Every baby deserves breast milk and every mother deserves an empowering breastfeeding experience. It is an instinctual and natural act, but it is also an art that is learned day by day. The reality is that almost all women can breastfeed, have enough milk for their babies and learn how to overcome problems both large and small. It is almost always simply a matter of practical knowledge and not a question of good luck.

Lactation benefits both the mother and the baby. For the mother this helps to keep her away from many life threatening diseases like cancer. On the other hand it is said to be first immunization for the baby and prevents the baby from many childhood diseases and obesity. As a whole it helps in the optimal growth and development of the baby.

Anwar Fazal says “The natural power of breastfeeding is one of the greatest wonders of the world. It is about real love. It is about caring and celebrating the wondrous joy of nurturing a new life. It is about enjoying being a woman.”

Breast milk is thought to be the best form of nutrition for neonates and infants. Hence being nurses, it's our responsibility to provide health teaching and training on lactation to help mothers and babies to achieve this goal.

In recognition of the immense importance of breast feeding, the Baby Friendly Hospital Initiative (BFHI) was launched by UNICEF/WHO in 1992. Lack of breast feeding practice— especially exclusive breast feeding during first 6 months of life is important as it reduces the risk factors for the infant mortality and the morbidity rate. WHO estimates that 1.5 million of infants' lives can be saved each year through increased breast feeding.

Breast feeding is the most important thing for every mother. It is the unique experience to be cherished. Sometimes certain simple problems faced by the mothers result in stoppage of the breast feeding or started giving artificial milk or commercial infant formula feeds to the baby. Problems may be like the flat nipples, inverted nipples, breast engorgement, swelling, sore nipples or not enough milk. Few simple techniques can easily resolve these problems like proper positions, latching up and burping up the baby.

Most of the mothers don't know the correct technique of breast feeding especially the primi mothers. This leads to many unnoticed and biased problems in babies and lactating mothers. These include improper nutrition to baby, altered growth, Oral thrush, low secretion of milk, inadequate feeds, nipple problems etc.

Minor problems may occur during breast-feeding. But with proper planning, knowledge, and support, mothers can overcome these challenges and continue breast-

feeding. Before the baby is born, attending classes, reading books, and watching videos that demonstrate breast-feeding techniques will help the mothers in promoting breast feeding practices.

The foundation for breast-feeding is established in the first few weeks after delivery. Proper techniques are crucial for successful breast-feeding. Although some aspects of breast-feeding technique comes naturally, learning new skills also is important.<sup>5</sup> Before the baby is born, attending classes, reading books, and watching videos that demonstrate breast-feeding techniques will help the mothers in promoting breast feeding practices.

### **Need for the study**

Even though basic aspect of health is the foundation for many technological advances in the field of health, many forget about the importance of basics and they try seeking the new innovations in technology to maintain their health. Alike even some mothers are very much interested to feed their newborns with other formula feds rather than giving breast milk. This clearly helps us to depict their lack of knowledge about the importance of breast milk for the baby. Even some fail to practice breast feeding due the lack of knowledge regarding breast feeding.

In one study it shown that formula fed infants tend to be obese and suffer from allergies than the breast fed infants. In some cultures they hesitate to give colostrums for the newborn and they discard it. It is we who can put an end to these practices by making them aware about its importance to the baby and the mother with the help of health teachings.

Literally hundreds of studies regarding breast feeding have been conducted. Many studies shown a positive results in the breastfeeding practices among rural mothers when compared to urban community. But a hospital based study conducted in Libya showed that parity had a greater significance in lactation practice. In that study practice of primi mothers was poor when compared to multiparous women.

In a cross sectional study conducted in Nepal, in 2007 regarding the infant feeding practices shown that three quarters of all mothers reported that they did not receive any information on breastfeeding during the antenatal visit. From these studies it clearly understands that most of the mothers had lack of knowledge on breastfeeding practices.

According to Centres for Disease Control and Prevention (CDC), a nationwide survey conducted in 2008, of the infants who were 19-35 months of age, 74% were breastfed at birth, 43% were breastfed at 6 months, 21% were breastfed at 12 months, 32% were exclusively breastfed at 3 months, and 12% were exclusively breastfed at 6 months.

Even in some hospitals they do not practice the BFHI policy like feeding within half an hour of delivery and also there is a lack of support groups Hence the researcher felt the importance to assess the effectiveness of Virtual Lactation Management upon knowledge and lactation practice among primi lactating mothers.

### **Statement of the problem**

An Experimental Study to Assess the Effectiveness of Virtual Lactation Management Upon Knowledge and Lactation Practice Among Primi Lactating Mothers at Selected Hospitals Chennai.

### **Objectives of the study**

1. To assess the level of knowledge on lactation before and after Virtual Lactation Management among Control and Experimental group of primi lactating mothers.
2. To assess the lactation practice before and after Virtual Lactation Management among Control and Experimental group of primi lactating mothers.
3. To determine the effectiveness of Virtual Lactation Management upon lactation by comparing the level of knowledge and lactation practice before and after the Virtual Lactation Management among Control and Experimental group of primi lactating mothers.
4. To determine the association between selected demographic variables and level of knowledge and lactation practice before and after Virtual Lactation Management among Control and Experimental group of primi lactating mothers.
5. To determine the association between selected obstetrical variables and level of knowledge and lactation practice before and after Virtual Lactation Management among Control and Experimental group of primi lactating mothers.
6. To determine the level of satisfaction regarding the Virtual Lactation Management among the Experimental group of primi lactating mothers

## **Operational definitions**

### **Effectiveness**

In this study the effectiveness refers to the outcome of Virtual Lactation Management programme as measured in terms of knowledge and lactation practice before and after the Virtual Lactation Management among primi lactating mothers using structured interview schedule and observational checklist respectively, developed by the researcher.

### **Virtual**

In this study the term virtual refers to the moving animated picture which is prepared by the researcher with a time duration of 7minutes. This depicts the process of lactation, importance of lactation, initiation and maintenance of lactation, factors affecting lactation, lactation techniques, expression and storage of breast milk and difficulties during lactation. This is administered to each primi lactating mothers in the Experimental group individually.

### **Lactation**

In this study it refers to the production, secretion, maintenance of breast milk and providing this milk to a newborn or infant either from mother's breast or as expressed breast milk.

### **Knowledge**

In this study it refers to the level of information known to the primi lactating mothers on lactation before and after the Virtual Lactation Management as measured by structured interview schedule, developed by the researcher.

## **Practice**

In this study it refers to the skill of performing lactation by the primi lactating mothers before and after the Virtual Lactation Management as measured by using a checklist, developed by the researcher.

## **Primi mothers**

In this study it refers to a women who has a live baby delivered for the first time and is lactating irrespective of abortion.

## **Assumptions**

The study assumes that:

- Babies who are breastfed generally are healthier and achieve optimal growth and development.
- To an extent lactation is a natural contraceptive method.
- Health teaching is essential for the primi mothers because some mothers have never even seen an infant suckling a mother's breast.
- Virtual Lactation Management is an accepted method of teaching.

## **Null Hypothesis**

**H01:** There will be no significant difference between pre test and post test level of knowledge and practice of lactation among the primi lactating mothers

**H02:** There will be no significant association between the selected demographic variables and the level of knowledge and practice of lactation before and after the Virtual Lactation Management among the primi lactating mothers.



**H03:** There will be no significant association between the selected obstetric variables and the level of knowledge and practice of lactation before and after the Virtual Lactation Management among the primi lactating mothers.

### **Delimitation**

The study is limited to :

- those women who are willing to participate in the study
- primi lactating mothers
- those who are available at the time of data collection
- primi mothers who are with their babies
- women who can read and understand English or Tamil

### **Conceptual Framework**

Conceptual framework is interrelated concepts or abstractions that are assembled together in some rational schemes by virtue of their relevance to a common theme (Polit).

The conceptual framework set up for the study is the modified model of Wiedenbach's helping art of clinical nursing theory. Ernestine Wiedenbach proposed a prescriptive theory of nursing which is described as a conceiving of desired situation of the ways to attain it. Prescriptive theories direct action towards an explicit goal. It consists of three factors:

1. Central purpose
2. Prescription
3. Realization.

A nurse develops a prescription based on a purpose and implements it according to the realities of the situation.

### **Central purpose**

In the model central purpose refers to what the nurse wants to accomplish. It is the overall goal towards which a nurse strives; it transcends the immediate intent of the assignment or task by specifically directing activities towards the patient's good. The central purpose of this study is to improve knowledge of breastfeeding and lactation practice. The researcher plans the prescription that will fulfil the central purpose by identifying the goal. Thus the researcher selected the method, Virtual Lactation Management as it is effective and without side effects.

### **Prescription**

Refers to the plan of care for the patient. It specifies the nature of the action that will fulfil the nurse's central purpose and acts as the rationale for the action.

### **Realities**

It refer to the physical, physiological, emotion and spiritual factors that come in to play in a situation involving nursing actions. The five realities identified by Wiedenbach are agent, recipient, goal, means and frame work where the agent is the practicing nurse; recipient is one who receives a nurse's action, goal is the nurse's desired outcome; the means are the activities and devices used by the nurse to achieve goal; then framework refers to the facilities in which nursing is practiced.

The realities identified in the study are:

**Agent** - Researcher.

**Recipient** – Primi lactating mothers.

**Goal** - To improve knowledge on breastfeeding and lactation practice.

**Means** – Virtual Lactation Management.

**Frame work** – postnatal wards

Wiedenbach views nursing practice as an art based on goal directed care. Her vision of nursing practice closely parallels the assessment, implementation and evaluation steps of the nursing process. She identifies seven levels of awareness/sensation, perception, assumption, realization, insight, design and decision.

According to Wiedenbach nursing practice consists of three steps:

- Identifying the patient's need for help
- Ministering the needed help
- Validating that the need for help was met

### **Identifying the patient's need for help**

In this study, 30 primi lactating mothers were identified to have the intervention (Virtual Lactation Management). The study assumed that there was a relationship between the intervention done by the nurse and the improvement of knowledge and lactation practice. Assessment before treatment in Experimental group was done. Intervention was given for Experimental group. Post assessment was done. A positive outcome represents improved knowledge and practice on breastfeeding. A negative outcome represents no improvement.

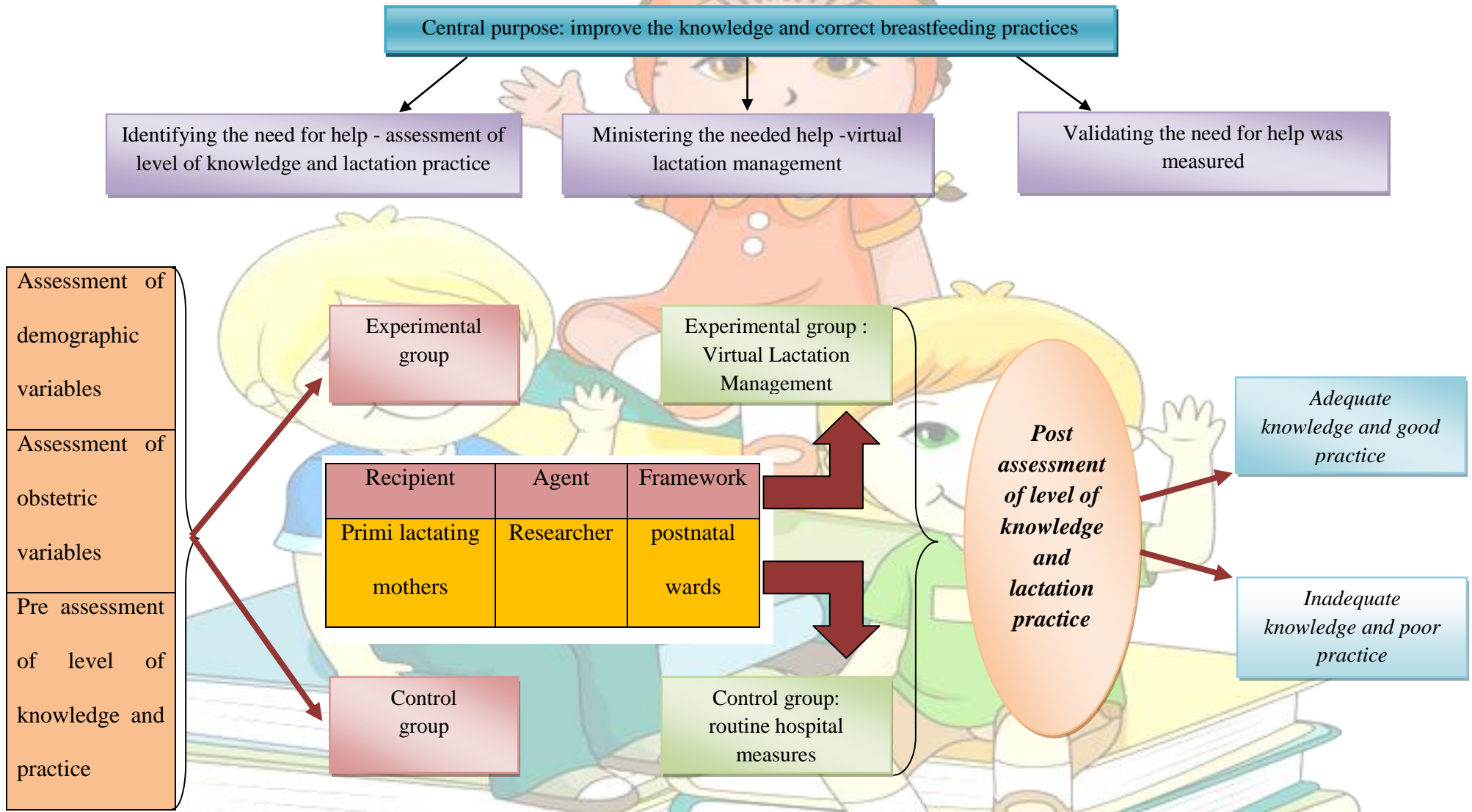
### **Ministering the needed help**

In this study the nurse researcher after getting consent from the selected primi lactating mothers, implemented the intervention of Virtual Lactation Management to Experimental group and to the Control group no intervention was provided.

### **Validating that the need for help was met**

In this study the nurse researcher validating whether the needed help was met or not by assessing the effectiveness of Virtual Lactation Management through observation of mothers lactation practice.

The model adopted for this study is modified form of Wiedenbach's helping art of clinical nursing theory. Researcher adopted this model and perceived apt in enabling to assess the effectiveness of Virtual Lactation Management on knowledge and practice among primi lactating mothers.



**Fig 1: Conceptual Framework on Modified Form of Wiedenbach's Helping Art of clinical Nursing**

## **Projected outcome**

This study will be useful for the primi mothers to improve the knowledge and improve breast feeding practices.

## **Summary**

This chapter has dealt with background of the study, need for the study, statement of the problem, objectives of the study, operational definitions, assumptions, null hypotheses, delimitations and conceptual framework.

## **Organization of report**

Further aspects of the study are presented in the following chapters

**Chapter II:** Review of literature

**Chapter III:** Research methodology which includes research approach , research design , research setting , population , sampling , sampling criteria and development of analysis and research instrument

**Chapter IV:** Analysis and interpretation of data is presented in terms of descriptive and inferential statistics

**Chapter V:** Discussion

**Chapter VI:** Summary , conclusion implications , recommendations and limitations are presented

## **CHAPTER II**

### **REVIEW OF LITERATURE**

A literature involves the systematic identification, location, scrutiny and summary of written materials that contain information on the research problem (Polit and Hungler 2007).

#### **Review of Literature**

“Conducting a literature review is a little bit doing a full-fledged study”. The review of literature has two major goals: (1) To provide readers with an overview of existing evidence on the problem being addressed and (2) To develop an argument that demonstrates the need for the new study. According to nursing research by Polit (2008), ‘Review of literature is a written summary of the state of evidence on a research problem.’

The review of literature in this chapter is presented under the following headings:

- 1. Literature related to breastfeeding**
- 2. Literature related to knowledge of breastfeeding in primi paras**
- 3. Literature related to lactation practice**
- 4. Literature related to Virtual Lactation Management**

#### **Literature related to breastfeeding**

A comparative study, was conducted by Chandra (2010) to assess the effectiveness of exclusive breast feeding and early supplemental feeding on infant morbidity in the first few weeks after birth, at rural and urban community in India. The

study results showed that exclusively breast fed infants had a significantly lower incidence of respiratory tract infection, otitis media, diarrhoea and dehydration. So all the mothers encouraged to breast feed their babies upto six months to reduce infant mortality and morbidity rates.

Bhavani (2007) conducted a worldwide survey and showed that every year, there are about 120million infants born, of which majority (85%) are in the developing countries. Before they reach the age of 1 year (10%) of these children die and another (4%) die before they are 5 years old. The survey resulted that in India (75%) of hospital admissions of infants and children is due to malnutrition (40%) diarrheal disease (15%) and infectious diseases (30%) this can be prevented from meeting the nutritional needs of the infants through breastfeeding.

In Mount Sinai Hospital, Toronto, Canada Shah (2007) conducted a study with the aim of 1) comparing breastfeeding with Control (placebo, no treatment ,sucrose , glucose , pacifiers or positioning) 2) comparing breast milk with Control for procedural pain in neonates. They concluded that breast feeding group had significantly less increase in heart rate , reduced proportion of crying time and reduced duration of crying compared to the swaddled or pacifier group. Neonates in the supplemental breast milk group had significant differences in the duration of crying time and SPO2 changes compared to the placebo group.

In (2006), Vallianatos et al. conducted a study to know the implications for womens health regarding beliefs and practices of First Nation women about weight gain during pregnancy and lactation. They found out many women had the negative health



consequences of excessive weight gain, yet they found it difficult to lose weight due to individual constraints such as lack of time, cultural beliefs about diet while breastfeeding and community constraints including lack of child care and lack of community programs for mothers.

Wright et al (2006) investigates the factors relate most strongly to breast feeding duration in order to support breastfeeding mothers. He found that only (24%) infants were still breast feeding at 6weeks, although (15%) continued beyond 4 months, early cessation seems to frequent feeding and rapid growth as well as continuing failure to eradicate health practices that determine breast feeding. Those infants not receiving breast milk suffered increased morbidity, but the apparent association between breast feeding duration and growth reflects reverse causation.

In 2005, Sachs et al. revealed infant weight monitoring, establishing breast feeding and the promotion of continued exclusive breast feeding are important activities of health professionals. Research evidence for choosing appropriate interventions to improve the growth of breast feeding babies is reviewed. This review gathers together a wide range of literature, and identifies infants whose weight may be of concern, and who may need appropriate intervention, and support continued breastfeeding.

### **Literature related to knowledge of breastfeeding in primi paras**

To examine the level of knowledge about breastfeeding among first-time mothers, a study was conducted in birthing rooms of Obstetrics and Gynecology Clinic Hospital for Medical University by the name of Marcinkowskiego in Poznań and Obstetrician Wing in Provincial Complex Hospital in Leszno in 2011. The study

concludes that there is a necessity of systematic and planned education for women. The system of lactation counselling should be an integral part of post-labour care in obstetrician clinics.

In July 2009 Ekambaram Maheswari conducted a descriptive study to explore the practices, knowledge and attitude towards breastfeeding among postnatal mothers and factors that determine them. This study resulted that there is still a need for programmes, which support and encourage breast-feeding particularly at a primary care level, focusing more on younger, less well-educated women and those from lower socioeconomic class.

Chang (2008) conducted a quasi Experimental study in Veterans General Hospital, Taiwan to assess the effectiveness of educational programme on knowledge and attitude of breastfeeding, satisfaction and problems of breastfeeding, and exclusive breastfeeding rate. The study revealed that prenatal educational programme on breastfeeding will help the mothers to increase the knowledge, attitude about breastfeeding and satisfaction toward breastfeeding not only during the intervention but also during the postnatal period.

New mothers breast feeding promotion Act, 2005, found that although breast feeding has been recognized as a prerequisite for healthy child growth development in the modern urban setting , it is complicated by the increasing tendency of women to work in situations where they are separated from their infants and depend on the formulated feed. About (50%) of the women are employed when they become pregnant and return to work places when their children are 3 months old.

## **Literature related to lactation practice**

A clinical trial to assess the effectiveness of postpartum position and attachment education to increase the breast feeding rates, was performed in a public hospital in Adelaide, south Australia. 160 primi mothers were participated in this study. The study results showed that (90%) of the study group were continued breastfeeding in the Control group (60%) of them were stopped breast feeding due to nipple pain and nipple trauma; (25%) of them reported lactation failure and remaining had introduced bottle feeding within 6 weeks. The researcher concluded that postpartum position and attachment education increases breast feeding rates (Henderson, et al .2011)

Ram (2010), conducted a cross sectional study to assess the correct position, attachment and effective suckling in the breastfeeding of infants as practiced by mothers .The study concluded that primipara mothers were more in need of support and guidance for appropriate breastfeeding techniques. It is recommended that each mother should be observed for mother's and infant's positioning and attachment at the onset of breastfeeding and if needed subsequent counselling should be given on correct positioning and attachment.

In Metro Health Medical Centre 2009, Bedinghaus proved that breastfeeding provides ideal nutrition to the baby. Attention to proper positioning is essential to successful breast feeding. This successful breastfeeding and proper latch on method prevents the postnatal breast complications such as sore nipples, engorgement and nipple pain

To identify factors that are associated with low incidence of breast feeding , a study was conducted in 2008 in a maternity unit, West Bengal. The study results showed that (95%) of the mothers reported breastfeeding cessation before 6 months. The researcher concluded that by promoting effective antenatal teaching regarding breastfeeding technique – latch on, duration and breast care will help to improve breastfeeding in the first 6 months.

A cross sectional study conducted in 2006 by Madhu with the primary objective to describe the breastfeeding and newborn care practices in rural areas and the secondary objective to describe the factors affecting the initiation and duration of breastfeeding. The findings was ((97%) of the mothers initiated breastfeeding, (19%) used pre lacteal feeds, (90%) had hospital deliveries and (10%) had home deliveries, and (50%) used a house knife to cut the umbilical cord among home deliveries. This study emphasizes the need for breastfeeding intervention programs especially for the mother during antenatal and postnatal check-ups and practices like discarding the colostrum and early/late weaning are still widely prevalent and need to be addressed.

In 2005, Gunasekaran Dhandapany, conducted a descriptive study in Pondicherry upon antenatal counselling on breastfeeding and postnatal lactation support. The study awareness related to breastfeeding among mothers in the "counselled" group was better than those in the "not counselled" group.

### **Literature related to Virtual Lactation Management**

In Bournemouth university in United Kingdom, 2010, a study conducted revealed that inadequate support from health professionals appears to be an underlying

feature, aggravated by a dearth of professional education that uses a biopsychosocial approach. This paper describes how using women's video narratives of their lived experience of breastfeeding within higher education impacted positively on the attitudes of a group of midwives in relation to supporting breastfeeding women they concluded that 'Listening and learning from real women's experiences' was central to learning, and was pivotal to attitudinal change, motivating an intense need to improve practice.

### **Summary**

This chapter deals with the review of literature related to problem stated. The literatures presented here were extracted from online journals, manual journals and books. It includes ten primary and seven secondary sources. It helped the researcher to develop tools, collect, organize and analyze the data.

## **CHAPTER III**

### **RESEARCH METHODOLOGY**

This methodology of the research study is defined as the way the data are gathered in order to answer the question and to analyze the research problem. It enables the researcher to project a blueprint of the research undertaken. The research methodology involves a systemic procedure in which a researcher had a start from the initial identification of the problem of its final conclusion (Polit and Beck, 2008).

The present study was conducted to assess the effectiveness of Virtual Lactation Management upon knowledge and lactation practice. This chapter deals with a brief discussion of different steps undertaken by the researcher for the study. It involves research setting, population, sample and sampling technique, selection of tool, content validity, reliability, pilot study, data collection procedure and plan for data analysis.

#### **Research Approach**

Research approach is the most significant part of any research. The appropriate choice of the research approach depends on the purpose of the research study which was undertaken.

According to Polit and Beck (2008) Experimental research is an extremely applied form of research and involves finding out how well a programme and practice of policy are working. Its goals are to assess or to evaluate the success of intervention. In this study the researcher wanted to assess the effectiveness of Virtual Lactation Management upon knowledge and lactation practice. After reviewing the various

literatures the researcher found that the true Experimental approach was seemed to be the most appropriate approach for the study.

### **Research Design**

The research design is the plan, structure and strategy of investigations answering the research question. It is the overall blue print to the researchers to select and carry out the study.

The research design used in this study was pre test – post test design.

R    O<sub>1</sub> X   O<sub>2</sub>

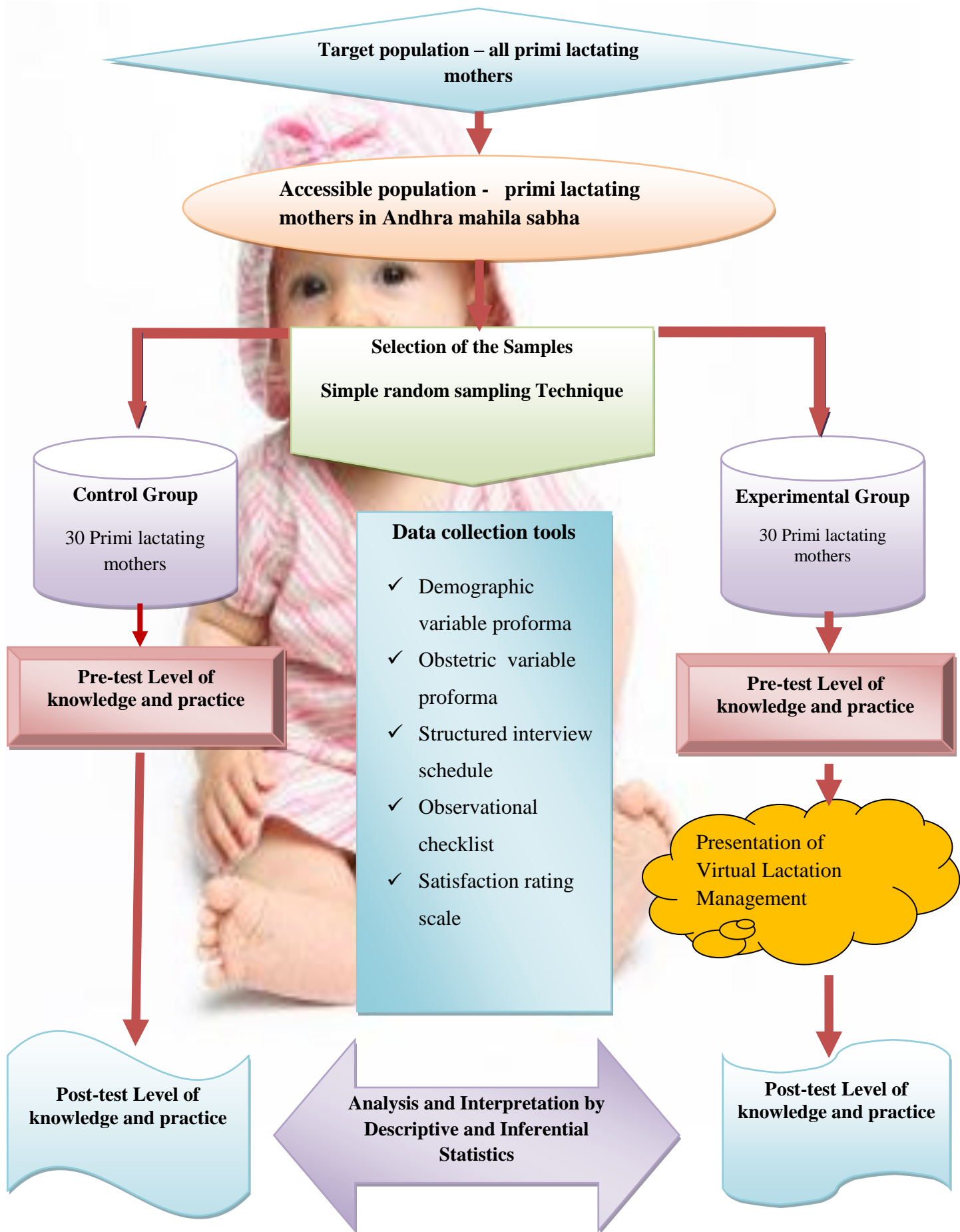
R    O<sub>1</sub> -   O<sub>2</sub>

R – randomization

O<sub>1</sub>- assessment before the administration of Virtual Lactation Management

X – administration of Virtual Lactation Management

O<sub>2</sub> - assessment after the administration of Virtual Lactation Management



**Fig.2 Schematic Representation of Research Design**



## **Variables**

Variable is an attribute that varies , that is taken on different values (Polit , 2010)

### **Independent variable**

The variable that is believed to cause or influence the dependent variable is called independent variable. In this study Virtual Lactation Management is the independent variable. The Virtual Lactation Management provided to the primi mothers after the pre test to improve their knowledge and practice on breast feeding.

### **Dependent variable**

The variable hypothesised to depend on or be influenced by independent variable is the dependent variable. In this study knowledge and lactation practice is the dependent variable.

### **Extraneous variables**

A variable that confounds the relationship between the independent and dependent variables and that needs to be Controlled either in the research design or through statistical procedures is the extraneous variables. Demographic variables and obstetric variables were extraneous variables in this study.

## **Research Setting**

The study was conducted at, Andhra Mahila sabha hospital located at Adyar, which is in the urban area of Chennai, the hospital is 200 bedded, which has two postnatal wards and an LSCS ward. The ward consists of equipments like weighing machines , BP apparatus, stethoscope , necessary medicines and injection trays. This hospital also has labour room, neonatal intensive care unit , operation theatre, laboratory

and other diagnostic facilities like ultrasonography. They also provide immunization and conduct teaching programmes for the staffs and the patients and do referral to government agencies indeed.

### **Population**

The entire set of individuals or objects having same or common characteristics (Polit and Beck, 2010).

**The target population** is the entire population in which a researcher is interested and to which he or she would like to generalize the study results. In this study the target population comprises of entire primi lactating mothers.

**The accessible population** is the aggregate of cases that confirm to designated criteria and that are accessible as subjects for a study. In this study the accessible population comprises of all primi lactating mothers satisfying the inclusion criteria and to whom the study findings will be generalized.

### **Sample**

According to Polit and Beck (2010) sample is a subset of population elements. In this study the sample consists of primi lactating mothers who meets the inclusion criteria. A Sample of 60 primi lactating mothers who meets the inclusion criteria, in that 30 primi lactating mothers were randomly assigned in the Experimental group and 30 primi lactating mothers were randomly assigned to the Control group.

## **Sampling technique**

Sampling is the process of selecting a portion of the population to represent the entire population so that inferences about the population can be made (Polit and Beck 2010). Simple random sampling was used in this study for the women who satisfy the inclusion criteria where the odd number primi lactating mothers were assigned to Control group and the even number women primi lactating mothers were assigned to the Experimental group

### **Inclusion criteria**

- Those women who are willing to participate in the study
- Primi lactating mothers
- Those who are available at the time of data collection
- Primi mothers who are with their babies
- Women who can read and understand English or Tamil

### **Exclusion criteria**

- Women who are not willing to participate
- Multi parous women
- Primi women with still birth or neonatal death.
- Babies with cleft lip or palate.

## **Selection and development of study instruments**

The instruments for this study were developed to evaluate the effectiveness of Virtual Lactation Management upon knowledge and lactation practice through extensive review of literature. The instruments used in this study were demographic

variable, obstetric variable, structured interview schedule, observational checklist, satisfaction scale.

### **Demographic variable proforma of primi lactating mothers**

The demographic variable proforma consists of age, religion , educational status , type of family , area of residence , type of employment and monthly income.

### **Obstetric variable Proforma of primi lactating mothers**

The obstetric variable proforma consists of antenatal checkups, antenatal nipple exercises, medical disorders during pregnancy, gestational age of the newborn at birth , mode of delivery, birth weight of the baby, sex of the baby, any complications during labour, initiation of breast feeding after delivery, breast condition of the mother, frequency of feeding, effective latch of the baby, sucking behaviour of the baby, satiety behaviour of the baby.

### **Structured interview schedule to assess knowledge**

The structured interview schedule was used to assess the level of knowledge of primi lactating mothers before and after Virtual Lactation Management which was collected by the researcher through interview schedule. The scoring was given based on observation by investigator during the procedure.

Scoring was classified as follows:

<b>Percentage</b>	<b>Level of knowledge</b>
<50%	Inadequate Knowledge
50-75%	Moderately Adequate Knowledge
>75%	Adequate Knowledge

### **Observational checklist to assess lactation practice**

The observational checklist was used to assess the lactation practice of primi lactating mothers before and after Virtual Lactation Management which was collected by the researcher through observation. The scoring was given based on observation by investigator during the procedure.

The checklist was classified as follows

<b>Scoring</b>	<b>Percentage(%)</b>	<b>Lactation Practice</b>
0-8	0-33	poor
9-6	34-66	average
17-24	67-100	good

### **Rating scale on satisfaction of Virtual Lactation Management**

This scale was designed by the researcher to assess the satisfaction level of the participants regarding the Virtual Lactation Management.

The satisfaction score was classified as follows:

<b>Score</b>	<b>Percentage (%)</b>	<b>Interpretation</b>
1 – 10	$\leq 25$	Highly dissatisfied
11 – 20	26 – 50	Dissatisfied
21 – 30	51 – 75	Satisfied
31 – 40	76 – 100	Highly satisfied

## **Psychometric Properties**

### **Validity of the instruments**

Validity is the degree to which an instrument measures what it is intended to measure ( Polit, 2010).

Content validity of the tool, was obtained from 7 experts in the field of paediatrics. Five of them were nursing personnel and two were paediatric specialists. The suggestions given by the validators regarding the structured interview schedule and checklist was made in the final preparation of the tool.

### **Reliability of the instruments**

Reliability is the degree of consistence or dependability with which an instrument measures an attribute (Polit 2007). The reliability was found using Pearsons correlation formula.

Structured interview schedule - 0.9 (test – retest method)

Observational checklist - 0.9 (test – retest method)

Rating scale - 0.9 (test – retest method)

### **Pilot study**

Pilot study is a small scale version or trial run done in preparation for a major study (Polit, 2004). The purpose of the pilot study was to find out the feasibility and practicability of study design.

The pilot study was conducted at Andhra mahila sabha Hospital, Chennai by selecting 12 primi lactating mothers with six primi lactating mothers in the Control group and six in the Experimental group using simple random sampling in order to assess the methodology and tool. The level of knowledge and lactation practice were assessed using

structured interview schedule and observational checklist respectively for both the Control and Experimental group before therapy. Virtual Lactation Management was provided for 7 minutes for the participants of Experimental group. Again the knowledge and lactation practice were assessed for both the groups after 7 days. The level of satisfaction on Virtual Lactation Management was assessed from the Experimental group after 7 days of Virtual Lactation Management. After the pilot study, it was found to be feasible and effective and the study instruments were found to be appropriate.

### **Intervention protocol**

The primi lactating mothers were made to sit comfortable and informed verbal consent was taken to conduct the study. Then Virtual Lactation Management which contains the process of lactation , importance of lactation , initiation and maintenance of lactation , factors affecting lactation , lactation techniques , expression and storage of breast milk and difficulties during lactation which was administered to each primi lactating mothers in the Experimental group individually for a duration of 7 minutes and 5-10mts were allotted for discussion .

### **Protection of Human Rights**

The researcher obtained permission to conduct the study from the Principal and Head of the Department of Child Health Nursing of Apollo College of Nursing and the Medical superintendent of Andhra Mahila Sabha and ethical committee of Apollo hospitals. Informed verbal consent was obtained from primi lactating mothers before collecting the data and confidentiality was maintained throughout the study.

## **Data collection procedure**

Data collection is gathering information about something which the researcher has chosen to explore or investigate (Crookes and Davies, 1998).

The participants were selected using simple random sampling among which 30 primi mothers were assigned to the Control group and 30 primi mothers to the Experimental group and the data was collected from the participants through interview, observation and through medical records. The level of knowledge was assessed by the structured interview schedule, lactation practice was assessed by observational checklist before each intervention for both Control and Experimental group of primi lactating mothers.

Virtual Lactation Management was provided for 7 minutes for Experimental group of primi lactating mothers. The level of knowledge and lactation practice were assessed again after 7 days of intervention for both groups with the same tools. The level of satisfaction on Virtual Lactation Management was assessed in the Experimental group of primi lactating mothers using rating scale developed by the researcher.

## **Problems Faced During Data Collection**

Some primi lactating mothers were not willing to participate in the study.

## **Plan for Data Analysis**

Data analysis is the systematic organization, synthesis of research data and testing of hypothesis using those data (Polit and Beck, 2010).



Analysis were carried out using descriptive statistics like frequency distribution, percentage, mean, standard deviation and inferential statistics like independent 't' test. The association between the demographic variables, obstetric variables and dependent variables were analyzed with the help of chi-square test.

### **Summary**

This chapter dealt with the research approach, research design, setting, population, sample, sampling technique, sampling criteria, development of study instruments, reliability and validity of the instruments, pilot study, data collection procedure and plan for data analysis.

## **CHAPTER IV**

### **ANALYSIS AND INTERPRETATION**

The analysis is defined as the method of organizing data in such a way that the research questions can be answered. Interpretation is the process of the results and of examining the simplification of the findings with in a broader context (Polit and Hungler 2010).

This chapter deals with the analysis and interpretation including both descriptive and inferential statistics. Statistics is the field of study concerned with techniques or methods of collection of data, classification, summarization, interpretation, drawing inferences, testing of hypothesis, making recommendations, etc (Mahajan, 2004).

The data was analysed according to the objectives and hypothesis of the study. Analysis of the study was compiled after all the data was transferred to the master coding sheet. The investigator used descriptive and inferential statistics for analysis. The data were analysed, tabulated and interpreted using appropriate descriptive and inferential statistics.

#### **Organization of the findings**

The findings of the study was organized and presented under the following headings

- Frequency and percentage distribution of demographic variables in Control and Experimental group of primi lactating mothers.
- Frequency and percentage distribution of obstetric variables in Control and Experimental group of primi lactating mothers.

- Comparison of mean and standard deviation of knowledge and lactation practice before and after Virtual Lactation Management between Control and Experimental group of primi lactating mothers.
- Comparison of mean and standard deviation of lactation practice before and after Virtual Lactation Management between Control and Experimental group of primi lactating mothers.
- Association between the selected demographic variables and the level of knowledge before and after Virtual Lactation Management in Control group of primi lactating mothers.
- Association between the selected demographic variables and the level of knowledge before and after Virtual Lactation Management in Experimental group of primi lactating mothers.
- Association between the selected demographic variables and lactation practice before and after Virtual Lactation Management in Control group of primi lactating mothers.
- Association between the selected demographic variables and and lactation practice of before and after Virtual Lactation Management in Experimental group of primi lactating mothers
- Association between the selected obstetric variables and the level of knowledge before and after Virtual Lactation Management in Control group of primi lactating mothers.
- Association between the selected obstetric variables and the level of knowledge before and after Virtual Lactation Management in Experimental group of primi lactating mothers.

- Association between the selected obstetric variables and lactation practice before and after Virtual Lactation Management in Control group of primi lactating mothers.
- Association between the selected obstetric variables and and lactation practice before and after Virtual Lactation Management in Experimental group of primi lactating mothers
- Frequency and percentage distribution of level of satisfaction regarding Virtual Lactation Management among Experimental group of primi lactating mothers

**Table.1**

**Frequency and percentage distribution of demographic variables in Control and Experimental group of Primi Lactating Mothers.**

Demographic variables	Control group n=30		Experimental group n=30	
	n	p	n	p
<b>Age ( in years)</b>				
<18 - 23yrs	23	76.66	25	83.33
24 - 29yrs	7	23.33	5	16.66
30 - 35yrs	0	-	0	-
>36yrs	0	-	0	-
<b>Religion</b>				
Hindu	25	83.33	29	96.66
Christian	4	13.33	1	3.33
Muslim	1	3.33	0	-
Others	-	-	-	-
<b>Educational status</b>				
Illiterate	-	-	-	-
Primary education	8	26.66	9	30.00
Secondary education	18	60.00	19	63.33
Graduates	4	13.33	2	6.66
post graduates	-	-	-	-
<b>Type of family</b>				
Nuclear	27	90.00	24	80.00
Joint	3	10	6	20
Extended	-	-	-	-

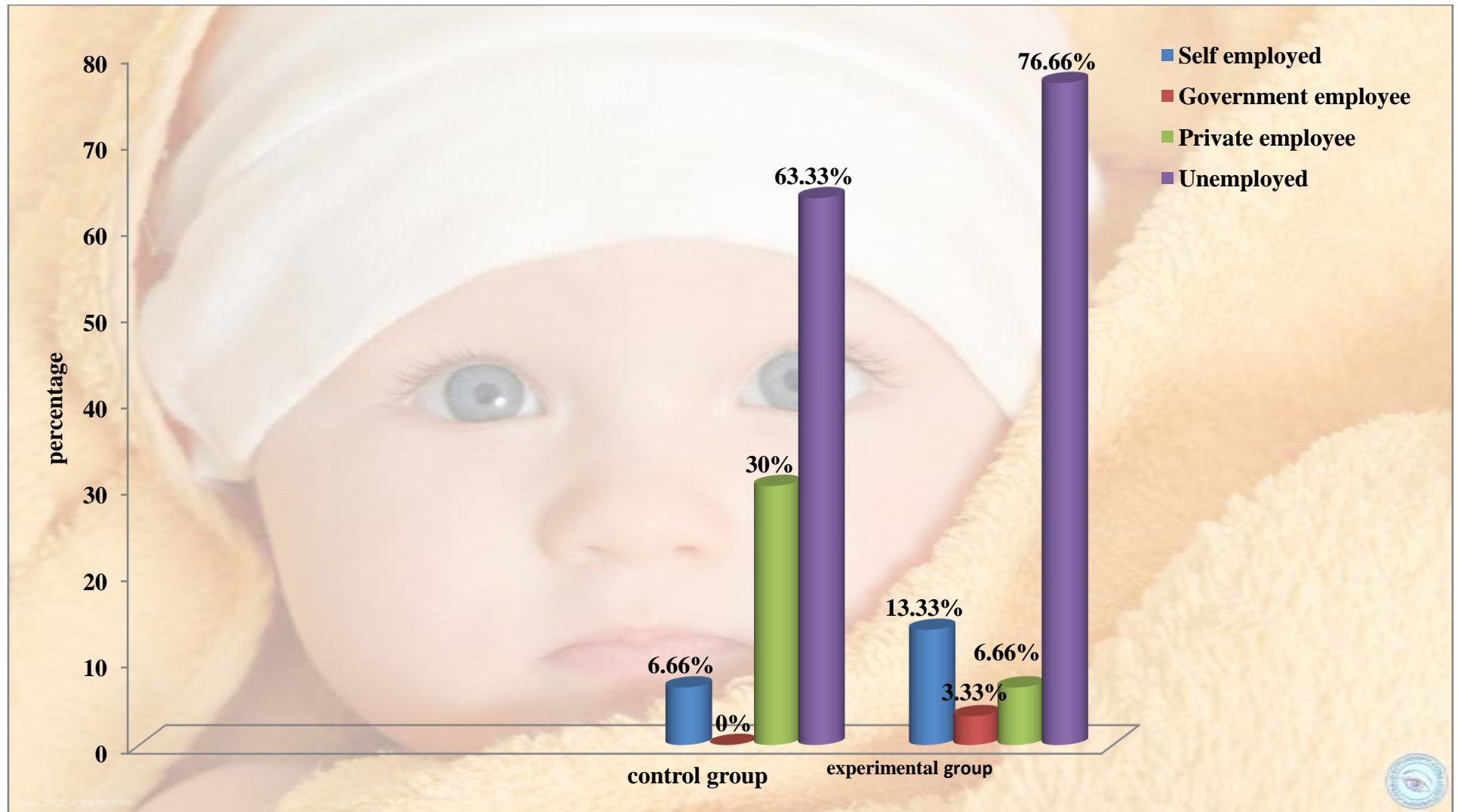
The data in table 1 reveals that majority of primi lactating mothers are 18 -23 years old (76.66, 83.33%), Hindus (83.33%, 96.66%), qualified upto secondary education (60%,63.33%), from nuclear family (90.00%, 80.00%), residing in urban area

(100%,100%). Large percentage of them are unemployed (63.33%, 76.66%) in Control group and Experimental group respectively.

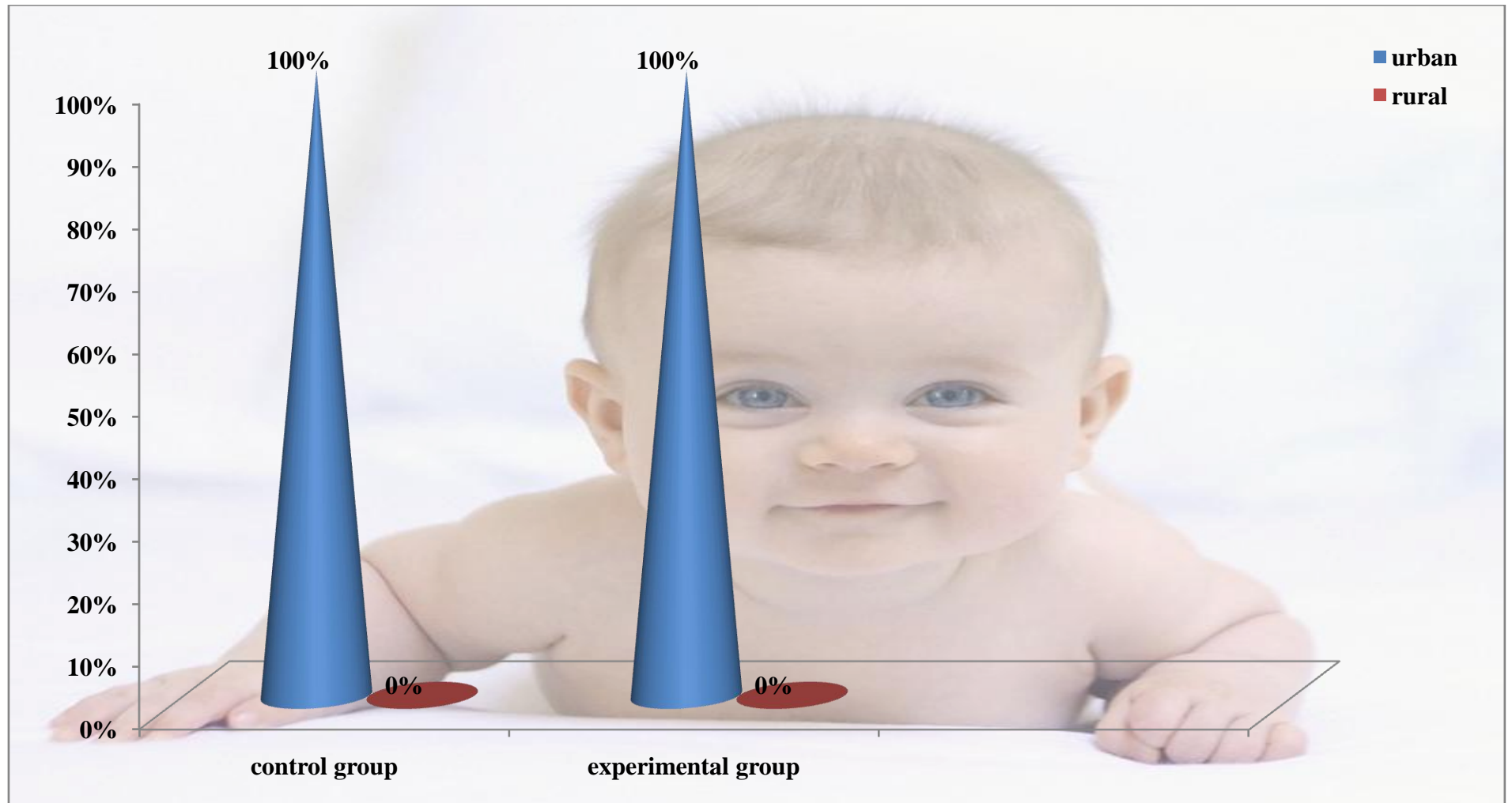
Fig.3. Percentage distribution type of employment in Control and Experimental group of primi lactating mothers. Majority of primi lactating mothers are unemployed (63.33%, 76.66%) in control and experimental group respectively.

Fig 4.Percentage distribution of area of residence in Control and Experimental group of primi lactating mothers. Majority of primi lactating mothers are from urban area (100%,100%) in control and Experimental group respectively.

Fig 5 .Percentage distribution of family monthly income in rupees in Control and Experimental group of primi lactating mothers. Majority of them have family monthly income between rupees 50001 – 7000(53.33%, 56.66%) in Control and Experimental group respectively.

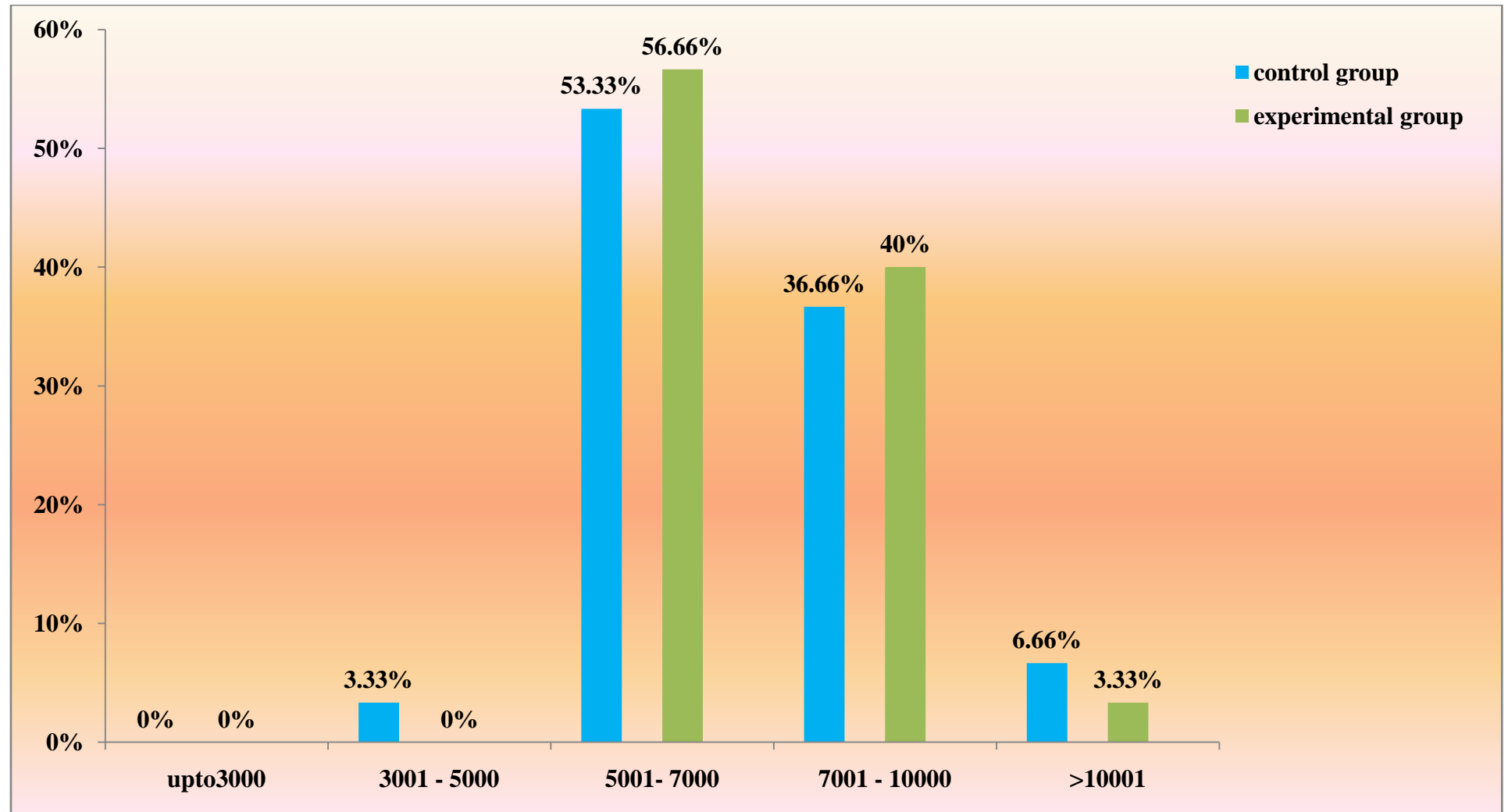


**Fig 3. Percentage distribution of employment in Control and Experimental group of primi lactating mothers.**



**Fig 4. Percentage distribution of area of residence in Control and Experimental group of primi lactating mothers.**





**Fig.5. Percentage distribution of area of residence in Control and Experimental group of primi lactating mothers**

**Table: 2**  
**Frequency and percentage distribution of obstetric variables in Control and Experimental Group of Primi Lactating Mothers.**

Obstetric variables	Control group (n=30)		Experimental group (n=30)	
	n	p	n	p
<b>Antenatal checkups</b>				
<3 checkups	-	-	-	-
3 – 5 checkups	-	-	-	-
>5checkups	30	100.00	30	100.00
Not done	-	-	-	-
<b>Antenatal nipple exercises</b>				
Regularly practiced after birth	-	-	-	-
Practiced once in a week	-	-	-	-
Occasionally practices	-	-	-	-
Never practiced	30	100.00	30	100.00
<b>Medical disorders during pregnancy</b>				
Anemia	1	3.33	-	-
Hypertension	-	-	1	3.33
Diabetes mellitus	2	6.66	1	3.33
Others if any specify	1	3.33	-	-
No complications	26	86.66	28	93.33
<b>Gestational age of baby</b>				
Less than 37weeks	-	-	-	-
37-40 weeks	30	100.00	30	100.00
Above 40 weeks	-	-	-	-

Data presented in table 2 depicts that majority of primi lactating mothers had regular antenatal checkups (100%, 100%), none of the mothers had practiced antenatal nipple exercises (100%,100%) in Control and Experimental group respectively.

Fig 6. Percentage distribution of initiation of breast feeding in Control and Experimental group of primi lactating mothers. Majority of primi lactating mothers

initiated breastfeeding between half an hour to one hour (46.66%, 43.33%) in Control and Experimental group respectively.

Fig 7. Percentage distribution of mode of delivery in Control and Experimental group of primi lactating mothers. Most of the mothers had normal vaginal delivery with episiotomy (73.33%, 86.66%) in Control and Experimental group respectively.

Fig 8. Percentage distribution of birth weight of the baby in Control and Experimental group of primi lactating mothers. Majority of babies birth weight is less than 2.5kgs (53.33%,46.66%) in Control and Experimental group respectively.

Fig 9. Percentage distribution of sex of the baby in Control and Experimental group of primi lactating mothers. Majority of newborns were males (53.33%, 63.33%) in Control and Experimental group of primi lactating mothers respectively.

Fig10. Percentage distribution of complications during labour in Control and Experimental group of primi lactating mothers. Most of the mothers did not have any complications during labour (86.66%, 93.33%) in Control and Experimental group of primi lactating mothers respectively.

Fig 11. Percentage distribution of breast condition of the mother in Control and Experimental group of primi lactating mothers. Majority of the mothers had erect nipple (100%, 100%) in Control and Experimental group of primi lactating mothers respectively.

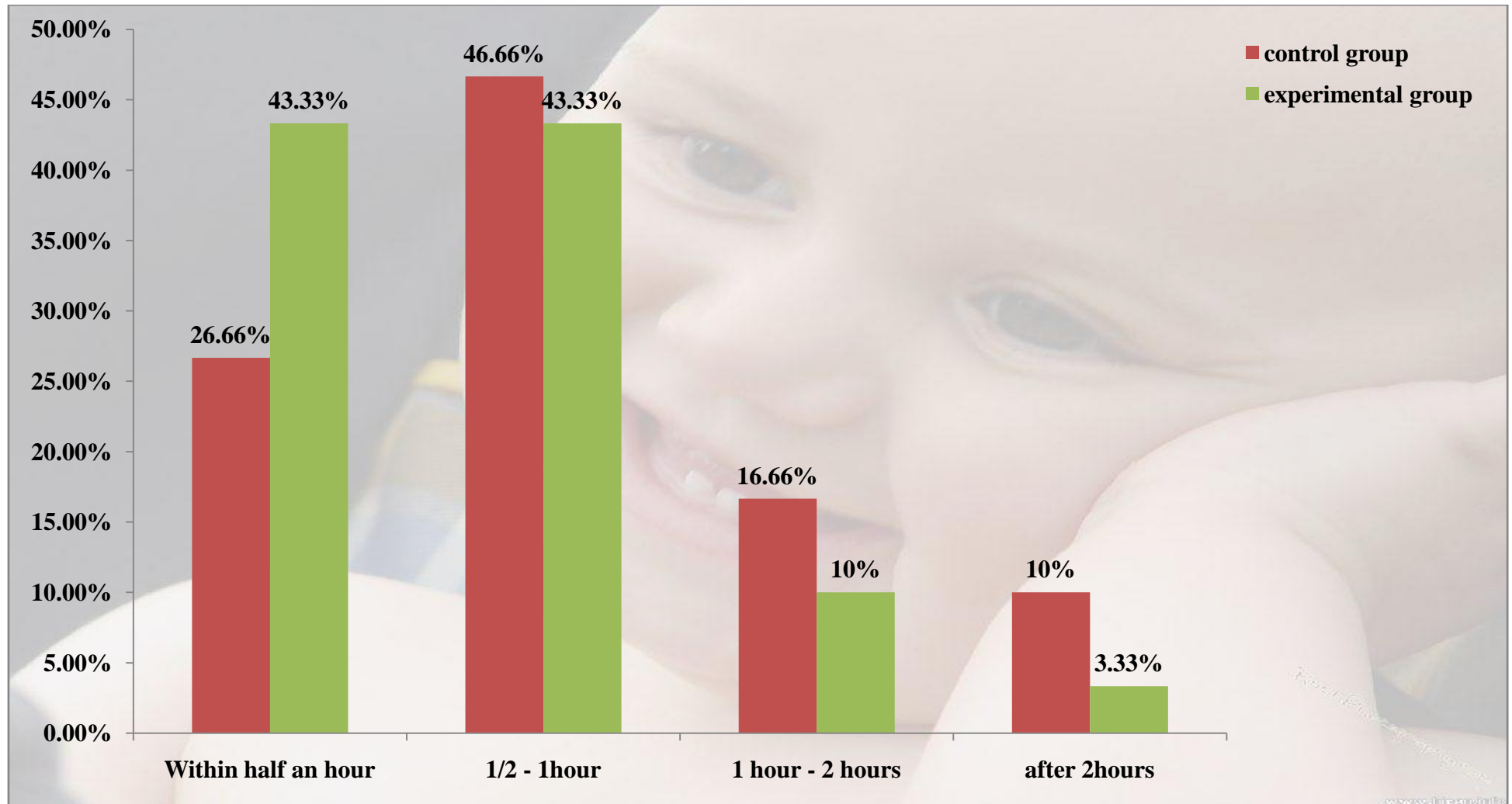
Fig12. Percentage distribution of frequency of feeding in Control and Experimental group of primi lactating mothers. Majority of them are breastfeeding the baby every hourly (53.33%, 56.66%) and significant of them practice demand feeding (36.66%, 43.33%) in Control and Experimental group of primi lactating mothers respectively.

Fig13. Percentage distribution of type of feeding in Control and Experimental group of primi lactating mothers. Most of the mothers practice only breastfeeding (93.33%, 96.66%) in Control and Experimental group of primi lactating mothers respectively.

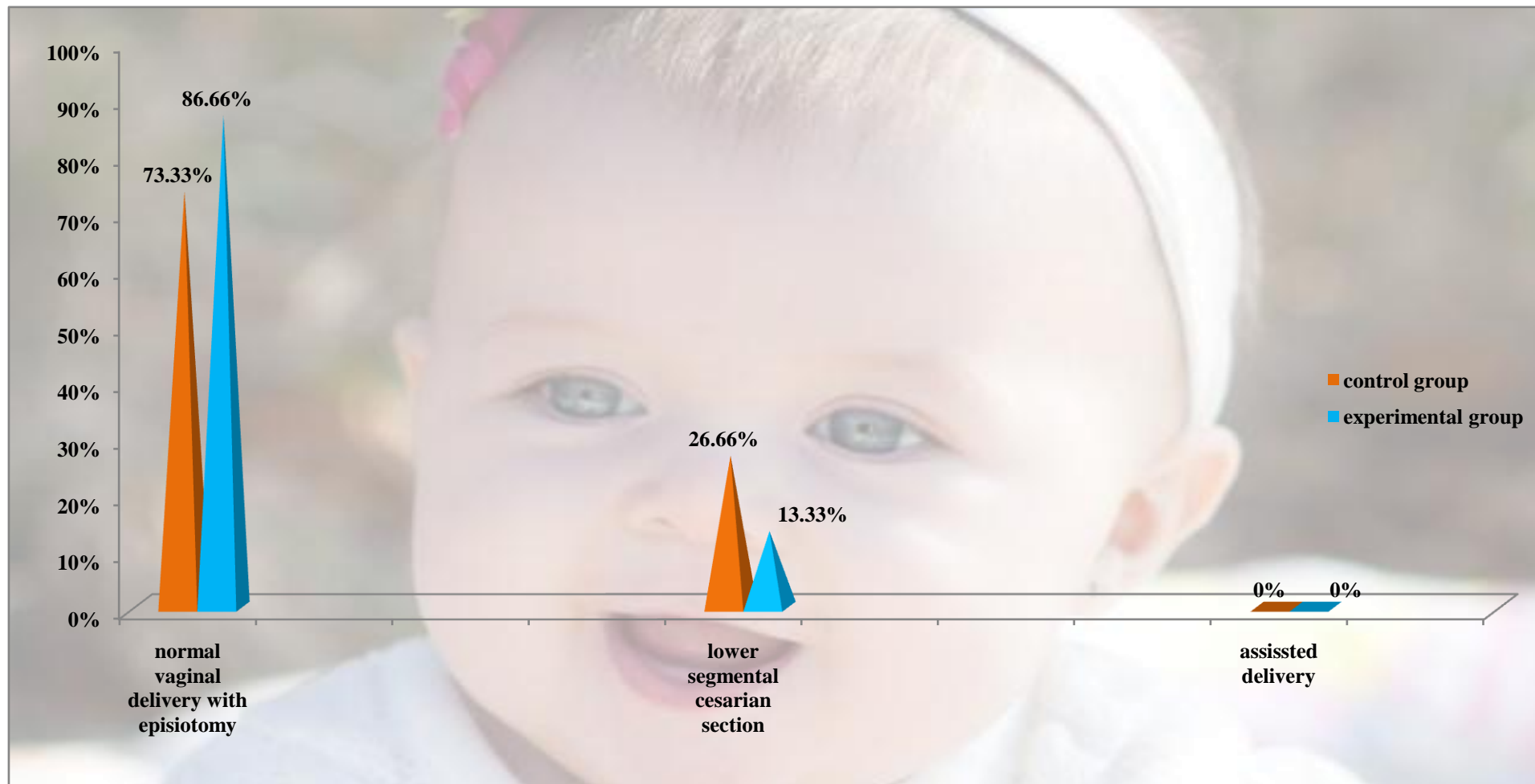
Fig .14. Percentage distribution of effective latch of the baby in Control and Experimental group of primi lactating mothers. About more than half of the babies had an effective latch (50%, 56.66%) in Control and Experimental group of primi lactating mothers respectively.

Fig15. Percentage distribution of sucking behaviour of the baby in Control and Experimental group of primi lactating mothers. Most of the babies have good sucking (56.66%, 63.33%) in Control and Experimental group of primi lactating mothers respectively.

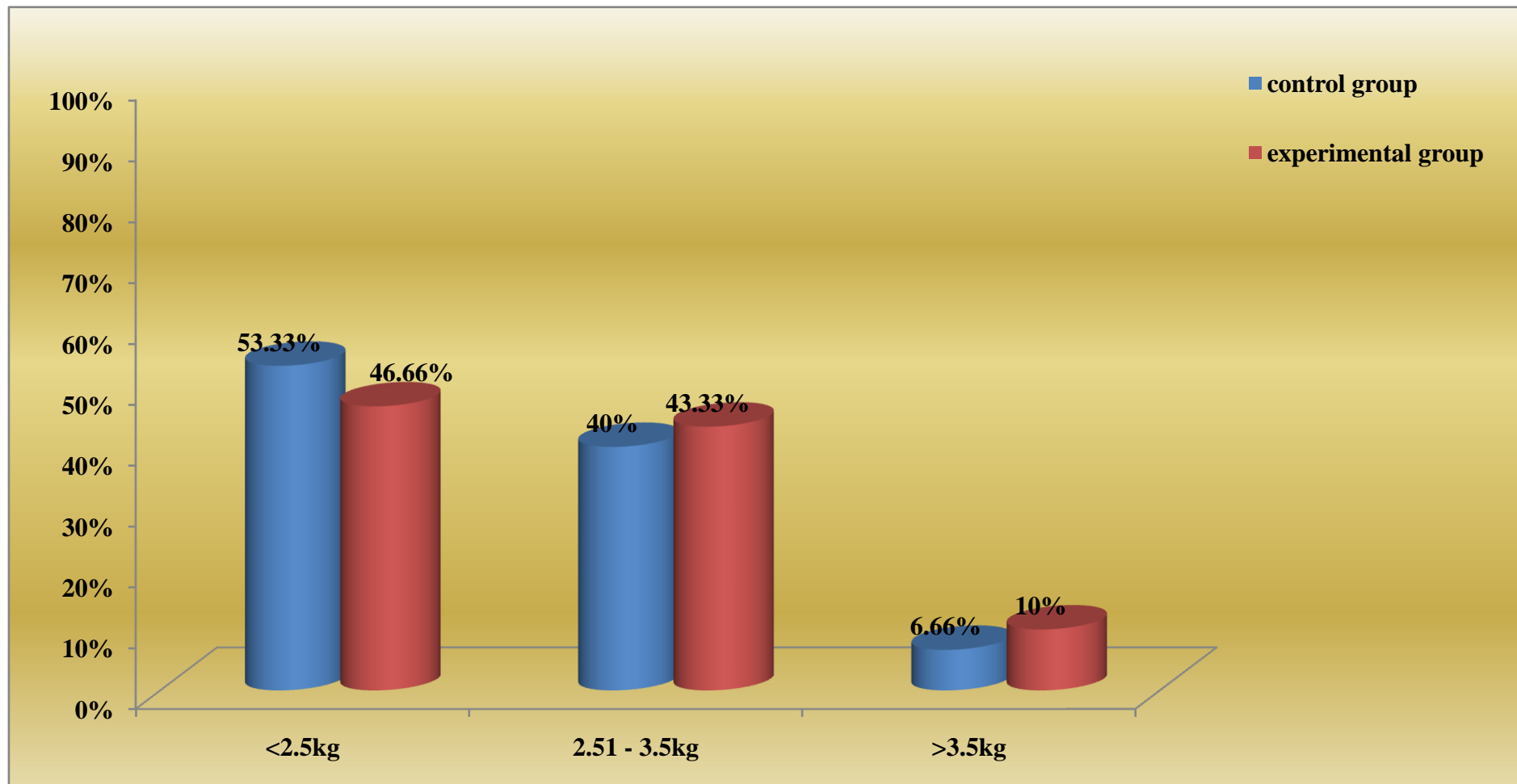
Fig16. Percentage distribution of satiety behaviour of baby in Control and Experimental group of primi lactating mothers. Majority of the babies were peaceful and calm (56.66%, 73.33%) in Control and Experimental group of primi lactating mothers respectively.



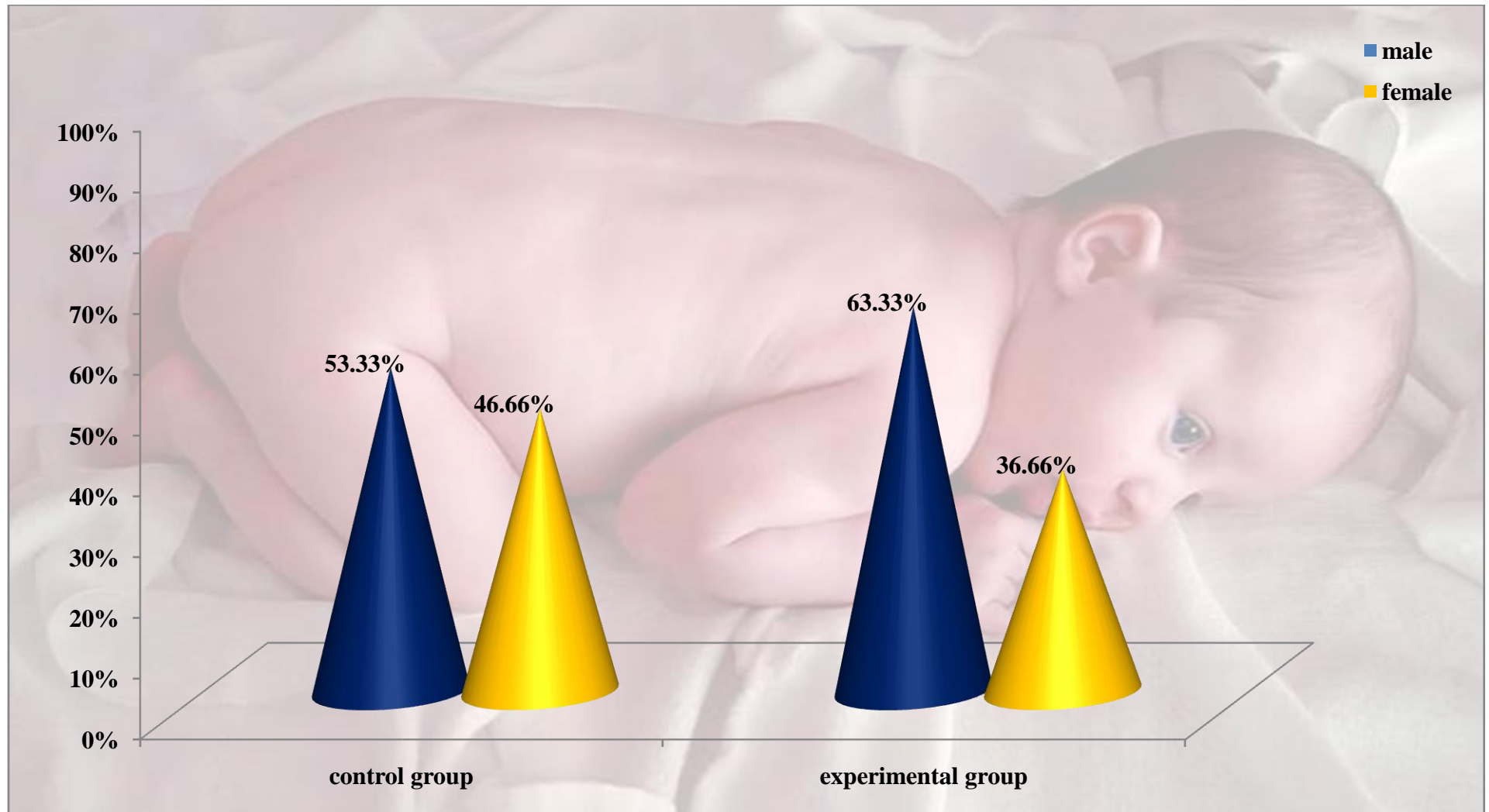
**Fig 6 percentage distribution of initiation of breast feeding in Control and Experimental group of primi lactating mothers.**



**Fig 7 percentage distribution of mode of delivery in Control and Experimental group of primi lactating mothers.**

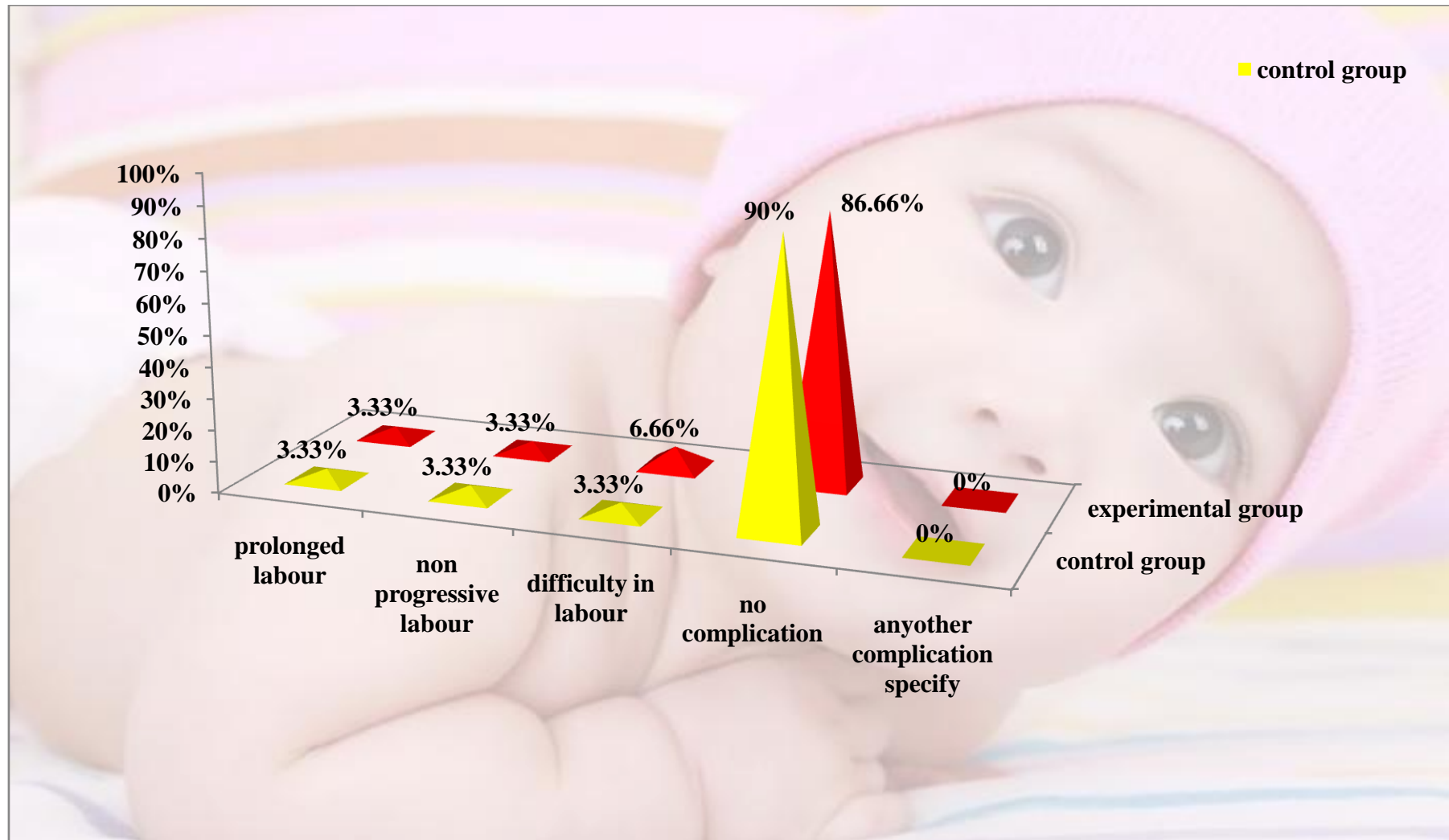


**Fig 8. Percentage distribution of birth weight of the baby in Control and Experimental group of primi lactating mothers.**



**Fig.9 percentage distribution of sex of the baby in Control and Experimental group of primi lactating mothers.**

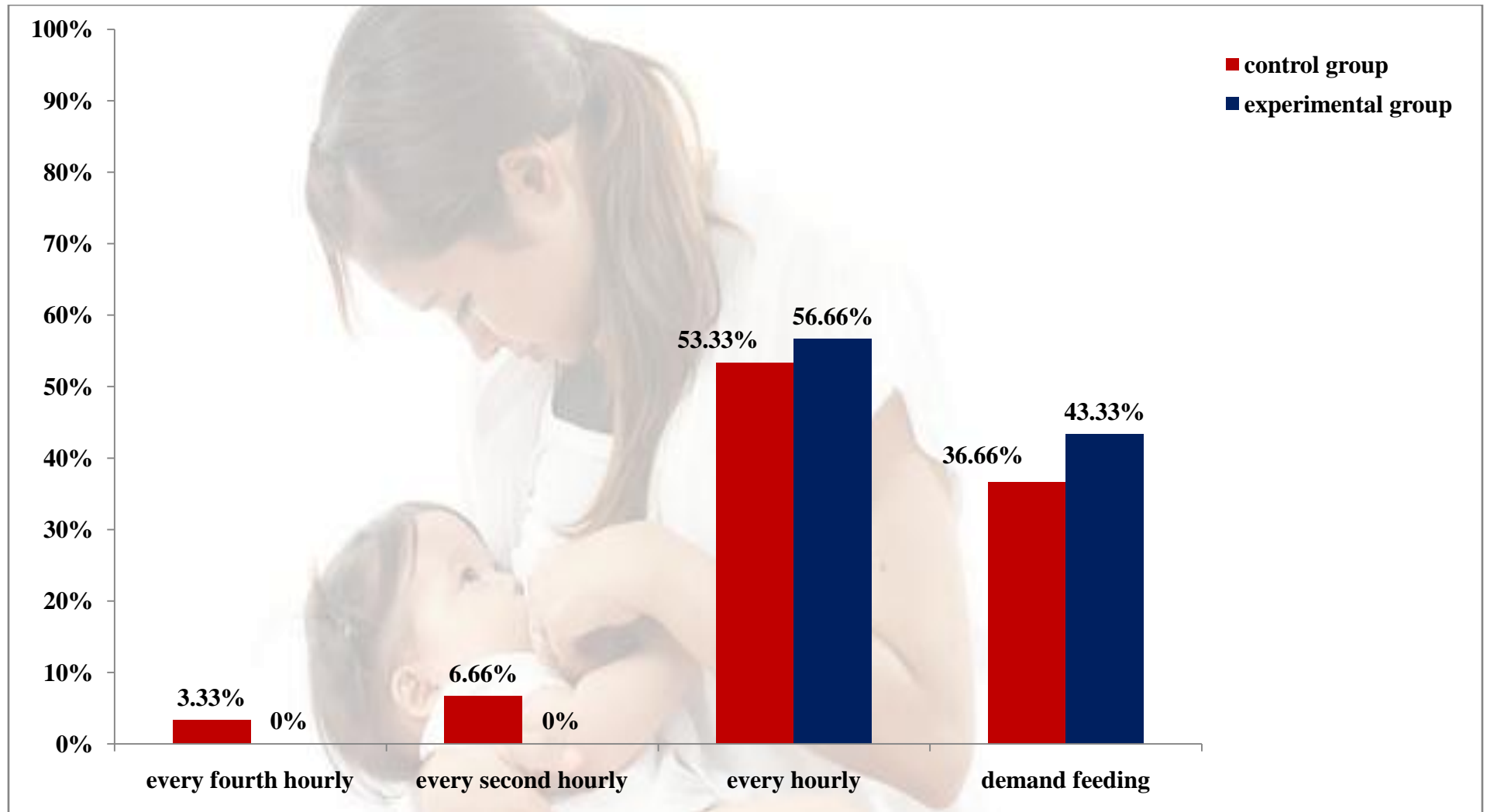




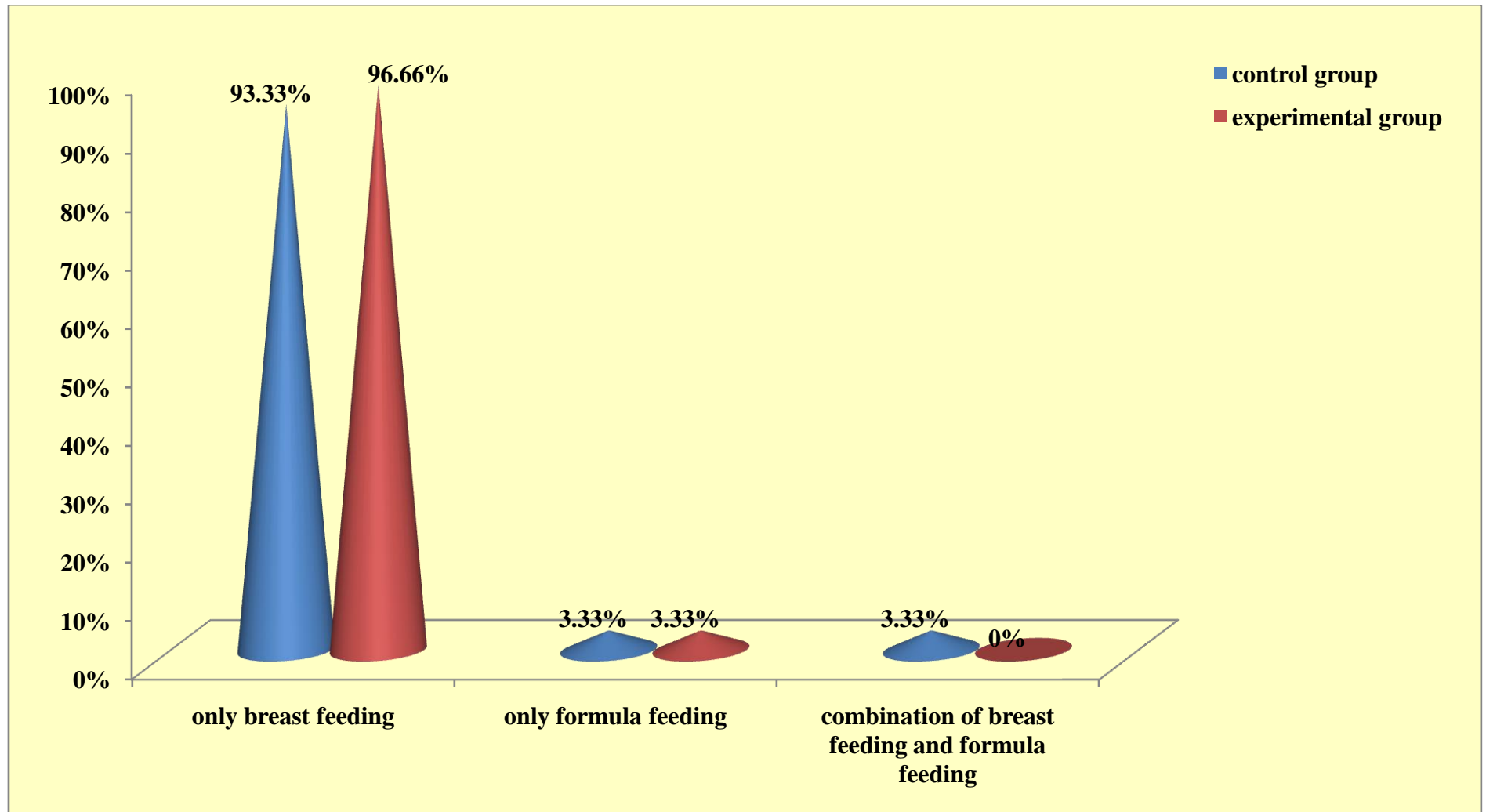
**Fig.10. percentage distribution of complications during labour in Control and Experimental group of primi lactating mothers.**



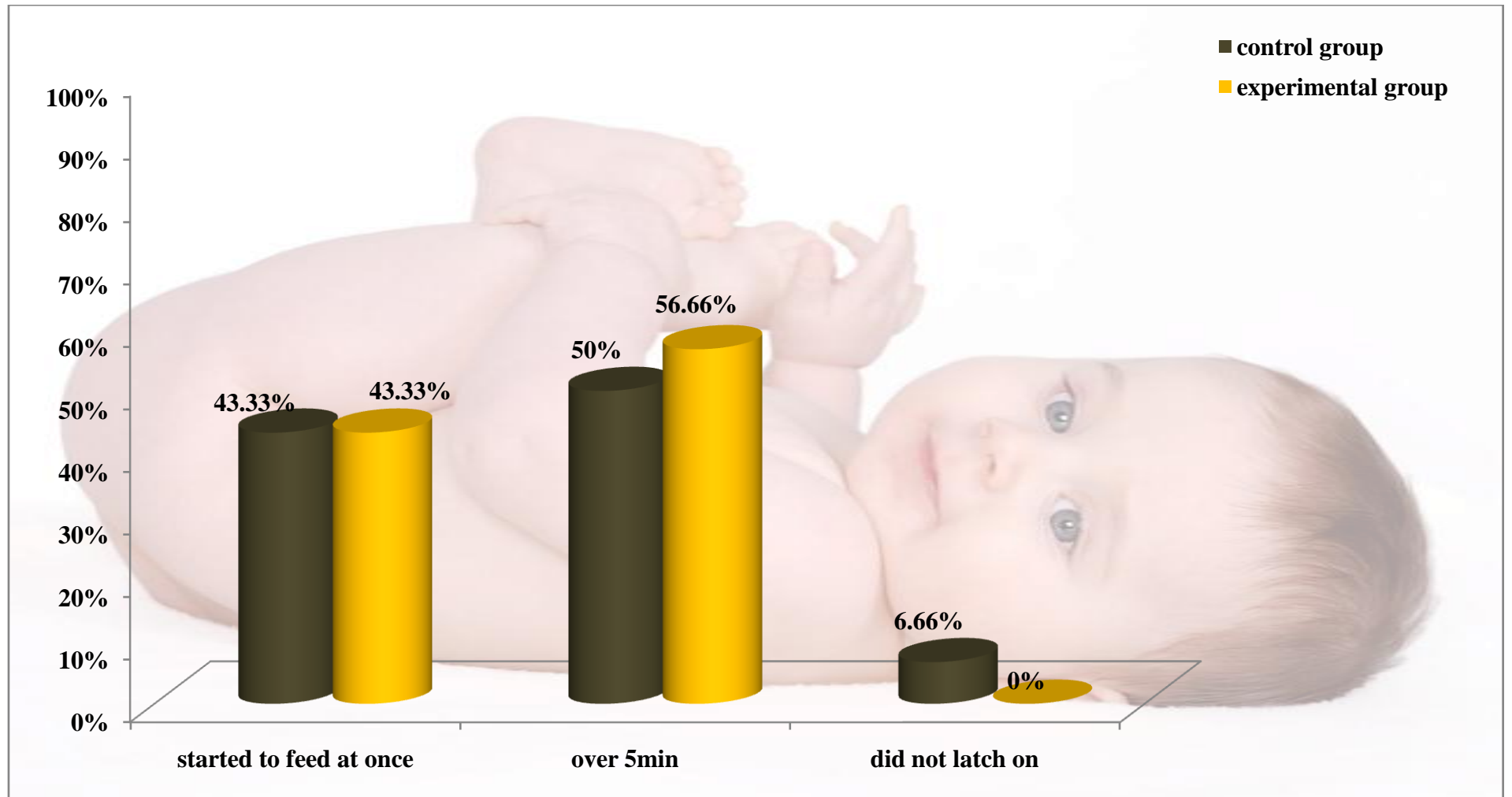
**Fig .11. percentage distribution of breast condition of the mother in Control and Experimental group of primi lactating mothers.**



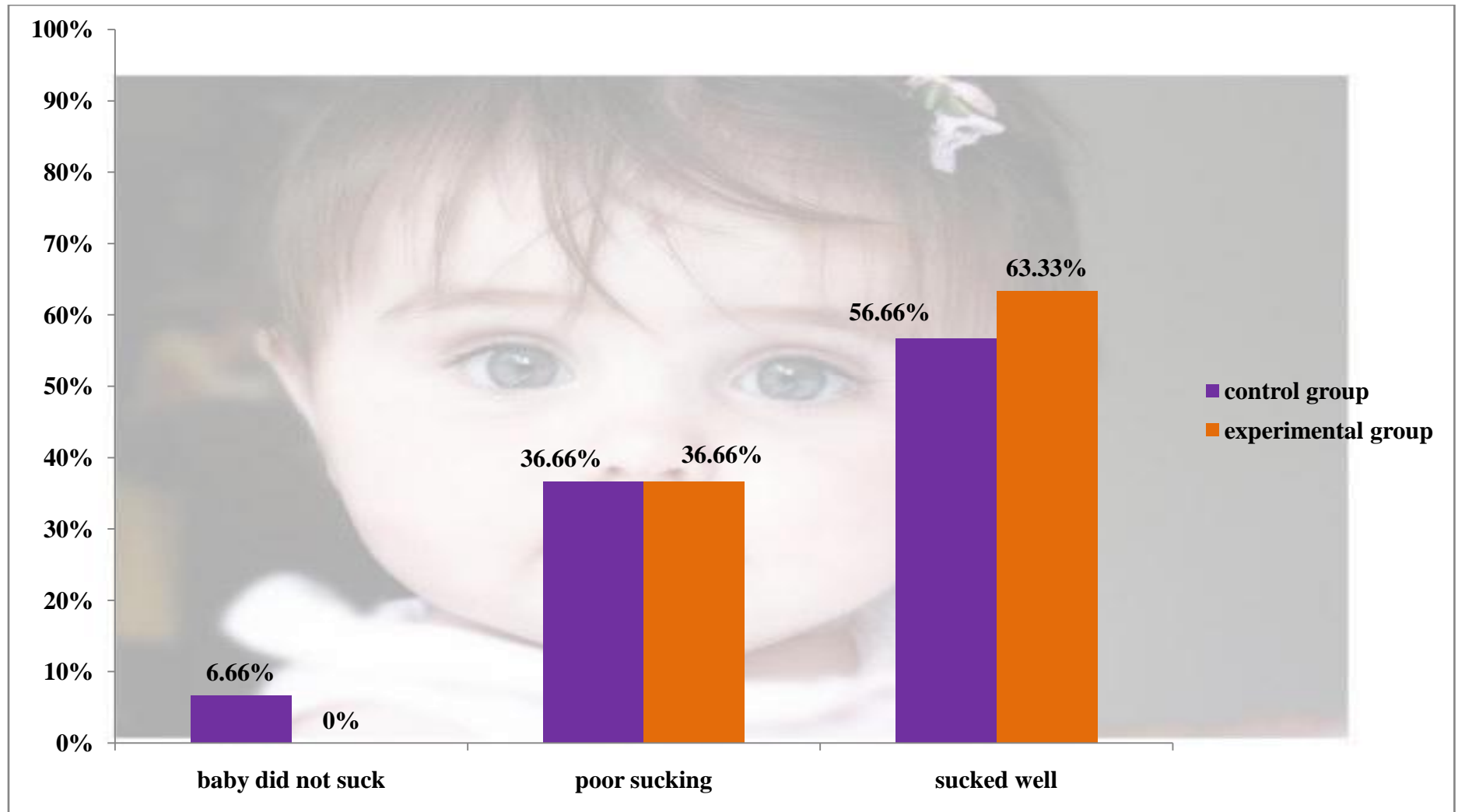
**Fig12. Percentage distribution of frequency of feeding in Control and Experimental group of primi lactating mothers.**



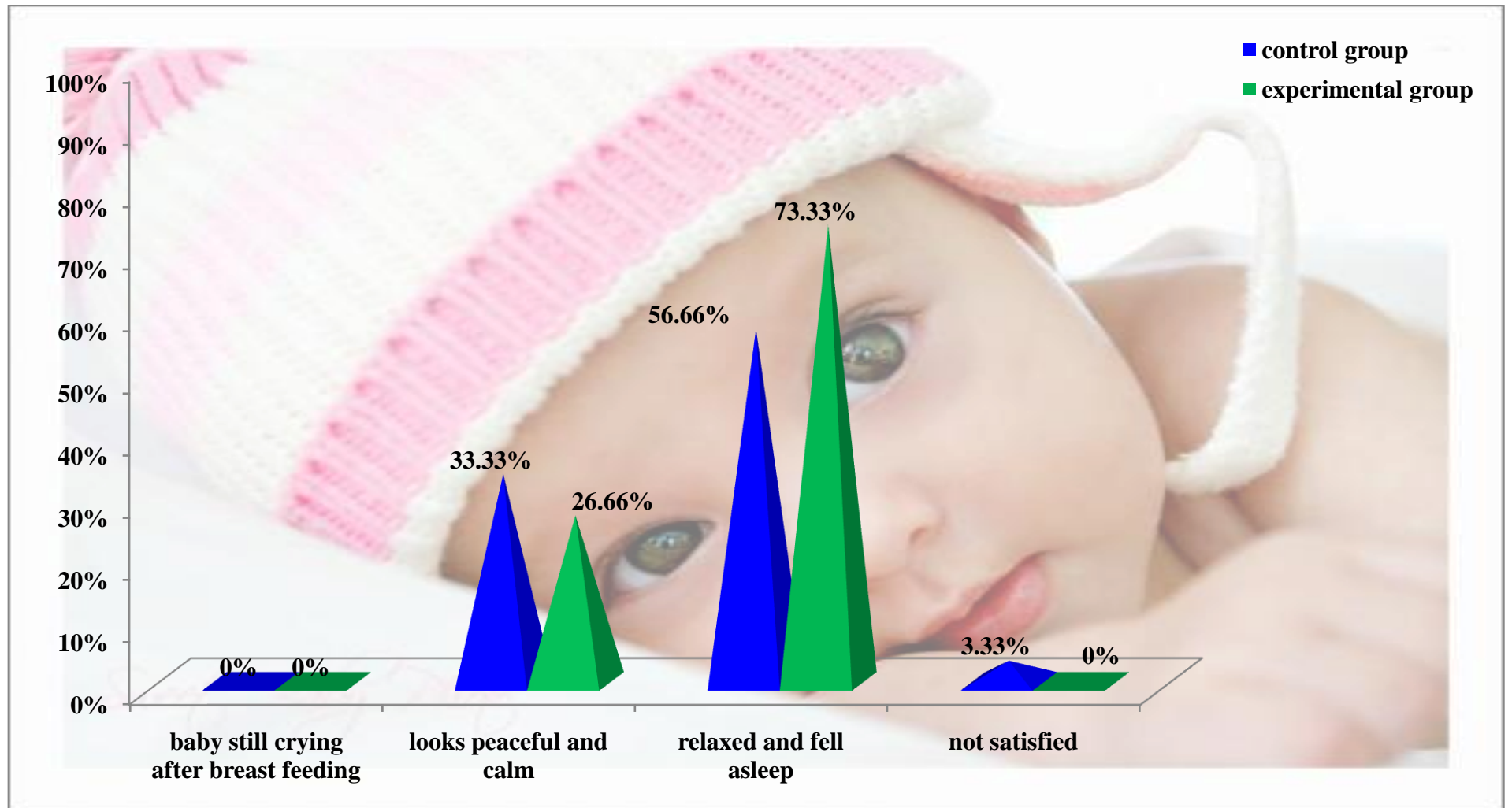
**Fig13. percentage distribution of type of feeding in Control and Experimental group of primi lactating mothers.**



**Fig14. Percentage distribution of effective latch of the baby in Control and Experimental group of primi lactating mothers.**



**Fig15. percentage distribution of sucking behaviour of the baby in Control and Experimental group of primi lactating mothers.**



**Fig16. percentage distribution of satiety behaviour of the baby in Control and Experimental group of primi lactating mothers.**

**Table.3**

**Frequency and Percentage Distribution of Level of knowledge Before and After Virtual Lactation Management in Control and Experimental group of primi lactating mothers**

Group	Before Virtual Lactation Management						After Virtual Lactation Management					
	Inadequate		Moderate		Adequate		Inadequate		Moderate		Adequate	
	n	p	n	p	n	p	n	p	n	p	n	p
Control group	24	80%	6	20%	-	-	25	83.3%	5	16.6%	-	-
Experimental group	28	93.33%	2	6.66%	-	-	-	-	-	-	30	100%

The data presented in table.3 depicts that majority of the primi lactating mothers had inadequate knowledge before intervention (80%, 93.33%) in the Control and Experimental group respectively and all of them had adequate knowledge (100%) in Experimental group after intervention



**Table: 4**

**Frequency and percentage distribution of lactation practice before and after Virtual Lactation Management in Control and Experimental Group of primi lactating mothers**

Group	Before Virtual Lactation Management						After virtual lactation management					
	Poor		Average		Good		Poor		Average		Good	
	n	p	n	p	n	p	n	p	n	p	n	p
Control group	30	100%	-	-	-	-	30	100%	-	-	-	-
Experimental group	30	100%	-	-	-	-	-	-	11	36.66%	19	63.33%

Table.4 infers that all the mothers in pre test had poor practice with regard to lactation(100%, 100% ) in Control and Experimental group. After the intervention the lactation practice was good in (63.33%) lactating mothers of Experimental group. Hence null hypothesis H01 is rejected.

**Table.5**

**Comparison of mean and standard deviation of knowledge before and after Virtual Lactation Management Between Control and Experimental Group of Primi Lactating Mothers.**

Group	Before Virtual Lactation Management			After Virtual Lactation Management		
	Mean	SD	t value	Mean	SD	t value
	Control group (N=30)	10.7	2.246	-8.33	10.8	2.119
Experimental group (N=30)	10.2	1.81		23.3	0.97	

\*\*\*P<0.001

Table 5 reveals that the mean knowledge level is slightly high in the post test (M=10.8, SD=2.119) when compared to pre test (M=10.7, SD=2.246) in the Control group where as the mean level of knowledge is high in the post test (M=23.3, SD=0.97) when compared to pre test (M=10.2, SD=1.81) in the Experimental group.

**Table.6**

**Comparison of mean and standard deviation of lactation practice of before and after Virtual Lactation Management Between Control and Experimental group of Primi Lactating Mothers.**

Group	Before Virtual Lactation Management			After Virtual Lactation Management		
	Mean	SD	t value	Mean	SD	t value
	Control group (N=30)	7.4	1.518	-2.5	7.5	1.403
Experimental group (N=30)	7.3	1.242		19.13	1.8	

\*\*\*P<0.001

Table.6 depicts that the mean score of lactation practice in the Experimental group is high in post test (M=19.13, SD=1.8) in comparison with pre test (M=7.3, SD=1.242). Whereas in the Control group there is only a minimal increase in the score of lactation practice (M=7.5, SD=1.403) during post test when compared with pre test (M=7.4, SD=1.518).

**Table.7**

**Association between selected demographic variables and level of knowledge before and after Virtual Lactation Management in Control Group of Primi Lactating Mothers.**

(N=30)

Demographic variables	Before Virtual Lactation Management			After Virtual Lactation Management		
	Above Mean	Upto Mean	$\chi^2$	Above Mean	Upto Mean	$\chi^2$
	<b>Age(in years)</b>					
<29	16	14	0.03	15	15	0.03
>29	0	0	(df=1)	0	0	(df=1)
<b>Educational status</b>						
Illiterate	5	3	0.19	5	3	0.51
Literate	11	11	(df=1)	10	12	(df=1)
<b>Type of family</b>						
Nuclear	13	14	2.54	12	15	2.96
Joint	3	0	(df=1)	3	0	(df=1)
<b>Type of employment</b>						
Employed	5	7	1.09	5	6	0.14
Unemployed	11	7	(df=1)	10	9	(df=1)

From the data presented in table 7 we can infer that there is no significant association between age , educational status , type of family, type of employment and level of knowledge of Control group of primi lactating mothers. Hence the null hypothesis Ho2 is retained.

**Table.8**

**Association between selected demographic variables and level of knowledge before and after Virtual Lactation Management in Experimental Group of Primi Lactating Mothers**

Demographic variables	Before Virtual Lactation Management			After Virtual Lactation Management		
	Above Mean	Upto Mean	$\chi^2$	Above Mean	Upto Mean	$\chi^2$
<b>Age(in years)</b>						
<29	18	12	0.03	1	13	0.03
>29	0	0	(df=1)	0	0	(df=1)
<b>Educational status</b>						
Illiterate	5	4	0.05	5	4	0.15
Literate	13	8	(df=1)	12	9	(df=1)
<b>Type of family</b>						
Nuclear	14	10	0.07	14	10	0.07
Joint	4	2	(df=1)	3	3	(df=1)
<b>Type of employment</b>						
Employed	3	4	0.90	5	2	0.14
Unemployed	15	8	(df=1)	12	11	(df=1)

Table 8 shows that there is no significant association between age, educational status, type of family, type of employment and knowledge of Experimental group of primi lactating mothers. Hence null hypothesis Ho2 is retained.

**Table.9**

**Association between selected demographic variables and lactation practice before and after Virtual Lactation Management in the Control Group of Primi Lactating Mothers.**

Demographic variables	Before Virtual Lactation Management			After Virtual Lactation Management		
	Above Mean	Upto Mean	$\chi^2$	Above Mean	Upto Mean	$\chi^2$
	<b>Age(in years)</b>					
<29	13	10	3.67	11	12	2.31
>29	1	6	(df=1)	1	6	(df=1)
<b>Educational status</b>						
Illiterate	4	4	0.125	10	9	3.39
Literate	10	12	(df=1)	2	9	(df=1)
<b>Type of family</b>						
Nuclear	13	11	0.17	14	10	0.07
Joint	3	3	(df=1)	4	2	(df=1)
<b>Type of employment</b>						
Employed	4	7	0.049	2	9	3.28
Unemployed	10	9	(df=1)	10	9	(df=1)

Table 9 shows that there is no significant association between age , educational status , type of family , type of employment and lactation practice of Control group of primi lactating mothers. Hence null hypothesis Ho2 is retained.

**Table.10**

**Association between the selected demographic variables and lactation practice before and after Virtual Lactation Management in the Experimental group of primi lactating mothers.**

Demographic variables	Before Virtual Lactation Management			After Virtual Lactation Management		
	Above Mean	Upto Mean	$\chi^2$	Above Mean	Upto Mean	$\chi^2$
	<b>Age(in years)</b>					
<29	13	12	0.00	18	12	0
>29	2	3	(df=1)	0	0	(df=1)
<b>Educational status</b>						
Illiterate	6	2	2.01	6	3	0.07
Literate	10	12	(df=1)	12	9	(df=1)
<b>Type of family</b>						
Nuclear	11	16	3.78	9	18	4.6*
Joint	3	0	(df=1)	3	0	(df=1)
<b>Type of employment</b>						
Employed	3	4	0.20	4	3	0.162
Unemployed	13	10	(df=1)	14	9	(df=1)

\*P <0.05

Table.10 shows that there is a significant association between type of family ,and Experimental group of primi lactating mothers. Hence null hypothesis Ho2 is rejected..

**Table11**

**Association between selected obstetric variables and level of knowledge before and after Virtual Lactation Management in Control Group of Primi Lactating Mothers.**

Demographic variables	Before Virtual Lactation Management			After Virtual Lactation Management		
	Above Mean	Upto Mean	$\chi^2$	Above Mean	Upto Mean	$\chi^2$
	<b>Effective latch of the baby</b>					
Within 5minutes	7	6	0.14	7	6	0.14
Over 5minutes	9	8	(df=1)	8	9	(df=1)
<b>Type of delivery</b>						
Normal delivery	10	12	1.87	9	13	2.54
Caesarean section	6	2	(df=1)	6	2	(df=1)
<b>Initiation of breast feeding after delivery</b>						
<1hour	10	12	1.87	9	13	2.54
>1hour	6	2	(df=1)	6	2	(df=1)
<b>Frequency of feeding frequency of feed</b>						
Demand feeding	7	4	0.58	6	5	0.142
others	9	10	(df=1)	9	0	(df=1)

Table 11 shows that there is no significant association between effective latch of the baby, type of delivery, initiation of breast feeding ,frequency of feeding and practice of Control group of primi lactating mothers. Hence null hypothesis Ho3 is retained.



**Table.12**

**Association between selected obstetric variables and level of knowledge before and after Virtual Lactation Management in Experimental Group of Primi Lactating Mothers.**

Demographic variables	Before Virtual Lactation Management			After Virtual Lactation Management		
	Above Mean	Upto Mean	$\chi^2$	Above Mean	Upto Mean	$\chi^2$
	<b>Effective latch of the baby</b>					
Within 5minutes	7	6	0.35	7	6	0.34
Over 5minutes	11	6	(df=1)	10	7	(df=1)
<b>Type of delivery</b>						
Normal delivery	16	10	0.106	14	3	0.35
Caesarean section	2	2	(df=1)	12	1	(df=1)
<b>Initiation of breast feeding after delivery</b>						
<1hour	16	10	0.106	14	12	0.35
>1hour	2	2	(df=1)	3	1	(df=1)
<b>Frequency of feeding</b>						
<b>frequency of feed</b>						
Demand feeding	10	3	2.58	6	7	1.02
others	8	9	(df=1)	11	6	(df=1)

Table 12 shows that there is no significant association between effective latch of the baby, type of delivery, initiation of breast feeding , frequency of feeding and practice of Experimental group of primi lactating mothers. Hence null hypothesis Ho3 is retained.

**Table.13**

**Association between selected obstetric variables and lactation practice before and after Virtual Lactation Management in Control Group of Primi Lactating Mothers**

Demographic variables	Before Virtual Lactation Management			After Virtual Lactation Management		
	Above Mean	Upto Mean	$\chi^2$	Above Mean	Upto Mean	$\chi^2$
<b>Effective latch of the baby</b>						
Within 5minutes	4	9	2.187	3	10	2.59
Over 5minutes	10	7	(df=1)	9	8	(df=1)
<b>Type of delivery</b>						
Normal delivery	9	13	0.92	8	14	0.275
Caesarean section	5	3	(df=1)	4	4	(df=1)
<b>Initiation of breast feeding after delivery</b>						
<1hour	9	13	0.139	8	14	0.275
>1hour	5	3	(df=1)	4	4	(df=1)
<b>Frequency of feeding</b>						
Demand feeding	5	6	0.009	4	7	0.05
others	9	10	(df=1)	8	11	(df=1)

Table.13. shows that there is no significant association between effective latch of the baby, type of delivery, initiation of breast feeding , frequency of feeding and lactation practice of Control group of primi lactating mothers. Hence null hypothesis Ho3 is retained.

**Table14**

**Association between selected obstetric variables and lactation practice before and after Virtual Lactation Management in Experimental Group of Primi Lactating Mothers**

Demographic variables	Before Virtual Lactation Management			After Virtual Lactation Management		
	Above Mean	Upto Mean	$\chi^2$	Above Mean	Upto Mean	$\chi^2$
<b>Effective latch of the baby</b>						
Within 5minutes	8	5	0.59	10	3	2.59
Over 5minutes	8	9	(df=1)	8	9	(df=1)
<b>Type of delivery</b>						
Normal delivery	14	12	0.139	17	10	0.21
Caesarean section	2	2	(df=1)	2	2	(df=1)
<b>Initiation of breast feeding after delivery</b>						
<1hour	14	12	0.139	17	10	0.21
>1hour	2	2	(df=1)	2	2	(df=1)
<b>Frequency of feeding</b>						
Demand feeding	8	5	0.59	10	4	0.53
Others	8	9	(df=1)	9	7	(df=1)

Table.14 shows that there is no significant association between effective latch of the baby, type of delivery, initiation of breast feeding , frequency of feeding and lactation practice of Experimental group of primi lactating mothers. Hence null hypothesis Ho3 is retained.

**Table.15**

**Frequency and percentage distribution of level of satisfaction regarding Virtual Lactation Management among Experimental Group of primi lactating mothers.**

Dimensions of mothers satisfaction	Highly Satisfied		Satisfied		Dissatisfied		Highly Dissatisfied	
	n	p	n	p	n	p	n	P
<b>Overall Satisfaction</b>	-	-	30	100	-	-	-	-
<b>Related to researcher</b>	-	-	30	100	-	-	-	-
<b>Related to virtual newborn care</b>	-	-	30	100	-	-	-	-

The data from the table.15 shows that all the participants in the Experimental group were satisfied (100%) with the Virtual Lactation Management intervention.

## **CHAPTER V**

### **DISCUSSION**

#### **Statement of the problem**

An Experimental Study to Assess the Effectiveness of Virtual Lactation Management Upon Knowledge and Lactation Practice Among Primi Lactating Mothers at Selected Hospitals Chennai.

#### **Objectives of the study**

1. To assess the level of knowledge on lactation before and after Virtual Lactation Management among Control and Experimental group of primi lactating mothers.
2. To assess the lactation practice before and after Virtual Lactation Management among Control and Experimental group of primi lactating mothers.
3. To determine the effectiveness of Virtual Lactation Management upon lactation by comparing the level of knowledge and lactation practice before and after the Virtual Lactation Management among Control and Experimental group of primi lactating mothers.
4. To determine the association between selected demographic variables and level of knowledge and lactation practice before and after Virtual Lactation Management among Control and Experimental group of primi lactating mothers.
5. To determine the association between selected obstetrical variables and level of knowledge and lactation practice before and after Virtual Lactation Management among Control and Experimental group of primi lactating mothers.
6. To determine the level of satisfaction regarding the Virtual Lactation Management among the Experimental group of primi lactating mothers

The conceptual framework for the study was developed based on the modified model of Wiedenbach's helping art of clinical nursing theory. An Experimental study of pre-test and post-test design was used. The study included 60 primi lactating mothers selected by simple random sampling. The present study was conducted at Andhra Mahila Sabha Hospital, Chennai. The variables of the study were Virtual Lactation Management, knowledge and lactation practice.

An extensive review of literature and guidance by experts laid to the foundation of development of demographic variable proforma, obstetric variable proforma, structured interview schedule, lactation practice checklist and rating scale on satisfaction of Virtual Lactation Management. The data collection tools were validated and reliability was established. After two weeks of pilot study, then data collection for main study was conducted.

The level of knowledge and lactation practice was assessed for Control and Experimental group of primi lactating mothers. The Virtual Lactation Management of seven minutes duration was provided for the Experimental group. Then the level of knowledge and lactation practice was assessed again after 7 days for both the groups. The level of satisfaction on Virtual Lactation Management among the Experimental group of primi lactating mothers was assessed after one week from intervention. The data obtained was analyzed using descriptive and inferential statistics.

### **Demographic variables distribution**

Majority of primi lactating mothers were 18 -23years old (76.66, 83.33%) , Hindus (83.33%, 96.66%), qualified upto secondary education (60%,63.33%), from

nuclear family (90.00%, 80.00%), residing in urban area (100%,100%). Large percentage of them were unemployed (63.33%, 76.66%) in Control group and Experimental group respectively.

A study conducted by Ekambaram Maheswari in 2009 says that there is still a need for programmes which support and encourage breast-feeding particularly at a primary care level, focusing more on younger, less educated women and those from lower socioeconomic class.

The researcher feels that as the responsibility to care for other family members is less in nuclear families , so promoting lactating mothers to care for her newborn better, improves mother - child bonding. None of the mothers in Control and Experimental group has adequate knowledge regarding breast feeding and lactation practice. Hence it is the duty of the nurses to explain to the mothers about breastfeeding , its importance and lactation practice.

### **Obstetrical variables distribution**

Majority of primi lactating mothers had regular antenatal checkups (100%, 100%) ,none of the mothers had practiced antenatal nipple exercises (100%,100%) and most of them did not have any complications during labour (86.66%, 93.33%). Majority of them practiced breastfeeding (93.33%,96.66%) and most of them were only practicing demand feeding (36.66%,43.33%).About more than half of the babies had an effective latch (50%,56.66%) and good sucking (56.66%,63.33%) in Control and Experimental group respectively.

The felt need by the researcher is to improve the mother's knowledge and practice of breastfeeding. Hence it is a nursing concern towards primi lactating mothers , to make them understand the benefits of breast feeding for mother and for the newborn and encourage them to practice lactation. Virtual Lactation Management provided to the Experimental group in the present study helped mothers to learn more about breastfeeding.

**The first objective was to assess the level of knowledge on lactation before and after Virtual Lactation Management**

Majority of the primi lactating mothers had inadequate knowledge before intervention (80%,93.33%) in the Control and Experimental group respectively and all of them had adequate knowledge (100%) in Experimental group after intervention.

This shows that Virtual Lactation Management was effective in improving the knowledge of primi lactating mothers. The management in postnatal period is a primary responsibility of nurse. Measures should be done to improve their knowledge on breast feeding as it is very essential for both the mother and baby.

Because of its strong effect on improving knowledge, Virtual Lactation Management can be used by the nurses working in postnatal wards to improve primi lactating mothers knowledge on lactation. A study conducted in an Obstetrician Wing in Provincial Complex Hospital in Leszno concludes that there is a necessity of systematic and planned education for women. The system of lactation counselling should be an integral part of post-labour care in obstetrics.



**The second objective was to assess the lactation practice of primi lactating mothers before and after Virtual Lactation Management**

Majority of mothers in pre test had poor practice with regard to lactation (100 %, 100% )in the Control and Experimental group. After the intervention the lactation practice was good in 63.33% lactating mothers of Experimental group. Hence null hypothesis H01 was rejected.

This shows that Virtual Lactation Management was effective in improving the lactation practice of primi lactating mothers. The proper demonstration of breast feeding by the nurse is an essential component in the post natal period especially for primi lactating mothers. Measures should be done to improve their lactation practice as it helps to prevent many complications in both mother and baby. Because of its strong effect on improving lactation practice , Virtual Lactation Management can be used by the nurses working in postnatal wards to improve primi lactating mothers breast feeding practice.

**The third objective was to determine the effectiveness of Virtual Lactation Management upon lactation by comparing the level of knowledge and lactation practice**

The mean knowledge level was slightly high in the post test (M=10.8, SD=2.119) when compared to pre test (M=10.7, SD=2.246) in the Control group where as the mean level of knowledge was high in the post test (M=23.3, SD=0.97) when compared to pre test (M=10.2, SD=1.81) in the Experimental group.

The test of significance (t value) for knowledge before the Virtual Lactation Management was very low ( $t = -8.33$ ) when compared to after ( $t = 31.25$ ) the Virtual Lactation Management which depicts that it is effective to improve the knowledge of breast feeding among primi lactating mothers ( $p < 0.001$ ).

The mean score of lactation practice in the Experimental group was high in post test ( $M = 19.13$ ,  $SD = 1.8$ ) in comparison with pre test ( $M = 7.3$ ,  $SD = 1.242$ ). Whereas in the Control group there was only a minimal increase in the score of lactation practice ( $M = 7.5$ ,  $SD = 1.403$ ) during post test when compared with pre test ( $M = 7.4$ ,  $SD = 1.518$ ).

The test of significance (t value) for lactation practice before the Virtual Lactation Management was very low ( $t = -2.5$ ) when compared to after ( $t = 29.82$ ) the Virtual Lactation Management which depicts that it is very effective to improve the breast feeding practice among primi lactating mothers ( $p < 0.001$ ).

**The fourth objective was to determine the association between selected demographic variables and level of knowledge and lactation practice**

In the Control group of primi lactating mothers there is no significant association between age, type of employment, type of family and educational status with regarding level of knowledge and lactation practice.

In the Experimental group there is no significant association between age, type of employment, type of family and educational status with knowledge regarding breast feeding and but there is significant association between type of family and lactation practice but there is no significant association with age, educational status, type of

employment and lactation practice. Hence the null hypothesis Ho2 was partially rejected. This proves that demographic variables has influence over the lactation practice.

Hence some method has to be provided to improve the level of knowledge and lactation practice in the primi lactating mothers.

**The fifth objective was to determine the association between selected obstetrical variables and level of knowledge and lactation practice**

In both the Control and Experimental group of primi lactating mothers that there is no significant association between effective latch of the baby, type of delivery, initiation of breast feeding , frequency of feeding with level knowledge Hence the null hypothesis Ho3 was accepted. Which emphasizes that obstetric variables has no influence over the level of knowledge and lactation practice among primi lactating mothers women.

**The sixth objective was to determine the level of satisfaction regarding the Virtual Lactation Management among the Experimental group of primi lactating mothers**

All the women were satisfied (100%) with Virtual Lactation Management therapy. This interprets that Virtual Lactation Management was highly effective in increasing the level of knowledge and lactation practice of primi lactating mothers. Virtual Lactation Management is an interesting experience for the mother where she is able to understand the importance of breast feeding which will increase the level of knowledge and lactation practice. Thus the nurses should understand the importance of

using this method which is harmless and they should be encouraged in practicing such therapies.

### **Summary**

This chapter dealt with the discussion of various aspects of the study findings. This emphasized the demographical and obstetrical variables of primi lactating mothers. It has also dealt with the mean and standard deviation of level of knowledge and lactation practice before and after Virtual Lactation Management in Control and Experimental group, association between selected demographic and obstetrical variables with level of knowledge and lactation practice.

## **CHAPTER VI**

### **SUMMARY, CONCLUSION, IMPLICATIONS AND RECOMMENDATIONS**

#### **Summary**

This study was conducted by the researcher to find the effectiveness of Virtual Lactation Management upon level of knowledge and lactation practice related to breastfeeding in primi lactating mothers.

#### **Objectives of the study**

1. To assess the level of knowledge on lactation before and after Virtual Lactation Management among Control and Experimental group of primi lactating mothers.
2. To assess the lactation practice before and after Virtual Lactation Management among Control and Experimental group of primi lactating mothers.
3. To determine the effectiveness of Virtual Lactation Management upon lactation by comparing the level of knowledge and lactation practice before and after the Virtual Lactation Management among Control and Experimental group of primi lactating mothers.
4. To determine the association between selected demographic variables and level of knowledge and lactation practice before and after Virtual Lactation Management among Control and Experimental group of primi lactating mothers.
5. To determine the association between selected obstetrical variables and level of knowledge and lactation practice before and after Virtual Lactation Management among Control and Experimental group of primi lactating mothers.

6. To determine the level of satisfaction regarding the Virtual Lactation Management among the Experimental group of primi lactating mothers

### **Null Hypothesis**

- H01** - There will be no significant difference between pre test and post test level of knowledge and practice of lactation among the primi lactating mothers
- H02** - There will be no significant association between the selected demographic variables and the level of knowledge and practice of lactation before and after the Virtual Lactation Management among the primi lactating mothers.
- H03**- There will be no significant association between the selected obstetric variables and the level of knowledge and practice of lactation before and after the Virtual Lactation Management among the primi lactating mothers.

### **Major Findings of the Study**

#### **Demographic variables of primi lactating mothers**

Majority of primi lactating mothers were 18 -23years old (76.66, 83.33%), Hindus (83.33%, 96.66%), qualified upto secondary education (60%, 63.33%), from nuclear family (90.00%, 80.00%), residing in urban area (100%, 100%). Large percentage of them were unemployed (63.33%, 76.66%) in Control group and Experimental group respectively.

#### **Obstetrical variables of the primi lactating mothers**

Majority of primi lactating mothers had regular antenatal checkups (100%, 100%) ,none of the mothers had practiced antenatal nipple exercises (100%,100%) and

most of them did not have any complications during labour (86.66%, 93.33%). Majority of them practiced breastfeeding (93.33%, 96.66%) and most of them were only practicing demand feeding (36.66%, 43.33%). About more than half of the babies had an effective latch (50%, 56.66%) and good sucking (56.66%, 63.33%) in Control and Experimental group respectively

### **Frequency and percentage distribution of level of knowledge before and after Virtual Lactation Management in Control and Experimental group of primi lactating mothers**

Majority of the primi lactating mothers had inadequate knowledge before intervention (80%, 93.33%) in the Control and Experimental group respectively and all of them had adequate knowledge (100%) in Experimental group after intervention.

### **Frequency and percentage distribution of lactation practice before and after Virtual Lactation Management in Control and Experimental Group of Primi Lactating Mothers**

Majority of mothers in pre test had poor practice with regard to lactation (100%, 100%) in the Control and Experimental group. After the intervention the lactation practice was good in (63.33%) lactating mothers of Experimental group. Hence null hypothesis H01 was rejected.

**Comparison of mean and standard deviation of knowledge before and after Virtual Lactation Management between Control and Experimental group of primi lactating mothers**

The mean knowledge level was slightly high in the post test (M=10.8, SD=2.119) when compared to pre test (M=10.7, SD=2.246) in the Control group where as the mean level of knowledge was high in the post test (M=23.3, SD=0.97) when compared to pre test (M=10.2, SD=1.81) in the Experimental group.

**Comparison of mean and standard deviation of lactation practice of before and after Virtual Lactation Management between Control and Experimental group of primi lactating mothers.**

The mean score of lactation practice in the Experimental group was high in post test (M=19.13, SD=1.8) in comparison with pre test (M=7.3, SD=1.242). Whereas in the Control group there was only a minimal increase in the score of lactation practice (M=7.5, SD=1.403) during post test when compared with pre test (M=7.4, SD=1.518).

**Association between selected demographic variables and level of knowledge before and after Virtual Lactation Management in Control group of primi lactating mothers.**

There was no significant association between age , educational status , type of family, type of employment and level of knowledge of Control group of primi lactating mothers. Hence the null hypothesis Ho2 was retained.



**Association between selected demographic variables and level of knowledge before and after Virtual Lactation Management in Experimental group of primi lactating mothers**

There was no significant association between age , educational status , type of family , type of employment and knowledge of Experimental group of primi lactating mothers. Hence null hypothesis Ho2 was retained.

**Association between selected demographic variables and lactation practice before and after Virtual Lactation Management in Control group of primi lactating mothers.**

There was no significant association between age , educational status , type of family , type of employment and lactation practice of Control group of primi lactating mothers. Hence null hypothesis Ho2 was retained.

**Association between selected demographic variables and lactation practice before and after Virtual Lactation Management in Experimental group of primi lactating mothers.**

There was significant association between type of family ,and Experimental group of primi lactating mothers. Hence null hypothesis Ho2 was rejected.

**Association between selected obstetric variables and level of knowledge before and after Virtual Lactation Management in Control group of primi lactating mothers.**

There was no significant association between effective latch of the baby, type of delivery, initiation of breast feeding , frequency of feeding and practice of Control group of primi lactating mothers. Hence null hypothesis Ho3 was retained.

**Association between selected obstetric variables and level of knowledge before and after Virtual Lactation Management in Experimental group of primi lactating mothers.**

There was no significant association between effective latch of the baby, type of delivery, initiation of breast feeding, frequency of feeding and practice of Experimental group of primi lactating mothers. Hence null hypothesis Ho3 was retained.

**Association between selected obstetric variables and lactation practice before and after Virtual Lactation Management in Control group of primi lactating mothers**

There was no significant association between effective latch of the baby, type of delivery, initiation of breast feeding, frequency of feeding and lactation practice of Control group of primi lactating mothers. Hence null hypothesis Ho3 was retained.

**Association between selected obstetric variables and lactation practice before and after Virtual Lactation Management in Experimental group of primi lactating mothers**

There was no significant association between effective latch of the baby, type of delivery, initiation of breast feeding, frequency of feeding and lactation practice of Experimental group of primi lactating mothers. Hence null hypothesis Ho3 was retained.

**Frequency and Percentage distribution of Level of Satisfaction regarding virtual management among Experimental Group of primi lactating mothers.**

All of the participants in the Experimental group were satisfied (100%) with the Virtual Lactation Management intervention.

**Conclusion**

This study shows that Virtual Lactation Management was effective in increasing the level of knowledge and improving the lactation practice. The Experimental group of primi lactating mothers women who received Virtual Lactation Management had increased level of knowledge and improved lactation practice related to breast feeding and was satisfied with the therapy. The Virtual Lactation Management is an interesting animated movie of 7 minutes which increases knowledge and lactation practice related to breast feeding in the primi lactating mother and hence the nurses could be encouraged to use this.

## **Implications**

### **Nursing Practice**

The primi lactating mothers of the Experimental group experienced an increase in the level of knowledge and improved lactation practice than the Control group proving it to be effective to use. The depth of knowledge and lactation practice and mothers concept to it varies widely. The environment in which the lactating mother lives and the support from others will also affect their knowledge and lactation practice.. Many lactating mothers end up in different complication due to lack of knowledge and improper lactation practice. Hence it becomes a necessity for the nurses to have adequate knowledge and should take initiative to educate the lactating mothers regarding breastfeeding. Nurses should use Virtual Lactation Management as a modality to increase the level of knowledge and to improve lactation practice in their clinical area as it is interesting, harmless and highly effective.

### **Nursing Education**

The nursing profession has a long history of viewing and caring for individuals in a holistic manner. A national conference conducted by National Institutes of Health of Alternative Medicine and the Uniformed Services University of Health Sciences concluded that nursing and medical education should include information about complementary and alternative therapies. Nurse educators should consider the inclusion of complementary and alternative therapies in nursing curricula with increasing Inherent in the nurse's role is the ability to assess, intervene and evaluate preventive, supportive, and restorative functions of a patient's physical, emotional, mental and spiritual domains. This should be emphasized to the nursing students through educating them

about the various therapies that help the patients in providing care to meet the above aspects.

### **Nursing Administration**

With the advent of various technologies in the field of nursing, nurses are expected to be skilful in various aspects of providing care for which student nurses has to be trained in it through their education. Thus it is the responsibility of the nurse administrators to include the concept of alternative and complementary therapies in the nursing curricula. The nursing staffs and the nursing students should be encouraged by the nurse administrators to learn various nursing modalities in caring patients and could conduct certifying courses which would help them to practice alternative and complementary therapies.

### **Nursing Research**

The competence of a registered nurse to perform the skills of complementary and alternative therapies begins with nursing education and ends with nursing practice which requires an evidence to give assurance that the knowledge and practice gained by the nurse are safe and provide comfort for the patients. Thus major research has to be promoted and conducted by the nurse researchers to prove the effectiveness of alternative and complementary therapies in nursing profession.

### **Recommendations**

- The same study can be conducted with large number of samples.
- A comparison can be made between primi and multipara lactating mothers
- A comparison can be made with different countries.

- The same study can be conducted at different setting.
- A comparison can be made between different types of alternative therapies.

### **Limitations**

- The study findings cannot be generalized due to small sample size.
- Quasi Experimental research was not possible due to practical difficulties.

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## APPENDIX I

### LETTER SEEKING PERMISSION TO CONDUCT STUDY



(Recognised by the Indian Nursing Council and Affiliated to the Tamil Nadu Dr. M.G.R. Medical University, Chennai)

CO/0221/13

29.05.2013

To

The Medical Director  
Andhra Mahila sabha Hospital  
11&12 Durgabai Desmukh road  
Chennai

Respected Sir / Madam,


**Sub:** To request permission for research study- Reg.

**Greetings!** As a part of the curriculum requirement our 2<sup>nd</sup> year M. Sc. (N) student Ms.Aswathi Nair J.K has selected the following title for her research study.

**“An Experimental study to assess the effectiveness of virtual lactation management upon knowledge and lactation practice among primi lactating mothers at selected hospitals Chennai.”**

So I kindly request your goodselves to permit her to conduct study in your esteemed institution

Thanking You,

  
**Dr.LATHA VENKATESAN**  
**PRINCIPAL**

Regd. Office : 21, Grems Lane Off, Grems Road, Chennai - 600 006. Ph. : +91-44-2829 3333, 2829 0200 Website : www.apollohospitalseducation.com  
Unit Office : Vanagaram to Ambattur Main Road, Ayanambakkam, Chennai - 600 095. Phone : 044 - 2653 4387 Fax : 044 - 2653 4923 / 2653 4386



Emergency Service  
Dial **1066**



APPENDIX II

LETTER PERMITTING TO CONDUCT THE STUDY



**Apollo College of Nursing**  
(A unit of Apollo Hospitals Educational Trust)

(Recognised by the Indian Nursing Council and Affiliated to the Tamil Nadu Dr. M.G.R. Medical University, Chennai)

*To meet  
Dr. Vadhevali Thomas - Secretary  
215713  
permitted  
215713*

CO/0221/13

29.05.2013

To

The Medical Director  
Andhra Mahila sabha Hospital  
11&12 Durgabai Desmukh road  
Chennai

Respected Sir / Madam,

**Sub:** To request permission for research study- Reg.

**Greetings!** As a part of the curriculum requirement our 2<sup>nd</sup> year M. Sc. (N) student Ms.Aswathi Nair J.K has selected the following title for her research study.

**“An Experimental study to assess the effectiveness of virtual lactation management upon knowledge and lactation practice among primi lactating mothers at selected hospitals Chennai.”**

So I kindly request your goodselves to permit her to conduct study in your esteemed institution

Thanking You,

*Dr. Latha Venkatesan*  
**Dr.LATHA VENKATESAN**  
**PRINCIPAL**

*Permits in OPD  
(Gynae & Paediatric) 2  
Wards  
R. Venkatesan  
4.5.13*

Regd. Office : 21, Greams Lane Off, Greams Road, Chennai - 600 006. Ph. : +91-44-2829 3333, 2829 0200 Website : www.apollohospitalseducation.com  
Unit Office : Vanagaram to Ambattur Main Road, Ayanambakkam, Chennai - 600 095. Phone : 044 - 2653 4387 Fax : 044 - 2653 4923 / 2653 4386



Emergency Service  
Dial **1066**



## APPENDIX III

### ETHICS COMMITTEE LETTER

## Ethics Committee



15 May 2013

To,  
Ms. Aswathi Nair. J. k  
2nd Year M.SC (Nursing),  
Department of Pediatric Nursing,  
Apollo College of Nursing, Chennai.

**Ref:** An experimental study to assess the effectiveness of virtual lactation management upon knowledge and lactation practice among primi lactating mothers at selected hospitals, Chennai.

**Sub:** Approval of the above referenced project and its related documents.

Dear Ms. Aswathi Nair,

Ethics Committee-Apollo Hospitals has received the following document submitted by you related to the conduct of the above-referenced study.

- Project proposal.
- Informed consent form.

The Ethics Committee-Apollo Hospitals reviewed and discussed the Project proposal documents submitted by you related to the conduct of the above referenced Project at its meeting held on 14 May 2013

The following Ethics Committee Members were present at the meeting held on 14 May 2013:

Name	Profession	Position in the committee
Dr. Rema Menon	Clinician	Member Secretary
Dr. P. Nalini Rao	Social Worker	Chairperson
Dr. Renuka Singh	Consultant Clinical Pharmacologist	Basic Medical Scientist
Dr. Krishna Kumar	Clinician-Medical Superintendent	EC -Member
Miss. N. Suseela	Retired English Teacher	Layperson
Ms. Maimoona Badsha	Lawyer	Lawyer
Dr. Vijayakumar	Clinician	EC-Member

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Apollo Hospitals Enterprise Limited  
21, Greams Lane, Off Greams Road, Chennai - 600 006  
Tel : 91 - 44 - 2829 1618, 2829 3333, 91 - 44 - 2829 5465 Extn : 5045 / 6641  
Fax : 91 - 44 - 2829 1618 / 4449 E - Mail : [ecapollochennai@gmail.com](mailto:ecapollochennai@gmail.com)

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## Ethics Committee

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After due ethical and scientific consideration, the Ethics Committee has approved the above presentation submitted by you.

The EC review and approval of the report is only to meet the academic requirement and will not amount to any approval of the conclusions / recommendations as conclusive, deserving adoption and implementation, in any form, in any healthcare institution.

The Ethics Committee is constituted and works as per ICH-GCP, ICMR and revised Schedule Y guidelines.

With Regards,

Date:

15/5/13

Dr. Rema Menon,  
Ethics Committee-Member Secretary,  
Apollo Hospitals, Chennai,  
Tamil Nadu, India.

**Dr. REMA MENON**  
**MEMBER SECRETARY**  
ETHICS COMMITTEE, APOLLO HOSPITALS  
APOLLO HOSPITALS ENTERPRISE LIMITED  
CHENNAI-600 006, TAMIL NADU, INDIA.

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Apollo Hospitals Enterprise Limited  
21, Greams Lane, Off Greams Road, Chennai - 600 006  
Tel : 91 - 44 - 2829 1618, 2829 3333, 91 - 44 - 2829 5465 Extn : 5045 / 6641  
Fax : 91 - 44 - 2829 1618 / 4449 E - Mail : [ecapollochennai@gmail.com](mailto:ecapollochennai@gmail.com)

## APPENDIX IV

### LETTER REQUESTING OPINIONS AND SUGGESTIONS OF EXPERTS FOR ESTABLISHING CONTENT VALIDITY OF RESEARCH

From

Ms. Aswathi Nair J.K ,  
M.Sc., (Nursing) II Year,  
Apollo College of Nursing,  
Chennai-95.

To

Forwarded Through:  
Dr. Latha Venkatesan,  
Principal,  
Apollo College of Nursing.

Sub: Request for opinions and suggestions of experts for content validity of Research tool.

Respected Sir/ Madam

Greetings! As a part of the Curriculum Requirement the following research title is selected for the study.

**“An experimental study to assess the effectiveness of virtual lactation management upon knowledge and lactation practice among primi lactating mothers at Selected Hospitals, Chennai”.**

I will be highly privileged to have your valuable suggestions with regard to the establishment of Content Validity of Research tool. So, I kindly request you to validate my Research tool and give suggestions about the tool.

Yours Sincerely,

(Ms. Aswathi Nair JK)

## APPENDIX V

### LIST OF EXPERTS FOR CONTENT VALIDITY

**1. Dr. Latha Venkatesan, M.Sc (N)., M.Phil.(N)., Ph.D.(N).,**

Principal and Professor,

Apollo college of Nursing,

Chennai-95.

**2. Mrs. Vijayalekshmi, M.Sc. (N), Ph.D.(N)**

Professor,

Department of Mental Health Nursing,

Apollo College of Nursing, Chennai.

**3. Mrs. Nesa sathya Sachi, M.Sc. (N)., Ph.D.(N)**

Reader,

Department of Child Health Nursing,

Apollo College of Nursing, Chennai.

**4. Mrs. Shobana M.Sc.(N)., Ph.D.(N)**

Reader,

Dept. Of Community Health Nursing,

Apollo College of Nursing, Chennai.

**5. Mrs.Cecilia Mary, M.Sc.(N).,**

Lecturer,

Dept. Of Child Health Nursing ,

Apollo College of Nursing, Chennai.



**6. Dr.Kalpana Bharani., M.B.B.S.,DCH.,MRCPCH.,**

Pediatric Consultant,

Apollo speciality Hospitals,

Chennai-600095.

**7. Dr.G . Krishnapriya, M.B.B.S., MRCPCH.,**

Pediatric Consultant,

Apollo speciality Hospitals,

Chennai-600095.

**APPENDIX VI**  
**CONTENT VALIDITY CERTIFICATE**

I hereby certify that I have validated the research tool and interventional programme of Ms.Aswathi Nair JK, M.Sc (Nursing) II year student who is undertaking research study on **“An experimental study to assess the effectiveness of virtual lactation management upon knowledge and lactation practice among primi lactating mothers at Selected Hospitals, Chennai”**.

Signature of Expert

Name and designation

## APPENDIX VII

### RESEARCH PARTICIPANT CONSENT FORM

Dear Participant,

I am Aswathi Nair JK, M.Sc. Nursing student of Apollo College of Nursing, Chennai. As a part of my study, I have selected a Research Project on “**An experimental study to assess the effectiveness of virtual lactation management upon knowledge and lactation practice among primi lactating mothers at Selected Hospitals, Chennai**”.

I hereby seek your consent and co-operation to participate in the study. Please be frank and honest in your response. The information collected will be kept confidential and anonymity will be maintained.

**Signature of the Researcher**

I, ....., hereby give my consent to participate in the study.

## ஆராய்ச்சியில் பங்கு பெருபவருக்கான ஒப்புதல் படிவம்

அன்பார்ந்த பங்கு பெறுவோரே!

நான் அஷ்வதி நாயர் ஜே.கே. அப்போலோ வெவிலியர் கல்லூரியில் முதுகலை செவிலியர் பயிற்று பெரும் மாணவி, என்னுடைய பயிற்சியின் ஒரு பகுதியாக சிறப்பு பயிற்சி மூலமாக தாய்ப்பாலும் தாய்ப்பாலின் முக்கியத்துவத்தியும் இந்த ஆராய்ச்சியில் நீங்கள் பங்கு பெற, உங்களுடைய ஒப்புதல் மற்றும் ஒத்துழைப்பையும் வேண்டுகிறேன். உங்களது குறிப்புகள் இரகசியமாக வைக்கப்படும், மற்றும் உங்களுடைய பெயர் வேறு எங்கும் வெளியிடப்படமாட்டாது.

ஆராய்ச்சியாளரின் கையொப்பம்

..... என்கிற நான் இந்த ஆராய்ச்சியில் பங்கு பெற ஒப்புதல் அளிக்கின்றேன்.

## APPENDIX VIII

### CERTIFICATE FOR ENGLISH EDITING

### TO WHOMSOEVER IT MAY CONCERN

This is to certify that the dissertation “**An experimental study to assess the effectiveness of virtual lactation management upon knowledge and lactation practice among primi lactating mothers at Selected Hospitals, Chennai**” by Aswathi Nair JK, II year M.Sc. Nursing student , Apollo College of Nursing was edited for English language appropriateness.

*Sheela*  
P. SHEELA  
HSST IN ENGLISH  
GOVT. MHS SCHOOL  
AMBALAPUZHA

Signature



**APPENDIX IX**  
**CERTIFICATE FOR TAMIL EDITING**  
**TO WHOMSOEVER IT MAY CONCERN**

This is to certify that the tool for demographic variable proforma, obstetric variable proforma, structured questionnaire to assess knowledge, rating scale on satisfaction and video script of virtual lactation management upon knowledge and lactation practice translated to Tamil by Ms. Aswathi Nair JK II year M.Sc (N) Student, Apollo College of Nursing for her dissertation “**An experimental study to assess the effectiveness of virtual lactation management upon knowledge and lactation practice among primi lactating mothers at Selected Hospitals, Chennai**” was edited for Tamil language appropriateness.

Signature



**நமஸ்காரம் ஆசிரியர்**  
**கங்காநாயகர் கல்விநிலையங்கள்**  
**வடக்கன்குளம்**  
**திருச்செவ்வேலி மாவட்டம் - 627 112.**

## APPENDIX X

### DEMOGRAPHIC VARIABLES PROFORMA FOR PRIMI LACTATING

#### MOTHERS

##### **Purpose**

This proforma is used by the researcher to collect information on demographic variables of the mother such as age, religion and educational status, type of family, area of residence, type of employment, and monthly income.

##### **Instruction**

The investigator will collect the data by interviewing the mother and from the hospital record.

##### **Sample No:**

##### **Hospital No:**

##### **1. Age in years**

1.1 18 – 23 years

1.2 24 – 29 years

1.3 30 – 35 years

1.4 36years and above

##### **2. Religion**

2.1 Hindu

2.2 Christian

2.3 Muslim

2.4 Others

**3. Educational status of the mother**

3.1 Illiterate

3.2 Primary education

3.3 Secondary education

3.4 Graduate

3.5 Postgraduate

**4. Type of family**

4.1 Nuclear

4.2 Joint

4.3 Extended

**5. Area of residence**

5.1 Urban

5.2 Rural

**6. Type of employment**

6.1 Self employed

6.2 Government employee

6.3 Private employee

6.4 Unemployed

**7. Family monthly income in rupees**

7.1 upto 3000

7.2 3001 – 5000

7.3 5001 – 7000

7.4 7001 – 10, 000

7.5 10001 and above



## குடும்ப விவரங்களை அறிய உதவும் படிவம்

### நோக்கம்

இந்த படிவம் குடும்ப விவரங்களை பற்றி அதாவது வயது, மதம், கல்வித்தகுதி, தொழில், மாத வருமானம், குடும்ப வகை, குடும்ப அங்கத்தினரின் எண்ணிக்கை தகவல் பெறும் சாதனங்கள் அறிய உதவுகிறது.

### குறிப்பு

கீழ்வரும் தகவல்கள் ஆய்வாளரால் நேர்முக கலந்துரையாடல் மூலமும், மருத்துவமனை குறிப்பேடுகளின் வாயிலாகவும் சேகரிக்கப்படும்.

### வரிசை எண்:

#### 1. வயது (வருடத்தில்)

1.1 18 - 23

1.2 24 - 29

1.3 30 - 35

1.4 36 வயதிற்கு மேல்

#### 2. மதம்

2.1 இந்து

2.2 கிறிஸ்துவர்

2.3 இஸ்லாமியர்

2.4 மற்றவை

#### 3. கல்வித்தகுதி

3.1 படிப்பறிவற்றவர்

3.2 ஆரம்பக் கல்வி

3.3 உயர்நிலைக்கல்வி

3.4 பட்டதாரி

3.5 தொழில் கல்வி

#### 4. குடும்ப வகை

4.1 தனிக்குடும்பம்

4.2 கூட்டுக்குடும்பம்

4.3 விரிவான குடும்பம்

#### 5. வசிக்கும் இடம்

5.1 நகரம்

5.2 கிராமம்

#### 6. தொழில்

6.1 சுயத்தொழில்

6.2 அரசு ஊழியர்

6.3 தனியார் ஊழியர்

6.4 வேலையில்லாதவர்

#### 7. குடும்பத்தின் மாத வருமானம்

7.1 3000 வரை

7.2 3001-7000.:-

7.3 7001-10000.:-

7.4 10000.:- மேல்

## APPENDIX XI

### OBSTETRIC VARIABLES PROFORMA FOR PRIMI LACTATING MOTHERS

#### Purpose

This proforma is used by the researcher to collect information on obstetrical variables of the mother such as antenatal checkups, antenatal self breast examination, medical disorders during pregnancy, gestational age at birth , mode of delivery, birth weight of the baby, sex of the baby, any complications during labour, initiation of breast feeding after delivery, breast condition of the mother, frequency of feeding, type of feeding, effective latch of the baby, sucking behaviour of the baby, and satiety behaviour of the baby.

#### Instructions

The investigator will collect the data by interviewing the mother and from the hospital records.

#### 1. Antenatal checkups

1.1 < 3 checkups

1.2 3 – 5 checkups

1.3 > 5 checkups

1.4 not done

#### 2. Antenatal nipple exercises

2.1 regularly practiced after bath

2.2 practiced once in a week

2.3 occasionally practices

2.4 never practiced

**3. Medical disorders during pregnancy**

- 3.1 Anemia
- 3.2 Hypertension
- 3.3 Diabetes
- 3.4 Others if any specify -----
- 3.5 No complications

**4. Gestational age of the newborn at birth**

- 4.1 <37weeks
- 4.2 37 – 40 weeks
- 4.3 >40weeks

**5. Mode of delivery**

- 5.1 Normal vaginal delivery with episiotomy
- 5.2 Caesarean delivery
- 5.3 Assisted delivery

**6. Birth weight of the baby**

- 6.1 <2.5kg
- 6.2 2.51 – 3.5kg
- 6.3 >3.51kg

**7. Sex of the baby**

- 7.1 Male
- 7.2 Female

**8. Any complications during labour**

- 8.1 Prolonged labour
- 8.2 Non progressive labour
- 8.3 Difficulty in labour
- 8.4 No complication
- 8.5 Any other complications specify -----

**9. Initiation of breast feeding after delivery**

- 9.1 Within half an hour
- 9.2 ½ - 1 hour
- 9.3 1 – 2 hour
- 9.4 After 2 hours

**10. Breast condition of the mother**

- 10.1 Erect nipple
- 10.2 Inverted nipple
- 10.3 Cracked nipple
- 10.4 Breast engorgement

**11. Frequency of feeding**

- 11.1 Every fourth hourly
- 11.2 Every second hourly
- 11.3 Every hourly
- 11.4 Demand feeding

**12. Type of feeding**

12.1 Only breast feeding

12.2 Only formula feeding

12.3 Combination of breast feeding and formula feeding

**13. Effective latch of the baby**

13.1 Started to feed at once (0 – 5min)

13.2 Over 5min

13.3 Did not latch on

**14. Sucking behaviour of the baby**

14.1 Baby did not suck

14.2 Poor sucking

14.3 Sucked well

**15. Satiety behaviour of the baby**

15.1 Baby still crying after breast feeding

15.2 Looks peaceful and calm

15.3 Relaxed and fell asleep

15.4 Not satisfied

## கர்ப்பகால விவரங்களின் மாதிரி படிவம்

### நோக்கம்

இந்த படிவம் கருவுற்றிருக்கும்போது மருத்துவ ஆலோசனை, மார்பகக் காம்பு உடற்பயிற்சி, கறுவுற்றிருக்கும் வாரங்கள், பிரசவிக்கும் முறை, குழந்தையின் எடை, மருத்துவ உபாதைகள், மார்பகத்தின் நிலை, முதலில் பால் கொடுக்க தொடங்குதல், எத்தனை முறை பால் கொடுக்க வேண்டும், குழந்தையின் பால் குடிக்கும் திறன், பால் கொடுக்கும் முறை நன்றான விதத்தில் பால் கொடுக்கம் முறை பிரசவத்தில் உள்ள சிக்கல்கள் குழந்தையின் மன நிறைவான நிலை பற்றி அறிய உதவுகிறது.

### 1. கர்ப்பக்கால பரிசோதனை

1.1 3 பரிசோதனைகளும் கீழ்

1.2 3-5 பரிசோதனைகள்

1.3 5க்கு பரிசோதனைக்கு மேல்

1.4 பரிசோதிக்கவில்லை

### 2. கர்ப்பக்கால மார்புக் காம்பின் உடற்பயிற்சி

2.1 தொடர்ந்து குளித்தவுடன் செய்வது

2.2 வாரத்திற்கு ஒருமுறை

2.3 எப்பொழுதாவது ஒருமுறை

2.4 செய்வது இல்லை

### 3. மருத்துவ உபாதைகள் கர்ப்பகாலத்தின் பொழுது

3.1 இரத்தசோகை

3.2 இரத்தஅழுத்தம்

3.3 நீரிழிவு நோய்

3.4 எந்த நோயாவது இருந்தால்

3.5 எந்த உபாதையும் இல்லை

**4. கர்ப்பகால வாரங்களின் எண்ணிக்கை குழந்தை பிறந்தவுடன்**

4.1 37 வாரங்களுக்கு கீழ்

4.2 37-40 வாரங்கள்

4.3 40 வாரங்களுக்கு மேல்

**5. பிரசவ முறை**

5.1 சாதாரண பிரசவம் மற்றும் புண்டவாய் திறப்புடன்

5.2 அறுவை சிகிச்சை மூலமாக

5.3 பிரசவத்தின் போது கருவிகளின் உதவியோடு

**6. குழந்தையின் உடல் எடை**

6.1 2.5 கிலோ கிராமிற்கு கீழ்

6.2 2.5-3.5 கிலோ கிராம்

6.3 3.51 கிலோ கிராமிற்கு மேல்

**7. குழந்தையின் பாலியல்**

7.1 ஆண்

7.2 பெண்

**8. பிரசவத்திலுள்ள சிக்கல்கள்**

8.1 நீண்ட பிரசவம்

8.2 முற்போக்கு அல்லாத பிரசவம்

8.3 பிரசவத்தில் கஷ்டம்

8.4 சிக்கல்கள் இல்லை

8.5 வேறு ஏதாவது சிக்கல்கள் இருந்தால் குறிப்பிடு



**9. பால் கொடுக்க தொடங்குதல், பிரசவத்திற்கு பிறகு**

9.1 ½ மணி நேரத்திற்குள்

9.2 ½ 1 மணி நேரம்

9.3 1-2 மணி நேரம்

9.4 2 மணி நேரம் கழித்து

**10. தாயின் மார்பகத்தின் நிலை**

10.1 நிமிர்ந்த காம்பு

10.2 தலைகீழ் மார்பகக்காம்பு

10.3 வெடித்த மார்பகக்காம்பு

10.4 மார்பகத்தில் பால் கட்டி இருந்தா

**11. பால் எத்தனை முறை கொடுக்க வேண்டும்**

11.1 4 மணிநேர இடைவேளையில்

11.2 2 மணிநேரத்திற்கு பிறகு

11.3 ஒவ்வொரு மணிநேரத்திற்கும்

11.4 குழந்தை அழும்பொழுது மட்டும்

**12. பால் கொடுக்கும் முறை**

12.1 தாய்ப்பால் மட்டும்

12.2 தாய்ப்பால் அல்லாத மற்ற பால்

12.3 தாய்ப்பால் மற்றும் மற்ற பால்

**13. நன்றான விதத்தில் பால் கொடுக்கும் முறை**

13.1 பிறந்தவுடனே பால் கொடுப்பது (0-5 நிமிடங்கள்)

13.2 5 மணிநேரத்திற்கு மேல்

13.3 பால் கொடுக்க குழந்தை மார்பக் காம்பை சப்பவில்லை

**14. பால் சப்பும் குழந்தையின் நடத்தை**

14.1 குழந்தை பால் சப்பவில்லை

14.2 குழந்தை பால் நன்றாக குடிக்கவில்லை

14.3 குழந்தை பாலை நன்றாக சப்பிக் குடிப்பது

**15. குழந்தையின் மன நிறைவான நிலை**

15.1 குழந்தை தாய்பால் கொடுத்த பின்பும் அழுது கொண்டு இருக்கிறது

15.2 குழந்தை அமைதியாக இருக்கிறது

15.3 குழந்தை அமைதியாக உரங்குதல்

15.4 மன நிறைவு அடையவில்லை

## BLUE PRINT

### STRUCTURED QUESTIONNAIRE REGARDING THE KNOWLEDGE OF BREASTFEEDING PRACTICES AMONG PRIMI LACTATING MOTHERS

SL.NO	ITEM	ITEM NO.	TOTAL NO. OF ITEMS	PERCENTAGE
1	Breast feeding	1, 2, 3, 4, 5,6,	6	24%
2	Breast feeding practice	7 , 8 , 9 , 10,11,	5	20%
3	Storage of breast milk	12 , 13 , 14 , 15 , 16	5	20%
4	Advantages of breast feeding to mother and baby	17 , 18 , 19 , 20 , 21	5	20%
5	Breast care	22 , 23 , 24 , 25	4	16%
	<b>TOTAL</b>		<b>25</b>	<b>100%</b>

## APPENDIX XII

### STRUCTURED INTERVIEW SCHEDULE

#### Purpose

This structured questionnaire is used to assess the knowledge of mothers regarding the breast feeding practices among primi lactating mothers.

#### Instruction

Please read the questions given below. Each question has 4 choices , select the appropriate choice and put a tick mark [☑] of correct answer in the space provided. The collected information will be kept confidential and will be used for the research purpose only.

#### 1. What influences the secretion of milk?

- a. Consuming more milk
- b. Putting the baby to breast for sucking
- c. Taking medicines
- d. Drinking more water

#### 2. When will you initiate breast feeding after normal delivery of a the baby?

- a. 30minutes after delivery
- b. 1 hour after delivery
- c. 1 hour and 30 minutes after delivery
- d. hours after delivery

**3. How many times in a day you should feed the baby?**

- a. Only when the baby cries
- b. At least 8 – 12 times/day
- c. Every half an hour
- d. Every hour

**4. How often will you feed your baby?**

- a. As and when the mother feels like feeding
- b. As on demand and once in 2 hours
- c. As and when the mother wants to go out
- d. As and when the mother is free from work

**5. How long can the breast feeding be continued?**

- a. Until the child wants to breast feed
- b. Until the mother like feeding
- c. Until the second year of life
- d. Until the first year of life.

**6. What should be done after feeding the baby?**

- a. Keep the baby on lap and stroke
- b. Keep the baby on bed in prone position
- c. Keep the baby on bed in sidelying position
- d. Keep the baby on shoulder and stroke

**7. How long should the baby be on exclusive breast feeding given to the baby?**

- a. 3months of life
- b. 6months of life
- c. 8months of life
- d. 11months of life

**8. What are parts of the breast to be inserted into the baby's mouth during breast feeding?**

- a. The tip of the nipple only
- b. Both nipple and areola
- c. The nipple areola and some part of breast tissue
- d. Whole nipple

**9. Which is the most proper position for breast feeding?**

- a. Lying on back
- b. Sitting
- c. Side lying position
- d. Standing

**10. How will you unlatch the baby from breast after feeding?**

- a. Making the baby to wake up
- b. Waiting for the baby to leave the breast
- c. Inserting the little finger between the breast and the lips of the baby
- d. Forcefully pulling the baby from breast

**11. How long the baby should be fed at each breast?**

- a. 5 minutes
- b. 10 minutes
- c. 15 minutes
- d. 20minutes

**12. The following are the ways to express breast milk for storage EXCEPT?**

- a. Milk pump
- b. Electric breast pump
- c. Manual expression
- d. Hand pump

**13. Which is the best container to store expressed breast milk?**

- a. Plastic or glass
- b. Stainless steel
- c. Aluminium vessel
- d. Bronze pot

**14. How long can you store the breast milk in room temperature?**

- a. 4hours
- b. 8 hours
- c. 10 hours
- d. 24hours

**15. How long can you store the breast milk in a refrigerator?**

- a. 72 hours
- b. 50hours
- c. 48hours
- d. 24hours

**16. What is the temperature of the refrigerator to store the breast milk?**

- a. 8 – 10 degree Celsius
- b. 6 - 8 degree Celsius
- c. 4- 6 degree Celsius
- d. 2 – 4 degree Celsius

**17. What are the advantages of breast feeding to the mother?**

- a. Reduces the weight of the mother
- b. Helps in involution of uterus
- c. Reduces body temperature
- d. Prevents stomach cancer

**18. What are the advantages of breast feeding to the baby?**

- a. Resistance to infectious diseases
- b. Helps in not gaining weight
- c. Reduces body temperature
- d. Acts as a laxative for the baby



**19. What are the contraindications for breast feeding?**

- a. Breast injury
- b. Hypertension
- c. Diabetes
- d. Anemia

**20. What are the signs of breast engorgement?**

- a. Redness and tenderness in breast
- b. Cold and clammy breast
- c. Lymphnode enlargement and bluish discolouration
- d. Dripping of milk from the breast

**21. What is the complication due to improper feeding technique?**

- a. Breast engorgement
- b. Excessive milk secretion
- c. Milk flow from breast
- d. Sagging of breast

**22. How will you take care of breast during feeding period?**

- a. Cleaning the breast after feeding
- b. Cleaning the breast before feeding
- c. Cleaning the breast before and after feeding
- d. Do not clean

**23. What type of breast supporters should be used by the breast feeding mothers?**

- a. Tie with cloth
- b. Leave without support
- c. Use bandage
- d. Support with brassieres

**24. How will you manage engorged breast?**

- a. Take a bath
- b. Give cold compress
- c. Give warm compress
- d. Do not express milk

**25. What type of diet the nursing mother should take during lactating period?**

- a. lime juice and less vegetables
- b. more of green leafy vegetables , milk , fruits and plenty of fluids
- c. Salt free diets and more of oral fluids
- d. less oral fluids and salt rich diet

**Scoring interpretation :**

<b>Percentage</b>	<b>Level of knowledge</b>
<50%	Inadequate Knowledge
50-75%	Moderately Adequate Knowledge
>75%	Adequate Knowledge

**Answer key:**

- 1) b
- 2) a
- 3) b
- 4) b
- 5) c
- 6) d
- 7) b
- 8) b
- 9) b
- 10) c
- 11) d
- 12) a
- 13) a
- 14) a
- 15) d
- 16) d
- 17) b
- 18) a
- 19) a
- 20) a
- 21) a
- 22) b
- 23) d
- 24) c
- 25) b

**மெய்நிகர் தாய்ப்பால் ஊட்டலின் வீடியோ நிகழ்ச்சியின் திறனை காண உதவும் நோக்காணல் படிவம்**

**நோக்கம்**

இந்த வடிவமைக்கப்பட்ட நோக்காணல் படிவம் குழந்தை பெற்ற தாய்மார்களின் தாய்ப்பால் ஊட்டுதல் வழக்கத்தைப் பற்றிய அறிவை அறிய உதவுகிறது.

**குறிப்பு**

தயவுசெய்து கொடுக்கப்பட்டுள்ள கீழ்க்கண்ட கேள்விகளை வாசிக்கவும். இந்த வடிவமைக்கப்பட்ட நோக்காணல் படிவத்தில் ஒவ்வொரு கேள்விக்கும் நான்கு விடைகள் அளிக்கப்பட்டுள்ளன. ஒவ்வொரு கேள்விக்கும் சரியான பதிலை அதற்குரிய கட்டத்தில் (✓) குறியீட்டின் மூலம் தெரிவிக்கவும். கொடுக்கப்பட்டுள்ள தகவல்கள் மற்றும் உங்களைப் பற்றிய குறிப்புகள் அனைத்தும் இரகசியமாக வைக்கப்படும்.

**1. தாய்ப்பால் சுரப்பது எதனால் அதிகப்படுத்தப்படுகிறது**

அ. அதிகமான பால் குடிப்பதன் மூலமாக.

ஆ. குழந்தை மார்பகத்தை உறிஞ்சி குடிப்பதால்.

இ. மருந்து சாப்பிடுவதன் மூலமாக.

ஈ. தண்ணீர் குடிப்பதன் மூலமாக.

**2. குழந்தை பிறந்தவுடன் முதன் முறையாக எப்பொழுது பாலுட்ட வேண்டும்**

அ. 30 நிமிடத்திற்குள்.

ஆ. ஒரு மணிநேரம் கழித்து.

இ. ஒன்றரை மணிநேரத்திற்கு பின்.

ஈ. பல மணி நேரத்திற்கு பிறகு.

**3. எத்தனை முறை ஒரு நாளில் குழந்தைக்கு தாய்ப்பால் கொடுப்பீர்கள்**

அ. குழந்தை அழும்பொழுது மட்டும்.

ஆ. 8-12 தடவை மட்டும்.

இ. அரைமணி நேரத்திற்கு ஒரு தடவை

ஈ. ஒருமணி நேரத்திற்கு ஒரு முறை.

**4. எப்போதெல்லாம் தாய் பாலூட்ட வேண்டும்?**

அ. ஒவ்வொரு முறையும் தாய் பாலூட்ட நினைக்கும் போது.

ஆ. குழந்தைக்கு தேவைப்படும்போது.

இ. தாய் வெளியில் செல்லும் போது.

ஈ. தாய் ஓய்வில் இருக்கும் போது.

**5. தாய்ப்பால் எவ்வளவு நாட்கள் ஊட்டப்படலாம்**

அ. குழந்தை தாய்ப்பால் குடிக்கும் வரை.

ஆ. தாய் குழந்தைக்கு ஊட்ட விரும்பும் வரை.

இ. பிறந்து 1 வருடம் வரை.

ஈ. பிறந்து 2 வருடம் வரை.

**6. குழந்தைக்கு தாய்ப்பால் ஊட்டிய பிறகு என்ன செய்ய வேண்டும்?**

அ. குழந்தையை மடியில் வைத்து முதுகுப்புறத்தில் தட்டி கொக்க வேண்டும்.

ஆ. குழந்தையை படுக்கையில் குப்புற படுக்க வைக்க வேண்டும்.

இ. குழந்தையை படுக்கையில் ஒருகணித்து படுக்க வைக்க வேண்டும்.

ஈ. குழந்தையை தோளில் போட்டுக் கொண்டு தட்டிக் கொடுக்க வேண்டும்.

**7. குழந்தைக்கு தாய்ப்பால் மட்டுமே எவ்வளவு நாட்கள் ஊட்டப்பட வேண்டும்?**

அ. பிறந்து 3 மாதங்கள் வரை.

ஆ. பிறந்து 6 மாதங்கள் வரை.

இ. பிறந்து 8 மாதங்கள் வரை.

ஈ. பிறந்து 11 மாதங்கள் வரை.

8. தாய்ப்பால் ஊட்டும் போது தாய் மார்பின் எந்த பகுதிகளை குழந்தையின் வாயில் உட்செலுத்த வேண்டும்?

அ. மார்பு காம்பின் நுனி பகுதி.

ஆ. மார்பு காம்பு மற்றும் மார்பக சிற்றிடம்.

இ. மார்பு காம்பு, ஏரியோலா மற்று மார்ப்பின் சில பகுதி.

ஈ. மார்பு காம்பு முழுவதும்.

9. தாய்ப்பால் கொடுக்கும் போது தாயின் சரியான நிலை என்ன?

அ. சாய்ந்து உட்கார்ந்து.

ஆ. உட்கார்ந்த நிலை.

இ. ஒருக்கணித்து படுத்துக்கொண்டு.

ஈ. நின்ற நிலை.

10. தாய்ப்பால் ஊட்டிய பிறகு எந்த விதத்தில் முடிக்க வேண்டும்?

அ. குழந்தையில் தட்டி எழுப்ப வேண்டும்.

ஆ. குழந்தை மார்பை விடும் வரை பொறுத்திருக்க வேண்டும்.

இ. சுண்டு விரலை மார்பு பகுதிக்கும் குழந்தையில் உதடுக்கும் இடையே செலுத்த வேண்டும்.

ஈ. குழந்தையின் தலையை மார்பிலிருந்து வெளியே இழுக்க வேண்டும்.

11. ஒவ்வொரு முறையும் பாலூட்டும் போது தாய் எவ்வளவு நேரம் பாலூட்ட வேண்டும்?

அ. 5 நிமிடங்கள்.

ஆ. 10 நிமிடங்கள்.

இ. 15 நிமிடங்கள்.

ஈ. 20 நிமிடங்கள்.

12. கீழ்க்கண்டவைகளில் எந்த முறை கறந்த தாய்ப்பாலை சேமித்து வைக்கும் முறை அல்ல?

அ. பால் பம்பு.

ஆ. மின்சார மார்பக பம்பு.

இ. கையினால் தாய்ப்பாலை சுறந்து எடுக்கும் முறை.

ஈ. கை பம்பு.

13. கறந்த தாய்ப்பாலை சேமித்து வைக்க எந்த வகையான பாத்திரத்தை பயன்படுத்த வேண்டும்?

அ. பிளாஸ்டிக் அல்லது கண்ணாடி பாத்திரத்தில்.

ஆ. எவர்சில்வர் பத்திரம்.

இ. அலுமினிய பாத்திரம்.

ஈ. செம்பு பாத்திரம்.

14. குளிர்ந்த அறையில் சேமித்து வைக்கும் கறந்த தாய்ப்பாலை எவ்வளவு நேரத்திற்குள் குழந்தைக்கு ஊட்ட வேண்டும்?

அ. 4 மணிநேரத்திற்குள்.

ஆ. 8 மணிநேரத்திற்குள்.

இ. 10 மணிநேரத்திற்குள்.

ஈ. 24 மணிநேரத்திற்குள்.

15. குளிர்ச்சாதன பெட்டியில் எவ்வளவு நேரம் தாய்ப்பாலை சேமித்து வைக்கலாம்?

அ. 72 மணிநேரம்.

ஆ. 50 மணிநேரம்.

இ. 48 மணிநேரம்.

ஈ. 24 மணிநேரம்.

16. குளிர்ச்சாதன பெட்டியில் எந்த வெப்ப நிலையில் தாய்ப்பாலை சேமித்து வைக்க வேண்டும்?

அ. 8-10 செல்சியஸ்.

ஆ. 6-8 செல்சியஸ்.

இ. 4-6 செல்சியஸ்.

ஈ. 2-4 செல்சியஸ்.

17. தாய்ப்பால் கொடுப்பதினால் தாய்க்கும் உண்டாகும் நன்மைகள் என்ன?

அ. தாயின் எடையை குறைக்கும்.

ஆ. கருப்பையை கர்ப்பத்திற்கு முன் இருந்தது போல் சுருங்கச் செய்கிறது.

இ. உடலின் வெப்ப நிலையை குறைக்கும்.

ஈ. வயிற்று புற்று நோயைக் குறைக்கிறது.

18. தாய்ப்பால் குடிப்பதினால் குழந்தைக்கு உண்டாக்கும் நன்மை என்ன?

அ. தொற்று நோயிலிருந்து பாதுகாக்கிறது

ஆ. குழந்தை எடை அதிகரிக்காதபடி செய்கிறது

இ. குழந்தையின் வெப்பநிலையை குறைக்கிறது.

ஈ. குழந்தைக்கு மலமிளக்கியாகப் பயன்படுகிறது

19. தாய் பாலூட்ட முடியாத நிலை எது?

அ. மார்பில் காயம்

ஆ. இரத்த கொதிப்பு

இ. நீரிழிவு நோய்

ஈ. இரத்த சோகை

20. மார்பக கட்டியின் அறிகுறிகள் என்ன?

அ. சிவந்தும், வலியும் மார்பகத்தில் உண்டாவதால்

ஆ. மார்பகம் குளிர்ந்து இருப்பதால்

இ. நிணநீர் கணது வீக்கம் மற்றும் நீலநிறத்தில் மாறுத்தல்

ஈ. மார்பகத்தில் இருந்து பால் சொட்டுவது



21. சரியான முறையில் பாலூட்டாததால் ஏற்படும் விளைவு என்ன?

அ. பால் கட்டியாகி அதிகமான மார்பு வலி

ஆ. அதிகமாக பால் வெளியாவது

இ. தானாகவே பால் வெளியாவது

ஈ. மார்பு தளர்ந்து போதல்

22. பாலூட்டும் நேரங்களில் உங்கள் மார்பகம் எவ்வாறு கவனித்து கொள்ள வேண்டும்?

அ. பாலூட்டிய பிறகு மார்பகத்தை சுத்தம் செய்ய வேண்டும்

ஆ. பாலூட்டும் முன்பு மார்பகத்தை சுத்தம் செய்ய வேண்டும்

இ. பாலூட்டும் முன் பாலூட்டும் பின் மார்பகத்தை சுத்தம் செய்ய வேண்டும்

ஈ. சுத்தம் செய்ய வேண்டாம்

23. எந்த வகையான மார்பக உள்ளடைகளை தாய்மார்கள் உபயோகிக்க வேண்டும்?

அ. துணி வைத்து கட்ட வேண்டும்

ஆ. எதுவும் அணிய வேண்டாம்

இ. பாண்டேஜ் பயன்படுத்த வேண்டும்

ஈ. மார்பக உள்ளடைகளை உபயோகித்தல்

24. மார்பகத்தில் உள்ள பால் கட்டியின் சிகிச்சை என்ன?

அ. குளிப்பது

ஆ. குளிர்ந்து ஓத்தடம்

இ. சூடான ஓத்தடம்

ஈ. பாலை வெளிப்படுத்தக் கூடாது

25. பாலூட்டும் தாய்மார்கள் எப்படிப்பட்ட உணவை உண்ண வேண்டும்?

அ. எலுமிச்சை சாறு மற்றும் காய்கறிகள்

ஆ. பச்சை காய்கறிகள், பால், பழம் மற்றும் திரவங்கள்

இ. உப்பு இல்லாத உணவு மற்றும் திரவங்கள்

ஈ. குறைந்த அளவு திரவங்கள் மற்றும் உப்பு அதிகமான அளவு உணவு

## BLUE PRINT

### OBSERVATIONAL CHECKLIST TO ASSESS THE LACTATION PRACTICES AMONG PRIMI LACTATING MOTHERS

SL.NO	ITEM	ITEM NO.	TOTAL NO. OF ITEMS	PERCENTAGE
1	Preparation before feeding	1, 2, 3, 4	4	33.33%
2	Feeding	5, 6, 7, 8	4	33.33%
3	After care	9, 10, 11, 12	4	33.33%
	<b>TOTAL</b>			<b>99.99%</b>

## APPENDIX XIII

### STRUCTURED OBSERVATIONAL CHECKLIST

#### Purpose

This structured observational checklist is used to assess lactation practice among primi lactating mothers.

#### Instructions

The investigator will collect the data by observing the feeding mothers practice.

SL.NO	STATEMENTS	DONE	PARTIALY DONE	NOT DONE
1	Cleans the breast before feeding.			
2	Maintains proper sitting and comfortable position during breast feeding.			
3	Knows the signs of hunger of the baby like crying , sucking fist continuously.			
4	Holds the baby in proper position.			
5	Breast feeds the baby every 2 hours or on demand of the baby.			
6	Both the areola and nipple is inserted into the baby's mouth while feeding (good latch).			
7	The baby is fed at one breast for 25 minutes and then changed to the other breast for 5minutes.			

<b>8</b>	Stimulates the baby during feeds to arouse the baby.			
<b>9</b>	Unlatches the baby from the breast by inserting the little finger between the breast and lips of the baby.			
<b>10</b>	Burps the baby after each feed.			
<b>11</b>	Positions the baby in left lateral position after feeding.			
<b>12</b>	Uses proper brassieres to support the breast.			

**Scoring interpretation :**

<b>Scoring</b>	<b>Percentage(%)</b>	<b>Lactation Practice</b>
0-8	0-33	poor
9-6	34-66	average
17-24	67-100	good

**BLUE PRINT**

**RATING SCALE TO ASSESS THE LEVEL OF SATISFACTION AMONG  
PRIMI LACTATING MOTHERS**

<b>SL.NO</b>	<b>ITEM</b>	<b>ITEM NO.</b>	<b>TOTAL NO. OF ITEMS</b>	<b>PERCENTAGE</b>
<b>1</b>	Research approach	1, 2, 3, 4	4	40%
<b>2</b>	Content	5, 6, 7	3	30%
<b>3</b>	Effectiveness	8, 9, 10	3	30%
	<b>TOTAL</b>			<b>100%</b>

**APPENDIX XIV**

**RATING SCALE ON SATISFACTION OF VIRTUAL LACTATION**

**MANAGEMENT**

**SATISFACTION SCALE**

**Purpose**

This satisfaction scale is used to assess satisfaction level among primi lactating mothers.

**Instructions**

The investigator will collect the data by interviewing the mother.

<b>Sl no</b>	<b>STATEMENTS</b>	<b>HIGHLY SATISFIED</b>	<b>SATISFIED</b>	<b>DISSATIS FIED</b>	<b>HIGHLY DISSATIS FIED</b>
1	The researchers explanation about the lactation management was adequate				
2	Approach of the researcher was comfortable				
3	The duration of the time spent by the researcher was adequate				
4	The communication of the researcher was effective				
5	The clarity of the video was good				
6	The duration of the virtual lactation management was adequate				
7	The continuity of the scene was adequate				

8	The attitude of the mother towards breast feeding was improved.				
9	The knowledge of the mother gained about breast feeding after virtual lactation management was adequate				
10	The session on the whole was effective.				

**Scoring interpretation :**

<b>Score</b>	<b>Percentage (%)</b>	<b>Interpretation</b>
1 – 10	≤25	Highly dissatisfied
11 – 20	26 – 50	Dissatisfied
21 – 30	51 – 75	Satisfied
31 – 40	76 – 100	Highly satisfied

## தண்நிறைவு அலவுகோல்

### பயன்:

முதல்முறை தாய்ப்பாலூட்டும் தாயின் மனநிறைவு நிலையை அறிய இந்த அளவுகோல் பயன்படுகிறது.

வரிசை எண்	கூற்று	முழு மன நிறைவு	மிதமான அளவு மன நிறைவு	மன நிறைவு	மனநிறைவு இல்லாமை
1.	தாய்ப்பாலூட்டுதல் பற்றிய ஆராய்ச்சியாளரின் விளக்கம்				
2.	ஆராய்ச்சியாளரின் அணுகுமுறை செளகரியமாக இருந்ததா				
3.	ஆராய்ச்சியாளர் எடுத்து கொண்ட நேரம் போதுமானதாக இருந்தது				
4.	ஆராய்ச்சியாளருடனான தொடர்பு பயனுள்ளதாக இருந்தது				
5.	வீடியோ தெளிவாக இருந்தது				
6.	தாய்ப்பால் பற்றிய வீடியோ போதுமானதாக இருந்தது				
7.	தாய்ப்பால் வீடியோ காட்சிகள் போதுமானதாக இருந்தது				
8.	தாய்மார்களின் தாய்ப்பாலூட்டுதல் பற்றிய மனப்பாங்கு அதிகரித்தது				
9.	தாய்ப்பால் பற்றிய வீடியோவினால் தாய்மார்களின்				



	தாய்ப்பாலூட்டுதல் பற்றிய அறிவு போதுமானதாக இருந்தது				
10.	தாய்ப்பாலூட்டுதல் பற்றிய விளக்கம் மிகவும் பயனுள்ளதாக இருந்தது				

## APPENDIX XV

### TAMIL SCRIPT FOR VIRTUAL LACTATION MANAGEMENT

தாய்ப்பாலும் தாய்ப்பால் முக்கியத்துவத்தின் வீடியோ நிகழ்ச்சி

#### தாய்ப்பாலின் மூலம் கிடைக்கும் பயன்கள்

தாய்ப்பால் கொடுப்பதன் மூலமாக குழந்தைக்கு நோய் எதிர்ப்பு சக்தி அதிகரிக்கின்றது குழந்தைக்கு எளிதில் ஜீரணமாகும். குழந்தைக்கும் தாய்க்கும் இடையிலான இணைவு முறையை அதிகரிக்கும்.

#### தாய்ப்பால் கொடுப்பதன் மூலம் தாய்மார்கள் பெறும் பயன்கள்

- தாய்ப்பால் கொடுப்பதன் மூலமாக பழையை (அல்லது) முந்தையை உடல்நிலையை அடையலாம்.
- மார்பக புற்றுநோய் வருவதை தடுக்கலாம்
- கர்ப்பை புற்றுநோய் போன்ற எலும்பு தேய்மானம் நோய்கள் வருவதை தடுக்கலாம்,

#### தாய்ப்பாலின் அறிவியல் தகவல்கள்

குழந்தை பிறந்த முதல் இரண்டு நாட்கள், தாயிடம் இருந்து சீயம்பால் என்ற மஞ்சள் நிறம் கலந்த பால் சுரக்கப்படும்.

இந்தப்பால் (சீயம்பால்) மிகவும் சத்து மிக்க ஊட்டச்சத்து நிறைந்தது. இந்தப்பாலில் புரோட்டின், வைட்டமின்கள் மற்றும் தாது உப்புக்கள் நிறைந்தது. இது குழந்தைக்கு மிகவும் பாதுகாப்பையும், நோய் எதிர்ப்பு சக்தியையும் கொடுக்கின்றது. அதற்கு பின் வரும் தாய்ப்பால் இடைநிலை பால் என அழைக்கப்படுகிறது. அந்த பாலில் வைட்டமின்கள், புரதச்சத்து, தாது உப்புகள் குறைந்து, கொழுப்பு மற்றும் கார்போஹைட்ரேட் நிறைந்து காணப்படுகிறது.

அதற்கு பின் வரும் தாய்ப்பால் முதிர்ச்சி அடைந்த தாய்ப்பால் என அழைக்கப்படுகிறது. அந்த முதிர்ச்சி அடைந்த தாய்ப்பாலில் கொழுப்பு மற்றும் புரதச்சத்து அதிகமாக காணப்படுகிறது.

#### **தாய்ப்பால் கொடுக்கும்போது பின்பற்றும் முறைகள்**

- முதலில் நன்றாக, சுகமான, நேரான நிலையில் அமருதல் மிகவும் அவசியமான ஒன்று.
- கை மற்றும் முதுகுப்பகுதியை தலையணை வைத்து தாங்கிக் கொள்ள வேண்டும்
- குழந்தையின் முகம் தாயின் மார்பகத்தை பார்த்து இருத்தல் வேண்டும்
- குழந்தையின் தலையை நன்றாக பிடித்துக்கொள்ள வேண்டும் முதலில் குழந்தையின் வாய்ப்பகுதி முழுவதுமாக மார்பக நுனிக்காம்பினை பற்றும்மாறு செய்ய வேண்டும்.
- மார்பக காம்பின் நுனி பகுதி முழுவதுமாக குழந்தையின் நாக்கின் மேல்பகுதியில் இருத்தல் அவசியம்.
- தாய்ப்பால் கொடுக்கும் பொழுது குழந்தை உறங்க ஆரம்பிக்கின்றது. தாய்ப்பால் கொடுத்தபின் குழந்தையின் நிலையை கண்காணிக்க வேண்டும்.

#### **தாய்ப்பால் கொடுக்கும் பொழுது குழந்தையை தாங்கும் முறைகள்**

- நேராக அமர்ந்த நிலையில் குழந்தையை தாயின் முன்புறமாக தாயின் மடியில் வைத்தல் வேண்டும். ஆங்கிலத்தில் இதை கிரேடில் கோல்ட் என்பர் (Cradle hold)
- குழந்தையை நன்றாக கைகளில் தாங்கி குழந்தையின் வாய்ப்பகுதி மார்பக நுனிக் காம்பினில் செல்லுமாறு வைக்க வேண்டும்.
- குழந்தை தலை, பின்புறம் மற்றும் கால்கள் தாயின் பின்புறமாக வைக்கவேண்டும். கைகளால் குழந்தையை தாங்கவேண்டும். அப்பொழுது

தலையணை போன்ற சுகமான உபகரணங்களை பயன்படுத்தலாம் இதனை ஆங்கிலத்தில் (Foot Ball Hold) என்பர்

- குழந்தையின் முகத்தினை மார்பக பகுதியில் அருகில் கொண்டு வர வேண்டும். ஒருவேளை, அறுவைசிகிச்சை மற்றும் மார்பகம் பெரிதாக இருந்தாலோ அல்லது இரட்டை குழந்தை எனில் இந்த முறை மிகவும் சலபமாக இருக்கும்.

### **ஒருபுறமாக சாய்ந்து படுத்தல்**

நன்றாக ஒருபுறமாக படுத்துக் கொண்டு குழந்தையை தாயின் பக்க வாட்டுப்பகுதியின் தாயின் மார்பகத்தை பார்த்த வண்ணம் படுக்க வைத்தல் வேண்டும். தாயின் மார்பக நுனிக்காம்பு பகுதி குழந்தையின் நாக்கின் கீழ்புறமாக செல்லுதல் வேண்டும். இந்த நிலையில் தாய்ப்பால் கொடுக்கும் பொழுது தாய் தன் கையினை கொண்டு தலைப்பகுதியை தாங்கிக்கொள்ளும்.

தாய்ப்பால் கொடுத்தபின் சீரணிக்ச் செய்தல் (அல்லது) ஏப்பம் வர வைத்தல் தாய்ப்பால் கொடுக்கும் பொழுது குழந்தை சிறிதளவு காற்றை உறிஞ்ச வாய்ப்பு உள்ளது. குழந்தையை தோளில் சாய்த்து குழந்தையின் முதுகுப்பகுதியை தாய்ப்பால் கொடுத்தபின் தட்கொடுத்தல் அல்லது தடவிக் கொடுத்தல் வேண்டும்.

### **தாய்ப்பால் கொடுக்கும் பொழுது ஏற்படும் சிறு பிரச்சனைகளை மேற்கொள்ளும் முறைகள்**

- பால் கசிவு ஏற்படுதல்
- தாய்ப்பால் கொடுக்கும் பொழுதோ அல்ல குழந்தை அழுகும் பொழுதே பால் கசிவு ஏற்படும். அப்பொழுது உறிஞ்சும் தன்மை உலர்ந்த உடைய துணியை உள்ளாடைக்குள் வைத்துக் கொள்ளலாம் அவ்வப்போது அந்த துணியை மாற்றிக் கொள்ளலாம்.

### **புண்பட்ட மார்பக நுனிக்காம்பு**

- சிலசமயம் குழந்தை உறிஞ்சும் பொழுதோ, நன்றாக அமராத நிலையிலோ மார்பக நுனிக்காம்பில் புண்படலாம் அப்பொழுது நன்றாக அமர்ந்த நிலையை பின்பற்ற வேண்டும். புண்படாத மறு மார்பக நுனிக்காம்பை பயன்படுத்தி தாய்ப்பால் அளிக்கலாம்.
- குழந்தை தாய்ப்பால் குடிப்பதற்கு முன் தாய் மார்ப்கத்தை தழுவி பால் வர வைக்கலாம்
- தாய்ப்பால் கொடுத்தபின் மார்பக நுனிக்காம்பு பகுதியை உலர வைத்தல் மிகவும் முக்கியமான ஒன்று

### **மார்பக வலி ஏற்படுதல்**

தாய்ப்பால் கொடுப்பதன், மூலமாகவோ, மார்பக நுனிக்காம்பு புண்பட்டிருந்தாலோ மார்பக வலி ஏற்படலாம் அந்த வேளையில் உங்களுக்கு காய்ச்சல் 100° க்கு மேல் ஏற்பட்டால் மார்பக தொற்று நோய் வர வாய்ப்பு உள்ளது. எனவே உடனடியாக மருத்துவரை அணுகவும்.

### **மிக மெதுவாக பால் சுரத்தில்**

மார்பக பகுதியை மெதுவாக தடவி விடவும் மனம்தளராமல் அமைதியான நிலையில் இருத்தல் மிகவும் அவசியமான ஒன்று.

### **மார்பக குவியல்**

தாய்ப்பால் கொடுக்கும் பொழுது குவியல் போன்று காணப்பட்டால் அந்த பகுதியிலே தொடர்ந்து பால் கொடுக்கவும். பால் கொடுக்கும் முன் மார்பக பகுதியை ஈரத் துணியால் துடைத்து எடுக்கவும். பின் மார்பக பகுதியை நன்றாக தடவிக் கொடுக்கவும்.

## மார்பகத்தில் வீக்கம் காணப்படுதல்

தொடர்ந்து பால் கொடுப்பதினால், மற்றும் அதிகபால் தேங்கி இருப்பதால் மார்பகத்தில் மார்பக வீக்கம் காணப்படுகிறது. மார்பக வீக்கத்தை குறைப்பதற்காக சிறிதளவு பாலை நீங்களே வெளியேற்றலாம். ஈரமான துணியினை வைத்து மார்பக பகுதியை ஒத்தணம் கொடுக்கலாம்.


**APPENDIX XVI**

**PLAGIARISM ORIGINALITY REPORT**

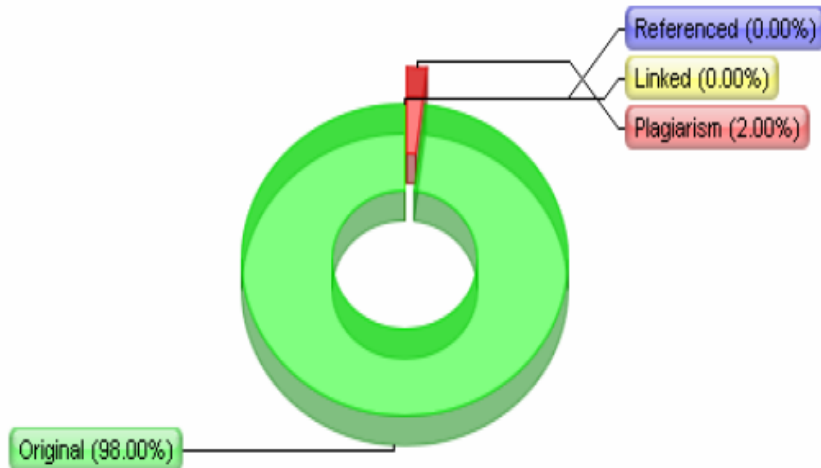
	<b>Plagiarism Detector - Originality Report</b>	
	Plagiarism Detector Project: [ <a href="http://plagiarism-detector.com">http://plagiarism-detector.com</a> ] Application core version: 557	

**Originality report details:**

Generation Time and Date:	1/9/2014 7:41:30 PM
Document Name:	ASWATHI NAIR THESIS.doc
Document Location:	C:\Documents and Settings\Administrator\Desktop\ ASWATHI NAIR THESIS.doc
Document Words Count:	162505

**Important Hint:** to understand what exactly is meant by any report value - you can click "Help Image" . It will navigate you to the most detailed explanation at our web site.

**Plagiarism Detection Chart:**



**Referenced 0% / Linked 0%**

**Original - 98% / 2% - Plagiarism**

## APPENDIX XVII

### DATA CODE SHEET

#### AG- Age in years

- 1.1 18 – 23 years
- 1.2 24 – 29 years
- 1.3 30 – 35 years
- 1.4 36years and above

#### RL- Religion

- 2.1 Hindu
- 2.2 Christian
- 2.3 Muslim
- 2.4 Others

#### ES - Educational status of the mother

- 3.1 Illiterate
- 3.2 Primary education
- 3.3 Secondary education
- 3.4 Graduate
- 3.5 Postgraduate

#### TF - Type of family

- 4.1 Nuclear
- 4.2 Joint
- 4.3 Extended

#### AR- Area of residence

- 5.1 Urban
- 5.2 Rural

#### TE - Type of employment

- 6.1 Self employed
- 6.2 Government employee
- 6.3 Private employee
- 6.4 Unemployed

#### MI - Family monthly income in rupees

- 7.1 upto 3000
- 7.2 3001 – 5000
- 7.3 5001 – 7000
- 7.4 7001 – 10, 000
- 7.5 10001 and above

#### AC - Antenatal checkups

- 1.1 < 3 checkups
- 1.2 3 – 5 checkups
- 1.3 > 5 checkups
- 1.4 not done

#### ANE - Antenatal nipple exercises

- 2.1 regularly practiced after bath
- 2.2 practiced once in a week
- 2.3 occasionally practices
- 2.4 never practiced

#### MDP - Medical disorders during pregnancy

- 3.1 Anemia
- 3.2 Hypertension
- 3.3 Diabetes
- 3.4 Others if any specify -----
- 3.5 No complications

#### GAN - Gestational age of the newborn at birth

- 4.1 <37weeks
- 4.2 37 – 40 weeks
- 4.3 >40weeks

#### MOD - Mode of delivery

- 5.1 Normal vaginal delivery with episiotomy
- 5.2 Caesarean delivery
- 5.3 Assisted delivery

#### BW - Birth weight of the baby

- 6.1 <2.5kg
- 6.2 2.51 – 3.5kg
- 6.3 >3.51kg

#### SB - Sex of the baby

- 7.1 Male
- 7.2 Female

#### CDL - Any complications during labour

- 8.1 Prolonged labour
- 8.2 Non progressive labour
- 8.3 Difficulty in labour
- 8.4 No complication
- 8.5 Any other complications specify -----



**IBF - Initiation of breast feeding after delivery**

9.1 Within half an hour

9.2 ½ - 1 hour

9.3 1 – 2 hour

9.4 After 2 hours

**BC - Breast condition of the mother**

10.1 Erect nipple

10.2 Inverted nipple

10.3 Cracked nipple

10.4 Breast engorgement

**FF - Frequency of feeding**

11.1 Every fourth hourly

11.2 Every second hourly

11.3 Every hourly

11.4 Demand feeding

**TOF - Type of feeding**

12.1 Only breast feeding

12.2 Only formula feeding

12.3 Combination of breast feeding and formula feeding

**ELB - Effective latch of the baby**

13.1 Started to feed at once (0 – 5min)

13.2 Over 5min

13.3 Did not latch on

**SBB - Sucking behaviour of the baby**

14.1 Baby did not suck

14.2 Poor sucking

14.3 Sucked well

**SB - Satiety behaviour of the baby**

15.1 Baby still crying after breast feeding

15.2 Looks peaceful and calm

15.3 Relaxed and fell asleep

15.4 Not satisfied

## APPENDIX XVIII

### MASTER CODE SHEET – CONTROL GROUP

DEMOGRAPHIC VARIABLES								OBSTETRIC VARIABLE													KNOWLEDGE LEVEL		PRACTICE LEVEL			
S.NO	AG	RL	ES	TF	AR	TE	MI	AC	ANE	MDP	GAN	MOD	BW	SB	CDL	IBF	BC	FF	TOF	ELB	SBB	SB	PRT	POT	PRT	POT
1	1.2	2.1	3.3	4.1	5.1	6.2	7.1	1.3	2.4	3.5	4.2	5.1	6.1	7.1	8.4	9.2	10.1	11.3	12.1	13.2	14.2	15.2	11	11	8	7
2	1.2	2.1	3.4	4.1	5.1	6.2	7.1	1.3	2.4	3.5	4.2	5.1	6.1	7.1	8.4	9.2	10.1	11.4	12.1	13.2	14.3	15.3	10	12	9	9
3	1.2	2.1	3.4	4.1	5.1	6.2	7.1	1.3	2.4	3.5	4.2	5.2	6.2	7.2	8.4	9.3	10.1	11.3	12.1	13.2	14.2	15.3	13	13	6	6
4	1.3	2.2	3.2	4.1	5.1	6.2	7.2	1.3	2.4	3.3	4.2	5.2	6.2	7.1	8.4	9.3	10.1	11.3	12.1	13.2	14.3	15.3	10	10	5	6
5	1.2	2.1	3.4	4.1	5.1	6.2	7.1	1.3	2.4	3.5	4.2	5.1	6.2	7.2	8.4	9.2	10.1	11.3	12.1	13.1	14.3	15.3	10	10	9	9
6	1.4	2.3	3.5	4.1	5.2	6.1	7.1	1.3	2.4	3.3	4.2	5.1	6.2	7.2	8.4	9.1	10.1	11.3	12.1	13.2	14.3	15.3	11	11	8	8
7	1.3	2.3	3.4	4.1	5.2	6.2	7.2	1.3	2.4	3.5	4.2	5.2	6.1	7.1	8.4	9.3	10.1	11.4	12.1	13.2	14.1	15.4	9	9	7	8
8	1.2	2.2	3.4	4.1	5.1	6.2	7.2	1.3	2.4	3.5	4.2	5.1	6.1	7.2	8.4	9.2	10.1	11.3	12.1	13.1	14.2	15.3	9	9	9	9
9	1.3	2.1	3.4	4.1	5.2	6.2	7.1	1.3	2.4	3.5	4.2	5.1	6.1	7.2	8.4	9.1	10.1	11.3	12.1	13.2	14.3	15.3	12	12	7	8
10	1.2	2.1	3.2	4.1	5.1	6.1	7.1	1.3	2.4	3.5	4.2	5.1	6.1	7.2	8.4	9.2	10.1	11.4	12.1	13.1	14.3	15.3	13	12	8	8
11	1.2	2.1	3.2	4.1	5.1	6.1	7.1	1.3	2.4	3.5	4.2	5.1	6.1	7.1	8.4	9.1	10.1	11.4	12.1	13.2	14.3	15.3	9	9	8	8
12	1.2	2.3	3.4	4.1	5.1	6.1	7.1	1.3	2.4	3.5	4.2	5.1	6.1	7.2	8.4	9.1	10.1	11.3	12.1	13.2	14.2	15.2	9	9	8	8
13	1.3	2.3	3.5	4.1	5.2	6.2	7.4	1.3	2.4	3.5	4.2	5.1	6.1	7.1	8.4	9.1	10.1	11.3	12.1	13.1	14.3	15.3	17	16	8	8
14	1.2	2.1	3.2	4.1	5.1	6.2	7.1	1.3	2.4	3.5	4.2	5.1	6.2	7.1	8.4	9.1	10.1	11.3	12.1	13.1	14.3	15.2	9	9	6	6
15	1.2	2.1	3.1	4.1	5.1	6.2	7.1	1.3	2.4	3.1	4.2	5.1	6.1	7.2	8.4	9.2	10.1	11.3	12.1	13.1	14.3	15.3	8	8	7	8
16	1.2	2.1	3.1	4.1	5.1	6.2	7.1	1.3	2.4	3.5	4.2	5.1	6.1	7.1	8.4	9.1	10.1	11.4	12.1	13.1	14.3	15.3	12	12	9	8
17	1.3	2.1	3.4	4.1	5.1	6.1	7.2	1.3	2.4	3.5	4.2	5.2	6.1	7.1	8.4	9.3	10.1	11.4	12.1	13.2	14.2	15.3	10	10	9	9
18	1.2	2.1	3.4	4.2	5.1	6.2	7.2	1.3	2.4	3.5	4.2	5.1	6.1	7.1	8.4	9.4	10.1	11.3	12.1	13.2	14.3	15.3	9	10	7	7
19	1.2	2.1	3.4	4.1	5.1	6.2	7.2	1.3	2.4	3.5	4.2	5.2	6.1	7.2	8.1	9.2	10.1	11.3	12.1	13.1	14.2	15.3	16	16	11	11
20	1.2	2.1	3.4	4.1	5.1	6.2	7.2	1.3	2.4	3.5	4.2	5.2	6.3	7.1	8.4	9.2	10.1	11.2	12.1	13.1	14.3	15.2	10	10	8	8
21	1.2	2.3	3.4	4.1	5.2	6.2	7.2	1.3	2.4	3.5	4.2	5.1	6.1	7.2	8.4	9.2	10.1	11.4	12.1	13.1	14.2	15.3	11	11	8	8
22	1.2	2.1	3.4	4.1	5.1	6.1	7.4	1.3	2.4	3.5	4.2	5.1	6.2	7.2	8.4	9.2	10.1	11.3	12.1	13.2	14.2	15.3	11	11	7	7
23	1.3	2.1	3.2	4.1	5.1	6.2	7.2	1.3	2.4	3.5	4.2	5.1	6.1	7.1	8.4	9.4	10.1	11.3	12.1	13.2	14.2	15.2	11	11	8	8
24	1.2	2.1	3.4	4.1	5.2	6.1	7.2	1.3	2.4	3.4	4.2	5.1	6.2	7.2	8.4	9.1	10.1	11.3	12.1	13.1	14.3	15.2	14	14	4	4
25	1.2	2.3	3.4	4.2	5.1	6.2	7.4	1.3	2.4	3.5	4.2	5.2	6.2	7.1	8.2	9.1	10.1	11.4	12.1	13.2	14.3	15.3	10	10	7	7
26	1.2	2.1	3.4	4.1	5.1	6.2	7.2	1.3	2.4	3.5	4.2	5.1	6.3	7.1	8.4	9.1	10.1	11.4	12.1	13.2	14.3	15.4	13	13	6	6
27	1.3	2.1	3.4	4.1	5.2	6.2	7.1	1.3	2.4	3.5	4.2	5.1	6.1	7.2	8.4	9.2	10.1	11.1	12.1	13.2	14.3	15.3	11	11	9	9
28	1.2	2.1	3.4	4.2	5.2	6.2	7.1	1.3	2.4	3.5	4.2	5.1	6.2	7.1	8.4	9.2	10.1	11.2	12.2	13.3	14.2	15.2	9	9	5	5
29	1.3	2.3	3.5	4.1	5.2	6.2	7.1	1.3	2.4	3.5	4.2	5.1	6.2	7.2	8.4	9.2	10.1	11.4	12.1	13.1	14.1	15.2	10	10	6	6
30	1.3	2.1	3.4	4.1	5.1	6.2	7.1	1.3	2.4	3.5	4.2	5.2	6.2	7.1	8.3	9.4	10.1	11.4	12.3	13.3	14.2	15.2	6	6	5	6

## EXPERIMENTAL GROUP

DEMOGRAPHIC VARIABLES								OBSTETRIC VARIABLE														KNOWLEDGE LEVEL		PRACTICE LEVEL		
S.NO	AG	RL	ES	TF	AR	TE	MI	AC	ANE	MDP	GAN	MOD	BW	SB	CDL	IBF	BC	FF	TOF	ELB	SBB	SB	PRT	POT	PRT	POT
1	1.2	2.1	3.2	4.2	5.1	6.4	7.3	1.3	2.4	3.5	4.2	5.1	6.2	7.1	8.4	9.2	10.1	11.3	12.1	13.2	14.2	15.2	9	24	6	16
2	1.2	2.1	3.3	4.1	5.1	6.4	7.4	1.3	2.4	3.5	4.2	5.1	6.2	7.1	8.4	9.2	10.1	11.4	12.1	13.2	14.3	15.3	9	23	8	16
3	1.2	2.1	3.3	4.1	5.1	6.1	7.4	1.3	2.4	3.5	4.2	5.1	6.1	7.2	8.4	9.3	10.1	11.3	12.1	13.2	14.2	15.3	11	23	8	17
4	1.1	2.2	3.2	4.1	5.1	6.4	7.3	1.3	2.4	3.3	4.2	5.1	6.2	7.1	8.4	9.3	10.1	11.3	12.1	13.2	14.3	15.3	11	25	7	18
5	1.2	2.1	3.3	4.1	5.1	6.4	7.4	1.3	2.4	3.5	4.2	5.1	6.1	7.2	8.4	9.2	10.1	11.3	12.1	13.1	14.3	15.3	10	24	8	18
6	1.1	2.3	3.3	4.2	5.2	6.1	7.3	1.3	2.4	3.2	4.2	5.1	6.1	7.2	8.4	9.1	10.1	11.3	12.1	13.2	14.3	15.3	8	25	8	19
7	1.3	2.3	3.3	4.2	5.2	6.4	7.4	1.3	2.4	3.5	4.2	5.2	6.1	7.1	8.4	9.3	10.1	11.4	12.1	13.2	14.1	15.4	8	23	5	18
8	1.2	2.1	3.4	4.1	5.1	6.4	7.3	1.3	2.4	3.5	4.2	5.2	6.2	7.2	8.4	9.2	10.1	11.3	12.1	13.1	14.2	15.3	7	24	7	16
9	1.1	2.1	3.4	4.1	5.1	6.4	7.3	1.3	2.4	3.5	4.2	5.1	6.1	7.2	8.4	9.1	10.1	11.3	12.1	13.2	14.3	15.3	11	24	6	17
10	1.1	2.1	3.2	4.1	5.1	6.3	7.3	1.3	2.4	3.5	4.2	5.1	6.2	7.2	8.4	9.2	10.1	11.4	12.1	13.1	14.3	15.3	9	22	8	17
11	1.2	2.1	3.2	4.1	5.1	6.4	7.3	1.3	2.4	3.3	4.2	5.2	6.2	7.1	8.4	9.1	10.1	11.4	12.1	13.2	14.3	15.3	12	23	8	20
12	1.2	2.1	3.4	4.1	5.1	6.1	7.3	1.3	2.4	3.5	4.2	5.1	6.1	7.2	8.4	9.1	10.1	11.3	12.1	13.2	14.2	15.2	9	22	8	20
13	1.1	2.3	3.2	4.1	5.1	6.4	7.3	1.3	2.4	3.5	4.2	5.1	6.1	7.1	8.4	9.1	10.1	11.3	12.1	13.1	14.3	15.3	10	24	6	19
14	1.1	2.1	3.2	4.1	5.1	6.4	7.3	1.3	2.4	3.5	4.2	5.1	6.1	7.1	8.4	9.1	10.1	11.3	12.1	13.1	14.3	15.2	10	23	6	19
15	1.2	2.1	3.1	4.1	5.1	6.4	7.4	1.3	2.4	3.1	4.2	5.1	6.2	7.2	8.4	9.2	10.1	11.3	12.1	13.1	14.3	15.3	9	23	5	18
16	1.2	2.1	3.1	4.1	5.1	6.4	7.3	1.3	2.4	3.5	4.2	5.1	6.2	7.1	8.4	9.1	10.1	11.4	12.1	13.1	14.3	15.3	10	24	6	18
17	1.1	2.1	3.4	4.1	5.1	6.1	7.4	1.3	2.4	3.5	4.2	5.1	6.2	7.1	8.4	9.3	10.1	11.4	12.1	13.2	14.2	15.3	19	22	7	19
18	1.1	2.1	3.2	4.2	5.1	6.4	7.4	1.3	2.4	3.5	4.2	5.1	6.1	7.1	8.4	9.4	10.1	11.3	12.1	13.2	14.3	15.3	13	23	7	21
19	1.2	2.1	3.3	4.1	5.1	6.4	7.5	1.3	2.4	3.5	4.2	5.1	6.1	7.2	8.1	9.2	10.1	11.3	12.1	13.1	14.2	15.3	17	25	6	19
20	1.2	2.1	3.4	4.1	5.1	6.1	7.4	1.3	2.4	3.5	4.2	5.1	6.2	7.1	8.4	9.2	10.1	11.2	12.1	13.1	14.3	15.2	12	23	8	22
21	1.2	2.1	3.4	4.1	5.2	6.4	7.3	1.3	2.4	3.5	4.2	5.1	6.2	7.2	8.4	9.2	10.1	11.4	12.1	13.1	14.2	15.3	9	24	9	21
22	1.2	2.1	3.2	4.1	5.1	6.4	7.3	1.3	2.4	3.5	4.2	5.1	6.2	7.2	8.4	9.2	10.1	11.3	12.1	13.2	14.2	15.3	11	23	9	21
23	1.1	2.1	3.2	4.1	5.1	6.3	7.4	1.3	2.4	3.5	4.2	5.1	6.2	7.1	8.4	9.4	10.1	11.3	12.1	13.2	14.2	15.2	10	24	7	22
24	1.2	2.1	3.3	4.1	5.2	6.1	7.3	1.3	2.4	3.4	4.2	5.1	6.1	7.2	8.4	9.1	10.1	11.3	12.1	13.1	14.3	15.2	9	24	9	21
25	1.2	2.3	3.4	4.2	5.1	6.4	7.3	1.3	2.4	3.5	4.2	5.1	6.1	7.1	8.2	9.1	10.1	11.4	12.1	13.2	14.3	15.3	9	24	7	19
26	1.2	2.1	3.4	4.1	5.1	6.4	7.3	1.3	2.4	3.5	4.2	5.1	6.1	7.1	8.4	9.1	10.1	11.4	12.1	13.2	14.3	15.4	11	22	9	22
27	1.1	2.1	3.4	4.1	5.2	6.4	7.4	1.3	2.4	3.5	4.2	5.1	6.1	7.2	8.4	9.2	10.1	11.1	12.1	13.2	14.3	15.3	11	23	6	19
28	1.2	2.1	3.4	4.2	5.2	6.4	7.3	1.3	2.4	3.5	4.2	5.1	6.3	7.1	8.4	9.2	10.1	11.2	12.2	13.3	14.2	15.2	11	21	8	21
29	1.1	2.1	3.3	4.1	5.2	6.4	7.3	1.3	2.4	3.5	4.2	5.1	6.3	7.2	8.4	9.2	10.1	11.4	12.1	13.1	14.1	15.2	9	23	7	20
30	1.3	2.1	3.3	4.1	5.1	6.1	7.4	1.3	2.4	3.5	4.2	5.2	6.3	7.1	8.3	9.4	10.1	11.4	12.3	13.3	14.2	15.2	12	22	10	21

**APPENDIX XIX**

**PHOTOGRAPHS DURING THE VIRTUAL LACTATION MANAGEMENT**

