A QUASI EXPERIMENTAL STUDY TO ASSESS THE EFFECTIVENESS OF EARLY SUCKLING ON MATERNAL AND NEONATAL OUTCOME DURING THIRD STAGE OF LABOUR AT DMM HOSPITAL, CHENNAI.

By

S.Vasudevi

A dissertation submitted to

THE TAMIL NADU DR.M.G.R.MEDICAL UNIVERSITY CHENNAI,

In the partial fulfilment of requirement

FOR THE AWARD OF DEGREE OF
MASTER OF SCIENCE IN
OBSTETRICS & GYNAECOLOGICAL NURSING

APRIL 2012

A QUASI EXPERIMENTAL STUDY TO ASSESS THE EFFECTIVENESS OF EARLY SUCKLING ON MATERNAL AND NEONATAL OUTCOME DURING THIRD STAGE OF LABOUR AT DMM HOSPITAL, CHENNAI.

Certified that this is the bonafide work of

Mrs S.VASUDEVI

Mohamed Sathak A.J.College of Nursing, Chennai - 600 001

Signature: _____

Prof. Mrs. R.RAMA SAMBASIVAN, M.Sc.(N).,Ph.D.,
Principal,
Mohamed Sathak A.J.College of nursing,
No.180, Thambu chetty street, Parrys,
Chennai – 600 001, Tamil Nadu.

College Seal:

A dissertation submitted to

THE TAMIL NADU DR.M.G.R.MEDICAL UNIVERSITY CHENNAI,

In the partial fulfilment of requirement

FOR THE AWARD OF DEGREE OF
MASTER OF SCIENCE IN
OBSTETRICS & GYNAECOLOGICAL NURSING

APRIL 2012

A QUASI EXPERIMENTAL STUDY TO ASSESS THE EFFECTIVENESS OF EARLY SUCKLING ON MATERNAL AND NEONATAL OUTCOME DURING THIRD STAGE OF LABOUR AT DMM HOSPITAL, CHENNAI.

Approved by dissertation committee on 10.01.2011

Professor in Nursing Research .....
Prof.Mrs.R.RAMA SAMBASIVAN, M.SC.(N).,Ph.D.,
Principal,
Mohamed Sathak A.J.College of Nursing,
No.180,Thambu chetty street, Parrys
Chennai –600 001,Tamil Nadu.

Clinical Speciality Expert .....
Prof.Mrs.SAFREENA, M.SC.(N).,
Vice-Principal,Head of the Department,
Obstetrics and Gynaecological Nursing,
Mohamed Sathak A.J.College of Nursing,
No.180,Thambu chetty street,Parrys
Chennai –600 001,Tamil Nadu.

Medical Expert .....
Dr.PADMA CHANDRASEKARAN M.B.,B.S.,M.D.,(OG),F.R.C.,S.,(LON),
Head of Maternity Department,
Devaraj Manickchand Maternity Hospital,
Jain Relief Medical Society,
Chennai-600 001,Tamil Nadu.

A dissertation submitted to

THE TAMIL NADU DR.M.G.R.MEDICAL UNIVERSITY CHENNAI,

In the partial fulfilment of requirement

FOR THE AWARD OF DEGREE OF
MASTER OF SCIENCE IN
OBSTETRICS & GYNAECOLOGICAL NURSING

APRIL 2012

ACKNOWLEDGEMENT

I thank the ***Lord Almighty*** for his abundant blessings which enabled me to complete this research . I show my sincere gratitude to the almighty for the blessing *SHOWERED* upon me throughout this nursing research work.

I thank the ***Management of*** Mohammed Sathak A.J.College of Nursing for offering me an opportunity to conduct the study.

I sincerely thank To ***Prof. Rama Sambasivan M.Sc. (N)., Ph.d., Principal,*** Mohammed Sathak.A.J. College of nursing of nursing for her valuable support and guidance throughout this study.

I express my sincere thanks To ***Mrs. Vadhana Prabhakaran M.SC. (N)***, ***Former, Nursing Director,*** MohammedSathak.A.J. college of Nursing for the expert guidance, encouragement and support throughout the study.

I extend my sincere thanks to my research guide cum class coordinator ***Prof. Safreena M.Sc Nursing, Vice principal***, for her support and valuable role in completing the study in time.

I would like to thank ***Mrs. Chitra M.Sc(N), Associate professor*** for her guidance throughout the study.

I would like to express sincere gratitude to my co-guide ***Dr. Padma chandrasekaran MD. DGO, FRCOG*** who gave me valuable criticism and constructive suggestions to carry out the study.

I am obliged to experts ***Dr. A.Susilathampi MBBS, MD, DGO, Dr.Susila M.Sc.,(N) Ph.D., Dr.G.Sumathi M.Sc(N).,*** for validating the content of the tool and thankful for their valuable suggestions and corrections to improve the quality of the tool.

A special thanks to ***Management*** of Devaraj Manikchand Memorial Hospital and all study samples for granting permission to conduct this study.

I extend my gratitude to all other ***Teaching faculty*** of M.S.A.J. College of nursing for their support, suggestions and guidance.

I extend my sincere thanks to ***Mr. Venkatraman Department*** of statistics for his expert guidance in the statistical analysis of data and graphical representation.

I thank librarian, Assistant Librarian, of M.S.A.J. College of nursing.

I also thank ***Mr.Abdulla Mohamad Rasak*** M.Sc.Computer science, Computer lab in-charge of M.S.A.J. College of Nursing for his contribution in access to website and computer works.

I thank all other ***non-teaching faculty of M.S.A.J. College of nursing*** for their help and support for the study.

I express my heartfelt thanks to my husband ***Mr.Venkatesan, B.Sc Nursing, MBA (Hospital Management),*** for his constant support and encouragement throughout the completion of my study.

I extent my thanks to my parents, ***child and friends for their affections***, support, suggestion and encouragement throughout the study.

CONTENT

LIST OF TABLES

LIST OF FIGURES

APPENDICES

S. No	CONTENT	APPENDIX NO
1	Self Structured Questionnaire	I
2	Intervention Schedule	II
3	Certificates Of Content Validity	III
4	Permission Letter From Hospital	IV

CHAPTER – I
INTRODUCTION

A baby nursing at a mother's breast....

is an undesirable affirmation of our rootedness in nature.

-David Suzuki (2008)

Nature has so designed that when a baby is born, a readymade food in the form of breast milk flows like divine nector. Initiating breast feeding at third stage of labour facilitates numerous benefits for the mother and newborn. Midwives play a vital role in the initiation of breast feeding within 3minutes after birth.

Scientific evidences cite that soon after child birth, there is precipitous drop in the mother's oestrogen & progesterone levels, which triggers the release of prolactin from the anterior pituitary gland. Prolactin prepares the breast to secrete milk and subsequently milk is produced in response to infant suckling and thus emptying the breast. As the nipple is stimulated by infant's suckling, the posterior pituitary is stimulated by the hypothalamus to produce oxytocin, which stimulates uterine contractions in labouring mother. The effect is due to oxytocin which is secreted during preparations for breast feeding and early suckling within 3min during third stage of labour.

Early feeding during third stage is the appropriate method as the neonate is in the first period of reactivity, being so active and quickly learns effective suckling. During early feeding, there is a large out pouring of twenty different gastrointestinal hormones secreted by both mother and newborn,

including cholecystokinins which stimulates the growth of the baby. A gentle approach to early feeding during third stage contributes to a successful outcome and safe delivery of the placenta and its membranes. it also facilitates infinite bonding between mother and newborn as per Baby Friendly Hospital Initiative.

In developing countries postpartum hemorrhage is the most common cause of mortality after labour, Unfortunately where oxytocin drugs are not available, early suckling can be initiated there by reducing postpartum hemorrhage.

WHO (2011) reported in a article that, postpartum hemorrhage currently has a worldwide prevalence rate of 6% to 10% and is the leading cause of maternal morbidity and mortality. Pregnancy safer division(a unit of WHO) supports, worldwide activities to meet the united Nations Millennium Development Goal to reduce maternal and newborn mortality by three quarters by 2015. The Joint Commission International Accreditation (JCIA) sentinental event alert programme warns that maternal blood loss is a fundamental objective of a stage three, death related to PPH must be significantly reduce. Initiating early suckling during third stage of labour enhances good uterine contractions and minimum vaginal bleeding on first postnatal day too.

Niroomanesh (2010) explained that Trained birth attenders (TBAs) who do not have the skill to administer injectable oxytocins for laboring mother should have a training on early suckling in order to reduce the risk of PPH.

World Alliance for Breast feeding Action (WABA) notified that mothers risk for postpartum hemorrhage can effectively be controlled by early initiation of breast feeding.

This is a right time to approach with early suckling. Midwife needs take up the role of entrepreneur and initiate early suckling as a non pharmaceutical method of preventing postpartum blood loss.

BACKGROUND OF THE STUDY

Breast milk is thought to be the best form of nutrition for neonates and infants. The properties of human milk facilitate the transition of life from in utero to ex utero. The midwives must be familiar with how the mammary gland produces human milk and how its properties nourish and protect the infant.

Midwives play a crucial role in a mother's decision to breastfeed and can facilitate her success in lactation. Although a mother may not be aware of the evidence indicating that breast milk contributes to her baby's short-term and long-term well-being, she has developed certain attitudes and cultural beliefs about breastfeeding. The issue of bonding between mother and newborn may be a strong factor. The mother makes her decision regarding breastfeeding prior to delivery in more than 90% of cases; therefore, her choice of infant nutrition should be discussed starting in the second trimester and continue as part of an ongoing dialogue during each obstetric visit.

Human milk, Bioactive fluid that evolves from colostrum to mature milk as the infant matures. This bioactive fluid contains numerous factors and

live cells that, in concert, promote the growth and well-being of the breastfeeding newborn. Initiation of breast feeding is the most crucial part of lactational success and bonding, researchers believes that suckling duing third stage will improve the above mentioned benefits. And also suckling enhances to secrete oxytocin. It is produced by the posterior pituitary Suckling at the breast stimulates the neurohypophysis to produce and release oxytocin in an intermittent manner.

Oxytocin acts on the breast to produce milk ejection or "milk let down." Oxytocin also causes uterine contractions. New studies are adding to a body of literature that shows oxytocin plays a key role in maternal bonding and social affiliation-what Taylor has labeled the "tend and befriend" response, as opposed to the "fight or flight" response. In line with years of animal research linking oxytocin to mothers' ability to care for their infants, a study in the November Psychological Science (Vol. 18, No. 11, pages 965-970), demonstrates this association for the first time in people.

Ruth Feldman, PhD(2011) of Bar-Ilan University, and colleagues measured plasma levels of oxytocin in 62 pregnant women at three points: during the first trimester, the third trimester and the first month postpartum. The team found that women with higher levels of oxytocin in the first trimester bonded better with their babies. It also found that those with higher oxytocin levels throughout the entire pregnancy and in the first month postpartum reported more behaviors that supported the formation of an exclusive relationship with their babies, such as singing special songs or bathing and feeding their infants in specific ways. (Because of its role in birth

and lactation, oxytocin was originally considered a "female" hormone, but it is now known to be present and important in both sexes.) This study is the effort of blunding the benefits of early suckling and expected outcomes.

NEED FOR THE STUDY

"Nevertheless the principles of allowing close mother child contact as soon as possible Remains unchanged even today"

-Rachel Richardson, (2000)

After the climactic experience of giving birth to a baby and during the delivery of the placenta (third stage of labour) makes mothers feel weak and dull. This period is however, a time of great potential hazard such as, retained placenta, postpartum hemorrhage etc…. The effort taken during this third stage of labour will bring about drastic improvement in maternal and neonatal outcome. The first choice of effective intervention is 'early suckling'.

Increasing the initiation of suckling represents an important health promotion challenge, it is an area where midwives can make a substantial contribution. However action should be based on evidence of which intervention actually work. The latest effective health care bulletins, focuses on the early suckling and its outcomes.

A number of studies have shown that early contact often combined with early suckling has beneficial effects on maternal and neonatal outcomes. Recent behavioral and physiological observations of infants of mothers have shown them ready to begin interacting in the first minute of life including early suckling.

Hilton (2009) states that there is an association between early suckling and placental separation because suckling at the breast helps the uterus to contract there by it helps to prevent severe bleeding after birth due to the 'hormone of love' which is named as 'oxytocin'.

Mr.Babai (2007) stated that Breast feeding during third stage enhances skin to skin contact between mother and newborn. Newborns are alert and crawl, reaching the mother's breast & they begin to touch, massage the breast and also attach to the mother's nipple, this process leads to an enhanced uterine contraction that helps in placental delivery thus reducing maternal bleeding. This also stimulates the flow of milk from the breast and the mother experience incredible joy with this first meeting of their child increases the process of bonding between mother and newborn.

Ms.Anju (2005) concluded in her study that Skin to skin contact with mother have significant reduction in the total duration of the third stage of labour and increase intense bonding between the mother and the newborn.

The investigator from her personal experience felt that the health care provider need to adopt early suckling of breast feeding following delivery ,as it offers numerous benefits for both mother and neonate. A good experience with 'early suckling' can ensure an intense interaction and benefits especially release of oxytocin which has an effect on placental separation and reduction in postpartum blood loss. This concept made the investigator to select this study.

STATEMENT OF THE PROBLEM

A quasi experimental study to assess the effectiveness of early suckling on maternal and neonatal outcome during third stage of labour at DMM hospital, Chennai.

OBJECTIVES

1) To assess the maternal outcome in experimental and control group mothers.

2) To assess the neonatal outcome in experimental and control group newborns.

3) To determine the effectiveness of early suckling on maternal and neonatal outcome.

4) To associate the maternal and neonatal outcome with selected demographic variables.

OPERATIONAL DEFINITION

1. Effectiveness

It refers to improved maternal and neonatal outcome with response to early suckling of measured by with timely placental separation, minimal blood loss, effective suckling, thermo regulation and bonding. .

2. Early suckling

The act of initiating breast feeding during third stage of labour within 3 min after birth of baby having satisfactory APGAR in first minute

3. Maternal outcome

It refers to variables such as timely placental separation and minimal blood loss.

4. Neonatal outcome

It refers to variables such as effective sucking, thermo regulation and emotional bonding.

5., Third stage

It is the time period extending from birth of the baby until the placenta separates and expels out.

HYPOTHESIS

There is significant difference in maternal and neonatal outcome with early suckling between experimental and control group.

ASSUMPTION

Early suckling enhances timely placental separation, minimizes the blood loss, enhances the effective sucking of newborn, thermo regulation and intense emotional bonding.

LIMITATIONS

- This study is limited to only 60 samples.
- Data collection is limited to only 6 weeks.

PROJECTED OUTCOME

Early suckling will be a simple non-pharmacological nursing care measures during third stage of labour facilitating safe maternal and neonatal outcome.

HUMAN RIGHTS PROTECTION

- Ethical clearance was obtained to conduct the study from Ethical committee
- Formal permission was obtained from hospital management.
- Verbal consent obtained from study samples.

CONCEPTUAL FRAMEWORK

Modified Ernestine Wiedenbach's Helping Art Theory

A conceptual framework is the conceptual underpinning of a study. In many studies, the framework is implicit, but ideally researchers clarify the conceptual definitions of key concepts. The frameworks usually springs from distinct research traditions. Ernestine wiedenbach's helping art theory is well fit into the study. This theory has broad conceptual model encompassing five elements which wiedenbach terms the realities of nursing.

The agent

The nurse/ midwive is the agent who intervenes early suckling during third stage of labour.

The recipient

The laboring mother is considered as the recipient of the care.

The goal

The objective of the intervention is known as goal. The expected goal is minimal blood loss (at third and fourth stage), timely intact placental separation, effective suckling of newborn, thermol regulation of newborn and intense bonding between the mother and newborn.

The means

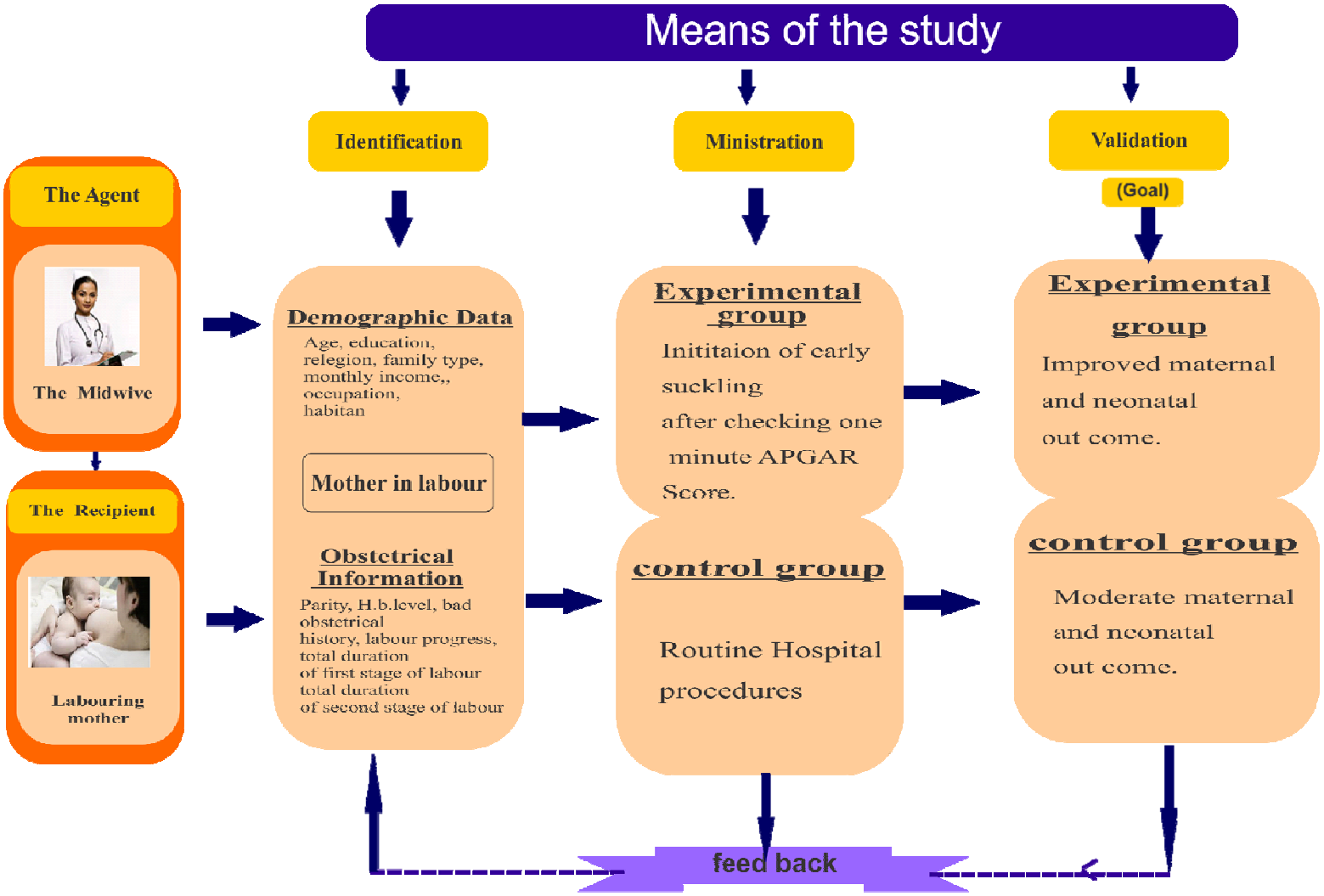
It is the steps to reach the goal which comprises of four phases.

1) ***Identification:*** It is a patient's experience of need for help. In this study midwife identifies the need of initiation of early suckling.

2) ***Ministration:*** The intervention planned by the midwife. Initiation of early suckling within 3minutes after checking one minute APGAR rating for experimental group.

3) ***Validation:*** Validation is the phase where the intervention is evaluated for the effectiveness. Observation of maternal and neonatal outcome for experimental and control group.

Fig 1: MODIFIED ERNESTINE WIEDENBACH'S HELPING ART THEORY



CHAPTER-II
REVIEW OF LITERATURE

Review of literature is a written summary of the state of existing knowledge on a research problem. Literature review for this study is referred from books, journals, magazine, dissertation of previous publications, unpublished materials, internet and newspaper. The literature is classified under following headings.

1) Initiation of early suckling and timely placental separation.

2) Effectiveness of early suckling on controlling postpartum blood loss.

3) Effectiveness of early suckling on maternal and neonatal bonding.

4) Effectiveness of early suckling on thermoregulation.

INITIATION OF EARLY SUCKLING VS PLACENTAL SEPARATION

Adele Pilliteri (2010) pointed out that immediately following the birth of the baby, as soon as the newborn sucks at the breast oxytocin is released from the mammary gland to contract. Forcing the milk to flow forward through the nipple. Since oxytocin makes the smooth muscle to contract f aster which aids in placental separation.

Gloria (2009) conducted a quasi experimental study among 300 mothers on effectiveness of early suckling. Early suckling was initiated during third stage within 5 minutes of child birth and uterine contractions were monitored. Initiation of breast feeding soon after the birth of the

newborn causes the posterior pituitary to secrete oxytocin to produce milk, by contracting alveoli of the breast, in addition to that it stimulates the uterus to contract which helps in the placental separation. Investigator concluded that early suckling is highly significant with uterine contraction at $p<0.001$ level.

Obstetrics and Midwifery Guidelines(2008) stated that the role of the midwife soon after the birth of the baby in maintenance of skin to skin contact between mother and newborn by putting the baby to mother's breast within five minutes to facilitates oxytocin from posterior pituitary on nipple stimulation will aid in placental separation. Thereby early suckling facilitates uterine contractions.

Dilck (2007) conducted a randomized control study among 406 mothers, the uterine contractions were monitored by using Medtronic toco graphic machine. He concluded that the duration of the third stage of labor decreases by early initiation of breast feeding soon after birth. It stimulates maternal oxytocin to release which is important for increased placental delivery by contracting uterus ($P<0.05$) and aid in faster uterine involution and also reduces anemia in the pueperium by reducing postpartum blood loss

Hilda.B (2005) focused that immediately following the birth of a newborn baby the mother sees, handles and offers the baby the first breast feed stimulating, the posterior pituitary to release hormone of love named 'oxytocin' that contracts the uterus continuously and help in the early separation of the placenta as well as it increases intense bonding between mother and her baby.

Ruth Bennet, V.Linda (2004) published in an article that the baby must be put to mother breast immediately after birth within 5 minutes which enhances the release of oxytocin from the posterior lobe of pituitary gland which helps in the separation of the placenta, and reduces the postpartum hemorrhage. Oxytocin release will aid in uterine contraction stronger thereby it protects the mother from risk of postpartum hemorrhage and also helps in uterine involution.

Dickread (2002) suggested in his article that when the baby begins suckling immediately after birth, it initiates uterine cramp by stimulating posterior pituitary to release oxytocin and make the placenta to separate from the uterine wall and is expelled out through the vagina in the third stage of labour within 15 minutes of child birth.

EFFECTIVENESS OF EARLY SUCKLING ON CONTROLLING BLOOD LOSS:

Deitral L. Lowder milk , Shannon E.porry , (2010) explained that when the baby sucks the breast for the first time soon after birth, hypothalamo – pituitary is stimulated by ascending impulses passing from the nipple to liberate oxytocin which enhances in the production of milk and contracts the uterus for expulsion of the placenta and to control uterine bleeding.

T.K.Johnson (2010) suggested that early suckling will stimulate the pituitary to secrete high level oxytocin concentration that will help in production of milk from the breast cells and involution of uterus which further decreases blood loss. Thereby reducing the risk of postpartum

complications like retained placenta, adherent placenta and postpartum hemorrhage.

Rolsen(2010) suggested that after a complete and successful normal delivery, the newborn will crawl and reach the breast to suck the milk. The posterior pituitary releases oxytocin which aid in the separation of placenta completely and reduces the risk of postpartum hemorrhage.

Crenshaw et.al.,(2009) concluded in their quasi experimental study that initiating early suckling by keeping mother and their baby together will contribute to effective attachment of the mother and infant soon after birth and this result in remarkable change in the maternal behavior with just a touch of the infant with mother nipple which rises the mother oxytocin level that helps reducing postpartum bleeding.

Chako Sarah (2009) conducted a study on breastfeeding promotion in labour room, under the concept of Baby Friendly Hospital Initiative, he recommended that initiation of early suckling within first five minutes of postpartum were significantly higher ($p<0.001$) to increase the health measure of the mother and newborn by preventing complications like postpartum hemorrhage after delivery.

Margrett.E (2009) stated that there are many benefits in early contact of the healthy newborn baby to the mother such as thermo regulation, intense bonding and improved feeding pattern. Early initiation of the breast feeding will have strong and effective sucking ($p<0.001$) which creates strong uterine

contraction by just first attempt of sucking the nipple of mother's breast that reduces the risk of postpartum hemorrhage.

Lois Wattis (2008) pointed that the observation of blood loss and effective suckling following child birth by close contact and suckling at the breast stimulates the release of natural oxytocin, that helps in continuous contraction of the uterus forcing the placenta to peel off from the uterine wall its reducing the post partum bleeding

Vernies (2007) concluded in her study that putting the baby on to the breast immediately following the delivery causes the uterus to undergo physiological changes, by contracting more stronger. Thereby intense release of oxytocin is noted which helps in involution of uterus and prevention of postpartum hemorrhage.

D.C.Dutta (2007) pointed that mother hormone in the third stage of labour as oxytocin releases from the pituitary is enhanced by first infant suckling soon after birth which aid in contracting the mother uterus to control postpartum bleeding and promote uterine involution.

EFFECTIVENESS OF EARLY SUCKLING ON MATERNAL AND NEONATAL BONDING

Dr.Pramod (2010) a special article of World Health Assembly report that, initiation of breast feeding immediately after birth by placing skin to skin with the mother has many benefits like strong suckling reflex at birth, prevention of post partum bleeding, emotional development between

the mother and the child which helps in developing loving relationship between the mother and the baby.

Susan, Martin (2010) explained that early initiation of breast feeding helps in the release of oxytocin which aid to expel the placenta out and also release of prolactin by pituitary to produce more milk from the alveoli of mammary glands establishing mother-baby bonding.

Miriam H.Labbik (2009) noted that initiation of early breast feeding stimulates pituitary to release oxytocin which aid in the production of prolactin there by enhancing the bonding, sense of well being and improved sense of self esteem.

Dr.Sarah (2008) conducted a true experimental study on the "Benefits of natural approach". The study report concluded that postnatal mothers are rewarded by natural hormone of love called oxytocin which is enhanced by skin to skin contact of the baby and mother. The babies first attempt to breast feed will further augment the oxytocin level which increases uterine contraction and help placenta to separate. This process prevents hemorrhage as well as establishes close bonding between mother and baby.

Delailama Cutler (2007) described that breast feeding within half - an-hour saves more than million babies, when a healthy new born are placed skin to skin contact with the mother abdomen and the chest immediately after birth, they are alert, crawl and reaches the mothers breast. They begin to touch and massage the breast and this speed will stimulate the baby to attach with the mother which stimulate oxytocin release this process leads to

enhance in uterine contractions that helps in placental delivery and reduction in maternal bleeding and it stimulates the flow of milk from the breast and mother experience incredible joy with the first meeting with her child. It increases process of intense bonding between mother and baby

EFFECTIVENESS OF EARLY SUCKLING ON THERMOREGULATION

Roopesh (2010) focuses in his article that early suckling has got relationship with the uterine involution and reduction in the postpartum hemorrhage. The initiation of early suckling will stimulate the posterior pituitary to release the oxytocin which continuously contracts the uterus to expel the placenta and also prevents the complications of newborn by maintaining thermo regulation of newborn.

Kyllike Christensson (2009) stated in scientific article of "Breast Crawl" that Early initiation offers several advantages to the baby and the mother such as effective thermo regulation through skin to skin contact, faster and effective achievement of feeding skills, active immunity, better sugar levels and other biochemical parameters in the first few hours of birth, earlier passage of meconium hence decreased intensity of normal (physiological) newborn jaundice, long term breastfeeding success, better mother-infant bonding and boosting development of baby's nervous system. There is evidence that many of these are better achieved with the Breast Crawl, which also offers proper acclimatization from the intrauterine to the extrauterine environment.

WHO and UNICEF documents recommended that initiating breastfeeding within an hour of birth subtly describe the process of the 'Breast Crawl'. However, a precise method needs to be described with clarity. The Breast Crawl will bridge this gap and strengthen the relationship between the mother and the baby there by improves the thermoregulation.

CHAPTER-III
METHODOLOGY

RESEARCH APPROACH

Quantitative approach is selected.

RESEARCH DESIGN

*Quasi Experimental - Post Test Only Design

E	**X**	**POST TEST**
C	**--**	**POST TEST**

Key

E-experimental group

C-control group

X-Initiation of early suckling

VARIABLES

Dependent variable: early suckling

Independent variable: maternal and neonatal outcome

SETTING OF STUDY

The study was conducted at Devaraj Manikchand Maternity hospital Chennai. It is a 3 storied building providing quality maternity care with affordable cost. This hospital deliver effective care through various departments like antenatal ward, postnatal ward, labour room and outpatient

departments. They provide essential maternity care by clinical experts in emergency situations also in a 24x7 hours basis.

POPULATION

Mothers in normal labour process as per inclusive criteria.

SAMPLE SIZE

60 mothers who were admitted in labour room of DMM hospital was selected in the study. (30 mothers in control group, 30 mothers in experimental group)

SAMPLING TECHNIQUE

NON PROBABILITY CONVENIENT SAMPLING technique was chosen since it was accustoming to the study objectives and practicability in selection of samples.

CRITERIA FOR SAMPLING

Inclusive Criteria

Term mothers who are at first stage of labour.

Normal newborn having ≥ 7at 1min APGAR score.

Exclusive Criteria

Newborn at risk / < 7 APGAR score.

High risk mothers.

Mothers with abnormal labour progress.

DESCRIPTION OF THE TOOL

The instrument consists of two parts.

Part I: Background Demographic variables

1) Demographic Variables: Age, education, religion, family type, monthly income of the family, occupation, habitant.

2) Obstetrical Information: Parity, haemoglobin level of the mother, bad obstetrical history during last pregnancy, labour progress, total duration of first stage of labour, total duration of second stage of labour.

Part II: Questionnaire for the Maternal and Neonatal

1) Questionnaire for the maternal outcome: Estimated blood loss at third stage, placental separation, delivery of placenta, type of placental expulsion.

2) Questionnaire for the neonatal outcome: Sucking pattern, cry pattern, newborn body temperature, bonding, activity of the neonate.

SCORE INTERPRETATION

All questionnaires are given score as,

A=3,

B=2,

C=1.

VALIDITY AND RELIABILITY

The tool was developed by the investigator based on many literature reviews. The validity was obtained from experts and the reliability of the tool was checked using test, retest method where r=1.0 and r'=1.0.

PILOT STUDY

After obtaining formal permission from the Management of DMM hospital, a pilot study was carried out in order to test the instrument and technique of data collection. Validity and Reliability was checked out, the investigator came to the conclusion that there was no need for modification in the questionnaire.

DATA COLLECTION PROCEDURE

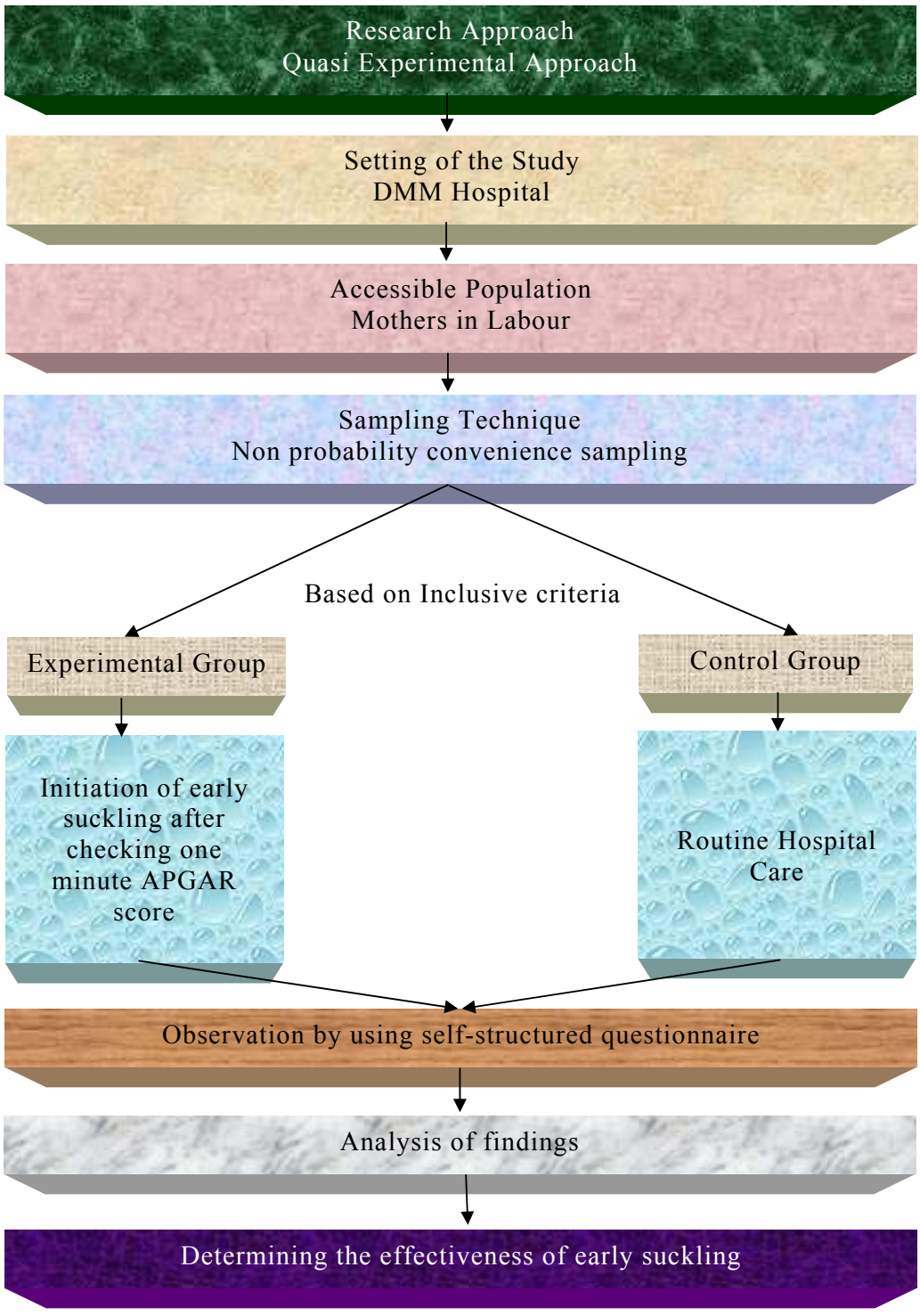
This study was conducted in labour ward of DMM hospital. The study was explained to the samples and verbal consent was obtained. The data collection period was from 6-6-2011 to10-7-2011. The study was conducted on 60 laboring mothers (30 experimental and 30 control group mothers)

DATA ANALYSIS AND STATISTICAL METHODS

Quasi Experimental - Post Test Only Design

S. No	OBJECTIVES	METHOD OF ANALYSIS
1	To assess the maternal outcome in experimental and control group mothers.	Descriptive statistics number percentage.
2	To assess the neonatal outcome in experimental and control group newborns.	Descriptive statistics number percentage.
3	To determine the effectiveness of early suckling on maternal and neonatal outcome.	Independent ”t” test
4	To associate maternal and neonatal outcome with selected demographic variables.	Chi-square test

FIG-2: SCHEMATIC REPRESENTATION OF RESEARCH DESIGN



CHAPTER-IV

DATA ANALYSIS AND INTERPRETATION

This chapter deals with the data analysis and interpretation to assess the effectiveness of early suckling on maternal and neonatal outcome among mothers at DMM Hospital.

Descriptive and inferential statistics were used for the analysis of the data. According to the study objectives the interpretation has been tabulated and organized as follows:

ORGANIZATION OF DATA

Section A **:** Description of demographic variables of mothers in the experimental and control group.

Section B **:** Assessment of maternal outcome among mothers in the experimental and control group.

Section C **:** Assessment of neonatal outcome among mothers in the experimental and control group.

Section D **:** Comparison of maternal outcome and neonatal outcome among mothers between the experimental and control group.

Section E **:** Association of maternal and neonatal outcome among mothers with selected demographic variables in the experimental group.

SECTION A:

Table-1: Frequency and percentage distribution of demographic variables of mothers in the experimental and control group. N = (30 + 30)

S. No	Demographic Variables	Experimental Group		Control Group	
		No.	%	No.	%
1.	Age				
	<=20 years	5	16.67	1	3.33
	21 - 25 years	10	33.33	5	16.67
	26 - 30 years	14	46.67	22	73.33
	31 - 35 years	1	3.33	2	6.67
	36 - 40 years	0	0.00	0	0.00
2.	Education				
	No formal education	2	6.67	0	0.00
	Primary	11	36.67	5	16.67
	Secondary	12	40.00	16	53.33
	Higher secondary	4	13.33	5	16.67
	Graduate and above	1	3.33	4	13.33
3.	Religion				
	Hindu	6	20.00	2	6.67
	Muslim	4	13.33	6	20.00
	Christian	19	63.33	19	63.33
	Others	1	3.33	3	10.00
4.	Family Type				
	Nuclear	15	50.00	10	33.33

S. No	Demographic Variables	Experimental Group		Control Group	
		No.	%	No.	%
	Joint family	15	50.00	20	66.67
5.	Monthly Income of the family				
	Upto Rs.2000	0	0.00	0	0.00
	Rs.2001 - 5000	2	6.67	1	3.33
	Rs.5001 - 8000	19	63.33	10	33.33
	Rs.8001 and above	9	30.00	19	63.33
6.	Occupation				
	Employed	15	50.00	10	33.33
	Unemployed	15	50.00	20	66.67
	Habitant				
	Rural	3	10.00	1	3.33
	Urban	21	70.00	14	46.67
	Sub Urban	6	20.00	15	50.00
7.	Obstetrical Information				
	Parity				
	Primi	27	90.00	20	66.67
	Multi	3	10.00	10	33.33
8.	HB level				
	<10 mg/dl	17	56.67	11	36.67
	10 - 13 mg/dl	13	43.33	19	63.33
	>14 mg/dl	0	0.00	0	0.00
9.	Bad obstetrical History				
	Yes	0	0.00	0	0.00
	No	3	10.00	12	40.00

S.No	Demographic Variables	Experimental Group		Control Group	
		No.	%	No.	%
	Not applicable	27	90.00	18	60.00
10.	Labour Progress				
	Spontaneous	1	3.33	1	3.33
	Spontaneous with minimal aid	29	96.67	29	96.67
	Induced	0	0.00	0	0.00
11.	Total Duration of first stage of labour				
	<10 hours	20	66.67	10	33.33
	10 - 14 hours	10	33.33	20	66.67
	>14 hours	0	0.00	0	0.00
	15 - 30 minutes	30	100.00	30	100.00
	>30 minutes	0	0.00	0	0.00

The table 1 shows the frequency and percentage distribution of demographic variables of the mothers in the experimental and control group.

With respect to age in the experimental group, majority 14(46.67%) were aged between 26 – 30 years and in the control group, majority 22(73.33%) were aged between 26 – 30 years.

Considering the educational status of the mothers in the experimental group, majority 12(40%) had secondary level education and in the control group, majority 16(53.33%) had secondary level education.

Regarding the religion of the mothers in the experimental group, majority 19(63.33%) were Christians and in the control group majority 19(63.33%) were Christians.

With regard to family type in the experimental group, 15(50%) were from nuclear and joint family respectively whereas in the control group, majority 20(66.67%) were from joint family.

Considering the monthly income of the family in the experimental group, majority 19(63.33%) were earning between Rs.5001 – 8000 and in the control group, majority 10(63.33%) were earning Rs.8001 and above.

With regard to occupation in the experimental group, 15(50%) were employed as well as unemployed whereas in the control group, majority 20(66.67%) were unemployed.

With respect to habitant in the experimental group, majority 21(70%) were from urban area and in the control group, majority 15(50%) were from sub urban area.

Regarding the parity of women in the experimental group, majority 27(90%) from primi parity and in the control group majority 20(66.67%) were primi para mothers.

Considering the HB level in the experimental group, majority 17(56.67%) had <10mg dl of HB and in the control group majority 19(63.33%) had an HB level of 10 – 13 mg/dl.

With regard to bad obstetrical history of women in the experimental group, majority 27(90%) were primi para mothers so it is not applicable and in the control group, majority 18(60%) were primi para mothers so it is not applicable.

While considering the labour progress of women in the experimental group, majority 29(96.67%) had spontaneous labour progress with minimal aid and in the control group majority 29(96.67%) had spontaneous labour progress with minimal aid.

With regard to total duration of first stage of labour in the experimental group, majority 20(66.67%) were <10 hours and in the control group majority 20(66.67%) were between 10 – 14 hours.

Regarding the total duration of second stage of labour in the experimental group, almost all 30(100%) were between 15 – 30 minutes and in the control group almost all 30(100%) were between 15 – 30 minutes.

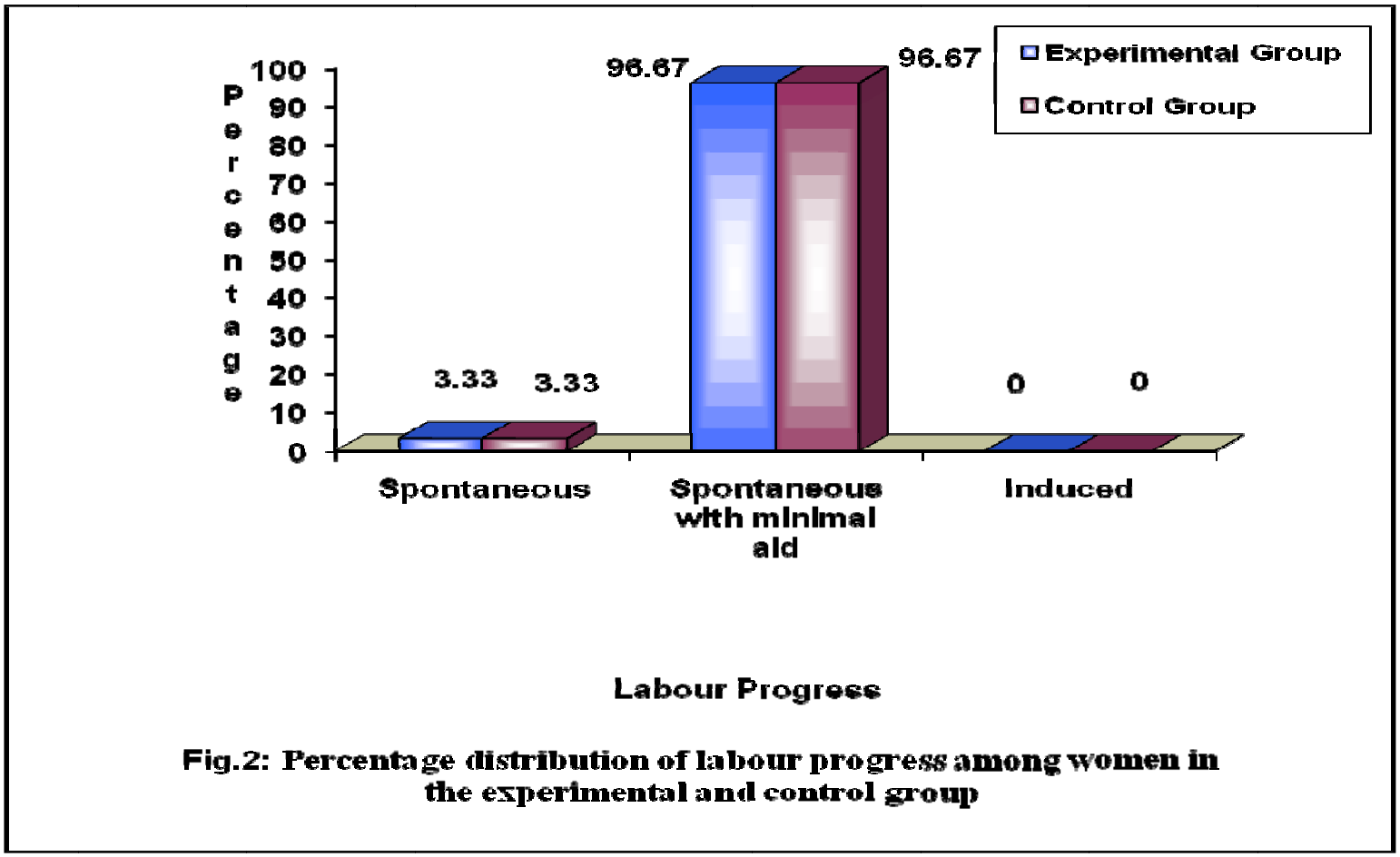


Fig.2: Percentage distribution of labour progress among women in the experimental and control group

SECTION B

Table 2: Frequency and percentage distribution of maternal outcome among mothers in the experimental and control group. N = (30 + 30)

S. No	*Maternal Outcome*	*Experimental*		*Control*	
		No.	*%*	*No.*	*%*
1.	Estimated Blood Loss at Third Stage				
	<400 ml	29	96.67	10	33.33
	401 - 501 ml	1	3.33	20	66.67
	>501ml	0	0.00	0	0.00
2.	Placental Separation				
	<10 minutes	27	90.00	8	26.67
	11 - 15 minutes	3	10.00	22	73.33
	>16 minutes	0	0.00	0	0.00
3.	Delivery of Placenta				
	Spontaneous	27	90.00	19	63.33
	Controlled Cord Traction	3	10.00	11	36.67
4.	Expulsion of Placenta				
	Complete	30	100.00	30	I00
	Incomplete	0	0.00	0.00	0.00
5.	Estimated blood loss at fourth stage 200 - 300 ml	30	100.00	8	26.67
	301 - 400 ml	0	0.00	22	73.33
	401 - 500 ml	0	0.00	0	0.00

The table 2 shows the maternal outcome in the experimental and control group. In the experimental group, with respect to estimated blood loss during third stage of labour majority 29(96.67%) were <400ml and in the control group majority 20(66.67%) were between 401 – 501ml.

In the experimental group, with respect to placental separation majority 27(90%) were <10 min. and in the control group majority 22(73.33%) were between 11 – 15 minutes.

In the experimental group, with respect to delivery of placenta majority 27(90%) were spontaneous and in the control group majority 19(63.33%) were spontaneous.

In the experimental group, and control group both with respect to expulsion of placenta majority 30(100%) were complete .

In the experimental group, with respect to estimated blood loss during fourth stage of labour majority 30(100%) were between 200 – 300 ml and in the control group majority 22(73.33%) were between 301 – 400 ml.

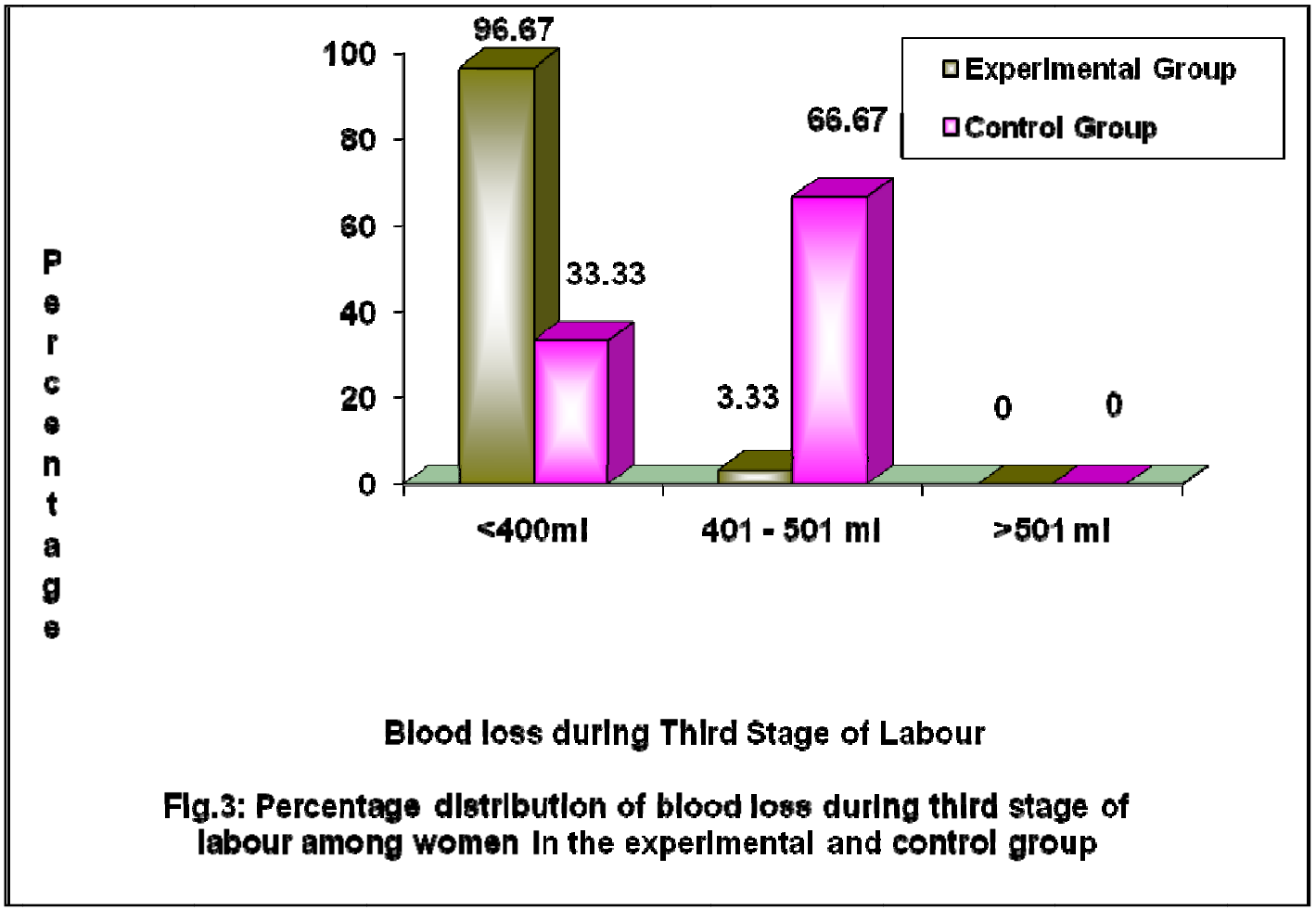


Fig.3: Percentage distribution of blood loss during third stage of labour among women in the experimental and control group

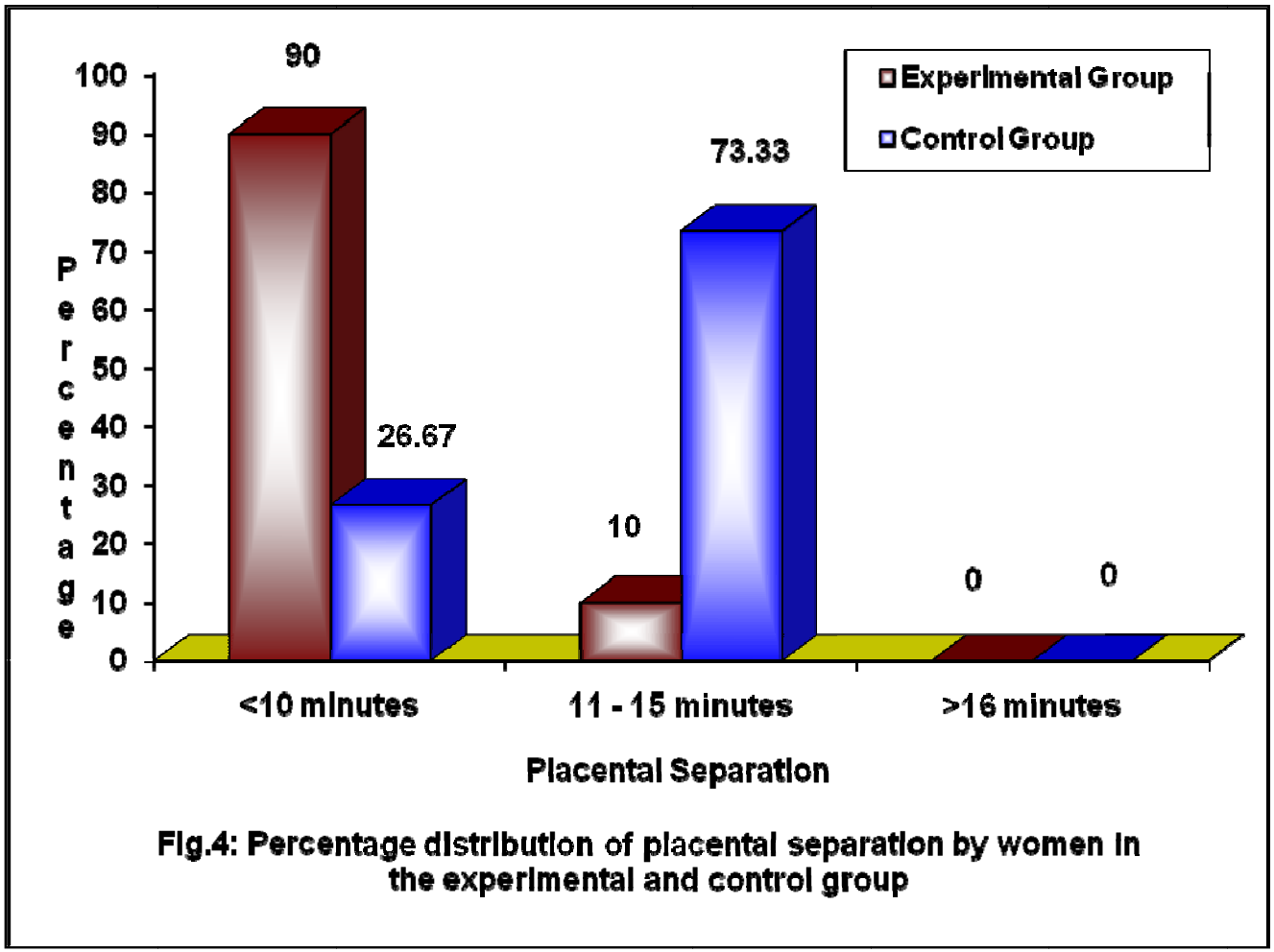


Fig.4: Percentage distribution of placental separation by women in the experimental and control group

SECTION C

Table-3: Frequency and percentage distribution of neonatal outcome among mothers in the experimental and control group.
N = (30 + 30)

S. No	Neonatal Outcome	Experimental		Control	
		No.	%	No.	%
1.	Sucking Pattern				
	Effectively sucking > 5 minutes	30	100.00	6	20.00
	Sucks for 2 – 4 minutes	0	0.00	23	76.67
	Not sucking	0	0.00	1	3.33
2.	Cry Pattern				
	Not crying and takes feed without disturb	30	100.00	5	16.67
	Reluctant to food and crying	0	0.00	25	83.33
3.	Newborn Body Temperature				
	95 - 96 degree Fahrenheit	26	86.67	3	10.00
	94 - 94.9 degree Fahrenheit	4	13.33	25	83.33
	<94 degree Fahrenheit	0	0.00	2	6.67
4.	Bonding				
	Mother exhibiting verbal communication	23	76.67	1	3.33
	Non verbal communication of mother and newborn	7	23.33	18	60.00
	No communication	0	0	11	36.67
5.	Activity of the Neonate				
	Good flexion of extension during feeding with suckling sound	27	90.00	5	16.67
	Weak and less movements of legs while feeding	3	10.00	25	83.33

The table 3 shows the neonatal outcome among mothers in the experimental and control group.With respect to sucking pattern in the

experimental group, majority 30(100%) were effectively sucking >5 minutes whereas in the control group, majority 23(76.67%) sucks for 2 – 4 minutes.

Considering the cry pattern in the experimental group, majority 30(100%) were not crying and takes feed without disturb and in the control group, majority 25(83.33%) were reluctant to food and were crying.

Regarding newborn body temperature in the experimental group, majority 26(96.67%) were between 95 – 86 degree Fahrenheit and in the control group, majority 25(83.33%) were between 94 – 94.9 degree Fahrenheit.

With regard to bonding in the experimental group, majority 23(76.67%) mothers exhibiting verbal communication and in the control group, majority 18(60%) were not communicating verbally.

Considering the activity of the neonate in the experimental group, majority 27(90%) had good flexion of extension during feeding with suckling sound and in the control group, majority 25(83.33%) were weak and were making less movements while feeding.

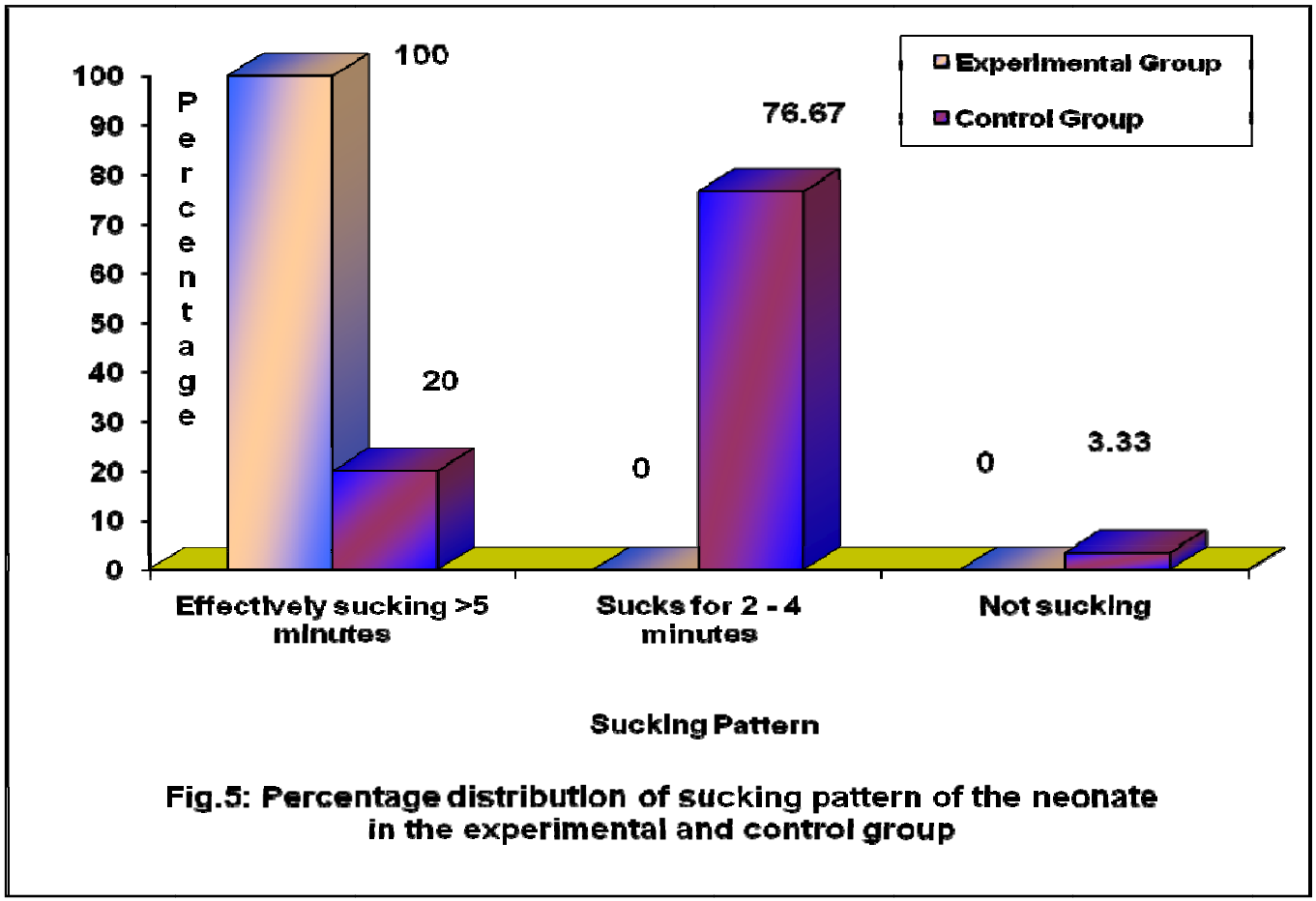


Fig.5: Percentage distribution of sucking pattern of the neonate in the experimental and control group

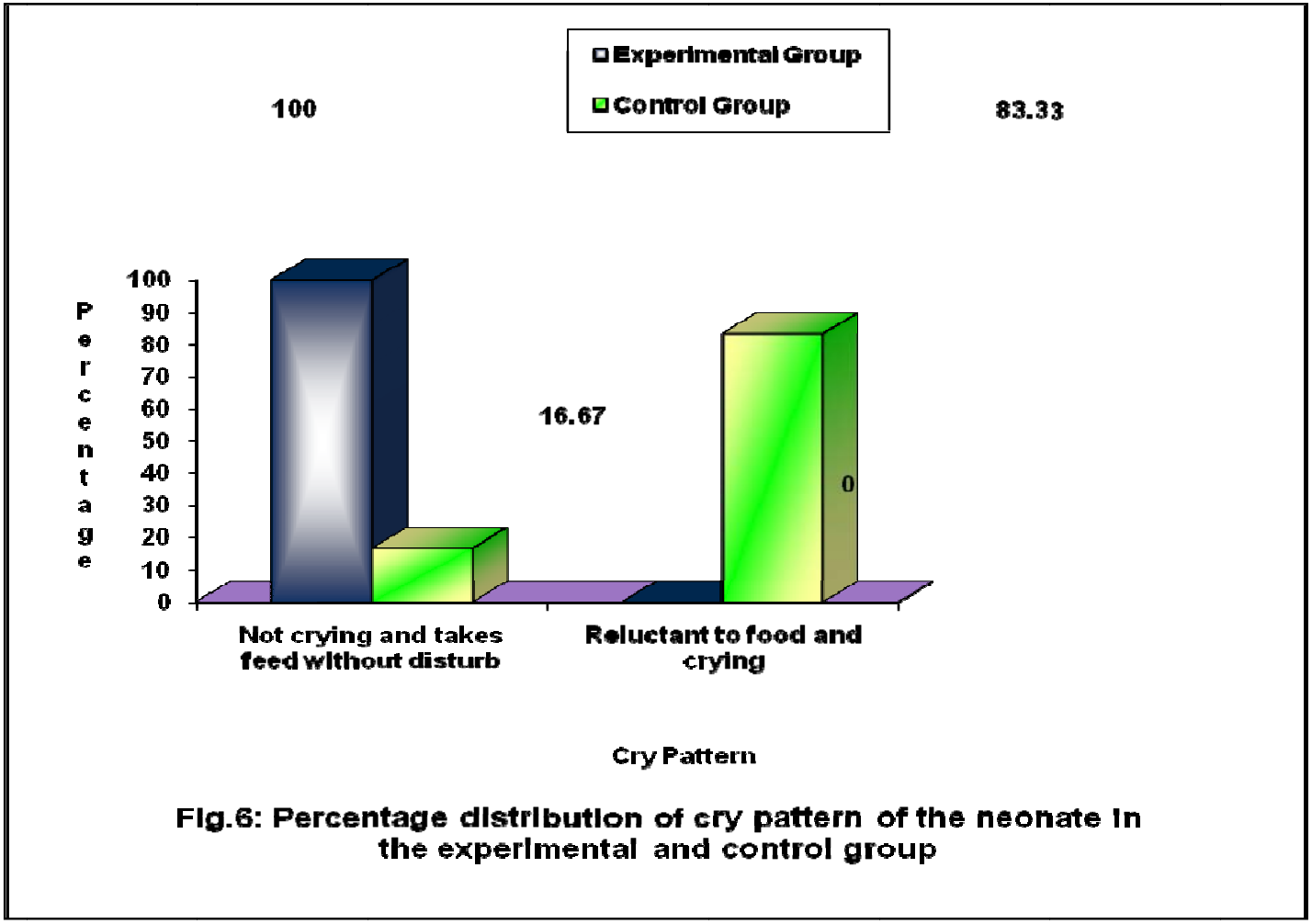


Fig.6: Percentage distribution of cry pattern of the neonate in the experimental and control group

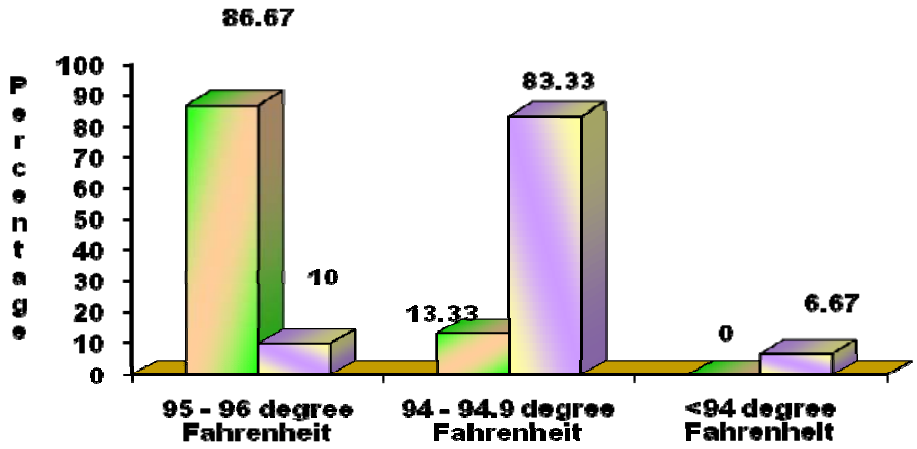


Fig.7: Percentage distribution of newborn body temperature in the experimental and control group

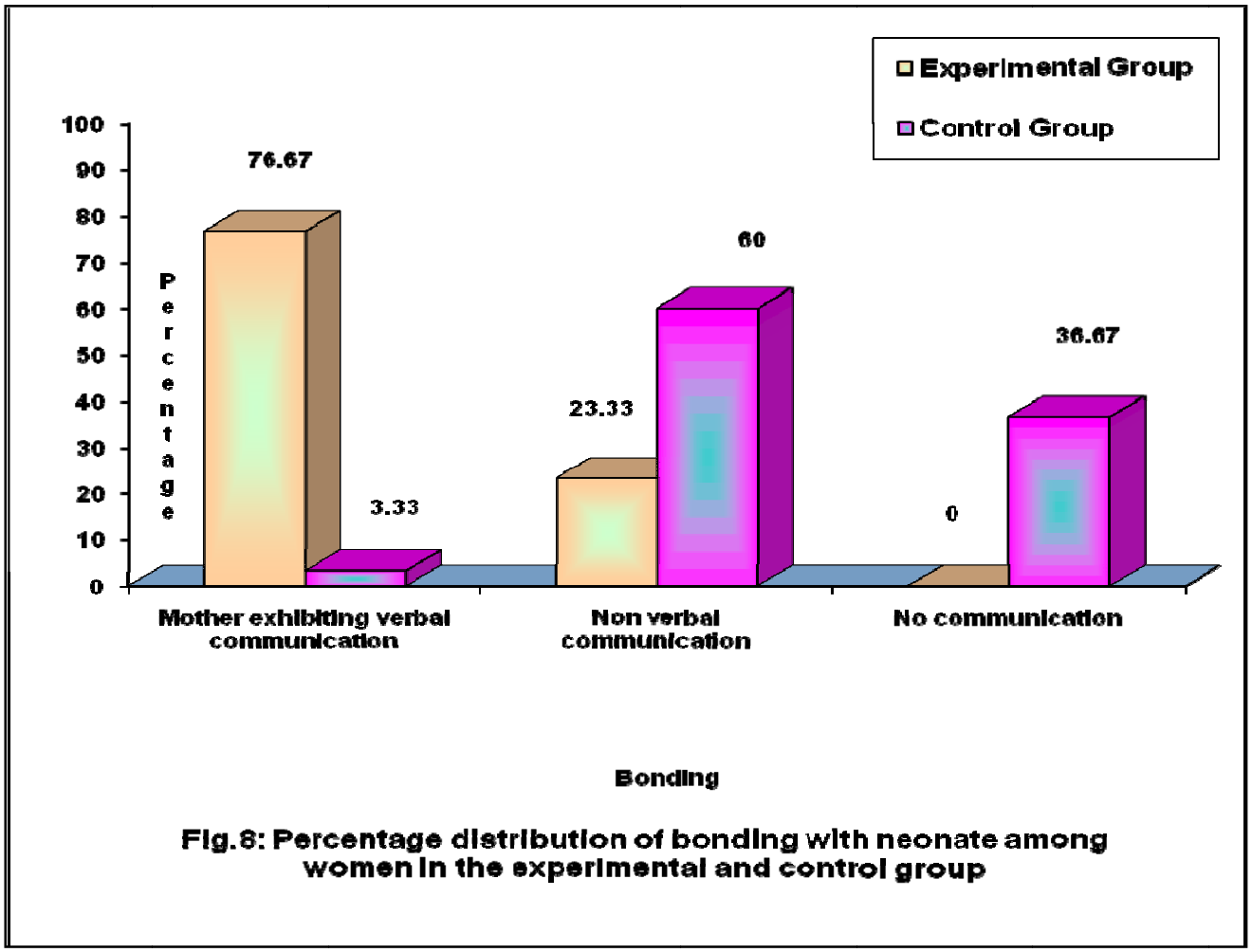


Fig.8: Percentage distribution of bonding with neonate among women in the experimental and control group

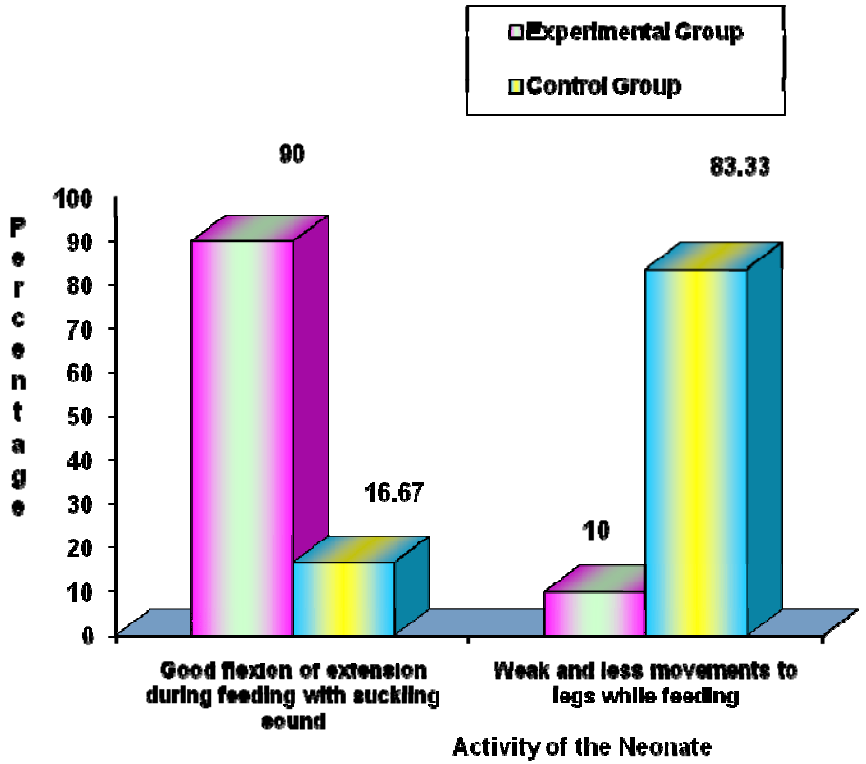


Fig.9: Percentage distribution of activity of the neonate in the experimental and control group

SECTION D

Table-4: Comparison of maternal outcome between the experimental and control group. N = (30 + 30)

Maternal Outcome	*Mean*	*S.D*	*'t' Value*
Experimental	12.77	0.68	11.825*** p = 0.000, (S)
Control	9.83	1.18	

***p<0.001, S – Significant

The table 4 shows that in the experimental group post test mean score was 12.77 with S.D 0.68 and in the control group, the post test mean score was 9.83 with S.D 1.18. The calculated 't' value of 11.825 was statistically highly significant at p<0.001. This shows there is a significant difference between the post test level of maternal outcome between the experimental and control group.

Table-5: Comparison of post test level of neonatal outcome between the experimental and control group.

N = (30 + 30)

Neonatal Outcome	Mean	S.D	't' Value
Experimental	12.50	1.00	13.096*** p = 0.000, (S)
Control	8.87	1.14	

***p<0.001, S – Significant

The table 5 shows that in the experimental group post test mean score was 12.50 with S.D 1.00 and in the control group, the post test mean score was 8.87 with S.D 1.14. The calculated 't' value of 13.096 was statistically highly significant at p<0.001. This shows there is a significant difference between the post test level of neonatal outcome between the experimental and control group.

SECTION E

Table-6: Association of estimated blood loss at third stage of labour with demographic variables in the experimental group. n = 30

S. No	*Demographic Variables*	*<400 ml*		*401 – 500 ml*		*Chi-Square Value*
		No.	*%*	*No.*	*%*	
1.	Age					
	<=20 years	5	16.7	0	0	$\chi 2 = 1.182$
	21 - 25 years	10	33.3	0	0	d.f = 2
	26 - 30 years	13	43.3	1	3.3	p = 0.757
	31 - 35 years	1	3.3	0	0	N.S
	36 - 40 years					
2.	Education					
	No formal education	2	6.7	0	0	$\chi 2 = 6.724$
	Primary	11	36.7	0	0	d.f = 4
	Secondary	12	40.0	0	0	p = 0.151
	Higher secondary	3	10.0	1	3.3	N.S
	Graduate and above	1	3.3	0	0	
3.	Religion					$\chi 2 = 0.599$
	Hindu	6	20.0	0	0	d.f = 3
	Muslim	4	13.3	0	0	p = 0.897
	Christian	18	60.0	1	3.3	N.S
	Others	1	3.3	0	0	
4.	Family Type					$\chi 2$

S. No	Demographic Variables	<400 ml		401 – 500 ml		Chi-Square Value
		No.	%	No.	%	
	Nuclear	14	46.7	1	3.3	1.034 d.f = 1 p = 0.309 N.S
	Joint family	15	50.0	0	0	
5.	Monthly Income of the family					$\chi 2$ = 0.599 d.f = 2 p = 0.741 N.S
	Upto Rs.2000	-	-	-	-	
	Rs.2001 – 5000	2	6.7	0	0	
	Rs.5001 – 8000	18	60.0	1	3.3	
	Rs.8001 and above	9	30.0	0	0	
6.	Occupation					$\chi 2$ = 1.034 d.f = 1 p = 0.309 N.S
	Employed	15	50.0	0	0	
	Unemployed	14	46.7	1	3.3	
7.	Habitant					$\chi 2$ = 4.138 d.f = 2 p = 0.126 N.S
	Rural	3	10.0	0	0	
	Urban	21	70.0	0	0	
	Sub Urban	5	16.7	1	3.3	
8.	Obstetrical Information					$\chi 2$ = 0.115 d.f = 1 p = 0.735 N.S
	Parity					
	Primi	26	86.7	1	3.3	
	Multi	3	10.0	0	0	
9.	HB level					$\chi 2$ = 1.353 d.f = 1
	<10 mg/dl	17	56.7	0	0	
	10 - 13 mg/dl	12	40.0	1	3.3	

S. No	Demographic Variables	<400 ml		401 – 500 ml		Chi-Square Value
		No.	%	No.	%	
	>14 mg/dl	-	-	-	-	p = 0.245 N.S
10.	Bad obstetrical History					$\chi 2$ = 0.115
	Yes	-	-	-	-	d.f = 1
	No	3	10.0	0	0	p = 0.735
	Not applicable	26	86.7	1	3.3	N.S
11.	Labour Progress					$\chi 2$ = 0.036
	Spontaneous	1	3.3	0	0	d.f = 1
	Spontaneous with minimal aid	28	93.3	1	3.3	p = 0.850
	Induced	-	-	-	-	N.S
12.	Total Duration of first stage of labour					$\chi 2$ = 2.069
	<10 hours	20	66.7	0	0	d.f = 1
	10 - 14 hours	9	30.0	1	3.3	p = 0.150
	>14 hours	-	-	-	-	N.S
13.	Total Duration of second stage of labour					
	15 - 30 minutes	29	96.7	1	3.3	-
	>30 minutes	-	-	-	-	

N.S – Not Significant

The above table 6 shows that none of the demographic variables had shown statistically significant association with the blood loss during third stage of labour in the experimental group.

Table-7 : Association of placental separation with demographic variables in the experimental group. n = 30

S. No	Demographic Variables	<10 min.		11 – 15 min.		Chi-Square Value
		No.	%	No.	%	
1.	Age					
	<=20 years	5	16.7	0	0	$\chi 2 = 3.810$
	21 - 25 years	10	33.3	0	0	d.f = 3
	26 - 30 years	11	36.7	3	10.0	p = 0.283
	31 - 35 years	1	3.3	0	0	N.S
	36 - 40 years					
2.	Education					
	No formal education	2	6.7	0	0	$\chi 2 = 3.148$
	Primary	11	36.7	0	0	d.f = 4
	Secondary	10	33.3	2	6.7	p = 0.533
	Higher secondary	3	10.0	1	3.3	N.S
	Graduate and above	1	3.3	0	0	
3.	Religion					$\chi 2 = 1.930$
	Hindu	6	20.0	0	0	d.f = 3
	Muslim	4	13.3	0	0	p = 0.587
	Christian	16	53.3	3	10.0	N.S
	Others	1	3.3	0	0	
4.	Family Type					$\chi 2 = 0.370$
	Nuclear	13	43.3	2	6.7	d.f = 1

S. No	Demographic Variables	<10 min.		11 – 15 min.		Chi-Square Value
		No.	%	No.	%	
	Joint family	14	46.7	1	3.3	p = 0.543 N.S
5.	Monthly Income of the family					$\chi 2$ = 0.240
	Upto Rs.2000	-	-	-	-	d.f = 2
	Rs.2001 – 5000	2	6.7	0	0	p = 0.887
	Rs.5001 – 8000	17	56.7	2	6.7	N.S
	Rs.8001 and above	8	26.7	1	3.3	
6.	Occupation					$\chi 2$ = 0.370
	Employed	14	46.7	1	3.3	d.f = 1
	Unemployed	13	43.3	2	6.7	p = 0.543 N.S
7.	Habitant					$\chi 2$ = 4.603
	Rural	3	10.0	0	0	d.f = 2
	Urban	20	66.7	1	3.3	p = 0.100
	Sub Urban	4	13.3	2	6.7	N.S
8.	Obstetrical Information					$\chi 2$ = 0.370
	Parity					d.f = 1
	Primi	24	80.0	3	10.0	p = 0.543 N.S
	Multi	3	10.0	0	0	
9.	HB level					$\chi 2$ = 0.739
	<10 mg/dl	16	53.3	1	3.3	d.f = 1
	10 - 13 mg/dl	11	36.7	2	6.7	p = 0.390 N.S
	>14 mg/dl	-	-	-	-	
10.	Bad obstetrical History					$\chi 2$ =

S. No	Demographic Variables	<10 min.		11 – 15 min.		Chi-Square Value
		No.	%	No.	%	
	Yes	-	-	-	-	0.370
	No	3	10.0	0	0	d.f = 1
	Not applicable	24	80.0	3	10.0	p = 0.543
						N.S
11.	Labour Progress					$\chi 2$ = 0.115
	Spontaneous	1	3.3	0	0	d.f = 1
	Spontaneous with minimal aid	26	86.7	3	10.0	p = 0.735
	Induced	-	-	-	-	N.S
12.	Total Duration of first stage of labour					$\chi 2$ = 6.667
	<10 hours	20	66.7	0	0	d.f = 1
	10 - 14 hours	7	23.3	3	10.0	p = 0.010
	>14 hours	-	-	-	-	S**
13.	Total Duration of second stage of labour					
	15 - 30 minutes	27	90.0	3	10.0	-
	>30 minutes	-	-	-	-	

**p<0.01, S – Significant, N.S – Not Significant

The above table 7 shows that the demographic variable total duration of second stage of labour had shown statistically significant association with placental separation in the experimental group at p<0.01 level and the other demographic variables had not shown statistically significant association with placental separation in the experimental group.

Table 8: Association of delivery of placenta with demographic variables in the experimental group. n = 30

S. No	Demographic Variables	Spontaneous		Controlled Cord Traction		Chi-Square Value
		No.	%	No.	%	
1.	Age					
	<=20 years	4	13.3	1	3.3	$\chi 2 = 2.063$
	21 - 25 years	10	33.3	0	0	d.f = 3
	26 - 30 years	12	40.0	2	6.7	p = 0.559
	31 - 35 years	1	3.3	0	0	N.S
	36 - 40 years					
2.	Education					
	No formal education	2	6.7	0	0	$\chi 2 = 1.380$
	Primary	10	33.3	1	3.3	d.f = 4
	Secondary	11	36.7	1	3.3	p = 0.848
	Higher secondary	3	10.0	1	3.3	N.S
	Graduate and above	1	3.3	0	0	
3.	Religion					$\chi 2 = 1.930$
	Hindu	6	20.0	0	0	d.f = 3
	Muslim	4	13.3	0	0	p = 0.587
	Christian	16	53.3	3	10.0	N.S
	Others	1	3.3	0	0	
4.	Family Type					$\chi 2 = 0.370$
	Nuclear	14	46.7	1	3.3	d.f = 1
	Joint family	13	43.3	2	6.7	p =

S. No	Demographic Variables	Spontaneous		Controlled Cord Traction		Chi-Square Value
		No.	%	No.	%	
						0.543 N.S
5.	Monthly Income of the family					$\chi 2$ = 0.240
	Upto Rs.2000	-	-	-	-	d.f = 2
	Rs.2001 – 5000	2	6.7	0	0	p = 0.887
	Rs.5001 – 8000	17	56.7	2	6.7	N.S
	Rs.8001 and above	8	26.7	1	3.3	
6.	Occupation					$\chi 2$ = 0.370
	Employed	13	43.3	2	6.7	d.f = 1
	Unemployed	14	46.7	1	3.3	p = 0.543
						N.S
7.	Habitant					$\chi 2$ = 0.635
	Rural	3	10.0	0	0	d.f = 2
	Urban	19	63.3	2	6.7	p = 0.728
	Sub Urban	5	16.7	1	3.3	N.S
8.	Obstetrical Information					$\chi 2$ = 0.370
	Parity					d.f = 1
	Primi	24	80.0	3	10.0	p = 0.543
	Multi	3	10.0	0	0	N.S
9.	HB level					$\chi 2$ =

S. No	Demographic Variables	Spontaneous		Controlled Cord Traction		Chi-Square Value
		No.	%	No.	%	
	<10 mg/dl	15	50.0	2	6.7	0.136
	10 - 13 mg/dl	12	40.0	1	3.3	d.f = 1
	>14 mg/dl	-	-	-	-	p = 0.713 N.S
10.	Bad obstetrical History					$\chi 2$ = 0.370
	Yes	-	-	-	-	d.f = 1
	No	3	10.0	0	0	p = 0.543
	Not applicable	24	80.0	3	10.0	N.S
11.	Labour Progress					$\chi 2$ = 0.115
	Spontaneous	1	3.3	0	0	d.f = 1
	Spontaneous with minimal aid	26	86.7	3	10.0	p = 0.735
	Induced	-	-	-	-	N.S
12.	Total Duration of first stage of labour					$\chi 2$ = 1.667
	<10 hours	19	63.3	1	3.3	d.f = 1
	10 - 14 hours	8	26.7	2	6.7	p = 0.197
	>14 hours	-	-	-	-	N.S
13.	Total Duration of second stage of labour					
	15 - 30 minutes	27	90.0	3	10.0	0
	>30 minutes	-	-	-	-	

N.S – Not Significant

The above table 8 shows that none of the demographic variables had shown statistically significant association with the delivery of placenta in the experimental group.

Table-9: Association of newborn body temperature with demographic variables in the experimental group. n = 30

S. No	Demographic Variables	95 – 96 Deg. F		94 – 94.9 Deg. F		Chi-Square Value
		No.	%	No.	%	
1.	Age					
	<=20 years	5	16.7	0	0	$\chi 2 = 1.319$
	21 - 25 years	8	26.7	2	6.7	d.f = 3
	26 - 30 years	12	40.0	2	6.7	p = 0.725
	31 - 35 years	1	3.3	0	0	N.S
	36 - 40 years					
2.	Education					
	No formal education	2	6.7	0	0	$\chi 2 = 1.416$
	Primary	9	30.0	2	6.7	d.f = 4
	Secondary	11	36.7	1	3.3	p = 0.841
	Higher secondary	3	10.0	1	3.3	N.S
	Graduate and above	1	3.3	0	0	
3.	Religion					
	Hindu	5	16.7	1	3.3	$\chi 2 = 0.926$
	Muslim	4	13.3	0	0	d.f = 3
	Christian	16	53.3	3	10.0	p = 0.819
	Others	1	3.3	0	0	N.S
4.	Family Type					$\chi 2 = 0.000$
	Nuclear	13	43.3	2	6.7	

S. No	Demographic Variables	95 – 96 Deg. F		94 – 94.9 Deg. F		Chi-Square Value
		No.	%	No.	%	
	Joint family	13	43.3	2	6.7	d.f = 1 p = 1.000 N.S
5.	Monthly Income of the family					$\chi 2$ = 0.445 d.f = 2 p = 0.800 N.S
	Upto Rs.2000	-	-	-	-	
	Rs.2001 – 5000	2	6.7	0	0	
	Rs.5001 – 8000	16	53.3	3	10.0	
	Rs.8001 and above	8	26.7	1	3.3	
6.	Occupation					$\chi 2$ = 0.000 d.f = 1 p = 1.000 N.S
	Employed	13	43.3	2	6.7	
	Unemployed	13	43.3	2	6.7	
7.	Habitant					$\chi 2$ = 0.536 d.f = 2 p = 0.765 N.S
	Rural	3	10.0	0	0	
	Urban	18	60.0	3	10.0	
	Sub Urban	5	16.7	1	3.3	
8.	Obstetrical Information					$\chi 2$ = 0.513 d.f = 1 p = 0.474 N.S
	Parity					
	Primi	23	76.7	4	13.3	
	Multi	3	10.0	0	0	
9.	HB level					$\chi 2$ = 0.084 d.f = 1 p = 0.773
	<10 mg/dl	15	50.0	2	6.7	
	10 - 13 mg/dl	11	36.7	2	6.7	
	>14 mg/dl	-	-	-	-	

S. No	Demographic Variables	95 – 96 Deg. F		94 – 94.9 Deg. F		Chi-Square Value
		No.	%	No.	%	
						N.S
10.	Bad obstetrical History					$\chi 2 = 0.513$
	Yes	-	-	-	-	d.f = 1
	No	3	10.0	0	0	p = 0.474
	Not applicable	23	76.7	4	13.3	N.S
11.	Labour Progress					$\chi 2 = 6.724$
	Spontaneous	0	0	1	3.3	d.f = 1
	Spontaneous with minimal aid	26	86.7	3	6.7	p = 0.010
	Induced	-	-	-	-	S**
12.	Total Duration of first stage of labour					$\chi 2 = 0.144$
	<10 hours	17	56.7	3	10.0	d.f = 1
	10 - 14 hours	9	30.0	1	3.3	p = 0.704
	>14 hours	-	-	-	-	N.S
13.	Total Duration of second stage of labour					
	15 - 30 minutes	26	86.7	4	13.3	-
	>30 minutes	-	-	-	-	

**p<0.01, S – Significant, N.S – Not Significant

The above table 9 shows that the demographic variable labour progress had shown statistically significant association with newborn body temperature in the experimental group at p<0.01 level and the other demographic variables had not shown

statistically significant association with newborn body temperature in the experimental group.

Table-10: Association of bonding with demographic variables in the experimental group. n = 30

S. No	Demographic Variables	Verbal Communication		Non Verbal Communication		Chi-Square Value
		No.	%	No.	%	
1.	Age					
	<=20 years	5	16.7	0	0	$\chi 2 = 3.088$
	21 - 25 years	8	26.7	2	6.7	d.f = 3
	26 - 30 years	9	30.0	5	16.7	p = 0.378
	31 - 35 years	1	3.3	0	0	N.S
	36 - 40 years					
2.	Education					
	No formal education	2	6.7	0	0	$\chi 2 = 2.685$
	Primary	9	30.0	2	6.7	d.f = 4
	Secondary	9	30.0	3	10.0	p = 0.612
	Higher secondary	2	6.7	2	6.7	N.S
3.	Graduate and above	1	3.3	0	0	
	Religion					$\chi 2 = 0.554$
	Hindu	5	16.7	1	3.3	d.f = 3
	Muslim	3	10.0	1	3.3	p = 0.907
	Christian	14	46.7	5	16.7	N.S
	Others	1	3.3	0	0	
4.	Family Type					$\chi 2 = 0.186$
	Nuclear	12	40.0	3	10.0	

S. No	Demographic Variables	Verbal Communication		Non Verbal Communication		Chi-Square Value
		No.	%	No.	%	
	Joint family	11	36.7	4	13.3	d.f = 1 p = 0.666 N.S
5.	Monthly Income of the family					$\chi 2$ = 3.455
	Upto Rs.2000	-	-	-	-	d.f = 2
	Rs.2001 – 5000	2	6.7	0	0	p = 0.178
	Rs.5001 – 8000	16	53.3	3	10.0	N.S
	Rs.8001 and above	5	16.7	4	13.3	
6.	Occupation					$\chi 2$ = 1.677
	Employed	13	43.3	2	6.7	d.f = 1
	Unemployed	10	33.3	5	16.7	p = 0.195
						N.S
7.	Habitant					$\chi 2$ = 1.384
	Rural	3	10.0	0	0	d.f = 2
	Urban	15	50.0	6	20.0	p = 0.501
	Sub Urban	5	16.7	1	3.3	N.S
8.	Obstetrical Information					$\chi 2$ = 0.186
	Parity					d.f = 1
	Primi	21	70.0	6	20.0	p = 0.666
	Multi	2	6.7	1	3.3	N.S

S. No	Demographic Variables	Verbal Communication		Non Verbal Communication		Chi-Square Value
		No.	%	No.	%	
9.	HB level					$\chi 2 = 6.679$
	<10 mg/dl	16	53.3	1	3.3	d.f = 1
	10 - 13 mg/dl	7	23.3	6	20.0	p = 0.010
	>14 mg/dl	-	-	-	-	S**
10.	Bad obstetrical History					$\chi 2 = 0.186$
	Yes	-	-	-	-	d.f = 1
	No	2	6.7	1	3.3	p = 0.666
	Not applicable	21	70.0	6	20.0	N.S
12.	Labour Progress					$\chi 2 = 3.399$
	Spontaneous	0	0	1	3.3	d.f = 1
	Spontaneous with minimal aid	23	76.7	6	20.0	p = 0.065
	Induced	-	-	-	-	N.S
13.	Total Duration of first stage of labour					$\chi 2 = 0.93$
	<10 hours	15	50.0	5	16.7	d.f = 1
	10 - 14 hours	8	26.7	2	6.7	p = 0.760
	>14 hours	-	-	-	-	N.S
14.	Total Duration of second stage of labour					
	15 - 30 minutes	23	76.7	7	23.3	-
	>30 minutes	-	-	-	-	

Table 10 shows that neonatal bonding is significant with haemoglobin level of the mother at**p<0.01 level.,

Table-11:Association of activity with demographic variables in the experimental group. n = 30

S. No	Demographic Variables	Good		Week		Chi-Square Value
		No.	%	No.	%	
1.	Age					
	<=20 years	5	16.7	0	0	$\chi 2$ = 0.952
	21 - 25 years	9	30.0	1	3.3	d.f = 3
	26 - 30 years	12	40.0	2	6.7	p = 0.813
	31 - 35 years	1	3.3	0	0	N.S
	36 - 40 years					
2.	Education					
	No formal education	2	6.7	0	0	$\chi 2$ = 1.380
	Primary	10	33.3	1	3.3	d.f = 4
	Secondary	11	36.7	1	3.3	p = 0.848
	Higher secondary	3	10.0	1	3.3	N.S
	Graduate and above	1	3.3	0	0	
3.	Religion					$\chi 2$ = 0.858
	Hindu	5	16.7	1	3.3	d.f = 3
	Muslim	4	13.3	0	0	p = 0.836
	Christian	17	56.7	2	6.7	N.S
	Others	1	3.3	0	0	
4.	Family Type					$\chi 2$ = 0.370
	Nuclear	14	46.7	1	3.3	d.f = 1
	Joint family	13	43.3	2	6.7	p = 0.543
						N.S
5.	Monthly Income of the family					$\chi 2$ = 2.190
	Upto Rs.2000	-	-	-	-	d.f = 2
	Rs.2001 – 5000	2	6.7	0	0	p =

S. No	Demographic Variables	Good		Week		Chi-Square Value
		No.	%	No.	%	
	Rs.5001 – 8000	18	60.0	1	3.3	0.335 N.S
	Rs.8001 and above	7	23.3	2	6.7	
6.	Occupation					$\chi 2 = 0.370$
	Employed	14	46.7	1	3.3	d.f = 1
	Unemployed	13	43.3	2	6.7	p = 0.543
						N.S
7.	Habitant					$\chi 2 = 1.429$
	Rural	3	10.0	0	0	d.f = 2
	Urban	18	60.0	3	10.0	p = 0.490
	Sub Urban	6	20.0	0	0	N.S
8.	Obstetrical Information					$\chi 2 = 2.015$
	Parity					d.f = 1
	Primi	25	83.3	2	6.7	p = 0.156
	Multi	2	6.7	1	3.3	N.S
9.	HB level					$\chi 2 = 0.739$
	<10 mg/dl	16	53.3	1	3.3	d.f = 1
	10 - 13 mg/dl	11	36.7	2	6.7	p = 0.390
	>14 mg/dl	-	-	-	-	N.S
10.	Bad obstetrical History					$\chi 2 =$

S. No	Demographic Variables	Good		Week		Chi-Square Value
		No.	%	No.	%	
	Yes	-	-	-	-	2.016 d.f = 1 p = 0.156 N.S
	No	2	6.7	1	3.3	
	Not applicable	25	83.3	2	6.7	
11.	Labour Progress					$\chi 2$ = 9.310 d.f = 1 p = 0.002 S***
	Spontaneous	0	0	1	3.3	
	Spontaneous with minimal aid	27	90.0	2	6.7	
	Induced	-	-	-	-	
12.	Total Duration of first stage of labour					$\chi 2$ = 1.667 d.f = 1 p = 0.197 N.S
	<10 hours	17	56.7	3	10.0	
	10 - 14 hours	10	33.3	0	0	
	>14 hours	-	-	-	-	
13.	Total Duration of second stage of labour					0
	15 - 30 minutes	27	90.0	3	10.0	
	>30 minutes	-	-	-	-	

***p<0.001, S – Significant, N.S – Not Significant

The above table 11 shows that the demographic variable labour progress had shown statistically high significant association with newborn activity in the experimental group at p<0.001 level and the other demographic variables had not shown statistically significant association with newborn activity in the experimental group.

CHAPTER-V
DISCUSSION

This chapter deals with the discussion of A STUDY TO ASSESS THE EFFECTIVENESS OF EARLY SUCKLING ON MATERNAL AND NEONATAL OUTCOME DURING THIRD STAGE OF LABOUR AT DMM HOSPITAL, CHENNAI.

The findings of this study has revealed that early suckling has improved the maternal and neonatal outcome..

DESCRIPTION OF THE POPULATION

The sample comprises of 60 labouring mothers, Among the 30 in experimental group , majority of 14(46.67%) were aged between 26 – 30 years. In the control group majority of 22(73.33%) were aged between 26 – 30 years. Considering the educational status of the mothers in the experimental group, majority of 12(40%) had secondary level education. In the control group, majority of 16(53.33%) had secondary level education.

The religion of the mothers in the experimental group, majority of 19(63.33%) were Christians and in the control group majority of 19(63.33%) were Christians.

The family type in the experimental group, majority of 15(50%) were from nuclear and joint family respectively whereas in the control group, majority 20(66.67%) were from joint family.

Considering the monthly income of the family in the experimental group, majority 19(63.33%) were earning between Rs.5001 – 8000 where as in the control group, majority 10(63.33%) were earning Rs.8001 and above.

The occupation in the experimental group, majority of 15(50%) were employed as well as unemployed whereas in the control group, majority 20(66.67%) were unemployed.

Habitant in the experimental group, majority 21(70%) were from urban area and in the control group, majority 15(50%) were from sub urban area.

The parity of women in the experimental group, majority of 27(90%) from primi parity and in the control group majority of 20(66.67%) were primi para mothers. HB level in the experimental group, majority 17(56.67%) had <10mg dl of HB and in the control group majority 19(63.33%) had an HB level of 10 – 13 mg/dl.

Bad obstetrical history of women in the experimental group, majority of 27(90%) were primi para mothers so it is not applicable and in the control group, majority 18(60%) were primi para mothers so it is not applicable.

Considering the labour progress of women in the experimental group, majority of 29(96.67%) had spontaneous labour progress with minimal aid and in the control group majority 29(96.67%) had spontaneous labour progress with minimal aid.

Total duration of first stage of labour in the experimental group, majority of 20(66.67%) were <10 hours and in the control group majority of 20(66.67%) were between 10–14 hours.Regarding the total duration of second stage of labour in the

experimental group, almost all 30(100%) were between 15–30 minutes and in the control group almost all 30(100%) were between 15 – 30 minutes.

THE DISCUSSION IS BASED ON THE OBJECTIVES

The first objective was to assess the maternal outcome in experimental and control group mothers.

In the experimental group,

Estimated blood loss during third stage of labour majority of 29(96.67%) were <400ml , with respect to placental separation majority of 27(90%) were <10 min, and delivery of placenta majority of 27(90%) were spontaneous, expulsion of placenta majority of 30(100%) were complete, In estimated blood loss during fourth stage of labour majority 30(100%) were between 200 – 300 ml.

In the control group,

In estimated blood loss during third stage of labour majority of 20(66.67%) were between 401 – 501ml, In the placental separation majority of 22(73.33%) were between 11 – 15 minutes, In delivery of placenta majority 19(63.33%) were spontaneous, and expulsion of placenta majority of 30(100%) were complete, estimated blood loss during fourth stage of labour majority of 30(100%) were between 301 – 400 ml.

Annemarie Colbin (2002) explained that putting the baby to the mother breast soon after the birth is a most sensible and realistic way through breast crawl method to initiate suckling which helps in contraction of uterus more strongly thereby it completes

the process of placenta separation from uterine wall and increase in by early separation of placenta and its membrane.

The second objective was to assess the neonatal outcome in experimental and control group newborns.

In the experimental group,

In the suckling pattern, majority 30(100%) were effectively sucking >5 minutes

In the cry pattern, majority of 30(100%) were not crying and takes feed without disturb

Regarding newborn body temperature, majority of 26(96.67%) were between 95 – 86 degree Fahrenheit

In the bonding, majority of 23(76.67%) mothers exhibiting verbal communication

Considering the activity of the neonate, majority 27(90%) had good flexion of extension during feeding with suckling sound

In the control group,

With respect to sucking pattern majority 23(76.67%) sucks for 2 – 4 minutes.

Considering the cry pattern, majority 25(83.33%) were reluctant to food and were crying.

Regarding newborn body temperature, majority 25(83.33%) were between 94 – 94.9 degree Fahrenheit.

In the bonding, majority of 18(60%) were not communicating verbally.

Considering the activity of the neonate, majority 25(83.33%) were weak and were making less movements while feeding.

The third objective to determine the effectiveness of early suckling on maternal and neonatal outcome between the experimental and control group

Maternal outcome

In the experimental group post test mean score was 12.77 with S.D 0.68 and in the control group, the post test mean score was 9.83 with S.D 1.18. The calculated 't' value of 11.825 was statistically highly significant at $p<0.001$. This shows there is a significant difference between the post test level of maternal outcome between the experimental and control group. There by the hypothesis "There is significant difference in maternal and neonatal outcome with early suckling" is accepted

Neonatal outcome

The experimental group post test mean score was 12.50 with S.D 1.00 and in the control group, the post test mean score was 8.87 with S.D 1.14. The calculated 't' value of 13.096 was statistically highly significant at $p<0.001$. This shows there is a significant difference between the post test level of neonatal outcome between the experimental and control group. There by the hypothesis "There is significant difference in maternal and neonatal outcome with early suckling" is accepted

The fourth objective is to associate early suckling, maternal and neonatal outcome on selected demographic variables

Association of estimated blood loss at third stage of labour with demographic variables in the experimental group

None of the demographic variables had shown statistically significant association with the blood loss during third stage of labour in the experimental group.

Association of placental separation with demographic variables in the experimental group

The demographic variable total duration of second stage of labour had shown statistically significant association with placental separation in the experimental group at $p<0.01$ level and the other demographic variables had not shown statistically significant association with placental separation in the experimental group.

Association of delivery of placenta with demographic variables in the experimental group.

None of the demographic variables had shown statistically significant association with the delivery of placenta in the experimental group.

Association of newborn body temperature with demographic variables in the experimental group

The demographic variable labour progress had shown statistically significant association with newborn body temperature in the experimental group at $p<0.01$ level and the other demographic variables had not shown statistically significant association with newborn body temperature in the experimental group.

Association of bonding with demographic variables in the experimental group.

Neonatal bonding is significant with haemoglobin level of the mother at**$p<0.01$ level.,

Association of activity with demographic variables in the experimental group.

The demographic variable labour progress had shown statistically high significant association with newborn activity in the experimental group at $p<0.001$ level and the other demographic variables had not shown statistically significant association with newborn activity in the experimental group.

CHAPTER-VI
SUMMARY, FINDINGS AND RECOMMENDATION

SUMMARY OF THE STUDY

This chapter presents the summary implication and recommendation that would create a evidence based approach to the midwives and envelope nurse lead midwifery care. The study focused on effectiveness of early suckling on maternal and neonatal outcome. The study was conducted in the labour room of DMM hospital, Sowkarpet, Chennai. The Quasi experimental design was used for the study. The investigator adopted a directional hypothesis which states that mothers who received early suckling during labour will have significant difference in the maternal and neonatal outcome.

Related literatures enabled base for the study regarding early suckling and maternal and neonatal outcome. The conceptual model Widenbach's model of helping art theory was applied

Pilot study was done to confirm the feasibility of the study. Following prior permission from the hospital committee and verbal consent from the samples, data was collected. Observation technique was used for data collection. Observation from each mother was collected by the investigator, personally, by using a questionnaire which had two sections comprising of demographic variable maternal and neonatal outcome variables. The samples were identified by convenient sampling technique and a post test was conducted during third stage of labour. Based on the objectives, the data was analysed by descriptive and inferential statistics.

MAJOR FINDINGS

- In the experimental group mothers majority of 22 (73.33%) were between the age group of 26 to 30 years, and majority of 29 (96.67%) were had spontaneous Labour progress with minimal aid. Regarding second stage of Labour, experimental and Control group mothers, all the 60 mothers (100%) were got the duration of (15 to30) minutes.

- In the experimental Group majority of 30 (100%) of the all the newborns were effectively suckling without disturb. And majority of 27 (90%) of the newborns were maintaining good flexion. Regarding body temperature in majority of 25 (86.67%) of the newborns were maintaining 95^{O} to 96^{O}f

- There is a significant difference between the post test level of maternal outcome between the experimental and control group at $p<0.001$ level (t value = 11.825***)

- There is a significant difference between the post test level of neonatal outcome between the experimental and control group at $p<0.001$ level (t value = 13.096***)

- Total duration of second stage of labour had shown statistically significant association with placental separation at $p<0.01$ level

- Labour progress had shown statistically significant association with newborn body temperature in the experimental group at $p<0.01$ level

- ❖ Neonatal bonding is significant with hemoglobin level of the mother, at $p<0.01$ level

NURSING IMPLICATIONS

The nurse midwives can play an important role in initiation of early suckling, Since this method is cost effective and highly possible resource this method must be initiated by nurses to provide the mother and newborn with numerous benefits of the nature.

NURSING EDUCATION

Though initiation of early suckling is in the theory it is not practiced, this is the right time to include non-pharmacological techniques like early suckling in the nursing curriculum which equip the nursing students with the necessary skills in teaching the same to the other.

NURSING SERVICE

Midwives should take privilege to make the labour process as natural and enhance early suckling and reduce unnecessary oxytocin usage. Early suckling during labour performs to be one of the future midwife-led care models. This policy should be inculcated among all the midwifery staff and students. In service education programme should be conducted for the midwive on the various benefits of early suckling.

NURSING ADMINISTRATION

Nurse administrators should motivate the midwives to give importance to early suckling to improve the maternal and neonatal well being. Early suckling is a simple

cost effective method to steer up the physical and emotional well being of the mother. Nurse administrators should facilitates evidence based practice in relation with early suckling.

NURSING RESEARCH

Initiation of early suckling is fast outweighing the concept of non-pharmacological as well as simple method which can be effectively carried out by midwives. As a nurse researcher we should take privilege to motivate the nurses in initiating early suckling which yields numerous benefits to mother and newborn.

RECOMMENDATIONS

- Same study can be done including the effect of early suckling on milk secretion during postnatal period.
- Comparative study can be done between nipple stimulation technique and early suckling.
- This study can be done in any one particular independent variable in increasing sample.

BIBLIOGRAPHY

BOOKS:

1) Basavanthappa, B.T. (1998) ***Nursing Research*** (1st ed.) Banglore. Jay pee brothers page no:296.

2) Bennet, V.R. & Brown L.K. (1997), ***Myles Text Book for Midwives*** (13th ed.) Philadelphia : ELBS Churchill livings tone pageno 452.

3) Burns.S. (1993). ***The practice of Nursing Research*** (4th ed.) Philadelphia: W.B. saunders company page no 283.

4) Burroughs, A., & Gloria. L, (2001) ***Maternity Nursing - An introductory Text*** (8th ed.) Philadelphia.: W.B. Sunders Company page no 240.

5) Dutta D.C. (2004) ***Text books of obstetrics including perinatology and contraception.*** (6th ed.) Calcutta : New central Book Agency (p) Ltd page no498.

6) Gupta. S.P.(2000). ***Statistical Method*** (5th ed.) New Delhi : Sultan chand & sons page no 332.

7) Kothari. C.R.(2000). ***Research Methodology*** (2nd .ed) New Delhi: wishva prakasan page no 423.

8) Littleton L.Y. Engebreton. J.C.(2002). ***Maternal Neonatal and Women's Health Nursing*** Australia : Delmar, Thomson Learning page no 567.

9) Lowdermilk, perry S.E.., & Bobak I.M. (1999) ***Materinity Nursing*** (5th ed.) London : Mosby page no 644.

10) Maharban singh., (2000). ***Baby and child care*** New Delhi: Sagar Publications page no 375.

11) Neeson M. (1986) ***comprehensive Maternity Nursing Philadelphia*** J.B Lippincott company page no 382.

12) Nichols. F.H. (1997) Maternal New Born- ***Nursing Theory and Practice Philadelphia*** : W.B. Saundes Company page no433.

13) Pilliteri, A. (1999) ***Maternal Child Health Nursing*** (3rd ed.) Philadelphia. J.B. Lippincott Company page no391.

14) Polit, D.F., & Hungler, B.P. (1999) ***Nursing Research Principles and Methods***, (6th ed) Philadephia. Lippincott company page no 500.

15) Raile M.A. Marriner A.T. (1997) ***Nursing Theory***, ***Utilization and Application*** Philadelphia. Mosby page no 423.

16) Reeder, J.S. Martin & Koniak Grifftin, D. (1997) ***Maternity Nursing Family New Born and Women's Health care***, (18th ed.) Philadephia: Lippincott company page no 289.

17) Stone E. et. al., (2000) Maternal – ***child Nursing Philadelphia*** W.B. Saunders Company page no 342.

18) Thomson E.D. (1997) ***Introduction to Maternity and Paediatric Nursing*** (2nd ed.) Philadelphia : W.B. Saunders Company page no 576.

19) Tomany A.M. & Alligood, R.M. (2002) ***Nursing Theorists*** and their work (5th ed.) st Louis : mosby. Page no 443

JOURNALS

20) Arun Gupta, Mathur GP, Jagdish, C.S. (2006) World Health Assembly Recommends Exclusive Breastfeeding for just six months. ***Journal of the Indian Medical Association***, vol 1000 No-8, August page no 510-515

21) Dalailama. Cutler H.C. (2008). Breastfeeding. The 1st hour save one million babies. ***The nursing journal of India*** _ vol. XCVIII, No.-8,page no 223

22) Everett F.Magann, Grainger S.Lanneall, (2009), Third Stage of Labor. ***Journal of obstetrics and Gynecology*** clinics of North America_vol 32 page no. 323-332

23) Rafael P.E. (2010) Evidence Based Breast- feeding Promotion the Baby-Friendly Hospital Initiative. ***The Journal of Nutrition*** Vol 137, 484-487

24) Rinda John. (2005), Knowledge, Attitude and practice of employed mothers about Breastfeeding. ***The nursing Journal of India*** Vol. XCVI No.-4, April page no 85-86.

25) Swaran L. (2012) Breastfeeding practices among female Helath Functionaries. ***The Nursing journal of India*** Vol. 42 No.-8, August page no 185-186.

26) WHO/UNICEF (2012) statement Protecting, promoting and supporting breast feeding. ***The Nursing journal of India*** Vol. LXXXIV, No.05, page no 107-108.

ONLINE JOURNALS

27) Crenshaw Jeannette, Phyllis h.Kalus, Marshall Klaus (2012) No separation of mother and Baby with unlimited opportunity for Breast feeding. ***Journal of perinatal Education*** Vol. 13, 02, 35-41'

28) Dalailama. Cutler H.C. (2011). Breastfeeding : The 1st hour save one million babies. The Art of Happiness A Hand Book for Living. ***The Jouranal of India*** Vol II, Page No: 458

29) Ailek, Hundan G.Ali. C (2009) Does early Breastfeeding Decrease the duration of the Third- Stage of labor and enhance the infant Mother Interaction. ***Jurnoal of Obstetrics and Gynecology*** Department of Gynecology and obstetrics Vol 5, No-03.

30) Matthiesin Maternal Oxytocin, Nissen-e, Unvas-M (2009) Postpartum Maternal Oxytocin release by newborns effects of infant hand massage and suckling.

31) Mirian .H.Labbok (2009) effects of Breast feeding on the mother Pediatric Clinics of North America ***Journal of Pediadria*** Vol 1-26, 419-503.

32) Obstetrics and Midwifery guidelines. (2008) Intra partum partum care-management of the Third stage of labor. Clinical Guidelines

33) Tennekoon KH, Arulambalam PD, Karunayake EH, Seneviratne HR. (2000) Prolactin response to suckling during the early postpartum period, Asia ocenia ***Journal of obstetric Gynaccology***; Sept Vol 20, No-03, 311-319.

WEB REFERENCES

1) http;//emedicine.medscape.com/article/275304-overview

2) http;//login.medscape.com/login/sso/getlogin?urlcache=aHROcDovL3d3dy5tZWRY2FWZS5jb20vdmlld2FydGUvNTU4MTE5XzY=&ac=401

3) http://www.nursingcentre.com/prodev/ce_article.asp?tid=1054744

4) http://onlinelibrary.wiley.com/doi/10.1016/jmwh.2008.12.016/full

5) http:www.sciencedirect.com/science/article/pii/0020729294903034

UNPUBLISHED THESIS

1) Anju.P. (2002) A study to assess the effect of suckling management on selected physiological outcome during the third stage of labour at selected maternuity centers Combatore. Unpublished master of Nursing Thesis, Tamil Nadu Dr.M.G.R. Medical University, Chennai.

2) Sunsan… (1998) Effectiveness of early suckling on physiological out come of third stage of labour at selected maternity center, Chennai. Unpublished master of nursing Thesis, Tamil Nadu Dr.M.G.R. Medical University, Chennai.