EFFECTIVENESS OF VIRTUAL NEWBORN CARE UPON KNOWLEDGE

AND PRACTICE AMONG PRIMIPARA MOTHERS

By

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A DISSERTATION SUBMITTED TO THE TAMILNADU DR.M.G.R MEDICAL

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DECLARATION

I hereby declare that the present dissertation entitled "**Effectiveness of Virtual Newborn care upon knowledge and practice among primipara 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, and **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 any way, the basis for the award of any degree or diploma in this university or any other universities.

M.Sc., (N) II Year

ACKNOWLEDGEMENT

SYNOPSIS

An Experimental Study to Assess the Effectiveness of Virtual Newborn Care Upon Knowledge and Practice among Primipara Mothers at Selected Hospitals, Chennai.

The Objectives of the Study were,

1. To assess the level of knowledge and practice on newborn care among primipara mothers.

2. To determine the effectiveness of virtual newborn care upon knowledge and practice among primipara mothers.

3. To determine the association between selected demographic variables and level of knowledge and practice before and after virtual newborn care among primipara mothers.

4. To determine the association between selected obstetric variables and level of knowledge and practice before and after virtual newborn care among primipara mothers

5. To assess the level of satisfaction on virtual newborn care among the experimental group of primipara mothers.

The conceptual framework set up for the study was based on modified model of Jean Ball Deck Chair Theory (1987) to assess knowledge and practice among primipara mothers upon virtual newborn care. An experimental study of pre-test and post-test design was used. The present study was conducted at Andhra Mahila Sabha Hospital, Chennai. The study included 60 primipara mothers who were selected by simple random sampling. The variables of the study were virtual newborn care, knowledge and practice. Null hypothesis were formulated.

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, observational checklist for Newborn care practice and satisfaction rating scale on Virtual newborn care. The validity was obtained from various experts and reliability was established. The main study was conducted after the pilot study.

The level of knowledge and practice of virtual newborn care were assessed for the control and experimental group of primipara mothers. The Virtual newborn care of ten minutes duration was provided for the experimental group. Then the level of knowledge and practice of virtual newborn care were assessed again after 7 days for both the groups. The level of satisfaction on Virtual newborn care among the experimental group of primipara 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 primipara mothers were aged 21 -25years (67%, 67%), Hindus (70%, 77%), having secondary education (67%, 56.6%), belonging to joint family (77%, 70%) and their source of information regarding newborn care was from family members (53%, 63.3%). Most of the mothers had a family income < 15000 rupees (70%, 66.6%) in control and experimental group respectively.

➢ Majority of primipara mothers had undergone regular antenatal check-up (100%, 100%), delivered through normal vaginal delivery (87%, 73.3%) male and female newborns in control group with (63%, 37%) whereas in experimental

group it was (37%, 43%). All the mothers breast fed their newborns (100%, 100%) and they had good sucking behaviour (100%, 100%) in control and experimental group of mothers. Breast feeding was initiated immediately after birth in (10%) of newborns and after half an hour in (90%).Most of the mothers did not develop any post natal complications (100%, 100%).

➢ Majority of the primipara mothers had inadequate knowledge (100%, 90%) before intervention in the control and experimental group and all of them had adequate knowledge (100%) after intervention in the experimental group. Hence null hypothesis Ho1 was rejected.

➢ The mean knowledge level was slightly high in the post test (M=5.06, SD=1.59) when compared to pretest (M=4, SD=1.22) in the control group where as the mean level of knowledge was significantly high in post test (M=19.00, SD=0.826) when compared to pretest (M=4.8, SD=1.67) in the experimental group.

➢ Majority of the primipara mothers in pretest had poor practice with regard to newborn care practice (100%, 100%) in the control and experimental group. After the intervention, the newborn care practice was good (100%) in experimental group. Hence null hypothesis Ho1 was rejected.

➢ The mean score of practice in the experimental group was high after intervention (M=23.1, SD=0.932) in comparison with before intervention (M=2.7, SD=1.208). Whereas in the control group there was only a minimal increase in the score of newborn care practice (M=4.0, SD=1.28) after intervention in comparison with before intervention (M=2.43, SD=0).

- There was a significant association between age in years, religion, occupation and source of information with level of knowledge of virtual newborn care among the control group of primipara mothers. Hence null hypothesis $H_0 2$ was rejected.

- There was a significant association between age in years, religion, occupation and source of information with level of knowledge of virtual newborn care in experimental group of primipara mothers. Hence the null hypothesis $H_0 2$ was rejected.

- There was a significant association between age in years, religion, occupation and source of information and practice in control group of primi para mothers. Hence null hypothesis Ho2was rejected.

- There was no significant association between age in years, religion, occupation and source of information and practice in experimental group of primipara mothers. Hence null hypothesis Ho2was retained.

- There was no significant association between birth weight, mode of delivery, any complication during labour, initiation of breast feeding and sex of the baby with level of knowledge of virtual newborn care in control group of primipara mothers. Hence null hypothesis $H_0 3$ was retained.

- There was a significant association between birth weight, mode of delivery, any complication during labour, initiation of breast feeding and sex of the baby with level of knowledge of virtual newborn care in experimental group of primipara mothers. Hence null hypothesis $H_0 3$ was rejected.

- There is no significant association between birth weight, mode of delivery, any complication during labour, initiation of breast feeding and sex of the baby and

practice in control group of primipara mothers. Hence null hypothesis Ho3 was retained.

➢ There was a significant association between birth weight, mode of delivery, any complication during labour, initiation of breast feeding and sex of the baby and practice in experimental group of primipara mothers. Hence null hypothesis Ho3 was rejected.

➢ All the participants in the experimental group were satisfied (100%) with virtual newborn care intervention.

Recommendations

➢ The same study can be conducted with large number of samples.

➢ A comparison can be made between primi and multi gravida.

➢ A comparison can be made with different states.

➢ 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

Background of the study

"A baby is God's way of saying the world should go on''

- Doris smith

New born care refers to the essential care provided to the new born baby by the mother or by the care provider on breast feeding, maintaining body temperature, cares of the cord, care of the eyes, and prevention of infection and injuries. The first week after birth is a time of major metabolic and physiological adaptation for newborn infants. The early life all new born try to adapt to the external environment. It is very difficult to adapt. They need special care and need intensive monitoring and support during this critical period of adaptation.

In the human lifespan, an individual faces the greatest risk of mortality during birth and the first 28 days of life the neonatal period. Each year, nearly four million newborns die during this period – equivalent to around 10,000 per day. Three quarters of these deaths take place within one week of birth, and one to two million die during the first day following birth. Most of these deaths occur at home are unrecorded and remain invisible to all but their families. Millions more suffer severe illness each year, and an unknown numbers are affected with lifelong disabilities.

A child's risk of death is nearly 15 times greater in the first month of life than at any other time during the first year of life. Almost 12,000 of the 350,000 babies born each day die within their first month, and 98 percent of those deaths occur in developing countries.

The knowledge of care of newborn is essential for a primipara mother. She has to prepare herself for proper care of the newborn. The care of newborn begins with bathing, clothing, feeding, positioning and care of umbilical cord of the baby etc. The mothers need to be well versed with it for proper handling of the baby.

The period from birth to 28 days of life is called neonatal period and the infant in this period is termed as neonate or newborn baby. The healthy newborn at term, between 38 to 42 weeks, cries immediately after birth, establishes independent rhythmic respiration, quickly adapts with extra uterine environment.

Essential care of the normal healthy newborn can be best provided by mothers. Almost 80 percent of the newborn babies require minimal care. The normal term baby should be kept with their mothers rather than in a separate nursery. Bedding-in or rooming-in promotes emotional bondage, prevents cross-infection and establishes breastfeeding easily. Mother participates in the nursing care of the baby and develops self-confidence in her.

The major goal of newborn care is to establish homeostasis (i.e. stability in the normal physiological status). Continuous care has to be provided immediately following birth, in the transition period and during the neonatal period. This care is performed involving mother and family members. Majority of the complications of the normal neonates may occur during first 24 hours or within 7 days. So close observations and daily essential routine care is important for health and survival of newborn baby.

Need for the Study

Motherhood can be defined as "the biological process of giving birth" to exercising control over responsibility for one's young. The important task of motherhood is to fulfil the physical, emotional, social, intellectual and moral needs of children. There is no doubt that a mother plays an important role in this regard.

The birth of the child is significant to any family. The health and survival of the newborn baby depends upon the health status of the mother and her awareness, education and skill in newborn care. Across the human lifespan an individual faces the greatest risk of mortality during the birth and the first 28 days of life – the neonatal period. Most of this occurs at home. Each year about 4 million newborn die before 4 weeks old and half of them die within first 24 hours .In India Sample registration system estimates neonatal mortality for the year 2006 is about 28 per 1000 live birth in early neonatal period (0-7 days), with about 32 for rural areas and 16 for urban areas. Neonatal mortality in the whole country is about 37 per 1000 live birth.

The nation will be shaped and moulded into a healthier and a stronger one, if its children are strong and healthy. One of the most newborn problems occur due to inadequate care during the antenatal period and during labour. Inadequate care immediately after birth and inadequate care of LBW infants within the first 48 hours contribute to the rest. Although a significant proportion of women would be categorized as high-risk and identified for institutional delivery, yet over 75% of all births take place in the community and mostly in the hands of unskilled birth attendants with little postpartum care to either the mother or the newborn. Clearly, the intervention package must focus not only on the newborn alone but treat the mother–baby as one.

Many a times the cultural practices may also cause problems. The practices like bathing the newborn soon after birth may cause a change in the thermoregulation of the baby. It is essential for the mother and others to know about the time of bathing for regulating thermoregulation. Many mothers do not know the essentialities of skin to skin care i.e. Kangaroo Mother Care. It also plays a very important role in maintaining the thermoregulation of the baby. The baby is more attached to his/her parents. This teaching is very essential.

In India the mortality rate in the age group of 0–28 days is about 39/1000 live-births, 1–12 months about 30/1000 live-births and 1–5 years about 26/1000 live-births. Thus, the ratio of neonatal death rate to 1–5-year death rate is about 1.3. In contrast, in most developed countries the ratio is over 10. Thus, efforts are under way to reduce neonatal mortality in India, by introducing information, education and communication programme.

A review of ages at death during the first 28 days reveals that two-thirds of deaths occur in the first week of life and two-thirds of these within the first 2 days of life (Baseline surveys of Multi-centric Home based Intervention project of the Indian Council of Medical Research [ICMR]. Thus, almost 45% of neonatal deaths take place within 48 hours of birth. The major causes of death during this period are birth asphyxia and trauma, problems related to low birth weight (such as hypothermia, respiratory problems, feeding and peripartum infections) and malformations.

A study in Uttar Pradesh (2002), India demonstrated a 50 percent decline in neonatal mortality through raising awareness in the community of such simple survival

strategies as cleaning, drying and warming the newborn, skin-to-skin contact with the mother, and exclusive breastfeeding for the first six months.

A household survey was conducted in Lrigoyen, (2007) to know newborn care practices in rural Egypt during the first weeks of life. The result showed that nearly half (43%) of the mothers reported that they did not wash their hands before neonatal care and only 7% washed hands after changing diaper. Thermal control was not practiced, although mothers perceived 22% of newborns to be hypothermic. The practices observed which are critical for newborn survival could be improved with minor modifications.

All these studies have shown that, most primipara mothers lack the knowledge on newborn care so teaching to primipara mothers about newborn care is essential. In present world media plays an important role. People find it easy to see and learn rather than only to read information.Video assisted teaching about newborn care may contribute to greater care, knowledge and maternal confidence.

Hence the investigator finds it is essential to give a video assisted teaching programme to primipara mothers regarding newborn care. Thus to improve the overall quality of life and to reduce the infant mortality rate it is essential to improve the new born care. Education for this should be given to the mother at the postnatal period for proper care of the baby.

Two third of the baby's in our country are born at home and are at higher risk of developing sepsis. Babies born in hospital may also develop infection at home after discharge from the hospital. The commonest sources of infection in the community are

unhygienic practice during delivery at home which include delivery in dark dirty room, cord cut with any available sharp instrument and the baby wrapped in old dirty cloths and other practices that increase the risk of infection include harmful applications to the cord, discarding colostrums and use of pre lacteal feeds numerous visitors, who could be carries of infection are another source of infection for the babies. Unhygienic practices at birth are also responsible for infections and deaths both of the baby and mother. The introduction of five cleans at delivery which include clean surface, clean hands, clean blade, clean cord tie and clean cloths have contributed to the reduction of neonatal infections.

Due to the unhygienic practice where cutting the umbilical cord improper observation about bleeding and the cord may lead to neonatal complications like neonatal tetanus and neonatal septicemia. Neonatal tetanus due to application of animal dung to the umbilical stump after delivery may cause increase the infant mortality rate. Untreated neonatal sepsis is life threatening and therefore its early identification and treatment is essential.

The proportion babies who are breast fed is high in all regions of the world but there are wide variations in the duration of breast, feeding, sub-optimal breast feeding practice are still the norm in most countries, failure to give newborn infants colostrums is a common example of bad practice, lack of exclusive breast-feeding substantially increase the risk of poor newborn and childhood outcome.

Neonatal care is not available to most neonates in developing countries because hospital care is costly, "so there is a need of home based delivery and neonatal care". The neonatal care needs even more special attention because births taking place in

home, in unhygienic conditions, due to ignorance, poverty and illiteracy among rural women. Promoting health at home and within the wider community plays and essential part in the reduction of children's morbidity and mortality rate. WHO'S report states that integrated approach, good feeding practice, immunization, improved hygiene and the healthy development of children will help to reduce the child mortality rates. So investigators felt that it is necessary, to conduct study on primipara mothers, knowledge, practice care related to essential news born care.

Statement of the Problem

An Experimental Study to Assess the Effectiveness of Virtual Newborn Care Upon Knowledge and Practice among Primipara Mothers at Selected Hospitals, Chennai.

Objectives of the Study

1. To assess the level of knowledge and practice on newborn care among primipara mothers.
2. To determine the effectiveness of virtual newborn care upon knowledge and practice among primipara mothers.
3. To determine the association between selected demographic variables and level of knowledge and practice before and after virtual newborn care among primipara mothers.
4. To determine the association between selected obstetric variables and level of knowledge and practice before and after virtual newborn care among primipara mothers.

5. To assess the level of satisfaction on virtual newborn care among the experimental group of primipara mothers.

Operational Definitions

Effectiveness

In this study the effectiveness refers to the outcome of virtual newborn care as measured in terms of knowledge and practice before and after the virtual newborn care among primipara mothers using structured interview schedule and observational checklist respectively which is developed by the researcher.

Virtual newborn care

In this study it refers to the systematically prepared video on virtual new born care with the components of thermoregulation, hygienic practice, breast feeding, promotion of growth and development, prevention of infection and immunization which was given for ten minutes. The teaching was given in English and Tamil language to each primipara mothers in the experimental group individually.

Knowledge

In this study it refers to appropriate response from primipara mothers on new born care assessed by self administered questionnaire before and after the virtual newborn care.

New born care

In this study it includes bathing, breastfeeding, immunization, cord care, eye care, skin care, mummifying the baby, Kangaroo mother care (KMC) in virtual newborn care instructed to the primipara mothers.

Primipara

In this study it refers to mothers who have delivered for the first time**.**

Newborn

In this study it refers to just born babies before 28 days who are delivered by primipara mothers at Andhra Mahila Sabha

Practice

In this study it refers to the appropriate activities of primipara mothers caring for newborn.

Assumptions

➢ Primipara mothers have inadequate knowledge on essential new born care.

➢ Virtual newborn care is an accepted method of teaching.

➢ Virtual newborn care can improve the knowledge of mothers regarding new born care.

➢ It is assumed that primipara mother's responses to the interview schedule items will reflect their actual knowledge about newborn care.

Null hypothesis

H_O1 There will be no significant difference between pre-test and post-test knowledge and practice on newborn care among primipara mothers.

Ho2   There will be no significant association between selected demographic variables and level of knowledge and practice before and after virtual newborn care among primipara mothers.

H$_O$3   There will be no significant association between selected obstetric variables and level of knowledge and practice before and after the virtual newborn care among primipara mothers.

Delimitation

This study was delimited to

- Primipara mothers.
- Four weeks.
- Primipara mothers with inadequate knowledge and practice on newborn care.
- Primipara mothers those who are willing to participate in the study.

Conceptual Frame Work of the Study

A conceptual frame work is a group of concepts and asset of propositions that spell out the relationship between them. The overall purpose is to make scientific findings meaningful and generalized (polit and Hungler 2007).

The conceptual study for a particular study is the abstract logical structure that enables the researcher to link knowledge and practice of virtual new born care. The model gives the direction for planning research design, data collection and interpretation of findings. A conceptual framework deals with interested concepts on abstractions that are assembled together in some rational scheme by virtue of their relevance to a common (Polit and Hungler 2007).

The researcher adopted Jean Ball Deck Chair Theory (1987) to assess knowledge and practice among primipara mothers upon virtual newborn care. It

imposes a demand for Virtual newborn care and she judges that Virtual newborn care may improve knowledge and practice of primipara mothers. Finally she takes the action on actual development on Virtual newborn care.

Jean Ball Deck Chair Theory is used as a conceptual frame work to describe the relationship and focus of the study. It includes 3 elements of the deck chair as follows,

- ➢ The base of the chair is formed by virtual newborn care.
- ➢ The side-strut of the chair is primipara mother's personality, life experiences and so on. The central strut her family and support system.
- ➢ The seat of the chair is the assessment of knowledge and practice of virtual new born care.

Base:

The base of the chair forms virtual newborn care with the components of thermoregulation, hygienic practice, breast feeding, promotion of growth and development, prevention of infection and immunization .With the professional team, the researcher frames the virtual newborn care. The researcher frames the basic needs and evaluates the primipara mothers satisfaction and their outcome with timely framed actions.

Side – strut:

The side-strut of the chair is the woman's personality, life experiences and so on. The mother's personality includes introvert and extrovert has their different behavior and emotional responses. The central strut her family and support system. Life experiences of the mother may be obtained from their sisters, neighbours, family

members and from media. The personality, experiences can make a difference in the level of knowledge and practice of newborn care among primipara mother's.

Seat:

The seat of the chair virtual newborn care which includes the knowledge and practice of primipara mothers. To identify the primipara mother's knowledge and practice of newborn care.

PRETEST → **INTERVENTION** → **POST TEST**

PERSONALITY OF MOTHERS

VIRTUAL NEWBORN CARE IMPROVES KNOWLEDGE AND PRACTICE AMONG PRIMIPARA MOTHERS

LIFE EXPERINCES PERCIEVED FROM MEDIA

NEIGHBOURS

FAMILY, PEERS

HEALTH CARE PERSONNEL
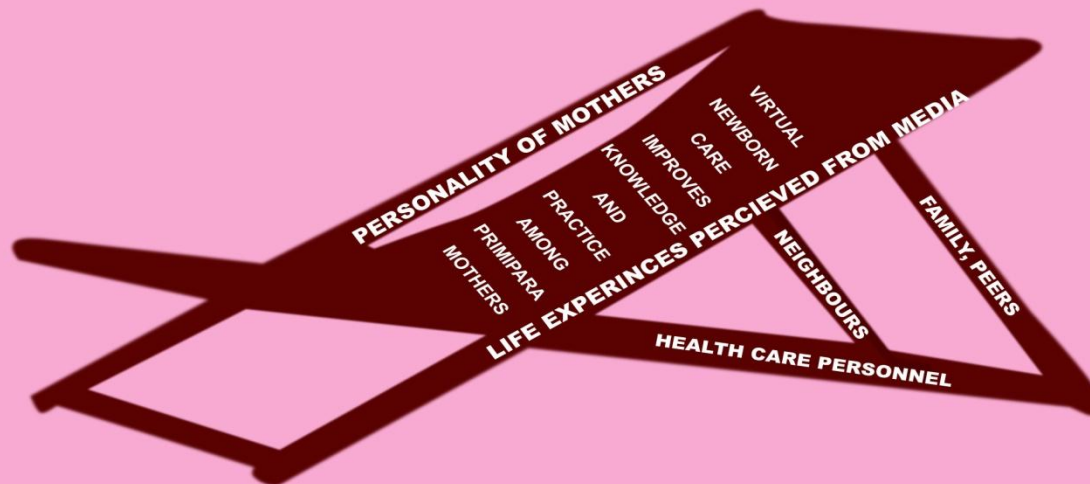
VIRTUAL NEWBORN CARE INCLUDES THERMOREGULATION, PREVENTION OF INFECTION, BREAST FEEDING, IMMUNIZATION & HYGIENE

ASSESSMENT OF KNOWLEDGE & PRACTICE UPON VIRTUAL NEWBORN CARE AMONG PRIMIPARA MOTHERS
* DEMOGRAPHIC VARIABLE PROFORMA
* OBSTETRIC VARIABLE PROFORMA
* STRUCTURED INTERVIEW FOR KNOWLEDGE SCHEDULE
* OBSERVATIONAL CHECKLIST FOR PRACTICE
* SATISFACTION RATING SCALE

EXPERIMENTAL GROUP → VIRTUAL NEWBORN CARE → ADEQUATE KNOWLEDGE AND GOOD PRACTICE

CONTROL GROUP → NO INTERVENTION → INADEQUATE KNOWLEDGE AND MODERATE KNOWLEDGE AND POORLY PRACTICE

FIG.1 CONCEPTUAL FRAMEWORK BASED ON JEAN BALL DECK CHAIR THEORY (1987)

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Projected outcome

This study will be useful for the primipara mothers to gain adequate knowledge and practice on new born care. In turn it will improve quality of newborn care. The intervention is affordable and easy to administer.

Summary

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

Organization of the Report

Further aspects of the study are presented in the following chapters.

In chapter II	:	Review of literature.
In chapter II	:	Research methodology which includes research approach, research design, setting, population, sample, sampling technique, tools used in the study, data collection procedure and plan for data analysis.
In chapter IV	:	Analysis and interpretation of data.
In chapter V	:	Discussion.
In chapter VI	:	Summary, conclusion, implications, recommendations and limitations.

CHAPTER II

REVIEW OF LITERATURE

Review of literature is an essential component of the research process. It is a critical examination of publications related to a topic of interest. Review of literature helps to plan and conduct the study in a systematic manner.

This chapter deals with the review of published and unpublished research studies from related material for the present study. The review helped the investigator to develop an insight in the problem area (Polit &Hungler 2008).

In the present study literature is reviewed and organized under six broad headings.

- **Literature related to Newborn care**
- **Literature related to knowledge and practice on newborn care**
- **Literature related to Prevention of hypothermia**
- **Literature related to Establishment of breast feeding**
- **Literature related to Prevention of infection**
- **Literature related to Virtual teaching programme on newborn care**

Literature related to Newborn care

A study was conducted by Blossom (2007) to assess the effectiveness of medicated cord care with that of dry cord care on newborn. 30 newborns were selected for the study. This study revealed that cord care is very important in preventing infections and thus reducing mortality.

WHO Annual report 2007 shows that the target set in 1988 to complete polio eradication in India by the year 2000.But it has not yet been achieved even in the first quarter of 2008.The report also stresses the need to create more awareness regarding universal immunization programme among Indian parents.

A quasi-experimental study was conducted by Jang (2002) on effects of breast-feeding education and support services on Breast-feeding rates and infant's growth. The participants were 39 mothers who were hospitalized for childbirth. Twenty mothers were assigned to the experimental group and 19 mothers, to the control group. The result indicates that the experimental group has a statistically significant higher rate for frequency of breast-feeding at one, three and six months after childbirth than the control group. However, there was no meaningful difference between the two groups for infant growth.

A cross-sectional study conducted by Baker in (1998) on Inequalities in immunization and breast feeding in an ethnically diverse urban area. The results showed that Black or black British infants had the highest rates of breast feeding at 2 weeks post partum. Within the white ethnic group, lower percentages of immunization and breast feeding were significantly associated with living in a deprived area and with increasing parity. Practices that are protective of child health were consistently less likely to be adopted by white mothers living in deprived areas.

Literature related to Knowledge and practice of Newborn care

A experimental study was conducted by Sari (1995) on the effect of Skin-to-Skin contact (Kangaroo Care) shortly after birth on the Neurobehavioral Responses of

the term Newborn. The method used to control the trial using a table of random numbers. After consent, the mothers were assigned to 1 of 2 groups: Kangaroo Care (KC) shortly after delivery or a no-treatment standard care. 47 healthy mother-infant pairs. KC began at 15 to 20 minutes after delivery and lasted for 1 hour. The result indicated that during a 1-hour-long observation, starting at 4 hours postnatal, the KC infants slept longer, were mostly in a quiet sleep state, exhibited more flexor movements and postures, and showed less extensor movements. KC seems to influence state organization and motor system modulation of the newborn infant shortly after delivery.

Literature related to knowledge and practice on newborn care

A descriptive study was conducted by Baqui in (2007) to assess the knowledge of mothers regarding newborn care in rural Uttar Pradesh. The objective of the study was to describe selected new born care practices related to cord care, thermal care, and breast feeding. The survey included 13,167 women who had live birth. Logistic regression was used in this study. This study concluded that mothers had less skill in newborn care and new born care practices, counselling and teaching strategy is essential for mothers. In addition, nurses are a great resource to show the mothers how to hold, burp, change, and care of the newborn.

A descriptive study was conducted by Dr.Chaudhuri (2000) regarding knowledge and attitude of rural mothers on breastfeeding and weaning in Bangladesh. The result indicated that most mothers did not have correct knowledge about exclusive breastfeeding and the appropriate time for introduction of weaning foods, and only three percentage of them knew how to prepare proper weaning foods.

A study was conducted by Vani in (1996) regarding knowledge and practice of health professionals in seven countries on Thermal control of newborn. The method used an evaluation of the knowledge and practices of health professionals on the thermal control of newborns was carried out in seven countries: Brazil, India, Indonesia, Kazakhstan, Mozambique, Nepal and Zimbabwe. The evaluation, conceived as a preliminary phase for a one-day training course on thermal control. The findings of the evaluation were consistent across countries and showed that thermal control practices were frequently inadequate in the following areas: ensuring a warm environment at the time of delivery; initiation of breastfeeding and contact with mother; bathing; checking the baby's temperature; thermal protection of low birth weight babies, and care during transport. Knowledge on thermal control was also insufficient, especially concerning the physiology of thermoregulation and criteria for defining hypothermia.

Literature related to prevention of hypothermia

A study was conducted by Galligaman (2006) on Skin to skin treatment of neonatal hypothermia. This study showed that skin-to skin (STS) care also called kangaroo care, an intervention in which the unclothed diapered infant is place on the mother's bare chest, be used to promote thermo regulation instead of using separation and a warmer. The purpose of this study was to assess the mothers' knowledge and practices of basic newborn care given at home. The total sample included 55 primipara and multipara mothers with newborn babies. Interview questionnaire and observation checklists were designed to fulfil the aim of the study. The study revealed that mothers' knowledge and practices were within good and satisfactory average scores in most of the studied items related to newborn care giving at home except breast feeding.

Significant differences was found between primipara and multipara mothers for most of the studied topics ,practices were within good and satisfactory average scores in most of the studied items related to newborn care giving at home except breast feeding.

A study was conducted by Bergstron A,Byaruhanga R, Okong P (2005), The impact of newborn bathing on the prevalence of neonatal hypothermia in Uganda. The aim of the study was to elucidate the impact of bathing on the prevalence of hypothermia among newborn babies exposed to the skin to skin (STS) care technique before and after bathing. The results showed, bathing of newborns in the first hour after delivery resulted in a significantly increased prevalence of hypothermia. There was no neonatal mortality by this method they have concluded, bathing newborn baby's shortly after birth increased the risk of hypothermia despite the use of warm water and STS care for thermal protection of the newborn.

A comparative study was conducted by Behnke (2000) on the effect of timing of initial bath on newborns temperature. The study was conducted among 80 healthy full term newborns. 40 neonates were bathed at one hour of age and 40 bathed at 2 hours of age. There was no significant difference noted in temperature between two groups before the bath or at 10,20 or 60 minutes after bath. It shows that healthy full term newborns with auxiliary temperature > or = 36.8^0 C (98.2^0 F) can be bathed after one hour of age when appropriate care is taken to support thermal stability.

Literature related to Establishment of breast feeding

Carolin (2010), conducted a descriptive study in mothers with major difficulties in establishment of lactationin Qubec city 86 breast feeding mothers were selected by

random sampling method a semi structured interview was conducted. The result showed that painful nipples, painful breast, low milk supply, latching difficulties were the most frequent problems with establishment of breast feeding. The researcher concluded that the breast feeding clinics have a critical role to play in improving the breast feeding experience of women with major difficulties.

A descriptive study was conducted by Thompson (2009). To find out the impact of postpartum haemorrhage upon initiation and establishment of breast feeding in Australia. 206 participants were selected by the simple random sampling method. The result showed that among women with a significant postpartum haemorrhage, 63% fully breast fed their babies from birth where as 70% of women with postpartum haemorrhage breast fed fully in the first postpartum week, and 50% didn't breast feed fully. The study concluded that delayed early contact between mother and baby following a complicated birth like postpartum haemorrhage impact the mother's ability to successful breast feeding.

In St.Petersburg a randomized trial was conducted by Ksenia (2007).Early lactation performance in primiparous and multiparous women in relation to different maternity home practices. 153 mother infant pairs were selected by using a random sampling method and were divided into four groups, group I infants (n=37) was provided with skin to skin contact in the delivery ward while group II (n=40) were dressed and placed in their mothers arms group III infants (n=38) were placed in the delivery cot with no rooming in Group IV (n=38) were kept in the delivery ward nursery and later roomed in. Episodes of early suckling were noted. The result showed

that infants in group I established breast feeding effectively when compared with infants in group II, III and IV.

Impact of epidural analgesia upon establishment of breast feeding a prospective cohort study was conducted by Siranda (2006). By using random sampling method1280 women aged≥16 years were selected. The result showed that in the first week of postpartum 93% of women were either fully breast feed or partially breast feed their baby and 60% were continued breast feed for 24 weeks. Women who had epidural analgesia being more likely to stop breast feeding earlier than women who used non pharmacological methods of pain relief (95%). The researcher concluded that the addition of fentanyl to epidural analgesia during child birth results in difficulty in establishing breast feeding.

In 2006, Sue conducted a study on the effects of analgesia used in labour upon establishment and maintenance of breast feeding. 554 mothers who took analgesics during labour were selected by random sampling method. The result showed that both pethidine and epidural analgesia can increase the likelihood of breast feeding cessation. 72% of mothers who had no pharmacological analgesia were found to breast feed their infants for 24 weeks when compared with the mothers (53%) who received pethidine and (52%) who received epidural containing fentanyl and bupivacaine. The researcher concluded that the women receiving high dose of analgesics might be offered extra support to establish and maintain breast feeding.

Sujeeva 2006, conducted a prospective descriptive study upon the impact of nipple abnormalities in successful establishment of breast feeding in Srilanka. 956

mothers were recruited for the study among them 768 had normal breast and 188 had abnormalities in the breast. The result showed that (72.5%) established successful lactation. 80% had flat nipples among them 44% of nipples were corrected with exercise and established lactation. 9.8% of women with breast or nipple abnormalities failed to establish lactation.

In 2005, Selvaggi conducted a study on breast feeding and health promotion of child survey results in Molise region in Italian, the aim of this study was to compare initiation and duration rates of breast feeding in Molise region (Italy) to those targeted from world health organization (WHO) and to examine factors associated with infant health. They concluded although we meet WHO goals regarding breast feeding initiation, we don't know about breast feeding duration, yet. Moreover the leading factors negatively link to infant health, are not widely recognized. It is therefore necessary to promote the whole infant health either supporting predominantly breast feeding.

In 2004, Makanjoula conducted a study to assess the first six months growth and illness of exclusively and non exclusively breast fed infants in Nigeria. The objectives of the study was to compare the growth and illness pattern of infants who were exclusively breast feds for six months with those of infants commenced on complementary feeding before the age of six months and ascertain reasons for the early introduction of complementary feeding. They concluded that exclusive breast feeding supported adequate growth during the first six months of life for most of the infants studied. Early introduction of complementary foods did not provide any advantage in terms of weight gain in our environment; it was frequently associated with illness

episodes and growth faltering. Many mothers however require support, encouragement and access to health care providers to breast fed exclusively for the first six months of life.

In 1998, Gandhi conducted a study on maternal attitudes and trends in initiation of new born feeding in Hardinge Medical College, New Delhi, India. In this study 305 of the mothers were primipara and 297 multipara 95.01% of the mothers indicated inclinations about breast feeding 47.37% of the mothers who knew about breast feeding had been instructed by the doctors at some stage lastly the study was concluded that clearly, better health education is called for regarding the early initiation of breast feeding and the importance of the colostrums to new born weaning practices.

Literature related to prevention of infection

A study was conducted by Afroza in (2006) on neonatal sepsis; it is one of the major health problems throughout world. Every year an estimated 30 million new born acquire infection and 1-2 million of these die. The finding of the study showed that clean and safe delivery, early and exclusive breast feeding, strict postnatal cleanliness following adequate hand washing and aseptic techniques during invasive procedure might reduce the incidence of neonatal sepsis, prompt use of antibiotic according to standard policy is warranted to save the newborn lives from septicemia.

A study was conducted by Deshmukh (1999) on effect of home based neonatal care and management of sepsis on neonatal mortality in a field trail in rural India, neonatal care is not available to most neonates in developing countries because hospital are in access and costly. According to the data the base line mortality rate

(1993-95) was similar, and in the intervention and the control area was 62 and 58 per100 live births, respectively. In the third of intervention 93% of neonates received home based neonatal care, including management of sepsis, is acceptable, feasible, and reduced neonatal and infant mortality by nearly 50% among the malnourished, literatures, rural study population as per the research neonatal mortality can be reduced substantially in developing countries by applying this method.

A study was conducted by Odugbemi (1998) on bacterial eye infection in neonates, a prospective study in a neonatal unit. One hundred and fifty four neonates with conjunctivitis admitted into the neonatal unit at the Lagos University Teaching Hospital were microbiologically investigated. This was to determine the bacterial etiological agent(s) in neonatal eye infection and highlight some risk factors. The incidence of conjunctivitis in the newborn was 18 per 1000 live births. The study findings showed that the high incidence of bacterial eye infection should be minimized by the elimination of the risk factors and adaptation of stringent aseptic measures in the care of neonates.

Literature related to Virtual teaching programme on newborn care

A pre-experimental study without control was conducted by Shanthi (2009) on 50 primiparous mothers to assess the effectiveness of compact disc on knowledge and practice of neonatal care among primiparous mothers in Coimbatore, Tamil Nadu. A structured interview schedule and observation checklist were used to collect data before and after, and a compact disc (CD) on neonatal care teaching was used. The finding showed that mean post-test knowledge (39.78) of mothers was found to be significantly

higher than mean pre-test knowledge score (9.98) as evident from the 't' value $(t_{49}=37.3, p<0.05)$. This suggests the effectiveness of CD in increasing the knowledge of mothers.

Summary

This chapter has dealt with the review of literature related to the problem stated**.** The literature presented here were extracted from Medscape, Medline and Journal of Indian paediatrics. It includes 23 primary sources and 2secondary sources. It has helped the researcher to understand the impact of the problem under study. It has enabled the investigator to design the study, develop the tool, plan the data collection procedure, and to analyze the data.

CHAPTER III

RESEARCH METHODOLOGY

The methodology of the research study is defined as the way, the data was gathered and analyzed in order to answer the research questions or analyze the research problem. It enables the researcher to project the blue print of the research problem undertaken. The research methodology involves a systematic procedure by which the researcher starts from initial identification of the problem to find its final conclusion.

The present study was conducted to assess effectiveness of virtual newborn care among knowledge and practice upon primipara mothers. This chapter deals with a brief description of different steps undertaken by investigator for the study. It includes research approach, research design, the setting, population, the sample and sampling technique, development and description of tool, content validity, reliability, pilot study, protection of human rights and procedure for data collection 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 program and practice of policy are working. Its goals are to assess or to evaluate the success of the intervention. In this study the researcher wanted to assess the effectiveness of virtual newborn care upon knowledge and practice among primipara mothers. After reviewing various

literature 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 investigation of answering the research question .According to Polit and Hungler (2008), it is the overall plan or blue print to the researchers to select and to carry out the study. It helps the researcher in selection of subjects, manipulation of independent variables to be studied. In true experimental, one group experimental and one group control to assess the effectiveness of virtual newborn care upon knowledge and practice among primipara mothers at selected hospitals, Chennai.

$$R \quad O_1 - O_2$$

$$R \quad O_1 \ X \ O_2$$

O_1 - Pre-test on knowledge and practice of virtual Newborn care among primiparamothers

O_2 - Post-test on knowledge and practice of virtual Newborn care among primiparamothers

X - Virtual newborn care

R - Randomization of primipara mothers in control and experimental group

Variables

A variable is an attribute that varies, that is taken on different values (Polit 2010).

Dependent variable

The variable that is believed to cause or influence the dependent variable is called independent variable, Polit (2008). In this study dependent variable is knowledge and practice of essential newborn care among primipara women.

Independent variable

The variable hypothesized to depend on or be influenced by independent variable is the dependent variable. In this study independent variable is virtual newborn care. The virtual newborn care provided to the primipara mothers after the pretest to improve the knowledge and practice on newborn care.

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 are the extraneous variables in this study.
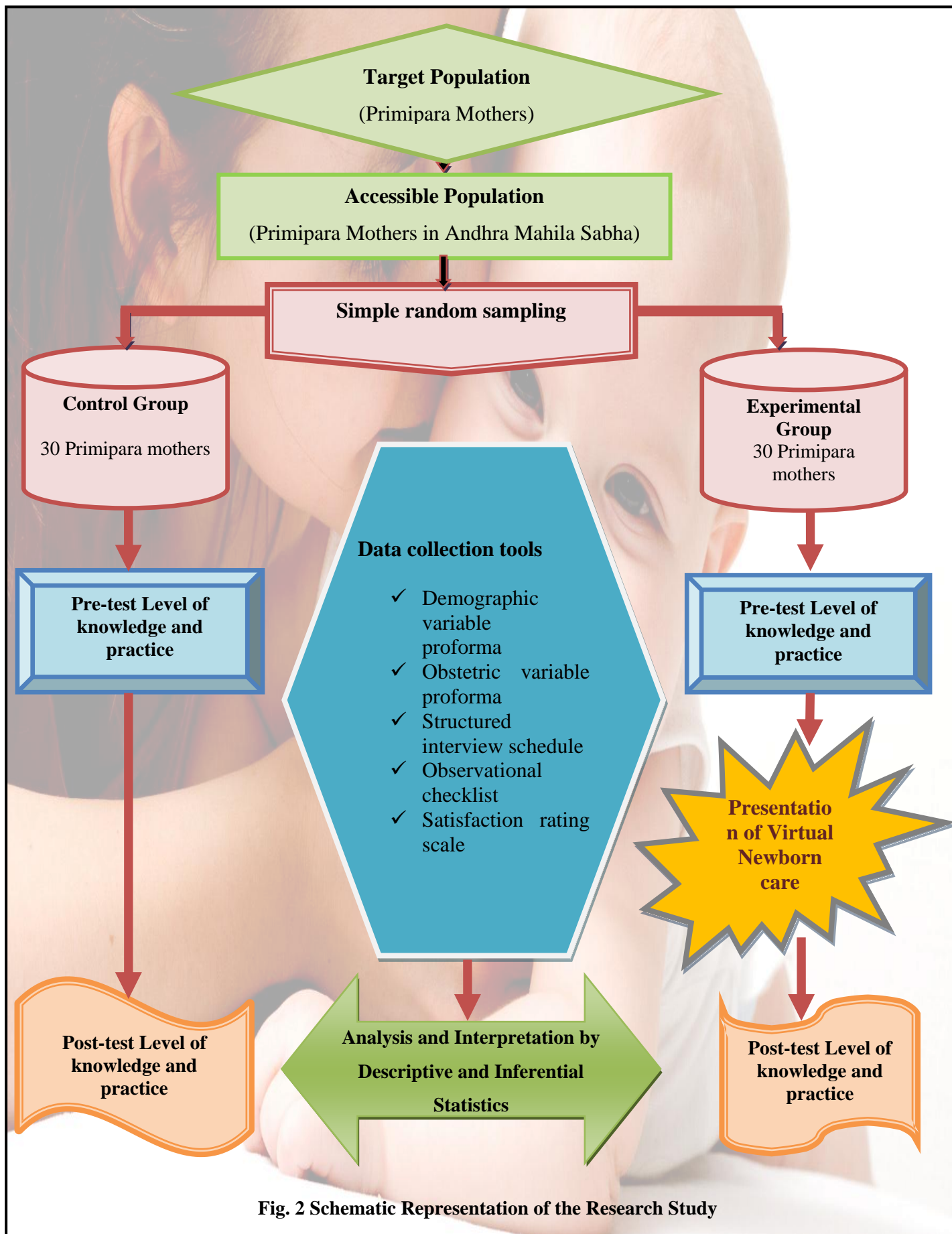
Fig. 2 Schematic Representation of the Research Study

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 labour room with four labour tables and equipments like cardio topography machine, warmer, life saving drugs and equipments for Obstetric and Medical Emergencies. On an average 80 – 100 women undergo normal vaginal delivery every month. The hospital also has postnatal ward, post operative ward, Neonatal Intensive Care Unit, operation theatre, laboratory and other diagnostic facilities like ultrasonography. They also provide Immunization and conduct teaching programmes for the staff and patients and do referral to Government agencies in need.

Population

Population is the entire set of individuals or objects having some common characteristics (Polit and Beck, 2010).

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 is all primipara mothers.

Accessible population is the aggregate of cases that conform to designated criteria and are accessible as subjects for a study. In this study the accessible population are all primipara mothers in Andhra Mahila Sabha, Chennai.

Sample

According to Polit and Beck (2010) sample is a subset of population selected to participate in a study. Sample consists of primipara mothers who meet the inclusion criteria at selected hospitals, Chennai for the study. A sample of 60 newborns were selected among which 30 primipara mothers were assigned to the control group and 30 primipara mothers were assigned to the experimental 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 (2010). Simple random sampling technique was used in this study for mothers who satisfied the inclusion criteria where the odd number primipara mothers were assigned to control group and the even number primipara mothers were assigned in experimental group.

Sampling criteria

Inclusion criteria

➢ Primipara mothers in Andhra Mahila Sabha.

➢ Primipara mothers who are willing to participate in the study.

➢ Primipara mothers available during the period of data collection.

➢ Primipara mothers who understand Tamil and English.

➢ Normal delivery and Caesarean Section mothers who are willing to participate in the study.

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Exclusion criteria

➢ Multipara mothers.

➢ Primipara mothers with puerperal complications and newborn complications.

➢ Primipara mothers who are not having interest to participate.

Selection and Development of Study Instruments

As the study aimed to evaluate the effectiveness of virtual newborn care upon knowledge and practice of collection instrument were developed through an extensive review of literature. Instruments used in this study were Demographic variable proforma, Obstetrical variable proforma, Structured questionnaire tool to assess the knowledge, observational checklist to assess practice and satisfaction tool.

Demographic variable proforma for primipara mothers

Demographic variable proforma consists of age in years, educational status, occupation, religion, monthly income, type of family, area of residence.

Obstetric variable proforma for primipara mothers

Obstetric variable proforma consists of birth weight, mode of delivery, antenatal check up, medical disorders during pregnancy, sex of newborn, gestational age at birth, Sucking behaviour, Initiation of breast feeding and postnatal complication.

Structured questionnaire assessment tool for knowledge level of primipara mothers regarding virtual newborn care

Knowledge of virtual newborn care was assessed by using modified virtual newborn care assessment tool. Checklist used for to assess the practice of newborn care. The tool was modified by the researcher and the tool consists of parameters such as thermoregulation, Prevention of infection, breast feeding, hygiene and immunization. The scoring was given based on observation by investigator during the procedure.

Scoring was classified

Percentage	Level of knowledge
<50%	Inadequate Knowledge
50-76%	Moderately Adequate Knowledge
76%	Adequate Knowledge

Observational checklist to assess newborn care practice among primipara mothers

This checklist was designed to assess the newborn care practice of the primipara mothers regarding virtual newborn care and this is assessed by the researcher at the end of virtual newborn care.

The checklist was classified as follows

Scoring	Interpretation
0-8	Poor
9-16	Average
17-24	Good

Rating scale on level of satisfaction of primipara mothers

This rating scale was designed to assess the level of satisfaction of the primipara mothers regarding virtual newborn care and this is assessed by the researcher at the end of virtual newborn care.

The Rating scale was classified as follows

Scoring	Percentage	Level of satisfaction
1-10	0-25%	Highly dissatisfied
11-20	26-50%	Dissatisfied
21-30	51-75%	Satisfied
31-40	76-100%	Highly satisfied

Psychometric Properties

Validity of study 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 seven experts in the field of child health nursing. Six were nursing personnel and one doctor. The suggestions given by the validators regarding rating scale was incorporated 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 karl Pearsons correlation formula.

Structured interview schedule   Split half Method (r=0.9)

Observational checklist   Split half Method (r=0.99)

Rating scale on satisfaction of virtual newborn care   Split half Method (r=0.8)

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, Chennai by selecting 12 Primipara mothers with 6 primipara mothers in the control group and 6 primipara mothers in the experimental group using purposive sampling technique in order to

assess the methodology and tools. After the pilot study, the study was found to be feasible and effective and the study instruments were found to be appropriate.

Intervention Protocol

The primipara mothers were made comfortable and informed verbal consent was obtained to conduct the study. The knowledge and newborn care practice of primipara mothers was assessed using structured interview schedule and observational checklist which was developed by the researcher. virtual new born care which contains thermoregulation, hygienic practice, breast feeding, promotion of growth and development, prevention of infection and immunization which was taught to primipara mothers in the experimental group individually for a duration of 10- 15 minutes. After which 5-10mts was allotted for discussion where the mother were encouraged to share. The level of knowledge and newborn care practice was assessed after 7 days of intervention for both groups with the same tool. The level of satisfaction on virtual newborn care was assessed in experimental group of primipara mothers using satisfaction rating scale which was developed by the researcher.

Protection of Human rights

The researcher presented the proposal to the ethical committee of Apollo hospitals and got ethical clearance to conduct the study. 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. Informed verbal consent was obtained from primipara mothers before

collecting the data and confidentiality of the participants 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).Protection of human rights was maintained and the data were collected from May 15th to June 15th 2013 in Andhra Mahila Sabha. The participants were selected using a Simple random sampling method among them 30 primipara mothers were assigned to control group and 30 primipara mothers were assigned to the experimental group and the data was collected from the primipara mothers through interview, medical records and observation. Knowledge and practice regarding virtual newborn care was assessed for the primipara mothers in control and experimental group before and after virtual newborn care.

In control group the primipara mothers without using virtual newborn care and the assessment of knowledge and practice of newborn care in 10 minutes by asking primipara mothers evaluation with the help structured interview schedule.

In experimental group the video presentation on virtual newborn care on thermoregulation, hygienic practice, breastfeeding, promotion of growth and development, prevention of infection, and immunization was given for ten minutes in English or Tamil to primipara mothers. This was administered to each primipara mothers in the experimental group individually.

The level of satisfaction virtual newborn care presentation was assessed for primipara mothers in experimental group using satisfaction scale after virtual newborn care.

Problem Faced During Data Collection

The problems faced during the process of study were getting permission from the setting was difficult and few mothers were not willing to take part in the study.

Plan for Data Analysis

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

Analysis was 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 and obstetric 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, (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, (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 the control and experimental group of primipara mothers.

➢ Frequency and percentage distribution of obstetric variables in the control and experimental group of primipara mothers.

- Frequency and Percentage distribution of level of knowledge before and after Virtual newborn care in control and experimental group of primipara mothers.

- Frequency and Percentage distribution of practice before and after Virtual newborn care in control and experimental Group of primipara mothers.

- Comparison of mean and standard deviation of knowledge and practice of before and after virtual newborn care between control and experimental group of primipara mothers.

- Comparison of mean and standard deviation of practice of before and after virtual newborn care between control and experimental group of primipara mothers.

- Association between selected demographic variables and level of knowledge before and after virtual newborn care in control group of primipara mothers.

- Association between selected demographic variables and level of knowledge before and after virtual newborn care in experimental group of primipara mothers.

- Association between selected demographic variables and practice of before and after virtual newborn care in control group of primipara mothers.

- Association between selected demographic variables and and practice of before and after virtual newborn care in experimental group of primipara mothers.

- Association between selected obstetric variables and the level of knowledge before and after virtual newborn care in control group of primipara mothers.

- Association between selected obstetric variables and the level of knowledge before and after virtual newborn care in experimental group of primipara mothers.

- Association between selected obstetric variables and practice of before and after virtual newborn care in control group of primipara mothers.

➢ Association between selected obstetric variables and and practice of before and after virtual newborn care in experimental group of primipara mothers.

➢ Frequency and percentage distribution of level of satisfaction regarding virtual newborn care among experimental group of primipara mothers.

Table.1

Frequency and Percentage Distribution of Demographic Variables in the Control and Experimental group of Primipara Mothers.

Demographic variables	Control group n=30		Experimental group n=30	
	n	p	n	p
Age (in years)				
<20yrs	-	-	2	7.00
21-25yrs	20	67.00	20	67.00
26-30yrs	9	30.00	7	23.00
>31yrs	1	3.00	1	3.30
Religion				
Hindu	21	70.00	23	77.00
Muslim	2	7.00	3	10.00
Christian	7	23.00	4	13.30
Others	-	-	-	-
Educational status				
Illiterate	-	-	1	3.33
Primary school	1	3.33	3	10.00
Middle school	6	20.00	6	20.00
High school	20	67.00	17	57.00
Graduates	3	10.00	3	10.00
Occupation				
Private	10	33.00	9	30.00
Government	-	-	-	-
Housewife	20	67.00	21	70.00
Type of family				
Nuclear	7	23.00	8	27.00
Joint	23	77.00	21	70.00
Extended	-	-	1	3.33

The data in the table 1 reveals that majority of primipara mothers are aged between 21-25years (67%, 67%), most of them are educated (67%, 57%), belonging to joint family (77.00%, 70.00%) employed (67.00%, 70.00%) in the control and experimental group respectively.

Fig:3 shows that most of their monthly family income was <15000 (70.00%, 67.00%) in control and experimental group respectively.

Fig:4 depicts that most of them had gained knowledge about Virtual newborn care from family members (53.00%, 63.00%) in the control and experimental groups respectively.
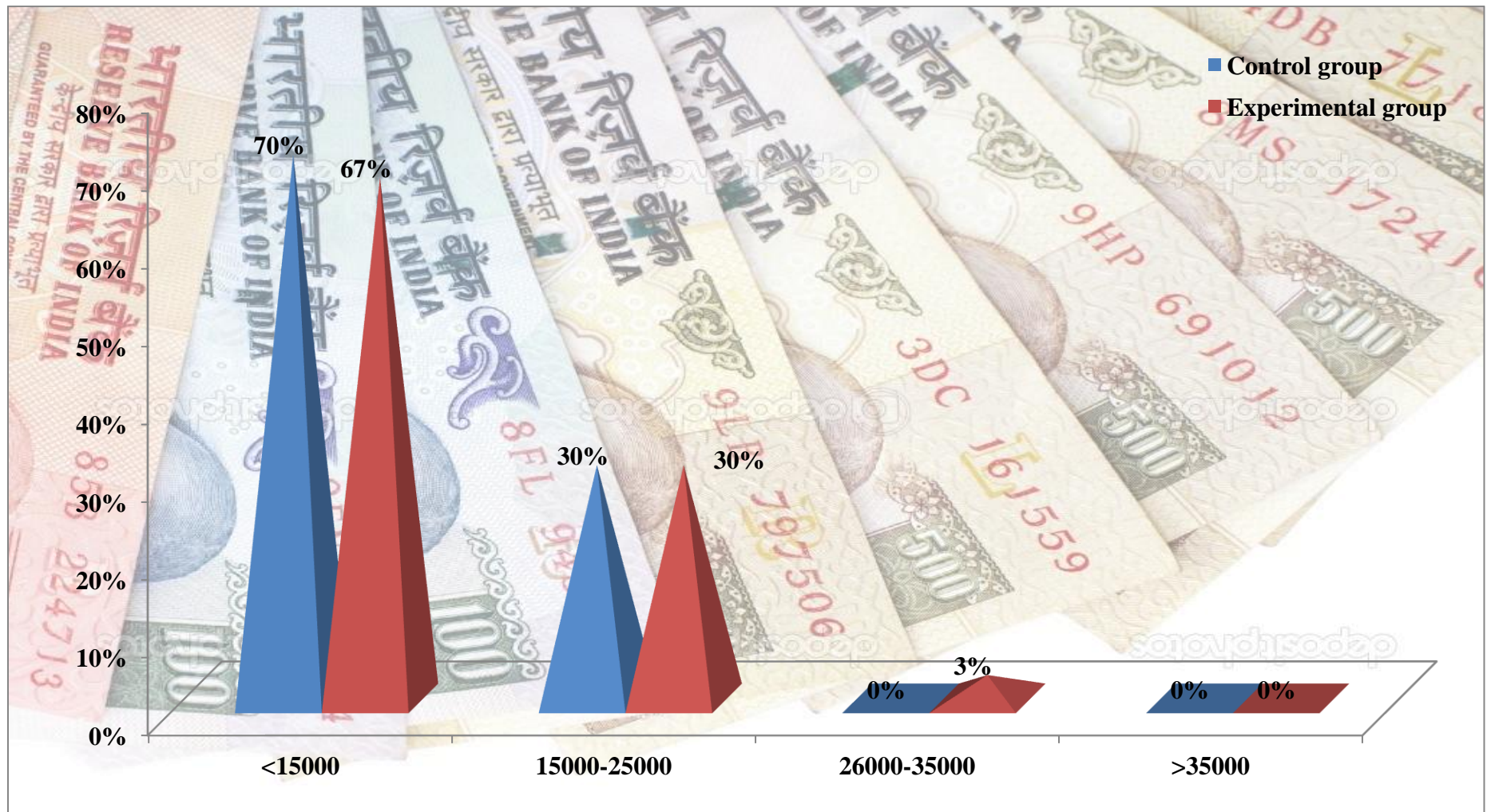
Fig-3: Percentage Distribution of Monthly Income of the Primipara Mothers
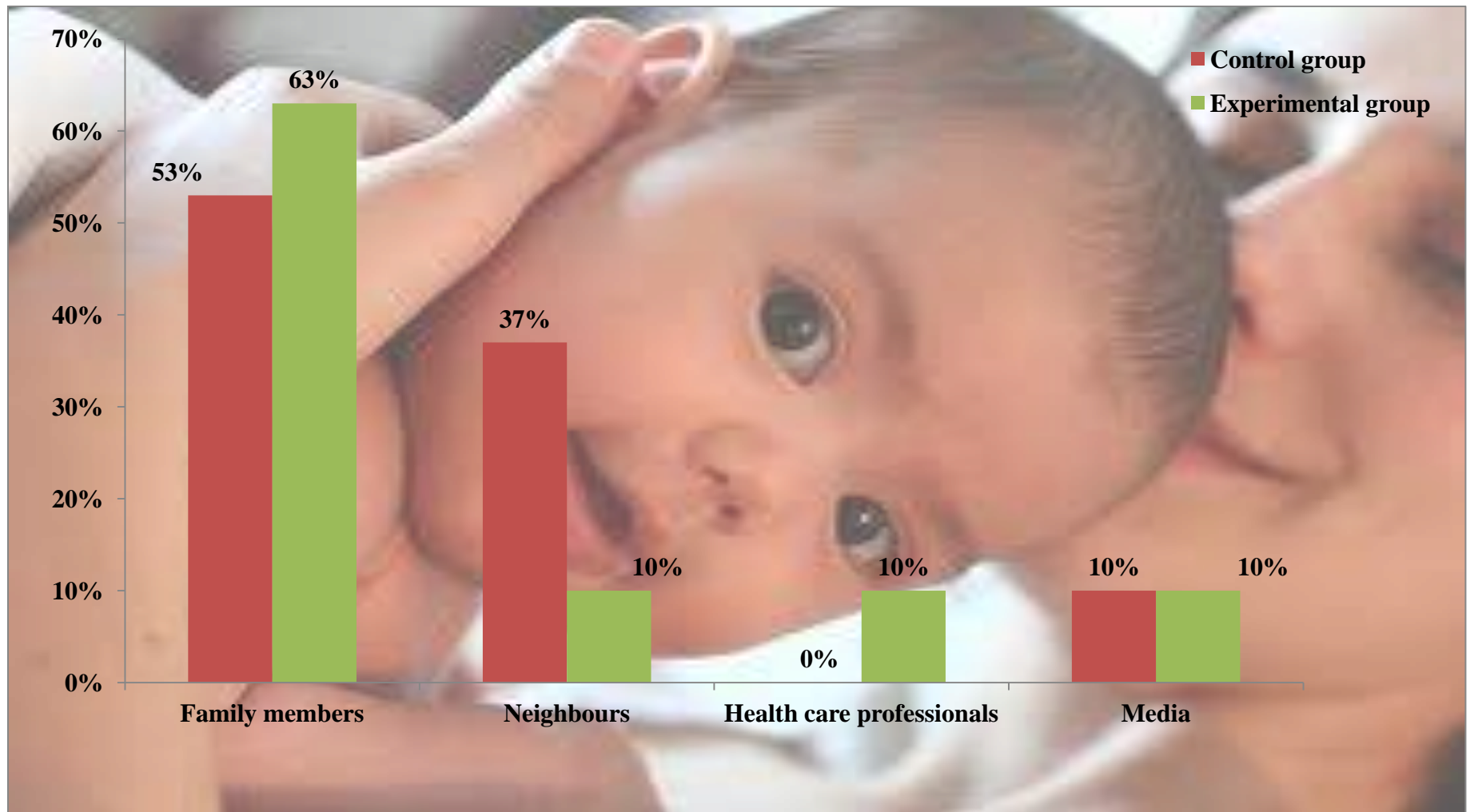
Fig-4: Percentage Distribution of Source of Information from the Primipara Mothers

Table. 2

Frequency and Percentage Distribution of Obstetric Variables in the Control and Experimental group of Primipara Mothers.

Obstetric variables	Control group (n=30)		Experimental group (n=30)	
	n	p	n	p
Birth weight				
> 2.5	-	-	-	-
2.6-3.5	25	83.00	23	7.00
<3.6	5	17.00	7	23.00
Mode of delivery				
NSVD	26	87.00	22	73.33
Caesarean delivery	4	13.00	7	28.30
Assisted delivery	-	-	1	3.30
Gestational age of baby				
Less than 38weeks	-	-	-	-
38-40 weeks	30	100.00	26	87.00
Above 40 weeks	-	-	4	13.00
Gender of the baby				
Male	19	63.00	17	57.00
Female	11	37.00	13	43.00
Type of feeding				
Only breast feeding	30	100	30	100
Only formula feeding	-	-	-	-
Combination of breastfeeding and formula feeding	-	-	-	-
Antenatal check up				
Regularly done	30	100.00	30	100.00
Irregularly done	-	-	-	-
Not done	-	-	-	-

Data presented in table 2 depicts that, all the mothers went for regular antenatal check up. Majority of the newborns by normal vaginal delivery (87.00%, 73.33%) with a gestational age of 38-40 weeks (100.00%, 87.00%) and most of the newborn birth weight is between 2.5-3.5kg (83.00%, 77.00%) in both control and experimental group. All the newborns had good sucking (100%, 100%) in control and experimental group respectively.

Fig: 5 represents that majority of the mothers did not develop any medical disorders during pregnancy (87%, 87%) in control and experimental group respectively.

Fig: 6 shows that all of the mothers not develop any post natal complications (100%, 100%) in control and experimental group respectively.

Fig: 7 depicts that majority of the mothers did not have any complication during labour (97%, 90%) in control and experimental group respectively.

Fig: 8 shows that all newborns had good sucking (100%, 100%) in control and experimental group respectively.

Fig: 9 depicts that majority of the mothers did not have any medical disorders (87%, 87%) in control and experimental group respectively.
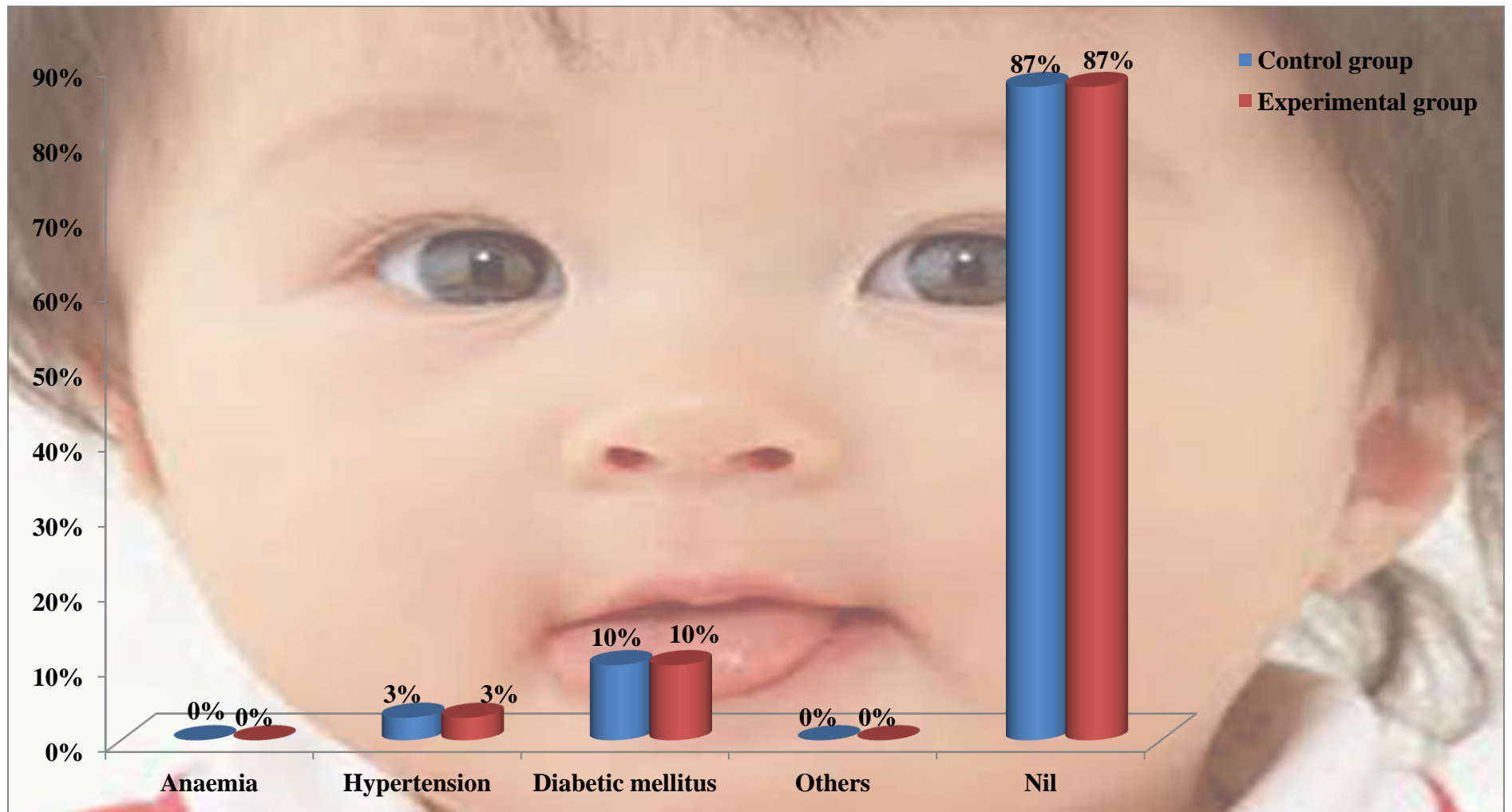
Fig. 5: Percentage Distribution of Medical Disorders During Pregnancy in Control and experimental group of primipara mothers
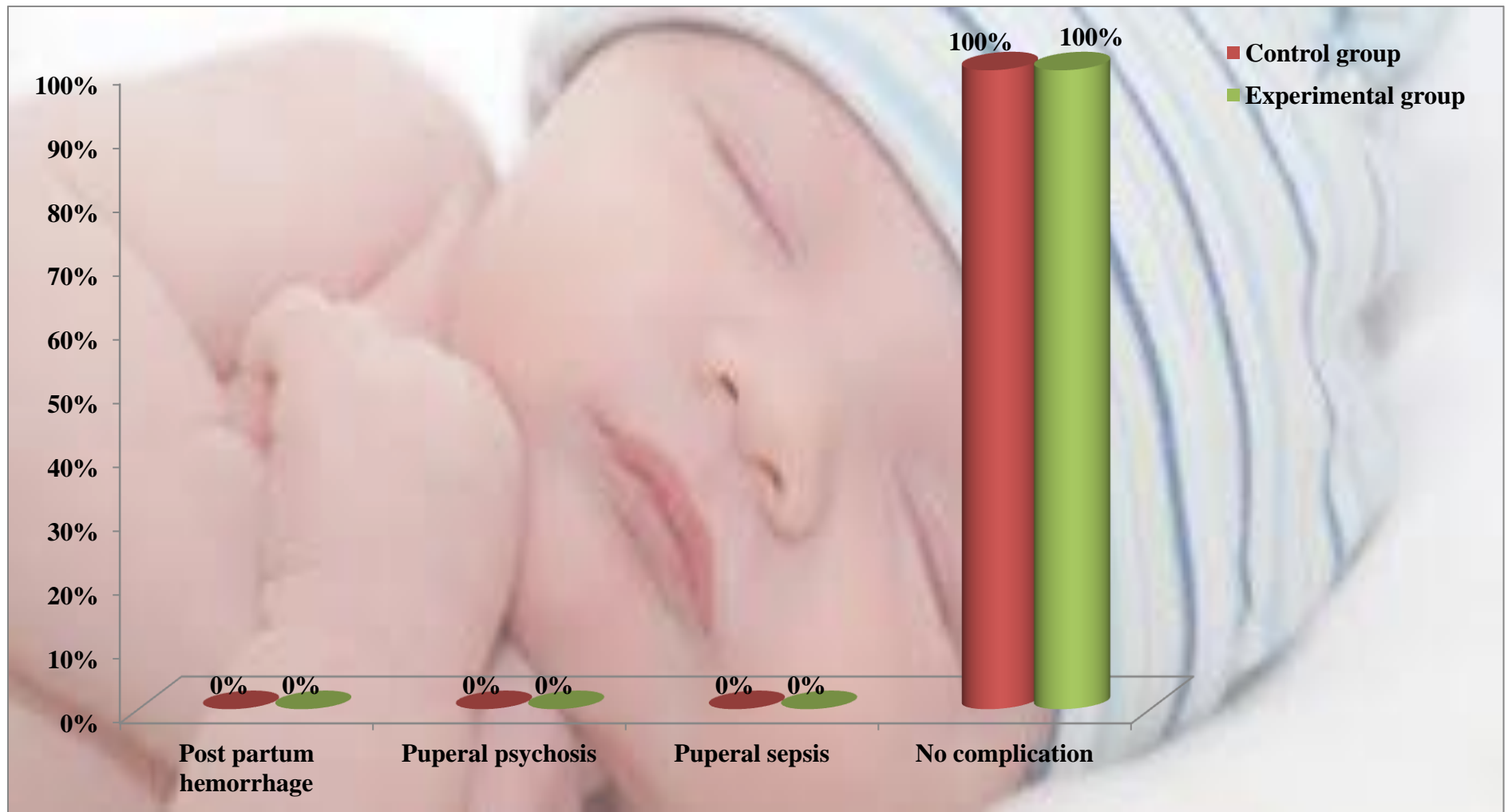
Fig. 6: Percentage Distribution of postnatal Complication after Delivery in Control and experimental group of primipara mothers
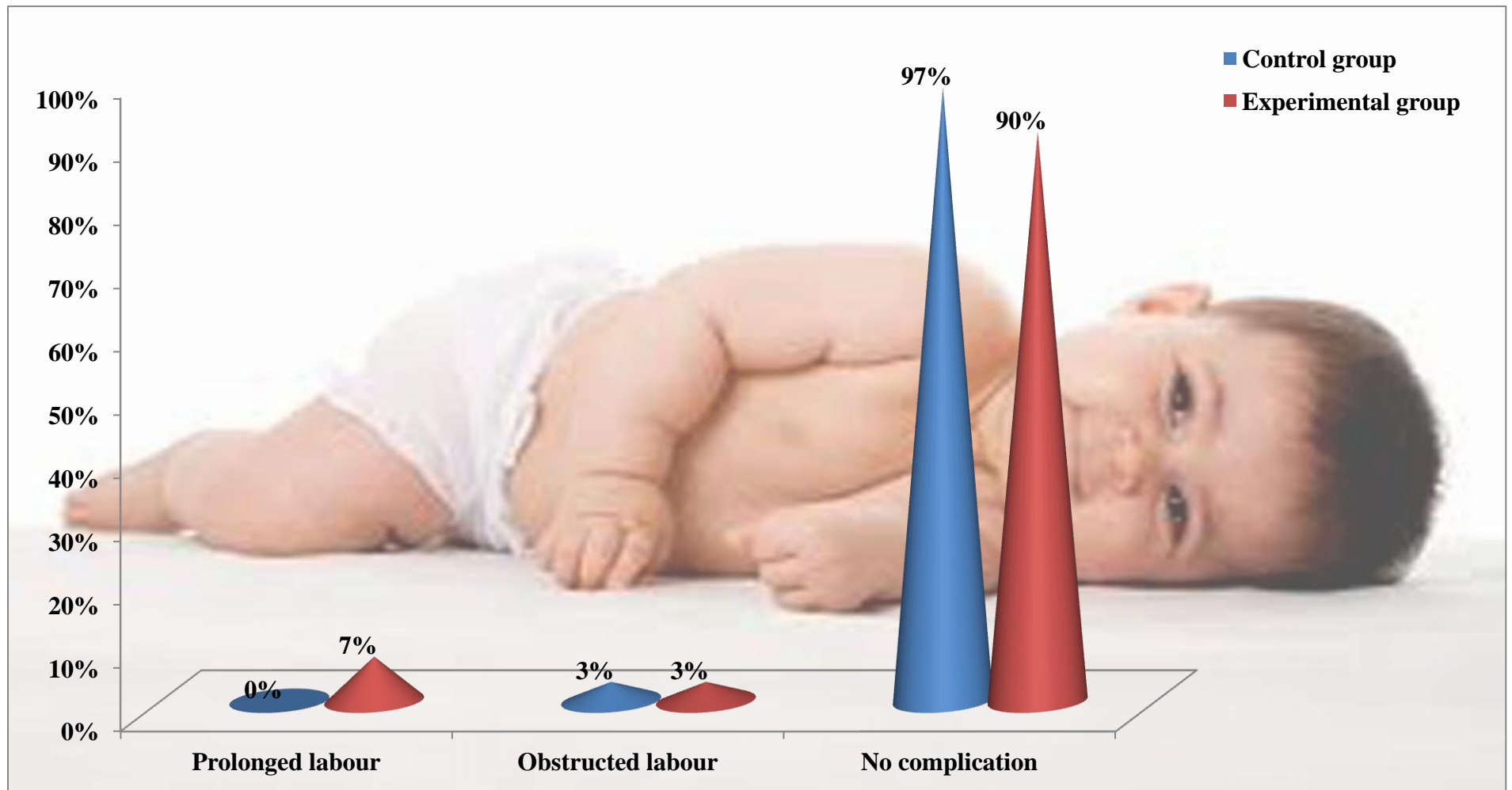
Fig. 7: Percentage Distribution of Any complication during Labour Control and experimental group of primipara mothers
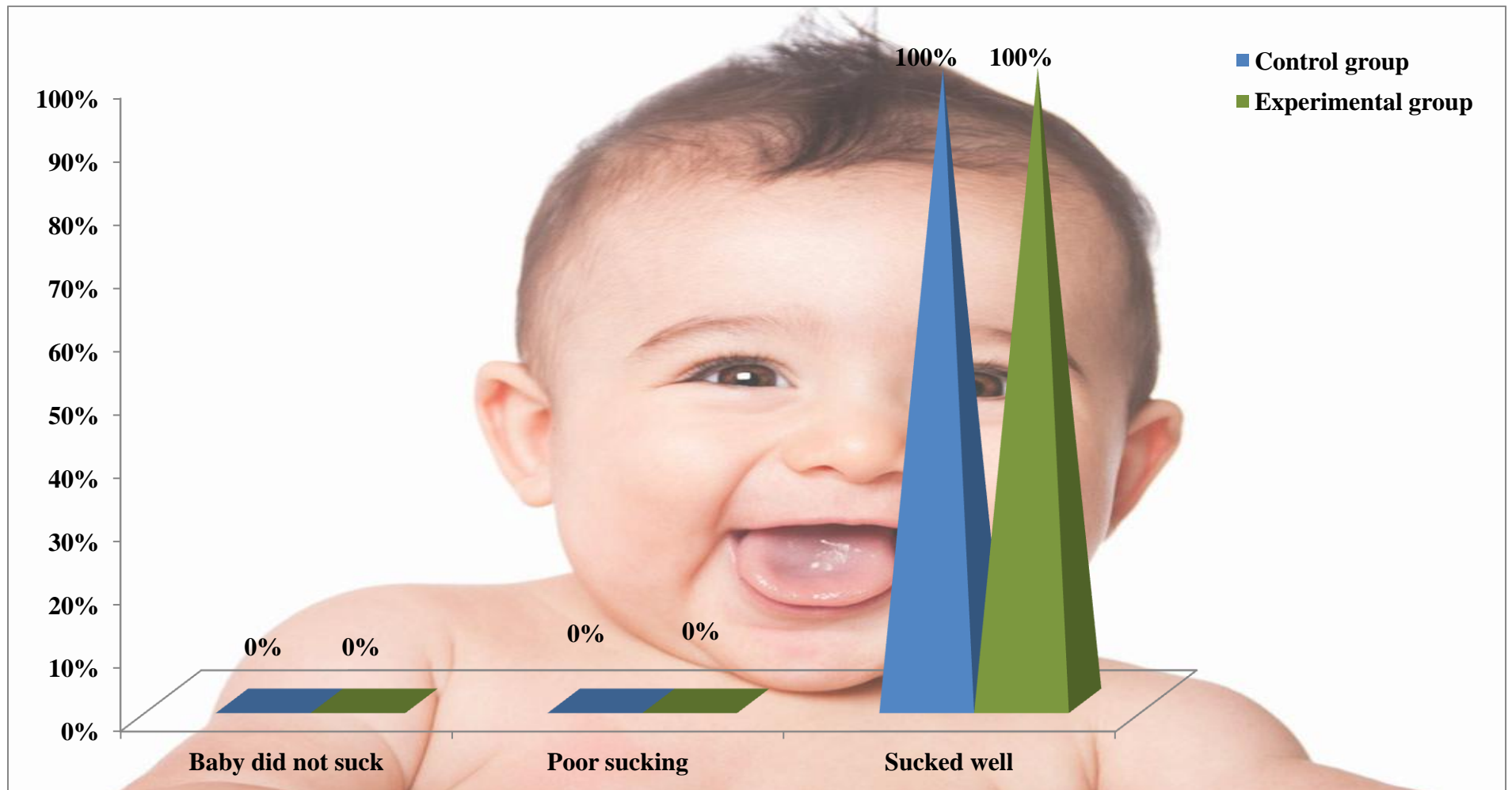
Fig. 8: Percentage Distribution of Sucking behaviour of baby Control and experimental group of primipara mothers
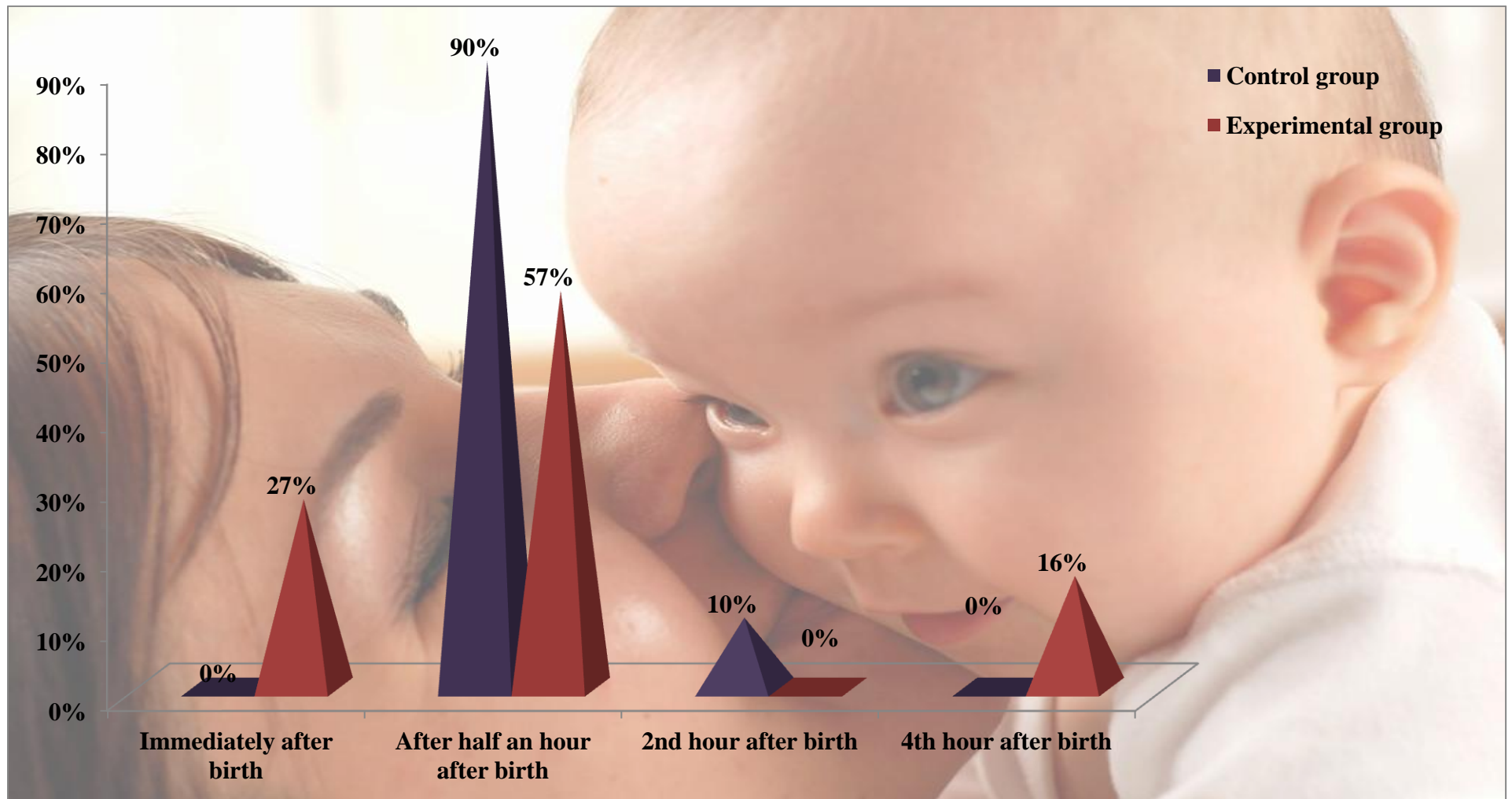
Fig. 9: Percentage Distribution of Initiation of breast feeding Control and experimental group of primipara mothers

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Table. 3

Frequency and Percentage Distribution of Level of knowledge Before and After Virtual newborn care in Control and Experimental group of primipara mothers

Group	Before virtual newborn care						After virtual newborn care					
	Inadequate		Moderate		Adequate		Inadequate		Moderate		Adequate	
	n	p	n	P	n	p	n	p	n	p	n	p
Control group	30	10%	-	-	-	-	25	83%	5	17%	-	-
Experimental group	27	90%	3	10%	-	-	-	-	-	-	30	100%

The data presented in Table 3 depicts that majority of the primipara mothers in control and experimental group had inadequate knowledge (10%, 90%) before virtual newborn care. Whereas after virtual newborn care in experimental group most of them had adequate knowledge regarding newborn care (100%).

Table. 4

Frequency and Percentage Distribution of practice Before and After Virtual newborn care   in Control and Experimental Group of primipara mothers

Group	Before virtual newborn care						After virtual newborn care					
	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%	-	-	-	-	-	-	-	-	30	100%

The data presented in Table 4 depicts that majority of the primipara mothers in control and experimental group newborn care practice was poor (100%, 100%) before virtual newborn care. Whereas in experimental group most of their practices was good (100%).

Table.5

Comparison of mean and standard deviation of knowledge of before and after virtual newborn care between control and experimental group of primipara mothers.

Group	Before Virtual newborn care			After Virtual newborn care		
	Mean	SD	t value	Mean	SD	t value
Control group (N=30)	4	1.22	2.35	5.06	1.59	44.87***
Experimental group (N=30)	4.8	1.67		19.00	0.836	

*** (p< 0.001)

The data presented in table 4 depicts that the mean and standard deviation of primi para mothers before Virtual newborn care is (M=4.00, 5.60, SD=1.22, 1.59) After Virtual newborn care the difference in the mean, standard deviation (M=4.80,19.00, SD=1.67,0.83) of knowledge between control and experimental group of primipara mothers is statistically significant (p<0.001).Hence null hypotheses Ho1 is rejected.

Table.6

Comparison of mean and standard deviation of practice before and after virtual newborn care among control and experimental group of primipara mothers.

Group	Before Virtual newborn care			After Virtual newborn care		
	Mean	SD	t value	Mean	SD	t value
Control group (N=30)	2.43	0	4.54	4.00	1.28	70.30***
Experimental group (N=30)	2.7	1.208		23.1	0.932	

*** (p< 0.001)

The data presented in table 6 depicts that the mean and standard deviation of primi para mothers before Virtual newborn care is (M=2.43,1.28 ,SD=0,1.28) After Virtual newborn care the difference in the mean, standard deviation was (M=2.7,23.10, SD=1.20,0.93) of practice between control and experimental group of primipara mothers which was statistically significant (p<0.001). Hence null hypotheses Ho1 is rejected.

Table.7

Association between selected demographic variables and the level of knowledge before and after virtual newborn care in the control group of primipara mothers.

Demographic variables	Before virtual newborn care (n=30)			After virtual newborn care (n=30)		
	Above Mean	Upto Mean	χ^2	Above Mean	Upto Mean	χ^2
Age(in years)						
<25	15	5	1.84	9	11	8.94**
>25	5	5	(df=1)	6	4	(df=1)
Religion						
Hindu	16	6	0.4	11	10	10.68**
Others	5	3	(df=1)	4	5	(df=1)
Occupation						
Private	6	4	0.37	8	1	6.57**
House wife	14	6	(df=1)	16	5	(df=1)
Source of information						
Family members	10	6	2.45	8	9	5.26*
Others	10	4	(df=1)	6	7	(df=1)

**(p<0.01), *(p<0.05)

Note: Categories under the variables were clubbed for the sake of chi square analysis.

Table. 7 shows that there is a significant association between selected demographic variables and level of knowledge before and after virtual newborn care in control group. Hence the null Hypotheses (Ho2) is rejected.

Table.8

Association between selected demographic variables and the level of knowledge before and after virtual newborn care in the experimental group of primipara mothers.

Demographic variables	Before virtual newborn care (n=30)			After virtual newborn care (n=30)		
	Above Mean	Upto Mean	χ^2	Above Mean	Upto Mean	χ^2
Age(in years)						
<25	18	4	1.33	17	5	0.93
>25	6	2	(df=1)	5	3	(df=1)
Religion						
Hindu	16	6	0.17	17	6	4.44*
Others	8	0	(df=1)	5	2	(df=1)
Occupation						
Private	8	2	0.07	16	5	5.24*
House wife	7	13	(df=1)	7	2	(df=1)
Source of information						
Family members	15	4	0.17	15	4	3.06
Others	9	2	(df=1)	7	4	(df=1)

*(p<0.05)

Table 8 reveals that there is significant association between the level of knowledge before and after virtual newborn care demographic variables of experimental group. Hence the null Hypotheses (Ho2) is rejected.

Table.9

Association between selected demographic variables and practice before and after virtual newborn care   in the control group of primipara mothers.

Demographic variables	Before virtual newborn care (n=30)			After virtual newborn care (n=30)		
	Above Mean	Upto Mean	χ^2	Above Mean	Upto Mean	χ^2
Age(in years)						
<25	12	8	0.42	14	6	0.16
>25	5	5	(df=1)	7	3	(df=1)
Religion						
Hindu	13	8	3.19	17	6	4.44
Others	4	5	(df=1)	5	2	(df=1)
Occupation						
Private	4	6	0.6	6	2	0.01
House wife	11	9	(df=1)	15	7	(df=1)
Source of information						
Family members	9	7	0	11	5	0.12
Others	8	6	(df=1)	10	4	(df=1)

Table .9 reveals that there is no significant association between the level of practice before and after virtual newborn care and demographic variables of group (p>0.05). Hence the null Hypotheses (Ho3) is retained.

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Table.10

Association between the selected demographic variables and practice before and after virtual newborn care in the experimental group of primipara mothers.

Demographic variables	Before virtual newborn care (n=30)			After virtual newborn care (n=30)		
	Above Mean	Upto Mean	χ^2	Above Mean	Upto Mean	χ^2
Age(in years)						
<25	15	6	0.05	14	8	0.32
>25	7	2	(df=1)	4	4	(df=1)
Religion						
Hindu	17	6	0.54	14	9	0.55
Others	4	3	(df=1)	3	4	(df=1)
Occupation						
Private	6	3	0.26	7	6	0.06
House wife	16	5	(df=1)	10	7	(df=1)
Source of information						
Family members	10	6	1.93	11	8	0
Others	12	2	(df=1)	6	5	(df=1)

Table.10 reveals that there is no significant association between the level of practice before and after virtual newborn care and demographic variables of experimental group (p>0.05). Hence the null Hypotheses (Ho3) is retained.

Table.11

Association between the selected obstetric variables and level of knowledge before and after virtual newborn care in the control group of prmipara mothers.

Demographic variables	Before virtual newborn care (n=30)			After virtual newborn care (n=30)		
	Above Mean	Upto Mean	χ^2	Above Mean	Upto Mean	χ^2
Birth weight						
<3.5	16	9	0.15	11	14	1.83
>3.5	4	1	(df=1)	4	1	(df=1)
Mode of deivery						
Normal spontaneous vaginal delivery	17	9	0.06	14	12	0.84
Others	3	1	(df=1)	1	3	(df=1)
Any complication during labour						
No complication	19	10	0.7	15	14	0.06
Others	1	0	(df=1)	0	1	(df=1)
Initiation of breast feeding						
Immediately after birth	0	0	0.03	0	3	2.55
After half an hour	19	11	(df=1)	6	5	(df=1)
Sex of the baby						
Male	12	8	0.73	11	8	1.18
Female	8	12	(df=1)	4	7	(df=1)

Table .11 reveals that there is no significant association between the level of knowledge before and after virtual newborn care and obstetric variables in the control group of primipara mothers (p>0.05). Hence null hypothesis is retained.

Table.12

Association between the selected obstetric variables and level of knowledge before and after virtual newborn care   in the experimental group of prmipara mothers.

Demographic variables	Before virtual newborn care (n=30)			After virtual newborn care (n=30)		
	Above Mean	Upto Mean	χ^2	Above Mean	Upto Mean	χ^2
Birth weight						
<3.5	18	6	1.35	18	5	0.09
>3.5	6	0	(df=1)	5	2	(df=1)
Mode of deivery						
Normal spontaneous vaginal delivery	18	4	0.07 (df=1)	17	5	0.53 (df=1)
Others	6	2		5	3	
Any complication during labour						
No complication	23	4	3.9	19	7	1.02
Others	1	2	(df=1)	4	0	(df=1)
Initiation of breast feeding						
Immediately after birth	4	4	0.12	6	2	8.74**
After half an hour	20	2	(df=1)	16	6	(df=1)
Sex of the baby						
Male	15	2	0.6	14	3	0.05
Female	10	3	(df=1)	10	3	(df=1)

*($p<0.05$)

Table.12 reveals that there is no significant association between the level of knowledge before and after virtual newborn care and obstetric variables of experimental group ($p<0.05$). Hence null Hypothesis is retained.

Table.13

Association between the selected obstetric variables and practice of before and after virtual newborn care in the control group of prmipara mothers.

Demographic variables	Before virtual newborn care (n=30)			After virtual newborn care (n=30)		
	Above Mean	Upto Mean	χ^2	Above Mean	Upto Mean	χ^2
Birth weight						
<3.5	15	8	2.88	17	9	1.35
>3.5	2	5	(df=1)	4	0	(df=1)
Mode of deivery						
Normal spontaneous vaginal delivery	14	8	1.64	17	5	2.46
Others	3	5	(df=1)	4	4	(df=1)
Any complication during labour						
No complication	7	22	1.27	20	7	1.93
Others	0	1	(df=1)	1	2	(df=1)
Initiation of breast feeding						
Immediately after birth	7	6	0.02	7	6	1.9
After half an hour	10	7	(df=1)	13	4	(df=1)
Sex of the baby						
Male	10	7	0.02	10	6	0.84
Female	7	6	(df=1)	11	3	(df=1)

Table.13 reveals that there is no significant association between the level of practice before and after virtual newborn care and obstetric variables of control group (p>0.05). Hence null Hypothesis is retained.

Table.14

Association between the selected obstetric variables and practice of before and after virtual newborn care in the experimental group of prmipara mothers.

Demographic variables	Before virtual newborn care (n=30)			After virtual newborn care (n=30)		
	Above Mean	Upto Mean	χ^2	Above Mean	Upto Mean	χ^2
Birth weight						
<3.5	16	7	3.5	13	9	0.25
>3.5	7	0	(df=1)	4	4	(df=1)
Mode of deivery						
Normal spontaneous vaginal delivery	17	5	0.54 (df=1)	14	8	2.52 (df=1)
Others	5	3		2	6	
Any complication during labour						
No complication	19	8	0.71	17	10	4.12
Others	3	0	(df=1)	0	3	(df=1)
Initiation of breast feeding						
Immediately after birth	9	4	0.02 (df=1)	7	6	5.25*
After half an hour	13	4		10	7	(df=1)
Sex of the baby			0.25			
Male	13	4	(df=1)	9	8	0.38
Female	9	4		8	5	(df=1)

* (p<0.05)

Table .14 reveals that there is no significant association between level of practice before and after virtual newborn care and obstetric variables of experimental group(p<0.05). Hence null Hypotheses is retained.

Table.15

Frequency and Percentage distribution of Level of Satisfaction regarding virtual newborn care among experimental Group of primipara mothers.

Level of Satisfaction	Highly Satisfied		Satisfied		Dissatisfied		Highly Dissatisfied	
	n	p	n	p	n	p	n	P
Overall Satisfaction	30	100	-	-	-	-	-	-
Related to researcher	30	100	-	-	-	-	-	-
Related to virtual newborn Care	30	100	-	-	-	-	-	-

It can be inferred from table 13 that all primipara mothers in experimental group are highly satisfied (100%) with all aspects of virtual newborn care.

Summary

This chapter has dealt with the analysis and interpretation of data obtained by researcher .The analysis of the data using descriptive and inferential statistics clearly revealed the effectiveness of virtual newborn care upon knowledge and practice and satisfaction of mother regarding virtual newborn care .In the following chapter interpretation of study findings are discussed in detail.

CHAPTER V

DISCUSSION

Statement of the Problem

An Experimental Study to Assess the Effectiveness of Virtual Newborn Care Upon Knowledge and Practice among Primipara Mothers at selected Hospitals,Chennai.

Objectives of the Study

1. To assess the level of knowledge and practice on virtual newborn care among primipara mothers.

2. To determine the effectiveness of virtual newborn care upon knowledge and practice among primipara mothers.

3. To determine the association between selected demographic variables and level of knowledge and practice before and after virtual newborn care among primipara mothers.

4. To determine the association between selected obstetric variables and level of knowledge and practice before and after virtual newborn care among primipara mothers

5. To assess the level of satisfaction on virtual newborn care among the experimental group of primipara mothers.

The conceptual framework set up for the study is modified model of Jean Ball Deck Chair Theory (1987) to assess knowledge and practice among primipara mothers upon virtual newborn care. An experimental study of pre-test and post-test design was used. The present study was conducted at Andhra Mahila Sabha Hospital, Chennai. The

study included 60 primipara mothers who were selected by simple random sampling. The variables of the study were virtual newborn care, knowledge and practice. Null hypothesis were formulated.

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, observational checklist for Newborn care practice and satisfaction rating scale on Virtual newborn care .

The validity was obtained from various experts and reliability was established. The main study was conducted after the pilot study.

The level of knowledge and practice of virtual newborn care was assessed for the control and experimental group of primipara mothers. The Virtual newborn care of ten minutes duration was provided for the experimental group. Then the level of knowledge and practice of virtual newborn care was reassessed after 7 days for both groups. The level of satisfaction on Virtual newborn care among the experimental group of primipara mothers was assessed after one week from intervention. The data obtained was analyzed using Descriptive and Inferential statistics.

Demographic variables distribution

Majority of primipara mothers were aged 21 -25years (67%, 67%), Hindus (70%, 77%), having secondary education (67%, 56.6%), belonging to joint family (77%, 70%) and their source of information regarding newborn care was from family

members (53%, 63.3%). Most of the mothers had a family income   < 15000 rupees (70%, 66.6%) in control and experimental group respectively.

A study was conducted by Baqui in 2007 says that mothers had less skill in newborn care and newborn care practices, counselling and teaching strategy for mothers is essential to improve the same.

The researcher feels that the responsibility to care other family members was less in nuclear families, so training her will promote the primipara mothers to care for her newborn better and improve mother-child bonding. None of the mothers in control and experimental group had adequate knowledge and practice regarding newborn care. Hence it is the duty of the nurse to explain to the mothers about newborn care, its importance and practice.

Obstetric variables of primipara mothers

Majority of primipara mothers had undergone regular antenatal check-up (100%, 100%), this study was supported by Tayie, (2008) that regular antenatal checkup is essential for better weight in newborns, delivered through normal vaginal delivery (87%, 73.3%) with (63%,37%) male and female newborns in control group whereas in experimental group both male and female newborns were (37%,43%) .All the mothers breast fed their newborns (100%, 100%) and they had good sucking behaviour (100%, 100%) in control and experimental group of mothers. Breast feeding was initiated immediately after birth in (10%) of newborns and after half an hour(90%).Most of the mothers did not develop any post natal complications (100%,100%).Virtual newborn

care provided to the experimental group has helped mothers to learn more about newborn care.

It is a felt need of the researcher that knowledge and practice of newborn care needs a change. Hence it is a nursing concern towards primipara mothers, to make them understand the importance of newborn care for primipara mothers and encourage them to practice newborn care. Virtual newborn care provided to the experimental group enabled the mothers to learn more about newborn care.

The first objective of the study is to assess the level of knowledge and practice on newborn care among primipara mothers.

Majority of the experimental and control group of primipara mother's level of knowledge were inadequate before virtual newborn care. The mean knowledge level was slightly high in the post test (M=5.06, SD=1.59) when compared to pretest (M=4, SD=1.22) in the control group where as the mean level of knowledge was significantly high in post test (M=19.00, SD=0.826) when compared to pretest (M=4.8, SD=1.67) in the experimental group.

Majority of the experimental and control group of primipara mothers newborn care practice was poor before virtual newborn care. The mean score of practice in the experimental group was high after intervention (M=23.1, SD=0.932) in comparison with before intervention (M=2.7, SD=1.208). Whereas in the control group there is only a minimal increase in the score for lactation practice (M=4.0, SD=1.28) after intervention in comparison with before intervention (M=2.43, SD=0).

This shows that the virtual newborn care is effective in improving the level of knowledge and practice of primipara mothers. The newborn care knowledge and practice in postnatal period is the primary responsibility of nurse. Measures should be done to improve their knowledge and practice on newborn care as it is very essential for both mother and baby. Because of its strong effect on improving knowledge and practice, virtual newborn care can be used by the nurses working in postnatal wards to improve primipara mother's knowledge and practice on virtual newborn.

The second objective is to determine the effectiveness of virtual newborn care upon knowledge and practice among primipara mothers.

Majority of the experimental and control group of primipara mothers level of knowledge were inadequate before virtual newborn care. The mean knowledge level was slightly high in the post test (M=5.06, SD=1.59) when compared to pretest (M=4, SD=1.22) in the control group where as the mean level of knowledge was significantly high in post test (M=19.00, SD=0.826) when compared to pretest (M=4.8, SD=1.67) in the experimental group.

The test of significance (t value) for knowledge before virtual newborn care was very low (t= 2.35) when compared to after (t=44.87) virtual newborn care which depicts that it is effective to improve the knowledge of newborn care among primipara mothers (p<0.001).

Similar results were obtained by shanthi M.D in 2006 more likely to have poor knowledge regarding newborn care among primipara mothers. It was recommended that maternal education programs should place more emphasis on primipara mothers, unemployed women and those with delayed booking visits.

Majority of the experimental and control group of primipara mothers newborn care practice was poor before virtual newborn care. The mean score of practice in the experimental group was high after intervention (M=23.1, SD=0.932) in comparison with before intervention (M=2.7, SD=1.208). Whereas in the control group there was only a minimal increase in the score of lactation practice (M=4.0, SD=1.28) after intervention in comparison with before intervention (M=2.43, SD=0).

The test of significance (t value) for newborn care practice before the virtual newborn care was very low (t=4.54) when compared to after (t=70.30) the virtual newborn care which depicts that it is very effective to improve the newborn care practice among primipara mothers (p<0.001).

Virtual newborn care is an interesting experience for the mother where she is able to understand the importance of newborn care which will increase the level of knowledge and newborn care practice.

The third objective of the study was to find out the association between selected demographic variables and level of knowledge and practice before and after virtual newborn care among primipara mothers.

There was a significant association between age in years, religion, occupation and source of information with level of knowledge of virtual newborn care among the control group of primipara mothers. Hence the null hypothesis $H_0 2$ was rejected.

There was a significant association between age in years, religion, occupation and source of information with level of knowledge of virtual newborn care in experimental group of primipara mothers. Hence the null hypothesis $H_0 2$ was rejected.

There was a significant association between age in years, religion, occupation and source of information and practice in control group of primi para mothers. Hence null hypothesis Ho2was rejected.

There was no significant association between age in years, religion, occupation and source of information and practice in experimental group of primipara mothers. Hence null hypothesis Ho2was retained.

Hence some type of method has to be provided for increasing the level of knowledge and newborn care practice in primipara mothers.

The fourth objective was to determine the association between selected obstetric variables and level of knowledge and practice before and after virtual newborn care among primipara mothers

There is no significant association between birth weight, mode of delivery, any complication during labour, initiation of breast feeding and sex of the baby with level of knowledge of virtual newborn care in control group of primipara mothers. Hence the null hypothesis H_03 was retained.

There was a significant association between birth weight, mode of delivery, complications during labour, initiation of breast feeding and sex of the baby with level of knowledge of virtual newborn care in experimental group of primipara mothers. Hence the null hypothesis H_03 was rejected.

There is no significant association between birth weight, mode of delivery, any complication during labour, initiation of breast feeding and sex of the baby and practice in control group of primipara mothers. Hence null hypothesis Ho3 was retained.

There was a significant association between birth weight, mode of delivery, any complication during labour, initiation of breast feeding and sex of the baby and practice in experimental group of primipara mothers. Hence null hypothesis Ho3 was rejected.

The fifth objective of the study assess the level of satisfaction on virtual newborn care among the experimental group of primipara mothers.

The findings of the study suggest that all primipara mothers in the experimental group were highly satisfied with all the aspects of virtual Newborn care (100%) and none of them were dissatisfied with the intervention. primipara mothers were very much interested in virtual Newborn care. The mothers opinion that they were satisfied with the virtual Newborn care and researcher approach. They felt that virtual Newborn care improves promotion of growth and development of Newborns and prevention from infections. Virtual newborn care is an interesting experience for the mother where she is able to understand the importance of newborn care which will increase the level of knowledge and practice. Thus the nurses should understand the importance of newborn care and encourage the mother to practice it.

Summary

This chapter dealt with the discussion of various aspects of the study findings. This emphasized the demographical and obstetrical variables of primipara mothers. It has also dealt with the mean and standard deviation of level of knowledge and lactation practice before and after virtual newborn care in control and experimental group, association between selected demographic and obstetrical variables with level of knowledge and newborn care practice.

CHAPTER VI

SUMMARY, CONCLUSION, IMPLICATIONS, RECOMMENDATIONS AND LIMITATIONS

The heart of the study is writing report of the findings. The investigator concise the whole study and made it for future references. This chapter deals with the summary, conclusion, implications and recommendations of the study.

Summary

An Experimental study to Assess the Effectiveness of Virtual Newborn Care Upon Knowledge and practice among primipara mothers at selected Hospitals, Chennai.

Objectives of the Study

1. To assess the level of knowledge and practice on newborn care among primipara mothers.

2. To determine the effectiveness of virtual newborn care upon knowledge and practice among primipara mothers.

3. To determine the association between selected demographic variables and level of knowledge and practice before and after virtual newborn care among primipara mothers.

4. To determine the association between selected obstetric variables and level of knowledge and practice before and after virtual newborn care among primipara mothers.

5. To assess the level of satisfaction on virtual newborn care among the experimental group of primipara mothers.

Null hypothesis

H$_O$1   There will be no significant difference between pre-test and post-test knowledge and practice on newborn care among primipara mothers.

Ho2   There will be no significant association between selected demographic variables and the level of knowledge and practice before and after virtual newborn care among primipara mothers.

H$_O$3   There will be no significant association between the selected obstetric variables and the level of knowledge and practice before and after the virtual newborn care among primipara mothers.

Conceptual framework of the study was based on Jean Ball Deck Chair Theory (1987) which was modified for the present study. The study variables were to assess the knowledge and practice of virtual newborn care. An extensive review of literature and guidance by experts formed the foundation to the development of Demographic variables and obstetric variables proforma, Observational checklist for newborn care practice and the level of Satisfaction about Virtual Newborn care.

A True Experimental design was used in this study. The present study was conducted in Andhra Mahila Sabha, Chennai. A sample size of 60 who meet the inclusion criteria were chosen for this study, in that 30 was taken for control group and 30 was taken for experimental group through Simple random sampling technique.

The data collection tools were validated and the reliability was established through test-retest and split half technique. The researcher used structured questionnaire for collecting data. After the pilot study, the data for the main study was collected. The

data was collected by using predetermined tools such as Demographic variables proforma, structured questionnaire, observational checklist for newborn care practice and level of Satisfaction about Virtual Newborn care.

The Virtual Newborn care was administered for the experimental group. Schedule was made for a month. Virtual Newborn care was administered for all primipara mothers, individually one by one for the duration of 10 min for each mother. The clients were assisted by the researcher during the session. Then levels of satisfaction regarding virtual Newborn care were assessed in the experimental group of primipara mother. On the whole Virtual Newborn care was found to be feasible to practice.

Virtual newborn care was administered only to the experimental group. virtual newborn care administered to experimental group and knowledge and practice was assessed for both control and experimental groups by using structured questionnaire. The level of satisfaction on administration of virtual Newborn care was assessed by using the rating scale in the experimental group of primipara mothers. Then collected data was tabulated and analyzed by using descriptive and inferential statistics.

The Major Findings of the Study

Demographic variables of primipara mothers

Majority of primipara mothers were aged 21 -25years (67%, 67%), Hindus (70%, 77%), having secondary education (67%, 56.6%), belonging to joint family (77%, 70%) and their source of information regarding newborn care was from family members (53%, 63.3%). Most of the mothers had a family income < 15000 rupees (70%, 66.6%) in control and experimental group respectively.

Obstetric variables of mother

Majority of primipara mothers had undergone regular antenatal check-up (100%, 100%), delivered through normal vaginal delivery (87%, 73.3%) with (63%, 37%) male and female newborns in control group whereas in experimental group both male and female newborns were (37%, 43%). All the mothers' breast fed their newborns (100%, 100%) and they had good sucking behaviour (100%, 100%) in control and experimental group of mothers. Breast feeding was initiated immediately after birth in (10%) of newborns and after half an hour(90%).Most of the mothers did not develop any post natal complications (100%,100%).

Frequency and percentage Distribution of level of knowledge before and after virtual newborn care in Control and Experimental group of primipara mothers.

Majority of the primipara mothers had adequate knowledge before intervention (100%,90%) in the control and experimental group respectively and all of them had adequately knowledge(100%) in experimental group after intervention. Hence null hypothesis Ho1 is rejected.

Frequency and percentage Distribution of Newborn care practice before and after virtual newborn care in Control and Experimental group of primipara mothers

Majority of the primipara mothers in pretest had poor practice with regard to newborn care (100%, 100%) in the control and experimental group. After the intervention the newborn care practice was good (100%) in the primipara mothers of experimental group. Hence null hypothesis Ho1 is rejected.

Comparison of mean and standard deviation of level of knowledge before and after virtual newborn care between Control and Experimental group of primipara mothers

Majority of the experimental and control group of primipara mothers level of knowledge were inadequate before virtual newborn care. The mean knowledge level was slightly high in the post test (M=5.06, SD=1.59) when compared to pretest (M=4, SD=1.22) in the control group where as the mean level of knowledge was significantly high in post test (M=19.00, SD=0.826) when compared to pretest (M=4.8, SD=1.67) in the experimental group.

Comparison of mean and standard deviation of newborn care practice before and after virtual newborn care between Control and Experimental group of primipara mothers

Majority of the experimental and control group of primipara mothers newborn care practice were not done before virtual newborn care. The mean score of practice in the experimental group was high in post test (M=23.1, SD=0.932) in comparison with

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pretest (M=2.7, SD=1.208). Whereas in the control group there was only a minimal increase in the score of newborn care practice (M=4.0, SD=1.28) during post test intervention in comparison with before intervention (M=2.43, SD=0).

Association between the selected demographic variables and level of knowledge before and after the virtual newborn care among primipara mothers in control group

There was a significant association between age in years, religion, occupation and source of information with level of knowledge of virtual newborn care among the control group of primipara mothers. Hence the null hypothesis $H_0 2$ is rejected.

Association between the selected demographic variables and level of knowledge before and after the virtual newborn care among primipara mothers in experimental group

There was a significant association between age in years, religion, occupation and source of information with level of knowledge of virtual newborn care in experimental group of primipara mothers. Hence the null hypothesis $H_0 2$ is rejected.

Association between the selected demographic variables and newborn care practice before and after the virtual newborn care among primipara mothers in control group

There was a significant association between age in years, religion, occupation and source of information and practice in control group of primi para mothers. Hence null hypothesis Ho2was rejected.

Association between the selected demographic variables and newborn care practice before and after the virtual newborn care among primipara mothers in experimental group

There is no significant association between age in years, religion, occupation and source of information and practice in experimental group of primipara mothers. Hence null hypothesis Ho2was retained.

Association between the selected obstetrical variables and the level of knowledge before and after the virtual newborn care among primipara mothers in control group

There is no significant association between birth weight, mode of delivery, any complication during labour, initiation of breast feeding and sex of the baby with level of knowledge of virtual newborn care in control group of primipara mothers. Hence the null hypothesis H_03 is retained.

Association between the selected obstetrical variables and the level of knowledge before and after the virtual newborn care among primipara mothers in experimental group

There was a significant association between birth weight, mode of delivery, any complication during labour, initiation of breast feeding and sex of the baby with level of knowledge of virtual newborn care in experimental group of primipara mothers. Hence the null hypothesis H_03 is rejected.

Association between the selected obstetrical variables and newborn care practice before and after the virtual newborn care among primipara mothers in control group

There is no significant association between birth weight, mode of delivery, any complication during labour, initiation of breast feeding and sex of the baby and practice in control group of primipara mothers. Hence null hypothesis Ho3 was retained.

Association between the selected obstetrical variables and newborn care practice before and after the virtual newborn care among primipara mothers in experimental group

There was a significant association between birth weight, mode of delivery, any complication during labour, initiation of breast feeding and sex of the baby and practice in experimental group of primipara mothers. Hence null hypothesis Ho3 was rejected.

Frequency and percentage distribution of Level of satisfaction upon virtual newborn care in experimental group of primipara mothers.

The findings of the study suggest that all primipara mothers in the experimental group were highly satisfied with all the aspects of virtual Newborn care (100%) and none of them were dissatisfied with the intervention. primipara mothers were very much interested in virtual Newborn care. The mothers opinion that they were satisfied with the virtual Newborn care and researcher approach. They felt that virtual Newborn care improves promotion of growth and development of Newborns and prevention from infections. Virtual newborn care is an interesting experience for the mother where she is able to understand the importance of newborn care which will increase the level of

knowledge and practice. Thus the nurses should understand the importance newborn care and encourage the mother to practice it.

Conclusion

This study shows that virtual newborn care was effective in increasing the level of knowledge and improving the newborn care practice. The experimental group of primipara mothers women who received virtual newborn care had increased level of knowledge and improved newborn care practice and was satisfied with the virtual presentation. The virtual newborn care is an interesting video presentation of 10 minutes which increases knowledge and newborn care practice related to breast feeding in the primipar mothers and hence the nurses could be encouraged to use this.

Implications

Nursing practice

The primipara mothers in the experimental group experienced an increase in the level of knowledge and improved newborn care practice than the control group proving it to be effective to use. The depth of knowledge and newborn care practice and mothers concept to it varies widely. The newborns in the experimental group show effective sucking, promotion of growth and development, bathing etc. The environment in which the women give birth and the support they received from their caregivers and companions will also affect the initiation of breast feeding.. Hence it becomes a necessity for the midwives to have adequate knowledge and skills about virtual Newborn care. The nurses should administered virtual Newborn care to primipara

mothers and to increase the level of knowledge and to improve newborn care practice in their clinical area as it is interesting, harmless and highly effective

Nursing education

Nurses are expected to have a core knowledge regarding health promotion, risk reduction and disease prevention yet, nurses have lack of knowledge surrounding Newborn care. In order to improve the knowledge regarding newborn care nursing and medical education should include the information about the newborn care. It is of paramount importance that nurses possess the knowledge and skills in practicing Newborn care therefore nursing programs and hospitals must make it a priority to educate both primipara mothers and nurses regarding evidence based Newborn care practices, support, and advice. 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 skillful in various aspects of providing care for which the primi paramothers have to be trained in it through their education .Thus it is the responsibility of the nurse administrator to include the virtual newborn care in the nursing curriculum.

The nursing staffs and the nursing students should be encouraged by the primipara mothers to practice newborn care.

Nursing research

Virtual Newborn care is an evidence based practice that has to be implemented almost in all the maternity settings. Nurses as health professionals work in coordination as a team to bring forth this initiative into maternity hospitals which will be beneficial for both mother and baby as well as the entire family there by reducing morbidity as well as mortality rates. Thus major research has to be promoted and conducted by the nurse researcher to prove the effectiveness of virtual Newborn care upon knowledge and practice among primipara mothers.

Recommendations

➢ The same study can be conducted with large number of samples.

➢ The same study can be conducted at different settings.

➢ . A comparison can be made with different countries.

➢ The same study can be conducted as a comparative study in urban and rural settings.

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 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)

CO/0223/13

30.05.2013

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 2nd year M. Sc. (N) student Ms. Sheeba Priyadharshini has selected the following title for her research study.

"An Experimental study to assess the effectiveness of virtual newborn care upon knowledge and practice among primipara 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

Apollo Hospitals
CHENNAI
touching lives

Emergency Service
Dial 1066

APPENDIX II

LETTER FOR 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)

CO/0223/13

30.05.2013

To

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Thanking You,

Dr.LATHA VENKATESAN
PRINCIPAL

Apollo Hospitals
CHENNAI
touching lives

Emergency Service
Dial **1066**

ETHICS COMMITTEE LETTER

Ethics Committee

15 May 2013

To,
Ms. R. Sheeba Priyadharshini,
2nd Year M.SC (Nursing),
Department of Pediatric Nursing,
Apollo College of Nursing, Chennai.

Ref: A study to assess the effectiveness of virtual newborn care upon knowledge and practice among primipara mothers at selected hospitals, Chennai.

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

Dear Ms. R. Sheeba Priyadharshini,

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

Ethics Committee

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:

15/13
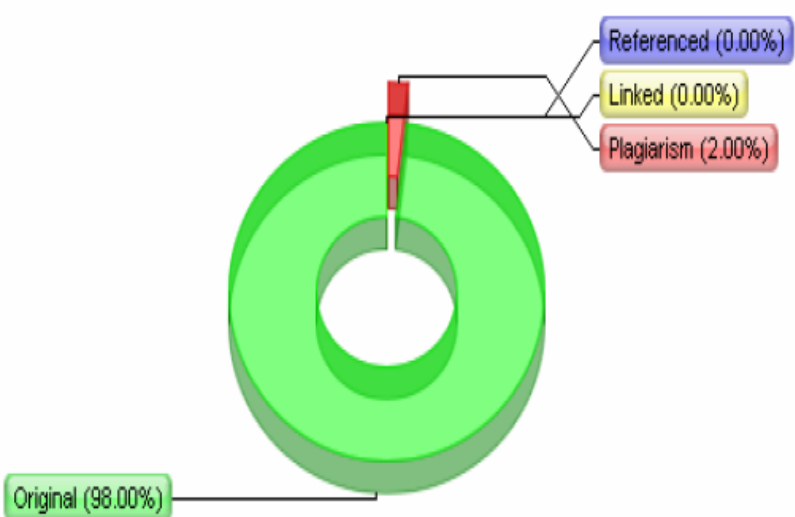
Dr. Rema Menon,

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

APPENDIX IV

PLAGIARISM ORIGINALITY REPORT

Plagiarism Detector - Originality Report	
Plagiarism Detector Project: [http://plagiarism-detector.com] Application core verrsion: 557	

Originality report details:

	Generation Time and Date:	1/7/2014 11:21:30 PM
	Document Name:	SHEEBA PRIYADHARSHINI THESIS.doc
	Document Location:	C:\Documents and Settings\Administrator\Desktop\ SHEEBA PRIYADHARSHINI THESIS.doc
	Document Words Count:	162803

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 (0.00%)

Linked (0.00%)

Plagiarism (2.00%)

Original (98.00%)

Referenced 0% / Linked 0%

Original - 98% / 2% - Plagiarism

APPENDIX V
REQUEST FOR CONTENT VALIDITY
LETTER REQUESTING OPINIONS AND SUGGESTIONS OF EXPERTS FOR
ESTABLISHING CONTENT VALIDITY OF RESEARCH

From

Ms. Sheeba priyadharshini.R

M.Sc., (Nursing) II Year,

Apollo College of Nursing,

Chennai-95.

To

Through Proper channel

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 newborn care upon knowledge and practice among primipara 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 request you to validate my Research tool and give suggestions about the tool.

Thanking You,

Yours Sincerely,

(Ms. Sheeba Priyadharshini.R)

APPENDIX VI

CONTENT VALIDITY CERTIFICATE

I hereby certify that I have validated the research tool and interventional programme of Ms. Sheebapriyadharshini.R M.Sc (Nursing) II year student who is undertaking research study on **"An Experimental Study to Assess Effectiveness of Virtual newborn care upon knowledge and practice among primipara mothers at Selected hospitals at Chennai".**

Signature of Expert

Name and designation

APPENDIX VII
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. **Dr.G. Krishna priya,M.B.B.S.,MRCPCH(UK).,**
   Consultant Paediatrician
   Apollo speciality hospitals
   Chennai-600005

3. **Prof. Nesa sathya satchi., M.Sc. (N), Ph.D.(N).,**
   Head of Department
   Child Health Nursing ,
   Apollo College of Nursing, Chennai-95.

4. **Prof. K. Vijayalakshmi,**
   M.Sc (N)., M.A. Psychology, Ph.D(N)
   Head of Department,
   Mental Health Nursing,
   Apollo College of Nursing, Chennai-95.

5. **Prof. Shobana., M.Sc. (N), Ph.D (N)**
   Head of Department,
   Community Health Nursing,
   Apollo College of Nursing, Chennai-95.

6. **Mrs.Cecilia Mary., M.Sc. (N),**
   Lecturer,
   Department of Child Health Nursing
   Apollo College of Nursing, Chennai-95.

RESEARCH PARTICIPANT CONSENT FORM

Dear Participant,

  I am Sheebapriyadharshini R, M.Sc Nursing II year 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 newborn care upon knowledge and practice among primipara 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
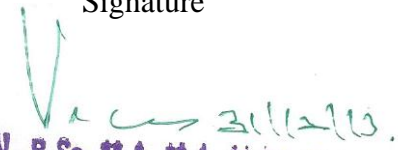
APPENDIX IX

CERTIFICATE FOR ENGLISH EDITING

TO WHOM SO EVER IT MAY CONCERN

This is to certify that the dissertation "An Experimental Study to Assess the Effectiveness of Virtual newborn care upon knowledge and practice among primipara mothers at Selected Hospitals, Chennai " by R.Sheebapriyadharshini M.Sc (N) II year Student, Apollo College of Nursing was edited for English language appropriateness.

Signature

T. VELAN, B.Sc., M.A., M.A., M.Ed., M.Phil.,
P. G. Asst. (English)
Mpl. Govt. Hr. Sec. School,
GUDIYATTAM-632 602, (VLR. DT.)

CERTIFICATE FOR TAMIL EDITING

TO WHOM EVER IT MAY CONCERN

This is to certify that the dissertation "**An Experimental Study to Assess the Effectiveness of Virtual newborn care upon knowledge and practice among primipara mothers at Selected Hospitals Chennai** by Ms.R.Sheebapriyadharshini M.Sc (N) II year Student, Apollo College of Nursing was edited for Tamil language appropriateness.

நா. கீதா,

Signature

நா. கீதா B. LIT, M.A, BEd
(Tamil)

மேலை துரைய
பாடசி ஒன்றிய துவக்கப்பள
இராசப்பட்ட.

DEMOGRAPHIC VARIABLE PROFORMA

Purpose

This proforma is used to measure the demographic variables like age in years, monthly income, religion, type of family, area of residence, occupation, educational status and source of information regarding newborn care.

Instructions

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

Sample number

UHID NO

1. Age in years

      1.1 < 20yrs   ☐

      1.2 21-25yrs   ☐

      1.3 26-30yrs   ☐

      1.4 > 31yrs   ☐

2. Religion

      2.1 Hindu   ☐

      2.2 Muslim   ☐

      2.3 Christian   ☐

      2.4 Others   ☐

3. Educational status of mother

    3.1 Illiterate   ☐

    3.2 Primary school   ☐

    3.3 Middle school   ☐

    3.4 High school   ☐

    3.5 Graduates   ☐

4. Occupation

    4.1 Private employed   ☐

    4.2 Government   ☐

    4.4 House wife   ☐

5. Monthly income of the family in rupees

    5.1 < 15, 000   ☐

    5.2 15, 000-25, 000   ☐

    5.3 25, 000 –35, 000   ☐

    5.4 >35, 000   ☐

6. Type of family

    6.1 Nuclear   ☐

    6.2 Joint   ☐

    6.3 Extended   ☐

7. Source of information regarding newborn care

    7.1 Family members   ☐

    7.2 Neighbours   ☐

    7.3 Health care professionals   ☐

    7.4 Media   ☐

<h1 align="center">சமூக அறிவியல் பட்டியல்</h1>

நோக்கம்

இப்பட்டியல் பலவகையான வேறுபாடுகளை அளவு செய்கிறது வயது, மாத வருமானம், மதம், குடும்பநிலை, செய்யும் தொழில், கல்வித்தகுதி, மற்றவர்களின் உந்துதலினால் குழந்தை பரமரிப்பு முறை பற்றி தெரிந்துகொள்ளுதல், மற்றும் இருப்பிடம்.

முன்குறிப்பு

கீழ்கண்ட கேள்விகளுக்கு விடை அளிக்கவும் இத்தவல்களை சரியான கட்டத்தில் (✓) செய்யவும். திறந்த மனதுடன் ஒளிவு மறைவு இல்லாமல் பதில் அளிக்கவும். இத்தகவல்கள் ரகசியமாக வைக்கப்படும்.

தன் நிலை விளக்கம்

மாதிரி எண் ....

மருத்துவமனை எண் ....

1. வயது (ஆண்டுகளில்)

1.1 20 வயதுக்கு கீழ் ☐

1.2 21-25 வயது ☐

1.3 26-30 வயது ☐

1.4 31 வயது மற்றும் அதற்கு மேல் ☐

2. மதம்

2.1 இந்து ☐

2.2 கிறிஸ்துவர் ☐

2.3 இஸ்லாமியர் ☐

2.4 மற்றவை எனில் (குறிப்பிடவும்) ☐

3. தாயின் கல்வி நிலை

3.1 படிக்கவில்லை ☐

3.2 தொடக்க கல்வி ☐

3.3 நடுநிலைக் கல்வி ☐

3.4 மேல்நிலைக்கல்வி ☐

3.5 பட்டப்படிப்பு ☐

4. தொழில்

4.1 ஏதெனும் நிறுவனத்தில் வேலை ☐

4.2 அரசு ஊழியர் ☐

4.3 குடும்பநிர்வாகி ☐

5. குடும்பத்தின் மாத வருமானம் (ரூபாயில்)

5.1 15,000க்கு கீழ் ☐

5.2 15000-25000 வரை ☐

5.3 25000-35000 வரை ☐

5.4 > 35000 மேல்

6. குடும்ப வகை

6.1 தனிக்குடும்பம் ☐

6.2 கூட்டுக்குடும்பம் ☐

6.3 பெரிய குடும்பம் ☐

7. குழந்தை பராமரிப்பு பற்றிய தகவல்களை முன்கூட்டியே யார்மூலமாக அறிந்து கொண்டீர்கள்

7.1 குடும்பத்தில் உள்ளவர்கள் ☐

7.2 தெரிந்தவர்கள் ☐

7.3 மருத்துவம் சார்ந்த ஊழியர்கள் ☐

7.4 தகவல் தொழில்நுட்பம் (தொலைகாட்சி, மின்அலை நுட்பம் மற்றும் கைப்பேசி) ☐

APPENDIX XII

OBSTETRIC VARIABLE PROFORMA

Purpose

This proforma is used by researcher to collect information on obstetric variables of the mother and baby such as birth weight of baby, mode of delivery, breast feeding, any postnatal complication, and gestational age of baby.

Instructions

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

1. Birth weight of the baby in kilograms

1.1 > 2.5   ☐

1. 2 2.6-3.5   ☐

1.3 <3.6   ☐

2. Mode of delivery

2.1 Normal spontaneous vaginal delivery   ☐

2.2 Caesarean delivery   ☐

2.3 Assisted delivery   ☐

3. Gestational age of baby

3.1 Less than 38weeks   ☐

3.2 38-40 weeks   ☐

3.3 Above 40 weeks   ☐

4. Any complication during labour

4.1 Prolonged labour ☐

4.2 Obstructed labour ☐

4.3 No complication ☐

5. Initiation of breast feeding

5.1 Immediately after birth ☐

5.2 After half an hour after birth ☐

5.3 2nd hour after birth ☐

5.4 4th hour after birth ☐

6. Sex of the baby

6.1 Male ☐

6.2 Female ☐

7. Type of feeding

7.1 Only breast feeding ☐

7.2 Only formula feeding ☐

7.3 Combination of breast feeding and formula feeding ☐

8. Sucking behaviour of baby

8.1 Baby did not suck ☐

8.2 Poor sucking ☐

8.3 Sucked well ☐

9. Antenatal check up

9.1 Regularly done   ☐

9.2 Irregularly done   ☐

9.3 Not done   ☐

10. Medical disorders during pregnancy

10.1 Anaemia   ☐

10.2 Hypertension   ☐

10.3 Diabetes   ☐

10.4 Others   ☐

10.5 Nil   ☐

11. Any postnatal complication

11.1 Post- partum haemorrhage   ☐

11.2 Puerperal psychosis   ☐

11.3 Puerperal sepsis   ☐

11.4 No complication   ☐

கர்ப்கால கூறு வேறுபாடுகளை கண்டறியும் படிவம்

நோக்கம்

கர்ப்கால கூறு வேறுபாடுகளின் மூலமாக குழந்தையின் எடை, குழந்தையை பிரசவிக்கும் முறை, தாய்ப்பால் கொடுத்தல், பிரசவத்திற்கு பின் வரும் பன்விளைவுகள், மற்றும் குழந்தை பிறந்த பொழுதுள்ள வயது வாரம்

அறிவுறுத்தல்கள்

ஆய்வாளர் பங்குப் பெறுபவர்களிடம் நேர்க் காணல் மூலம் தகவல்களைச் சேகரிப்பார்.

1. பிறந்த குழந்தையின் எடை (கிலோகிராமில்)

1.1 2.5 கி.கிக்கு கீழ் ☐

1.2 2.6 -.35 கி.கி வரை ☐

1.3 3.0 க்கு மேல் ☐

2. பிரசவ முறை

2.1 சுகப்பிரசவம் (இயற்கை) ☐

2.2 அறுவை சிகிச்சை ☐

2.3 உதிவியுடனான இயற்கை ☐

3. குழந்தை பிறந்த பொழுதுள்ள வயது வாரம்

3.1 38 வாரத்திற்கு கீழ் ☐

3.2 30-40 வாரம் ☐

3.3 40 வாரத்திற்கு மேல் ☐

4. பிரசவத்தின் போது ஏற்படக்கூடிய பின்விளைவுகள்

4.1 பிரசவிக்கும் காலம் தாமதமாகுதல் ☐

4.2 குழந்தை பிறப்பின் பொழுது ஏதேனும் இடையூறு ஏற்படுதல் ☐

4.3 எந்த பின்விளைவும் இல்லை ☐

5. பிறந்த குழந்தைக்கு தாய்ப்பால் கொடுக்க ஆரம்பிபதற்கான சரியான அளவு நேரம் எது.

5.1 குழந்தை பிறந்தவுடன்

5.2 குழந்தை பிறந்த 30 நிமிடம்

5.3 குழந்தை பிறந்த அடுத்த 2 மணிநேரம்

5.4 குழந்தை பிறந்த அடுத்த 4 மணிநேரம்

6. குழந்தையின் பாலினம்

6.1 ஆண்

6.2 பெண்

7. தாய்ப்பால் அளிக்கும் போது பயன்படுத்தும் முறை

7.1 தாய்ப்பால் மட்டும்

7.2 பவுடர் பால் மட்டும்

7.3 தாய்ப்பால் மற்றும் பவுடர்ல் பால்

8. குழந்தையின் உறிஞ்சும் திறன்

8.1 உறிஞ்சவில்லை

8.2 மிகவும் குறைவாக உறிஞ்சுதல்

8.3 நன்றாக உறிஞ்சுதல்

9 கர்ப்பகால மருத்துவ பரிசோதனை

9.1 ஒழுங்கான மருத்துவ பரிசோதனை

9.2 ஒழுங்கற்ற மருத்துவ பரிசோதனை

9.3 மருத்துவ பரிசோதனை இல்லை

10 கர்ப்பகாலத்தின் போது மருந்துவம் சார்ந்த உடல் நல குறைபாடுகள்

10.1 இரத்தசோகை

10.2 இரத்தகொதிப்பு ☐

10.3 நிரழிவு நோய் ☐

10.4 மற்றவை (குறிப்பிடவும்) ☐

10.5 மேற்கண்டவற்றில் எதுவும் இல்லை ☐

11. பிரசவத்திற்கு பின் ஏற்படும் விளைவுகள்

11.1 அதிக இரத்தம் வெளியேறுதல் ☐

11.2 மனநலம் பாதிப்பு ஏற்படுதல் ☐

11.3. நோய் கிருமிகளின் தாக்குதல் ☐

11.4 எதுவும் இல்லை ☐

BLUE PRINT ON STRUCTURED QUESTIONNAIRE OF KNOWLEDGE

REGARDING NEWBORN CARE

S.no	Content	Item number	Total	Percentage
1.	Thermoregulation	1 ,2 ,3,4	4	20%
2.	Prevention of infection	5 ,6 ,7 ,8	4	20%
3.	Breast feeding	9,10,11,12,	4	20%
4.	Immunization	13,14,15,16	4	20%
5.	Hygiene	17,18,19,20	4	20%
		Total	20	100%

Interpretation of scores

Percentage	Level of knowledge
<50%	Inadequate
50-75	Moderately adequate
>76	Adequate

STRUCTURED QUESTIONNAIRE TO ASSESS KNOWLEDGE REGARDING

NEWBORN CARE

Purpose

This structured questionnaire is used to assess the knowledge of primipara mothers regarding newborn care

Instructions

Please answer these questions freely and frankly. Each question has four choices, select the appropriate choice and place a tick mark in the space provided. The collected information will be kept confidential and used for research purpose only.

1. We should keep the baby warm by

a.   Covering the head

b.   Covering the chest and abdomen

c.   Covering the body including head, hands and legs

d.   Covering the head and legs

2 . **We should maintain the body temperature of the newborn to prevent**

a.   Infection

b.   Hypothermia

c.   Vomiting

d.   Fever

3. The best method to maintain body temperature immediately after birth is by

a.   Skin to skin contact with mother   ☐

b.   Covering with clothes   ☐

c.   Covering with more clothes   ☐

d.   Placing the newborn under the light   ☐

4. The baby is prone for heat loss from

a.   Trunk   ☐

b.   Extremities   ☐

c.   Face   ☐

d.   Head   ☐

5. We can care for the umbilical cord by

a.   Keeping the umbilical cord clean and dry   ☐

b.   Covering with bandage   ☐

c.   Applying cream   ☐

D.   Cleaning with soap and water   ☐

6. Eyes of the newborn are cared by

a.   Cleaning with clean cloth   ☐

b.   Applying kajal   ☐

c.   Pouring water   ☐

d.   Using dry cotton   ☐

7. Bathing a baby immediately after feeding causes

a.   Indigestion

b.   Regurgitation

C.   Vomiting

d.   Diarrhoea

8. The type of bath which is best for the baby with intact umbilical cord is

a.   Cold water bath

b.   Whole body bath

C.   Warm water bath

d.   Sponge bath

9. The first breast milk is

a..   Squeezed and discarded

b.   Fed to the baby

c.   Mixed with water and fed

d.   Mixed with sugar and fed

10. Breast feeding is initiated for a newborn baby born by normal

Vaginal delivery

a.   Half an hour after birth

b.   2 hours after birth

c   4 hours after birth

d   6 hours after birth

11. After feeding the baby we should immediately

a.   Burp the baby

b.   Place the child in a cradle

c.   Give some water

d.   Allow the baby to play

12. A child can be breast fed

a.   Up to 6 months

b.   Up to 12 months

c.   Up to 18 months

d.   Up to 24 months

13. Immunization is necessary

a.   To protect the baby from certain communicable disease

b.   To promote normal growth

c.   To protect baby from all infections

d.   To protect the baby from common injuries

14. The following vaccines reduce the risk for tuberculosis

a.   BCG

b.   MMR

c.   TT

d.   DPT

15. The reaction that develops after BCG vaccine

a. Pain

b. Pus

c. Edema

d. Redness

16. After polio vaccine breast feeding will be initiated

a. After 60mts

b. After 40mts

c. Within 30mts

d after 10mts

17. The napkin can be tied

a. Above the umbilical cord

b. Below the umbilical cord

c. On top of the umbilical cord

d. Very high above the umbilical cord

18. The primary cause for infection during newborn period are the following EXCEPT

a. Immature immune system

b. Breast feeding

c unhygienic practices

d. Lack of knowledge among mothers

xl

19.   Best technique followed to hasten healing of umbilical stump is

a   applying talcum powder

b.   Applying antiseptic cream

c.   Leaving it open

d.   Covering with bandage

20.   The commonest symptoms of infection in newborn are the following

EXCEPT

a.   Poor feeding

B.   Shrill cry

c.   Irritability

d.   Abdominal colic

Answer key:

1) c

2) b

3) a

4) b

5) a

6) a

7) b

8) d

9) b

10) a

11) a

12) d

13) a

14) a

15) d

16) c

17) b

18) b

19) c

20) d

குழந்தை பராமரிப்பு முறையின் தகவல்களை பற்றி அறிவதற்காக

வடிவமைக்கப்பட்ட முதல் குழந்தை பெற்ற தாயின் மாதிரி படிவம்

நோக்கம்

   குழந்தை பராமரிப்பு முறையை பற்றி அறிவற்காக வடிவமைக்கப்பட்ட மாதிரிப் படிவம்.

அறிவுறுத்தல்கள்

கீழ்கண்ட கேள்விகளுக்கு உண்மையாக பதில் அளிக்கவும் ஒவ்வொரு கேள்விகளும் நான்கு விடைகளைக் கொண்டுள்ளன. அதில் சரியான விடையை தேர்ந்தெடுக்கவும். நீங்கள் அளிக்கும் தகவல்கள் ரகசியமாக வைக்கப்படும். இந்த பதில்கள் ஆராய்ச்சிக்காக மட்டுமே பயன்படுத்தப்படும்.

1. நீங்கள் குழந்தையை இதமாக வைக்க கையாளும் முறைகள்

அ. குழந்தையின் தலையை மூடிவைத்தல்

ஆ. குழந்தையின் மார்பு மற்றும் வயிற்றுப்பகுதியை மூடிவைத்தல்

இ. குழந்தையின் உடம்பு மற்றும், தலை, கைகள், கால்களை மூடிவைத்தல்

ஈ. குழந்தையில் தலை மற்றும் கால்களை மூடுதல்

2. குழந்தையின் தட்பவெப்ப நிலையை சரிசெய்யும் (அ) தடுக்கும் விதம்

அ. நுண்கிருமிகளிடம் இருந்து பாதுகாத்தல்

ஆ. குளிர்காய்ச்சல்

இ. வாந்தி

ஈ. காய்ச்சல்

3. குழந்தை பிறந்ததிற்கு பின் உடனடியாக குழந்தையின் தட்டவெப்பநிலையை சரி செய்யும் விதம்

அ. தாயின் தோளுடன் தோல் இணைவு

ஆ. துணியைக் கொண்டு குழந்தையை மூடுதல்

இ. அதிகமான துணியினை பயன்படுத்தி குழந்தையை மூடுதல்

ஈ. குழந்தையை ஒளிவிளக்கின் கீழ்புரம் அல்லது அடியில் அப்படியே வைத்தல்

4. குழந்தையின் உடலில் சுலபமாக வெப்பம் இழக்கும் பகுதி

அ. குழந்தையின் மார்பகத்தின் பின்பகுதி மற்றும் முன்பகுதி ☐

ஆ. கால் பகுதி ☐

இ. முகம் ☐

ஈ. தலைபகுதி ☐

5. தொப்புள் கொடியை பராமரிக்கும் முறை

அ. தொப்புள் கொடியை சுத்தம் செய்தல் மற்றும் உலர்த்துதல் ☐

ஆ. காயம் கட்டும் துணியால் மூடிவைத்தல் ☐

இ. மருத்துவப் பசையை தடவுதல் ☐

ஈ. சோப்பு மற்றும் தண்ணீரால் சுத்தம் செய்தல் ☐

6. குழந்தையின் கண்களை பராமரிக்கும் முறை

அ. சுத்தமான துணியால் சுத்தம் செய்தல் ☐

ஆ. கண்களில் கண்மையை கடவுதல் ☐

இ. தண்ணீரால் சுத்தம் செய்தல் ☐

ஈ. உலர்ந்த பஞ்சை பயன்படுத்துதல் ☐

7. குழந்தையை குளிப்பாட்டியவுடன் பால் கொடுப்பதால் ஏற்படும் விளைவுகள்

அ. அஜீரணம் ☐

ஆ. எதுக்களித்தல் ☐

இ. வாந்தி எடுத்தல் ☐

ஈ. வயிற்றுப்போக்கு மற்றும் பேதி ☐

8. தொப்புள் கொடியுடன் கூடிய குழந்தையின் சிறந்த குளியல் முறை

அ. குளிர்ந்த நீரில் குழந்தையை குளிப்பாட்டுதல் ☐

ஆ. முழு உடம்பை குளிக்க வைத்தல் ☐

இ. சுடுநீரில் உடம்மை கழுவுதல் ☐

ஈ. குழந்தையின் உடலை துணியினைக் கொண்டு துடைத்தல் ☐

9. முதல் தாய்ப்பாலை பயன்படுத்தும் முறை

அ. கீழே வீணாக்குதல்

ஆ. குழந்தைக்கு பருக கொடுதல்

இ. தண்ணீர் கலந்து குழந்தைக்கு பருக கொடுத்தல்

ஈ. சர்க்கரை கலந்து குழந்தைக்கு பருக கொடுத்தல்

10. சுகப்பிரசவத்தில் பிறந்த குழந்தைக்கு தாய்ப்பால் கொடுக்க ஆரம்பிக்கும் நேரம்

அ. குழந்தை பிறந்த அடுத்த 30 நிமிடம்

ஆ. குழந்தை பிறந்த 2 மணி நேரம்

இ. குழந்தை பிறந்த 4 மணி நேரம்

ஈ. குழந்தை பிறந்த 6 மணி நேரம்

11. தாய்ப்பால் கொடுத்தவுடன் செய்ய வேண்டுபவை

அ. குழந்தையின் முதுகு பகுதியை தடவி விடுதல்

ஆ. குழந்தையை தொட்டிலில் போடுதல்

இ. குறைந்த அளவு நீரை குழந்தைக்கு கொடுத்தல்

ஈ. குழந்தையை சற்றுநேரம் விளையாட அனுமதித்தல்

12. தாய்ப்பால் கொடுக்கும் கால அளவு

அ. 6 மாதம் வரை

ஆ. 12 மாதம் வரை

இ. 18 மாதம் வரை

ஈ. 24 மாதம் வரை

13. தடுப்பு மருந்தின் முக்கியத்துவம்

அ. தொற்றுநோயில் இருந்து குழந்தையை பாதுகாத்தல்

ஆ. குழந்தையின் வளர்ச்சியை பாதுகாத்தல்

இ. குழந்தையை கிருமிகளிடம் இருந்து பாதுகாத்தல்

ஈ. குழந்தையை அடிக்கடி ஏற்படும் காயங்களில் இருந்து பாதுகாத்தல்

14. கீழ்கண்ட தடுப்பு மருந்துகளில் காசநோயை தடுக்கும் மருந்து

அ. பி.சி.ஜி.

ஆ. எம்.எம்.ஆர்

இ. டி-டி

ஈ. டி.பி.டி

15. பி.சி.ஜி தடுப்பூசி போட்டவுடன் ஏற்படும் விளைவுகள்

அ. வலி ஏற்படுதல்

ஆ. சீழ் வடிதல்

இ. விங்கி காணப்படுதல்

ஈ. சிவந்து காணப்படுதல்

16. போலியோ சொட்டு மருந்து கொடுத்த பின் தாய்ப்பால் கொடுக்க தொடங்கும் நேரம்

அ. அடுத்த 30 நிமிடம்

ஆ. சொட்டு மருந்து கொடுத்தபின் 40 நிமிடம்

இ. 30 நிமிடம்

ஈ. அடுத்த 10 நிமிடம்

17. குழந்தையின் இடுப்பு துணியை கட்டும் விதம்

அ. தொப்புள் கொடிக்கு மேல்

ஆ. தொப்புள் கொடிக்கு கீழ்

இ. தொப்புள் கொடிக்கு நேராக

ஈ. தொப்புள் கொடிக்கு மிகவும் மேலாக

18. குழந்தையை நோய்கிருமிகளில் இருந்து பாதுகாக்கும் முதன்மையான காரணங்களை தவிர உள்ளவற்றை குறிப்பிடவும்

அ. வளர்ச்சியற்ற தடுப்பு ஒழுங்கு

ஆ. தாய்ப்பால் கொடுத்தல்

இ. தூய்மையின்மை

ஈ. போதிய அறிவுறைகள் இல்லாமல் இருத்தல்

19. தொப்புள் கொடி பராமரிப்பிற்கு பயன்படுத்தும் முறைகள்

அ. சாதாரணமாக பயன்படுத்தும் பவுடர் ☐

ஆ. நோய் எதிப்பு சக்தி மிகுந்த மருத்துவப்பசை ☐

இ. திறந்த வெளியில் காணப்படுதல் ☐

ஈ. தொப்புள் கொடியை மூடிவைத்தல் ☐

20. குழந்தையை நோய்க்கிருமிகளின் தாக்குதலில் வரும் விளைவுகள் தவிர உள்ளவற்றை குறிப்பிடவும்.

அ. சரிவர பால் கொடுக்காதிருத்தல் ☐

ஆ. இறுக்கமான நிலையில் அழுதல் ☐

இ. எளிதில் கோபம் கொள்ளுதல் ☐

ஈ. வயிற்று வலி ஏற்படுதல் ☐

APPENDIX XV

BLUEPRINT FOR OBSERVATIONAL CHECKLIST FOR NEWBORN CARE PRACTICE

S.no	Item	Item number	Total number of item	Percentage
1	Thermoregulation and breast feeding	1,2,3,4,5,6,	6	50%
2	Prevention of infection , immunization and Hygiene	7,8,9,10,11,12	6	50%
			Total	**100%**

Score key;

Scoring	Interpretation
0-8	Not done
9-16	Partially done
17-24	Done

APPENDIX XVI

OBSERVATION CHECKLIST FOR NEWBORN CARE PRACTICE

TO ASSESS THE PRACTICE OF NEWBORN CARE AMONG PRIMIPARA MOTHERS

S.no	Statement	Done	Partially done	Not done
1	Practises skin to skin contact			
2	Covers the head ,hands, and legs of the baby			
3	Feeds the baby on demand			
4	Follow appropriate position during breast feeding			
5	While feeding both the areola and nipple is inserted into the baby 's mouth			
6	Burps the baby each feed			
7	Umbilical stump is left open			
8	Cleans the eyes with clean mitten			
9	Has given BCG vaccine for the baby			
10	Washes the hands before handling the baby			
11	Applies diaper below the umbilical cord			
12	The clothes dries it in the sun light			

தணிக்கை பட்டியல்

குழந்தை பராமரிப்பின் செயல்முறை விளக்கம் பற்றி வடிவமைக்கப்பட்ட தணிக்கை பட்டியல்

வரிசை எண்	கேள்விகள்	செய்து முடித்தது	பகுதி செய்து முடித்தது	செய்யாதது
1.	தோல் மேல் தோல் இணைப்பு ஏற்படுதல்			
2.	குழந்தையின் தலை, கை மற்றும் கால் பகுதி மூடி மறைக்கப்படுதல்			
3.	குழந்தைக்கு நிறைவான தாய்ப்பால் கொடுத்தல்			
4.	தாய்ப்பால் கொடுக்கும் போது நன்றாக அமர்ந்த நிலை			
5.	தாய்ப்பால் கொடுத்தலின் போது நுனிக்காம்பு முழுவதும் குழந்தையின் வாய்ப்பகுதியில் உள்புறமாக இருத்தல்			
6.	தாய்ப்பால் கொடுத்தபின் குழந்தையின் முதுகுப்பகுதியை தட்டிக் கொடுத்தல்			
7.	தொப்புள் கொடி திறந்த நிலையில் காணப்படுதல்			
8.	தூய்மையான பஞ்சினை வைத்து குழந்தையின் கண் பகுதியை சுத்தம் செய்தல்			
9.	குழந்தைக்கு தடுப்பூசி அளிக்கப்பட்டு இருத்தல்			

10.	குழந்தை பராமரிப்பிற்கு முன் கைகளை சுத்தம் செய்தல்			
11.	தொப்புள் கொடிக்கு கீழே டையப்பர் அணிதல்			
12.	குழந்தைகளின் துணிகளை சூரிய ஒளியில் உலர்த்தி பயன்படுத்துதல்			

BLUE PRINT FOR LEVEL OF SATISFACTION

S.no	Content	Statement	Total	Percentage
1	Question related to researcher	1,2,3	3	30%
2	Question related to virtual newborn care	4,5,6,7,8,9,10	7	70%
		Total	10	100%

Score interpretation

Scores	Interpretation
1-10	Highly dissatisfied
11-20	Dissatisfied
21-30	Satisfied
31-40	Highly satisfied

RATING SCALE ON THE LEVEL OF THE SATISFACTION OF THE

PARTICIPANTS

This tool is developed by a investigator

Purpose

This rating scale is designed to assess the level of satisfaction on newborn care among primipara mothers. This is assessed by the researcher after implementing virtual newborn care

Instructions

Kindly read the items, response extends from highly satisfied, satisfied, dissatisfied, and highly dissatisfied

- ➢ Please read the questionnaire given below

- ➢ Please respond to all questions listed below

- ➢ Please put tic mark against you preferred alternative

- ➢ Please don't omit any question given below

- ➢ Give four responses freely and frankly

- ➢ The responses will be kept confidential and used for research purpose only

S.no	Statement	Highly satisfied	Satisfied	Dissatisfied	Highly dissatisfied
1	Explanation regarding virtual new born care by researcher				
2	Approach of the researcher				

3	Time spent by the researcher				
4	Duration of the virtual newborn care				
5	Arrangements made during the virtual newborn care				
6	The clarity of the video				
7	Time of interaction				
8	The virtual newborn care is easy to follow and understand				
9	There is an improvement in your ability to take care of newborn				
10	Self confidence developed after watching virtual newborn care				

தன் நிறைவு அளவுகோல்

நோக்கம்

இந்தப் படிவம் பங்கு பெறுவோரின் தன் நிறைவை அறிவதற்காக அமைக்கப்பட்டுள்ளது.

செய்முறை

கீழே பத்து கேள்விகள் உள்ளன. கேள்விகளை கவனமாக வாசிக்கம். பதில்கள் மிகவும் திருப்தி என துவங்கி திருப்தி, மிகவும் அதிருப்தி என்பது வரை உள்ளது பதில்களுக்கு நேராக (✓) செய்யவும் உங்கள் பதில்கள், வெளிப்படையாகவும், உண்மையாகவும் இருக்கவும் உங்களுடைய குறிப்புகள், ஆராய்ச்சிக்காக மட்டுமே உபயோகிக்கப்படும். பெயர் வேறு எங்கும் வெளிபடமாட்டாது நன்றி.

வரிசை எண்	தனிவிவரம்	மிகவும் திருப்தி	மிதமான திருப்தி	குறைந்த திருப்தி	அதிருப்தி
1.	ஆராய்ச்சியாளர் இந்த நிகழ்ச்சியை குறித்து விளக்கம் அளித்தது				
2.	ஆராய்ச்சியாளரின் அணுகுமுறை				
3.	ஆராய்ச்சியாளர் செலவழித்த நேரம்				
4.	நிகழ்ச்சி நடத்திய காலகட்டம்				
5.	நிகழ்ச்சியின் போது செய்யப்பட்ட ஏற்பாடுகள்				

6.	செயல்முறை விளக்கம்				
7.	நிகழ்ச்சியின் பங்கு பெறுபவரின் ஈடுபாடு				
8.	நிகழ்ச்சி எளிதல் புரியும் படி இருந்தது				
9.	குழந்தை பராமரிப்பின்போது ஏற்படும் முன்னேற்றம்				
10.	நிகழ்ச்சியின் உபயோபம்				

குழந்தை பராமரிப்பு முறையினை பற்றி காணும் வீடியோ படநிகழ்ச்சி தொகுப்பு

"வாழ்க்கை என்ற பரிசைத் தவிர
வாழ்வில் வேறு ஒன்றும் உயர்ந்த பரிசல்ல".

குழந்தை பிறப்பு வாழ்க்கையின் முக்கிய துவக்கம் ஆரோக்கியமான குழந்தை பிறப்பும் பிறப்பும், அதன் வளர்ச்சியும் நாட்டின் எதிர்கால வளர்ச்சிக்கு இன்றியமையாததாகும். இன்றைய கால கட்டத்தில், நவினமான உலகத்தில் முதல் குழந்தையின் பராமரிப்பு என்பது மிகவும் கடினமானது. அத்தகைய முதல் குழந்தைப் பராமரிப்பினை பற்றி பார்ப்போம்.

காட்சி – 1

பகுதி – 1
குழந்தையின் உடல் வெப்பநிலையை பராமரிக்கும் முறைகள்

குழந்தையின் உடலில் தலை முதல் கால் வரை துணியால் நன்றாக சுற்றிவைத்தல் மிகவும் அவசியம். அப்படி செய்வதன் மூலமாக குழந்தையின் உடல் வெப்ப நிலையை சீராக வைக்க முடிகிறது. துணி ஒன்றை எடுத்துக்கொண்டு துணியின் ஒரு நுனியின் மையப்பகுதியை நோக்கி மடக்கி வைத்தல் வேண்டும். குழந்தையின் தலையை துணியின் நுனி பகுதியால் மூடிவைக்க வேண்டும். துணியின் வலது புற நுனியை குழந்தையின் வலதுகையை சேர்த்து உடம்போடு சொருக வேண்டும்.

குழந்தையின் காலடியில் உள்ள துணியை எடுத்துக் குழந்தையின் இடதுபுற கையை விட்டுவிட்டு உடம்பின் அடிப்புறத்தில் துணியை சொருக வேண்டும். இடது புறத்தில் உள்ள நுனியை குழந்தையின் கைகளையும் சேர்த்து வலது புறத்தில் சுற்றவேண்டும். தாய் சேய் பராமரிப்பின் மூலமாக தாய் சேய் உறவு அதிகரிக்க உதவுகிறது.

பகுதி -2:

நவீன நூதனமான முறை (கங்காரு பராமரிப்பு)

கங்காரு பராமரிப்பின் மூலமாக தாய், சேய் உறவு பெலனடைகிறது, குழந்தையின் உடல் வெப்பநிலை சீராக்கப்படுகிறது. தூய்பால் அதிகரிக்க உதவுகிறது. கங்காரு பராமரிப்பின்போது குழந்தையை தாயின் மார்பக பகுதியில் வைத்தல் மிகவும் அவசியம்.

காட்சி — 2

குழந்தையை நோய் தொற்றுகளிடம் இருந்து பாதுகாக்கும் முறைகள்

குழந்தையை குளிக்க வைக்கும் முறைகள்:

குளியல் என்பது குழந்தைக்கு மிகவும் முக்கியமானது. அது குழந்தையை சுகமான நிலையில் வைக்கிறது. மேலும் நோய் தொற்றுகளிடம் இருந்து பாதுகாக்கிறது.

- குளிக்க வைக்கும் முன் தேவையான உபகரணங்களை எடுத்துக் கொள்ளவேண்டும்.
- முதலில் டப்பில் மூன்றில் ஒரு பங்கு சுடுநீரை எடுத்துக்கொள்ள வேண்டும்.

குழந்தையை மசாஜ் செய்யும் முறைகள்:

குழந்தையை குளிக்க வைக்கும் முன்பு மசாஜ் செய்தல் அவசியம் மசாஜ் செய்வதற்கு முன்பு கைகளை நன்றாக சுத்தம் செய்து கொள்ள வேண்டும்.

கையில் சிறிதளவு எண்ணையை எடுத்துக்கொண்டு குழந்தையின் பாதம் மற்றும் நுனிப்பகுதி, மேல்பகுதி மசாஜ் செய்யவும். பின் வயிற்றுப் பகுதியை கடிகார சுற்று திசையில் மசாஜ் செய்யவும். இதனால் குழந்தையின் வயிற்றுப்பகுதியில் உள்ள வாய்வு வெளியேற்றப்படுகிறது. பின்பு மார்பக பகுதியை மசாஜ் செய்தல், பின் கை மற்றும் கையின் நுனிவிரல் பகுதி, தாடை, கன்னம், புருவத்தின் மேல் பகுதி, தலைப்பகுதி மற்றும் பின் பகுதியில் சிறிய அழுத்தம் கொடுத்து, மென்மையான முறையில் மசாஜ் செய்யவும்.

கண்களை பராமரிக்கும் முறை

ஒரு பஞ்சியின் நுனிப்பகுதியை நீரில் நனைத்து கண்களின் உட்புறத்தில் இருந்து வெளிப்புறமாக துடைக்க வேண்டும்.

குழந்தையை குளிக்க வைக்கும் முறை:

குளிக்க வைக்கும்முன் தேவையான உபகரணங்களை எடுத்துக் கொள்ளவேண்டும்.

நீரின் வெப்பநிலையை சரிபார்க்க வேண்டும். குழந்தையை கையில் எடுத்து குழந்தையின் முகத்தை சுத்தம் செய்யவும். பின் காதின் வெளிப்புறம், பின்புறம் சுத்தம் செய்யவும். பின்பு குழந்தையின் முகத்தை உலர்ந்த துணியின் மூலமாக தொட்டு, தொட்டு, துடைத்து எடுக்க வேண்டும். பின் தலைப்பகுதியினை குளிக்க வைக்கவும், பின் தலைப்பகுதியை துண்டினால் துடைக்கவும், பின் உடம்பினை சோப்பினை பயன்படுத்தி நீரினால் நனைக்கவும், குழந்தையின் உடம்பினை துடைக்கும் பொழுது முக்கியமாக அக்குள் பகுதி, கைப்பகுதி, மற்றும் கால்களுக்கு இடைப்பட்ட பகுதியினை சுத்தமாக நீரினால் கழுவ வேண்டும். பின் குழந்தையினை டப்பினுள் வைத்து முன்புறம் மற்றும் பின்புற பகுதியினை நீரினால் கழுவவேண்டும். பின் உலர்ந்த துணியினால் குழந்தையை துடைக்கவும்.

குழந்தையின் தொப்புள் கொடியினை பராமரிக்கும்முறை

- ஒரு சிறிய பஞ்சினால் தொப்புள் கொடிபகுதியினை துடைக்கவும்.
- பின் குழந்தையின் தூய்மையான டையப்பரை மாற்ற வேண்டும்.
- பின் குழந்தையினை நன்றாக ஒரு துணியினால் சுற்றி தாயிடம் ஒப்படைக்கவும்.

காட்சி – 3

தாய்ப்பால் கொடுக்கும் முறைகளைப் பற்றி:

"தாய்ப்பால் என்பது மிகவும் முக்கியமானது, குழந்தையின் வளர்ச்சிக்கு தாய்ப்பால் மிகவும் அவசியமானது. தாய்ப்பால் கொடுப்பதால் தாய்சேய் உறவுமுறை அதிகரித்தல் குழந்தை அதிக நோய் எதிர்ப்பு சக்தியினைப் பெறுகின்றது. அதனால் தாய்ப்பால் என்பது மிகவும் அவசியம்.

- சுகப்பிரசவத்திற்கு பின் அடுத்த அரைமணி நேரத்தில் தாய்ப்பால் கொடுத்தல் மிகவும் அவசியம்.
- அறுவைசிகிச்சைக்குப் அடுத்த ஒரு மணி நேரத்தில் தாய்ப்பால் கொடுத்தல் அவசியம்.

காட்சி — 4

குழந்தையின் வளர்ச்சி நிலையை அதிகரிக்கும் முறைகள்:

- தாய்சேய் இணைவு முறையை பெலப்படுத்துதல்
- இனிய இசையின் மூலமாக குழந்தையின் உறக்க நிலையை அதிகரித்தல்.

காட்சி — 5

நோய் கிருமியை தடுக்கும் முறைகள்:

- நோய்கிருமிகளில் உள்ள மனிதர்களிடம் இருந்து குழந்தையை பாதுகாப்பாக வைத்தல்
- குழந்தை வளர்வதற்கு உரிய இருப்பிடத்தை உருவாக்குதல்.
- குழந்தை வளர்வதற்கு உரிய சுற்றுப்புற சூழ்நிலையை சுத்தமாகவும், அமைதியாகவும், உருவாக்குதல்.
- குழந்தை அசுத்தம் செய்த துணிகளை சோப்புத்தூள்களைப் பயன்படுத்தி துவைத்து வெயிலில் உலர வைக்கவேண்டும்.

காட்சி — 6

தடுப்பு மருந்து கொடுத்தல்:

நோய்தடுப்பு மருந்துகளான பி.சி.ஜி, போலியோ சொட்டுமருந்து, டி.பி.டி, மஞ்சள்காமாலை, மூளைக்காய்ச்சல், அம்மைதடுப்பு, டைபாய்டு போன்ற மூலமாக குழந்தைகள் தொற்றுநோயில் இருந்து பாதுகாக்கப்படுகின்றனர்.

முடிவுரை:

"எவ்வாறு உங்களது குழந்தையை நீங்கள் பார்த்துக் கொள்கிறீர்களோ அவ்வாறே குழந்தையின் வளர்ச்சி அமையும்.

இந்த வீடியோ படநிகழ்ச்சி மூலமாக உங்களுடைய குழந்தையின் நலமான ஆரோக்கியம் அல்லது மருத்துவ நிலையைப் பற்றி நன்கு தெரிந்துகொள்ள உதவியாக இருக்கும் என்று நாங்கள் நினைக்கிறோம். எங்களது இந்த சிறிய உதவியின் மூலம் நீங்கள் உங்கள் குழந்தையை நன்கு பாதுகாத்து அன்புசெலுத்தி அந்த குழந்தையுடன் உங்கள் உறவை வளர்த்துக்கொள்ள வேண்டுகிறோம்.

"இவ்வுலகில் செல்வத்தினுள்
தலைசிறந்த செல்வம்
குழந்தைச் செல்வம் ___ அத்தகைய
குழந்தைச்செல்வத்தினை பாதுகாப்போம்,
நலமுடன் வாழ்வோம்".

நன்றி!!!

DATA CODE SHEET

DEMOGRAPHIC VARIABLE PROFORMA

1. AGE – Age in years

   1.1   < 20yrs

   1.2   21-25yrs

   1.3   26-30yrs

   1.4   > 31yrs

2. RL- Religion

   2.1   Hindu

   2.2   Muslim

   2.3   Christian

   2.4   Others

3. ES-Educational status of mother

   3.1   Illiterate

   3.2   Primary school

   3.3   Middle school

   3.4   High school

   3.5   Graduates

4. OC-Occupation

   4.1   Private employed

   4.2   Government

   4.4   House wife

5. MI-Monthly income of the family in rupees

   5.1   < 15, 000

   5.2   15, 000-25, 000

   5.3   25, 000 –35, 000

   5.4   >35, 000

6. TF-Type of family

   6.1   Nuclear

   6.2   Joint

   6.3   Extended

7. SI- Source of information regarding newborn care

   7.1   Family members

   7.2   Neighbours

   7.3   Health care professionals

   7.4   Media

OBSTETRIC VARIABLE PROFORMA

1. BW-Birth weight of the baby in kilograms

1.1 > 2.5

1. 2 2.6-3.5

1.3 <3.6

2. MD-Mode of delivery

2.1 Normal spontaneous vaginal delivery

2.2 Caesarean delivery

2.3 Assisted delivery

3. GA-Gestational age of baby

3.1 Less than 38weeks

3.2 38-40 weeks

3.3 Above 40 weeks

4. CL-Any complication during labour

4.1 Prolonged labour

4.2 Obstructed labour

4.3 No complication

5. IB- Initiation of breast feeding

5.1 Immediately after birth

5.2 After half an hour after birth

5.3 2nd hour after birth

5.4 4th hour after birth

6. SB-Sex of the baby

6.1 Male

6.2 Female

7. TF- Type of feeding

7.1 Only breast feeding

7.2 Only formula feeding

7.3 Combination of breast feeding and formula feeding

8. SB-Sucking behaviour of baby

8.1 Baby did not suck

8.2 Poor sucking

8.3 Sucked well

9. AC-Antenatal check up

9.1 Regularly done

9.2 Irregularly done

9.3 Not done

10. MD- Medical disorders during pregnancy

10.1 Anaemia

10.2 Hypertension

10.3 Diabetes

10.4 Others

10.5 Nil

11. PC-Any postnatal complication

11.1 Post- partum haemorrhage

11.2 Puerperal psychosis

11.3 Puerperal sepsis

11.4 No complication

APPENDIX XXI

MASTER CODE SHEET

	CONTROL GROUP																					
	DEMOGRAPHIC VARIABLES							OBSTETRIC VARIABLE											KNOWLEDGE LEVEL		PRACTICE LEVEL	
S.NO	AG	RL	ES	OC	MI	TF	SI	BW	MD	GA	CL	IB	SB	TF	SB	AC	MD	PC	PRT	POT	PRT	POT
1	1.2	2.1	3.3	4.3	5.1	6.2	7.1	1.2	2.1	3.2	4.3	5.2	6.1	7.1	8.3	9.1	10.5	11.4	5	5	2	2
2	1.2	2.1	3.4	4.3	5.1	6.2	7.1	1.2	2.1	3.2	4.3	5.2	6.1	7.1	8.3	9.1	10.5	11.4	3	6	3	5
3	1.2	2.1	3.4	4.3	5.1	6.2	7.1	1.2	2.1	3.2	4.3	5.2	6.2	7.1	8.3	9.1	10.5	11.4	2	3	2	2
4	1.3	2.2	3.2	4.3	5.1	6.2	7.2	1.2	2.1	3.2	4.3	5.2	6.2	7.1	8.3	9.1	10.5	11.4	4	8	2	4
5	1.2	2.1	3.4	4.3	5.1	6.2	7.1	1.2	2.1	3.2	4.3	5.3	6.1	7.1	8.3	9.1	10.5	11.4	3	6	2	2
6	1.4	2.3	3.5	4.1	5.2	6.1	7.1	1.3	2.2	3.2	4.3	5.2	6.2	7.1	8.3	9.1	10.5	11.4	2	3	3	6
7	1.3	2.3	3.4	4.1	5.2	6.2	7.2	1.2	2.1	3.2	4.3	5.2	6.1	7.1	8.3	9.1	10.5	11.4	5	5	2	5
8	1.2	2.2	3.4	4.3	5.1	6.2	7.2	1.2	2.1	3.2	4.2	5.3	6.1	7.1	8.3	9.1	10.5	11.4	4	8	3	3
9	1.3	2.1	3.4	4.1	5.2	6.2	7.1	1.2	2.1	3.2	4.3	5.3	6.1	7.1	8.3	9.1	10.5	11.4	3	3	2	2
10	1.2	2.1	3.2	4.3	5.1	6.1	7.1	1.3	2.2	3.2	4.3	5.3	6.2	7.1	8.3	9.1	10.5	11.4	4	7	2	4
11	1.2	2.1	3.2	4.3	5.1	6.1	7.1	1.3	2.1	3.2	4.3	5.3	6.2	7.1	8.3	9.1	10.5	11.4	4	4	3	3
12	1.2	2.3	3.4	4.1	5.1	6.1	7.1	1.3	2.1	3.2	4.3	5.3	6.1	7.1	8.3	9.1	10.5	11.4	4	4	2	5
13	1.3	2.3	3.5	4.1	5.2	6.2	7.4	1.2	2.1	3.2	4.3	5.3	6.2	7.1	8.3	9.1	10.5	11.4	5	6	3	2
14	1.2	2.1	3.2	4.3	5.1	6.2	7.1	1.2	2.2	3.2	4.3	5.2	6.1	7.1	8.3	9.1	10.3	11.4	3	6	3	3
15	1.2	2.1	3.1	4.3	5.1	6.2	7.1	1.2	2.2	3.2	4.3	5.2	6.2	7.1	8.3	9.1	10.5	11.4	3	6	2	5
16	1.2	2.1	3.1	4.3	5.1	6.2	7.1	1.2	2.1	3.2	4.3	5.2	6.2	7.1	8.3	9.1	10.5	11.4	4	7	3	6
17	1.3	2.1	3.4	4.3	5.1	6.1	7.2	1.2	2.1	3.2	4.3	5.2	6.1	7.1	8.3	9.1	10.3	11.4	5	5	3	5
18	1.2	2.1	3.4	4.3	5.1	6.2	7.2	1.2	2.1	3.2	4.3	5.2	6.1	7.1	8.3	9.1	10.5	11.4	4	6	2	4
19	1.2	2.1	3.4	4.3	5.1	6.2	7.2	1.2	2.1	3.2	4.3	5.2	6.1	7.1	8.3	9.1	10.5	11.4	3	6	2	4
20	1.2	2.1	3.4	4.3	5.1	6.2	7.2	1.2	2.1	3.2	4.3	5.2	6.1	7.1	8.3	9.1	10.5	11.4	5	6	2	4
21	1.2	2.3	3.4	4.3	5.2	6.2	7.2	1.2	2.1	3.2	4.3	5.2	6.2	7.1	8.3	9.1	10.5	11.4	5	6	2	6
22	1.2	2.1	3.4	4.1	5.1	6.1	7.4	1.3	2.1	3.2	4.3	5.2	6.1	7.1	8.3	9.1	10.2	11.4	6	2	3	3
23	1.3	2.1	3.2	4.3	5.1	6.2	7.2	1.2	2.1	3.2	4.3	5.2	6.1	7.1	8.3	9.1	10.5	11.4	2	4	PRT	3
24	1.2	2.1	3.4	4.1	5.2	6.1	7.2	1.2	2.1	3.2	4.3	5.2	6.2	7.1	8.3	9.1	10.5	11.4	2	3	3	4
25	1.2	2.3	3.4	4.1	5.1	6.2	7.4	1.2	2.1	3.2	4.3	5.2	6.2	7.1	8.3	9.1	10.5	11.4	3	4	3	6
26	1.2	2.1	3.4	4.1	5.1	6.2	7.2	1.2	2.1	3.2	4.3	5.2	6.1	7.1	8.3	9.1	10.5	11.4	3	4	2	4
27	1.3	2.1	3.4	4.3	5.2	6.2	7.1	1.2	2.1	3.2	4.3	5.2	6.1	7.1	8.3	9.1	10.5	11.4	5	2	2	2
28	1.2	2.1	3.4	4.3	5.2	6.2	7.1	1.2	2.1	3.2	4.3	5.2	6.1	7.1	8.3	9.1	10.5	11.4	5	4	2	2
29	1.3	2.3	3.5	4.1	5.2	6.2	7.1	1.2	2.1	3.2	4.3	5.2	6.1	7.1	8.3	9.1	10.5	11.4	6	7	3	4
30	1.3	2.1	3.4	4.3	5.1	6.2	7.1	1.2	2.1	3.2	4.3	5.2	6.2	7.1	8.3	9.1	10.2	11.4	4	6	3	4

	EXPERIMENTAL GROUP																					
	DEMOGRAPHIC VARIABLES							OBSTETRIC VARIABLE											KNOWLEDGELEVEL		PRACTICELEVEL	
S.NO	AG	RL	ES	OC	MI	TF	SI	BW	MD	GA	CL	IB	SB	TF	SB	AC	MD	PC	PRT	POT	PRT	POT
1	1.2	2.1	3.2	4.3	5.1	6.2	7.1	1.2	2.1	3.2	4.3	5.2	6.1	7.1	8.3	9.1	10.5	11.4	5	19	2	23
2	1.3	2.1	3.2	4.3	5.1	6.1	7.1	1.2	2.1	3.2	4.3	5.2	6.1	7.1	8.3	9.1	10.5	11.4	5	18	4	21
3	1.3	2.1	3.1	4.3	5.2	6.2	7.2	1.3	2.1	3.2	4.3	5.2	6.1	7.1	8.3	9.1	10.5	11.4	5	20	2	24
4	1.2	2.2	3.4	4.1	5.2	6.2	7.3	1.3	2.2	3.3	4.3	5.3	6.2	7.1	8.3	9.1	10.2	11.4	5	20	2	24
5	1.2	2.1	3.4	4.3	5.1	6.1	7.1	1.2	2.1	3.2	4.3	5.1	6.2	7.1	8.3	9.1	10.5	11.4	6	20	4	21
6	1.1	2.2	3.4	4.3	5.1	6.2	7.1	1.2	2.2	3.2	4.3	5.3	6.1	7.1	8.3	9.1	10.5	11.4	5	20	4	24
7	1.2	2.1	3.3	4.3	5.1	6.1	7.1	1.2	2.1	3.2	4.3	5.1	6.1	7.1	8.3	9.1	10.5	11.4	4	18	3	24
8	1.2	2.1	3.3	4.1	5.1	6.1	7.2	1.2	2.1	3.2	4.3	5.1	6.2	7.1	8.3	9.1	10.5	11.4	7	19	4	22
9	1.2	2.3	3.4	4.1	5.2	6.2	7.1	1.2	2.1	3.2	4.3	5.1	6.1	7.1	8.3	9.1	10.5	11.4	1	19	3	24
10	1.1	2.1	3.4	4.3	5.1	6.1	7.1	1.2	2.1	3.2	4.3	5.1	6.2	7.1	8.3	9.1	10.5	11.4	4	19	0	22
11	1.2	2.1	3.2	4.3	5.1	6.2	7.1	1.3	2.1	3.2	4.3	5.1	6.1	7.1	8.3	9.1	10.5	11.4	6	19	2	22
12	1.3	2.1	3.4	4.3	5.2	6.2	7.3	1.2	2.2	3.3	4.1	5.2	6.2	7.1	8.3	9.1	10.3	11.4	6	19	3	24
13	1.2	2.1	3.4	4.1	5.3	6.1	7.1	1.2	2.2	3.2	4.3	5.2	6.2	7.1	8.3	9.1	10.5	11.4	5	20	4	24
14	1.2	2.1	3.2	4.3	5.1	6.2	7.1	1.2	2.3	3.2	4.1	5.2	6.2	7.1	8.3	9.1	10.3	11.4	8	19	1	24
15	1.2	2.1	3.4	4.3	5.2	6.2	7.2	1.2	2.1	3.2	4.3	5.1	6.1	7.1	8.3	9.1	10.5	11.4	5	19	3	23
16	1.4	2.1	3.2	4.3	5.1	6.3	7.2	1.3	2.1	3.3	4.3	5.1	6.1	7.1	8.3	9.1	10.5	11.4	4	20	1	23
17	1.2	2.1	3.4	4.3	5.2	6.2	7.2	1.3	2.2	3.3	4.3	5.2	6.2	7.1	8.3	9.1	10.5	11.4	5	19	3	23
18	1.2	2.3	3.4	4.1	5.2	6.1	7.4	1.2	2.1	3.2	4.3	5.3	6.1	7.1	8.3	9.1	10.5	11.4	4	19	2	22
19	1.2	2.1	3.4	4.3	5.1	6.2	7.1	1.2	2.2	3.2	4.3	5.2	6.2	7.1	8.3	9.1	10.5	11.4	5	18	5	23
20	1.2	2.1	3.4	4.3	5.1	6.2	7.1	1.2	2.1	3.2	4.3	5.2	6.1	7.1	8.3	9.1	10.5	11.4	4	18	2	23
21	1.2	2.1	3.4	4.3	5.2	6.2	7.1	1.2	2.1	3.2	4.3	5.2	6.2	7.1	8.3	9.1	10.5	11.4	5	20	3	23
22	1.2	2.1	3.2	4.1	5.1	6.2	7.1	1.2	2.1	3.2	4.3	5.2	6.1	7.1	8.3	9.1	10.5	11.4	2	18	3	23
23	1.3	2.1	3.4	4.3	5.1	6.2	7.4	1.2	2.1	3.2	4.3	5.2	6.1	7.1	8.3	9.1	10.3	11.4	3	20	2	24
24	1.2	2.1	3.4	4.3	5.2	6.2	7.1	1.2	2.1	3.2	4.3	5.2	6.2	7.1	8.3	9.1	10.5	11.4	4	18	3	23
25	1.2	2.1	3.4	4.1	5.1	6.2	7.1	1.3	2.2	3.2	4.2	5.3	6.2	7.1	8.3	9.1	10.5	11.4	5	19	2	24
26	1.2	2.1	3.4	4.1	5.1	6.2	7.1	1.2	2.1	3.2	4.3	5.2	6.1	7.1	8.3	9.1	10.5	11.4	4	18	3	24
27	1.3	2.3	3.4	4.3	5.1	6.1	7.4	1.2	2.1	3.2	4.3	5.2	6.2	7.1	8.3	9.1	10.5	11.4	4	19	2	22
28	1.2	2.2	3.2	4.1	5.1	6.2	7.3	1.2	2.1	3.2	4.3	5.2	6.1	7.1	8.3	9.1	10.5	11.4	4	17	4	24
29	1.3	2.3	3.4	4.3	5.1	6.2	7.1	1.3	2.1	3.2	4.3	5.2	6.1	7.1	8.3	9.1	10.5	11.4	4	19	3	22
30	1.3	2.1	3.4	4.3	5.1	6.2	7.1	1.2	2.1	3.2	4.3	5.3	6.1	7.1	8.3	9.1	10.5	11.4	10	19	4	24

APPENDIX XXI

PHOTOGRAPHS DURING VIRTUAL NEWBORN CARE