

**EFFECTIVENESS OF NURSING CARE ON
HIGH RISK NEWBORN**

By
MISS. R.CHRISTINA



A Dissertation submitted to
**THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY,
CHENNAI.**

**IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR
THE DEGREE OF MASTER OF SCIENCE IN NURSING.**

MARCH – 2010.



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M.Sc., (Nursing) Degree Examination,

Branch – II, Paediatric Nursing,

Adhiparasakthi College of Nursing,

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CERTIFICATE

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CHAPTER – I

INTRODUCTION

Every family looks forward to the birth of a healthy newborn. It is an exciting time with so much to enjoy. In some cases, though, unexpected difficulties and challenges occur along the way. Some newborns are considered high risk. This means that a newborn has a greater chance of complications because of conditions that occur during fetal development, pregnancy conditions of the mother, or problems that may occur during labor and birth.

National vital statistics report suggested that babies who died of preterm related causes accounted for 34.6% of infant deaths in 2000 and 36.5% in 2005. The infant mortality rate inched up slightly in 2005 to 6.9 from 6.8 per one thousand live births in 2004.

In India 25 million newborn infants are born every year. The current neonatal mortality rate is 43.4 per 1000 live births and infant mortality rate is 67.6 per 1000 live births at the national level.

Baillie et al., (2006) stated the factors which favours for the high risk new born and they are maternal factors, delivery factors, baby factors.

American Academy of Pediatrics (2006) classified high risk new born as preterm infant, infant with special health care needs or dependent on technology, infants at risk because of family issue, infants with anticipated early death.

Wong's (2007) defined that high risk neonate as a newborn regardless of gestational age or birth weight, who has a greater than average chance of morbidity or mortality because of conditions or circumstances super imposed on the normal course of events associated with birth and the adjustment to extra uterine existence.

David et al.,(2008) listed the classification of newborn as three types and they are high risk due to the size, high risk due to the gestational age, high risk due to the viability.

Need for the study

The morbidity and mortality of the newborn is very high globally

USA	-	6.37 deaths/1000 live births
Canada	-	4.03
Mexico	-	19.63
UK	-	5.01
Russia	-	11.06
Malaysia	-	16.62
Pakistan	-	68.87
India	-	34.61

Globally it is estimated that 17% of live born infant are preterm. In developed countries the infant mortality rate is 10 per 1000 live births and in developing countries it is 69 per 1000 live births. Neonatal death rate in developed countries is 2% and in developing countries is 70%. In south-Asia 32%, in India 33% of live birth are pre-term and low-birth weight babies

WHO estimates the total annually global live births in the ratio of pre-term and small for date infants in developing countries is 1: 4 and in developed countries it is two third of live birth.

In United State of America nearly 12% of babies are born pre-term babies and many of these babies also are low birth weight. About 9% of all new born babies require care in neonatal intensive care unit giving birth to a sick or pre-matured baby can be quite unexpected for any parents.

UNICEF (2009), reported that infant born in developing nations have 14 fold higher chance of death during their first month of birth compared to a new born in developed countries

India's share in the global burden of the neonatal death is high as 24%. About 7 to 10 % of babies are born before 37 week of

gestation week. In India the infant mortality rate is 60 per 1000 live births and in Kerala it is 15 per 1000 live births in rural and 12 per 1000 live births in urban.

The national centre for health statistics released final data for 2005 showing that the pre-term birth rate the percentage of babies born at less than 37 week gestation is continuing its relentless rise, with more than 525000 babies or 12.7% born prematurely. That's up from 12.5% in 2004 and 2006. Preliminary report indicates that the pre-term birth will continue its upward trend and reach 12.8% in about 543000 babies.

STATEMENT OF THE PROBLEM

EFFECTIVENESS OF NURSING CARE ON HIGH RISK NEWBORN.

OBJECTIVES

- ✚ to assess the health condition of high risk newborn.
- ✚ to evaluate the effectiveness of nursing care on high risk newborn.
- ✚ to find out the correlation between the demographic variables and the effectiveness of nursing care on high risk newborn.

OPERATIONAL DEFINITION

EFFECTIVENESS

It refers to evaluate the nursing care provided and promoted the health status on high risk newborn.

NURSING CARE

It refers to the nursing care to the high risk newborn which includes, monitoring vital parameters, maintaining thermoregulation, breast feeding, changing of position, cord care, eye care, skin care, genital care, kangaroo care, and care with aseptic technique.

HIGH RISK NEWBORN

It refers as a newborn regardless of gestational age or birth weight, which has a greater-than-average chance of morbidity or mortality because of the condition or circumstance superimposed on the normal course of events associated with birth adjustment to extra uterine existence.

Preterm

An infant born before completion of 37 weeks of gestation, regardless of birth weight.

Low birth weight

An infant whose birth weight is less than 2500g, regardless of gestational age.

Hyperbilirubinemia

The term hyperbilirubinemia refers to an excessive level of accumulated bilirubin in the blood and is characterized by jaundice or icterus a yellowish discoloration of the skin, sclerae, and nails.

ASSUMPTIONS

- ✚ Daily assessment of the neonate enables a nurse to gain thorough knowledge about progress in neonate's health condition and will provide guidelines for the nurse implement a need based care.
- ✚ Nursing care effectively given will enhance the ratio in prevention of further infection and promotes continuous and constant health seeking behavior.

LIMITATIONS

- ✚ This study was limited to high risk newborn born in Melmaruvathur Adhiparasakthi Institute of Medical Sciences and Research.
- ✚ The data collection period was limited to 6 weeks.
- ✚ This study was limited to samples of thirty high risk newborn.

PROJECTED OUTCOME

- ✚ The study exhibits that the nursing care would be effective with vital improvements on the health conditions of high risk newborn.
- ✚ The result of this study will help the nursing personnel to motivate and engage them in regular health assessments and promotion of effective nursing Intervention.
- ✚ The findings on demographic variables will help us in identifying the factors which affect the nursing intervention among the high risk newborn.
- ✚ The result will help the administrators to plan for continuing education programme through effective nursing care.

CONCEPTUAL FRAME WORK

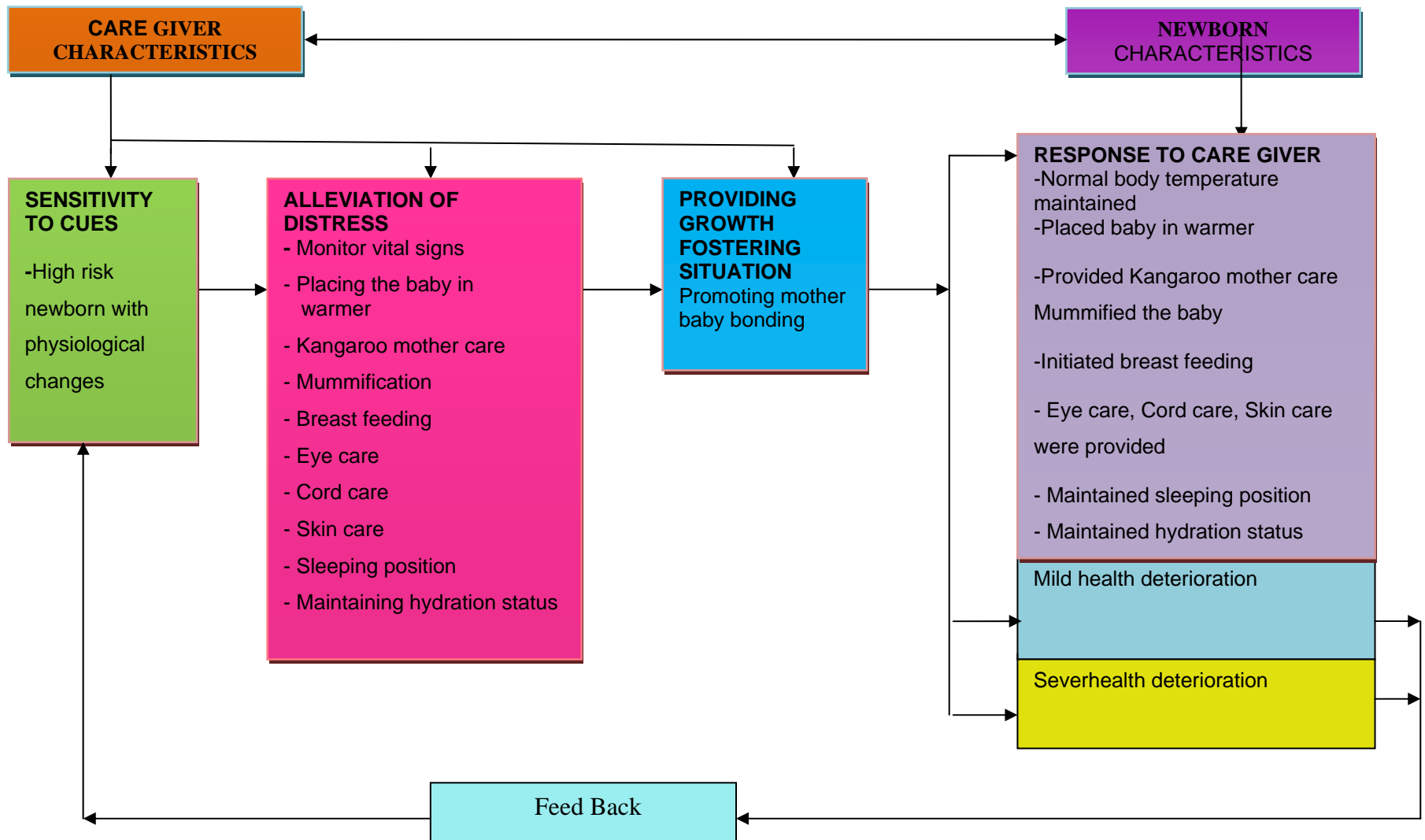
The conceptual frame work or model is made up of concepts that are mental images of a phenomenon. These concepts are linked to express their relationship between them.

The study designed to elicit the effective of nursing care on high risk newborn. The concept for the study is based on the Kathryn Barnard's (1977), modified version – 2006, parent / care giver – child interaction model. A major focus of Barnard's work was the development of assessment tool to evaluate the effective of nursing care among high risk the Barnard stated that the care giver infant system was influenced by individual characteristics of each member and that the individual characteristics modified to meet the needs of the system.

The theory components are as follows:-

A. Care giver characteristics

B. High risk newborn characteristics



KATHRYN BARNARDS CARE GIVER – CHILD INTERACTION MODEL MODIFIED VERSION (2006).

A.CARE GIVER CHARACTERISTICS

Care giver is the nurse whose role is vital. Care giver must be able to accurately read the cues given by the high risk newborn.

1) Sensitivity to cues

Cues which we have seen in the high risk newborn is the basic of care include hypothermia, altered respiration, inactive, change in color of the skin, altered sleep pattern, weak cry, altered feeding pattern. Only when the cues are reduced that the care giver task is achieved there by bringing the expected change in the newborn babies.

2) Alleviation of distress

The effectiveness of care giver is alleviating the distress of babies depends on several factors as,

- a) Recognizing that the baby is in distress
- b) Appropriate action to alleviate distress
- c) Put the knowledge into action

The high risk newborn babies kept under the warm room, mummified, to maintain the thermoregulation, and temperature recorded every second hour, promoting the breast feeding.

Care must be taken to change the position every second hour, sleeping position was maintained towards the mother hydration status maintained, skin cleaned with warm water, weight recorded daily and cord care, eye care and genital care was given.

a)Thermoregulation

Monitoring the temperature by checking the vital signs every second or and keeping the bay in warm room ,mummification, kangaroo care was done.

b)Breast feeding

It refers to promotion of breast feeding to the high risk newborn facilitates the thermoregulation and feeding pattern.

c) Eye care

Monitoring the color of the sclera (yellow, red). Eye care was given with normal saline.

d)Cord care

Cleaning the cord with normal saline and application with betadine solution to prevent infection.

e)Skin care

In order to prevent infection and maintain thermoregulation, skin care was done with warm water.

f)Sleeping position

It refers to change the position towards the mother while sleeping with the intervals of two hours.

3) Providing growth fostering situation

The ability to initiate growth fostering activities by promoting the mother baby bonding by means of kangaroo mother care and during breast feeding.

B. HIGH RISK NEWBORN CHARACTERISTICS

Interventions are continuously carried out and released as high risk newborn characteristics, which imply high risk newborn responsiveness to care giver. Here it refers to maintaining thermoregulation, maintaining mother baby bonding and preventing infection as positive response.

The care giver characteristics are made based on high risk newborn characteristics. It is a process where the care giver intervention is based on the newborn baby response.

a) Response to care giver

If the high risk newborn is non responsive to behavioral cues of his/her care giver, adaptation is possible. Response given to the care giver as maintenance of the thermoregulation, maintenance of the mother baby bonding and prevention of infection and expected change in physical status.

CHAPTER - II

REVIEW OF LITERATURE

A critical summary of research on a topic of interest, often prepared to put a research problem in context.

This chapter deals with the literature focused on the general information of high risk newborn, management and prevention of high risk newborn. The review of literature has been arranged in the following sections.

- 1. Literature related to high risk newborn.**
- 2. Literature related to nursing management of high risk newborn.**
- 3. Literature related to prevention of high risk newborn.**

1. LITERATURE RELATED TO HIGH RISK NEWBORN

There have been many advances in the care of sick and premature babies, not only just in technology and medicine, but also in meeting the special emotional and developmental needs of these babies. In the neonatal intensive care unit, babies are often subjected to tests, procedures, noises, and lights - vary different from the warm, dark, comfort of the mother's womb. Some babies are too sick to be held or have difficulty comforting them when not being held. Premature babies especially need a supportive environment to help

them continue to mature and develop as they would in their mother's womb.

Diane.J et al.,(2009), conducted a study on home health nurse clinical assessment of neonatal jaundice and stated that the nurses determined that 82 (50%) of the 164 newborns had jaundice. Their estimates of bilirubin levels were most highly correlated with serum bilirubin levels. All 3 newborns with bilirubin levels greater than or equal to 291 $\mu\text{mol/L}$ (≥ 17 mg/dL) were recognized by the nurses as having jaundice. These newborns had icterometer readings greater than or equal to 3.5 and had estimated bilirubin levels of greater than or equal to 274 $\mu\text{mol/L}$ (≥ 16 mg/dL). These results suggest that postpartum home health nurses can effectively evaluate newborns for the presence and severity of jaundice.

Henderson.s et al.,(2009), stated that significantly fewer cases than controls had received human breast milk. The day on which enteral feeding was started did not differ significantly. The mean duration of trophic feeding (<1 ml/kg/h) was significantly shorter in the cases than control. Cases were fully fed significantly earlier than controls.

James.H et al.,(2009), stated that group B streptococcus causes infections within first 7 days of life and Sepsis 69%,

leucopenia 31% pneumonia 26% and one percentage respiratory distress.

Saiki.L et al.,(2009), conducted a study on sleeping position, oxygenation and lung function in prematurely born infants studied post term at a median of 36 weeks postmenstrual age and 6 weeks later, respectively, oxygen saturation and compliance respiratory system were higher in the prone than the supine position. In the prone position, both bronchopulmonary status and non-bronchopulmonary status infants had significantly greater functional residual capacity on both occasions and oxygen saturation at 36 weeks post menstrual age, but oxygen saturation was significantly better post term only in non- bronchopulmonary infants. Twelve infants had superior oxygen saturation and 17 superior functional residual capacity in the prone compared with the supine position at both 36 weeks post menstrual age and post term.

Dag.M et al.,(2008), divided the gestational age in to five categories; they are 23 weeks to 27 weeks, 28 weeks to 30 weeks,31 weeks to 33 weeks, 34 weeks to 36 weeks, 37 weeks or more.

Elizabeth.R et.,al (2008), conducted a study on variation in the survival rate and mortality rate for very preterm infants across europe.

Overall the proportion of this very pre term cohort who survived to discharge from neonatal care was 89.5% varying from 93.2 % to 74.8% across the region. Among all fetuses alive at onset of labor of 24-27 weeks gestation, between 84.0% and 98.9% were born alive and between 64.6% and 97.8% were admitted to the newborn intensive care unit.

Lee.et.al.,(2008), conducted a study and found that basic developmental care has no positive effect on neurological and mental development or growth at 1 and 2 years of age in infants born at <32 weeks. A positive effect on psychomotor development at 1 year did not continue at 2 years of age.

Rose Mary.et.al.,(2008), stated that nosocomial infection in newborn intensive care unit occurs at high rates and often leads to significant rate of morbidity and mortality.Up to 50% of extremely low birth weight infants develop infection in newborn intensive care Unit.

Vasquez.EP et.al.,(2008),conducted a model program: neonatal nurse practitioners providing community health care for high-risk infant and stated that neonatal nurse practitioners should prepare in the future to practice not only in secondary-- and tertiary--

level neonatal centers, but also in follow-up clinics, long-term developmental centers, and the community.

Ahn.y et al.,(2007), conducted a study on weight variation by sex and nature of risk factors in high-risk infants an evolutionary perspective. A retrospective cohort study was conducted to explore growth variation during the intrauterine and early postnatal period by sex and nature of high-risk factors (i.e. physiological and pathological) in 831 Korean infants at a University hospital. The results showed that infants with a physiological risk showed a more congruent intrauterine growth pattern compared to those with a pathological risk. Particularly with a physiological risk, female infants experienced more compatible intrauterine and postnatal growth than males, although male infants were heavier than female infants at a given gestational age. In conclusion bigger may not necessarily be better for prenatal growth in humans. A more confluent intrauterine growth in infants with physiological risk can be beneficial for early postnatal catch-up growth. From an evolutionary perspective, female infants with a physiological risk may keep their advantageous edge over male infants during the early postnatal period although such an advantage may not be present with a pathological condition.

Ahn.y et al.,(2007), conducted study on measurement of pain-like response to various neonatal intensive care unit stimulants for

high-risk infants using correlational study. He states that full-term infants tended to express more distinct pain-like responses to invasive procedures or direct contacts than premature infants.

Charles.E et al.,(2007), explored Collaborative, hospital-based quality-improvement project on improving newborn preventive services at the birth hospitalization and stated that documented rates of assessment improved for breastfeeding adequacy, risk for hyperbilirubinemia, infant sleep position, and car safety seat fit. Documented rates of counseling improved for tobacco smoke exposure. Performance of hearing screens also improved. No significant changes were noted in performance of hepatitis B immunization or metabolic screens, assessment of tobacco smoke exposure, counseling on sleep position, assessment of exposure to domestic violence, or planning for outpatient follow-up care. All hospitals demonstrated pre intervention versus post intervention improvement of $\geq 20\%$ in ≥ 1 newborn preventive service hospital staff members and community physicians was effective in improving documented newborn preventive services during the birth hospitalization.

Juan.G et al.,(2007), reported that kangaroo care is a practice originated in Colombia in late 1970s.Kangaroo care means holding an neonatal intensive care unit high risk newborn skin-to-skin. Premature and sick babies that “Kangaroo” appear to relax and

become content. The benefits of kangaroo care are higher blood oxygen levels, improved sleep and improve weight gain.

Martin.G et al.,(2007), conducted a study on transitional hypothermia in preterm newborns. Hypothermia remains a significant challenge in the initial care of premature infants. Although a number of prevention strategies have been identified, hypothermia is still a common event, especially in extremely low birth weight infants. Using data from four centers, an incidence of hypothermia on admission to the neonatal intensive care unit from the delivery room of 31–78% for infants <1500 g birth weight. Increased efforts will be necessary to prevent early hypothermia in very preterm infants, especially with respect to the environmental conditions of the delivery room itself.

Paul.B et al.,(2007), conducted a study on early discharge of newborns and mothers: A critical review of the literature suggest that early discharge is likely to be safe for selected populations at low psychosocial, socioeconomic, and medical risk, with careful antenatal screening and preparation and multiple postpartum home visits. Some studies suggested adverse outcomes associated with early discharge even with early follow-up. The studies that have concluded that early discharge was safe were applied under restricted circumstances or were too small to detect clinically significant effects on important outcomes.

Bossano.P et al., (2006), stated developmental care involves many aspects; from meeting comfort needs and helping babies feel secure and develop normal sleep patterns, to decreasing stimulation from noise, lights or procedures. It includes changes in overall physical environment, baby's immediate environment and way care using signals from the baby to plan care.

Byers.F et al.,(2006), found that respiratory therapy equipment, alarms, staff talking, and infant fussiness contributed to higher sound levels to which high-risk infants are exposed in various actual environmental conditions in the neonatal intensive care unit. The renovated was neonatal intensive care unit, on average, 4-6 dBA quieter across all environmental conditions than a comparable nonrenovated room, representing a significant sound level reduction.

Samaan M et al.,(2006), conducted a study on doctors' and nurses' attitudes towards neonatal ethical decision making in Ireland and states that Mean values of attitude scores were 5.8 for doctors, and 6.0 for nurses. Respondents with experience in follow-up of graduates had significantly higher scores .while the opposite was true among more religious staff and particularly for minority religions such as muslim. Scores were higher after age 30 for nurses, and after age 40 for doctors, suggesting the adoption of a less vitalistic viewpoint as

respondents grow older and more experienced. Among doctors, a relationship was found between the attitude score and their self-reported non-treatment practices. In Ireland, neonatal intensive care unit doctors and nurses hold similar attitudes towards ethical decision making. Personal and professional factors have a statistically significant impact on attitude score. compared with the rest of Europe, attitudes in Ireland appear more similar to those of southern rather than northern European countries.

Weiss.J et al.,(2006),examined the degree to which birth weight, gestational age, fetal drug exposure, hazardous postnatal medical events, and a mother's predisposition toward touch predicted the likelihood of an infant's tactile vulnerability during nursing care by the convenience sample included 99 hospitalized infants and found to be highly associated. The significant relationship of postnatal medical events to tactile vulnerability suggests that it may be associated with the presence of infant pain or injury to the infant's central nervous system. Symptoms of drug withdrawal and the impact of teratogens on arousal regulation may also be implicated in greater distress from touch by infants. In addition, findings suggest the potential for inherited transmission of a vulnerability to touch. Assessment of infant vulnerability, including discussion with parents about their views of the infant's needs regarding touch, may enhance problem identification and early intervention to reduce infant distress and further medical problems.

Ojukwu.JU et al.,(2006),states that in southeastern nigeria neonatal septicemia is a major cause of morbidity and mortality. Most of the predisposing factors were due to poor obstetric care and unsterile delivery practices which could be avoided and prevented, and the causative organisms were different from those in the developed countries. There was appreciable resistance to commonly used antibiotics.

Babilio.E et al.,(2005), stated that when babies are cold-stressed, they use energy and oxygen to generate warmth. If skin temperatures drop just one degree from the ideal 97.7° F (36.5°C), a baby's oxygen use can increase by 10 percent. By keeping babies at optimal temperatures, neither too hot nor cold, they can conserve energy and build up reserves. This is especially important when babies are sick or premature.

Chiolero. A et al.,(2005), reported that an association between maternal smoking for low birth weight in Switzerland. They concluded that the prevalence of low birth weight and its determinants in an urban resettlement area of Delhi; prevalence of low birth weight remains high in the urban under privilege of Delhi maternal age, parity and weight and height are important determinants. Increasing

age of first birth to more than 20 years can minimize effect of primiparity.

Grattan.MP et al.,(2005), analyzed sex differences in high-risk premature infants using modified-measure of behavioral laterality neonatal assessment to explore differences in reflex and postural reactions among 26 male and female high-risk, premature infant. Neither premature males nor females showed asymmetries in foot and leg reflexes (placing, plantar grasp, Babinski).

Mundell.H et al., (2005), listed the ways to keep babies warm and they are; Immediate drying and warming after delivery, open bed with radiant warmer ,Incubator / Isolate.

Srisuparp.P et al.,(2005), conducted a study on high-risk neonatal hearing screening program using automated screening device performed by trained nursing personnel yielded good results. Hearing screening using automated auditory brain stem response devices in high-risk neonates revealed approximately 7% of pathologic results with almost two-thirds having bilateral affected. The protocol of having trained nursing staffs to perform the screening i.e., the coverage of screened infants within 3 months of age (97%), feasible duration of procedure.

Vidya.B et al.,(2005), reviewed on impact of improved survival of very low birth weight infants on recent secular trends in the prevalence of cerebral palsy and states that an apparently unavoidable side effect of the increasing success of newborn intensive care is a moderate rise in the childhood prevalence of cerebral palsy.

Chhabra.P et al.,(2004), conducted that the prevalence of low birth weight and its determinants in an urban resettlement area of Delhi remains high. The determinants are maternal age,parity,weight and height are important determinants. Increasing age of first birth to more than 20 years can minimize effect of primi parity.

Hummel.P et al.,(2004), stated that increasingly, infants are discharged from the neonatal intensive care unit with unresolved healthcare issues and ongoing technology needs. A well-planned discharge of a medically stable infant is important to assure safe and effective care in the home and to minimize avoidable hospital readmissions.

Mathews.J et al., (2002), compared preterm with infant born at term. preterm infant have a such greater risk of death and disability. Approximately 75% of perinatal deaths occur among preterm infant.

Almost 1/5 of all infant less than 32 weeks gestation do not survive the first year of life, whereas about one percent of infant born between 32-36 weeks of gestation and 0.3% of infant born at 37-41 weeks of gestation do not survive the first year of life. The infant mortality rate per 1000 live births for infant born at less than 32 weeks of gestation was 180.9 nearly times the rate for infant born between 37 and 41 week gestation.

2. LITERATURE RELATED TO MANAGEMENT OF HIGH RISK NEWBORN

Castral.TC et al.,(2008), reported that the effects of skin-skin contact during acute pain in preterm infants. Skin-skin contact promoted reduction in behavioral measures and less physiological increase during procedure it recommended that skin-skin contact be used as a non-pharmacological interventions to relieve acute pain in stable premature infants born 30 weeks gestational age or older.

Kent.AL et al.,(2008),conducted a study to improve admission temperature of the preterm infants less than 31 weeks gestation. Increasing the ambient temperature in the operating theatre and wrapping preterm infants in polyethylene wrap improves admission temperature.

Bhatia.J et al.,(2006), reported that fluid and electrolyte management in very low birth weight neonate is critical for survival. The amount of fluid present in the plasma, interstitial fluid and cellular fluid changes throughout the foetal and neonatal period, presenting a challenging situation. One of the many mechanisms such as evaporation low birth weight infants are especially susceptible to this, due to their large body surface area and immature skin often resulting in hypernatremia, resulting in various other complication. Careful monitoring is essential in deciding how to manage these infants.

Joshi.M et al.,(2005), suggested the feeding modes and weight pattern among preterm. They can be effectively fed with early orogastric feeding followed by paladai feeding. This feeding protocol resulted in weight gain and early transfer to mothers.

Sankaranarayanan.k et.,al(2005), compared the coconut oil massage versus mineral oil massage. They suggested that coconut oil application improves the weight gain velocity in preterm low birth weight neonates and above the benefits of tactile kinesthetic stimulation due to massage alone. Transcutaneous absorption of the vegetable oils results in the greater caloric intake and have a better weight gain.

Ludington.H et al.,(2005) done a comparative study on heel stick during kangaroo care and heel stick in a warmer. He concluded that heel stick during kangaroo care is reducing preterm infants physiologic and behavioral pain responses. Kangaroo care positioning before and during heel stick is simple and inexpensive analgesic intervention to ameliorate pain in stable premature.

Abrams.S et al.,(2004), reported that the nutritional management of low birth weight infants. Safe effective means of fortifying human milk is essential to the care of the very low birth weight. The optimal approaches for this fortification and the potential risks related to human milk fortification remains controversial .Limited data are available for the optimal content, initiation and method for mixing fortifier with human milk.

Rahamathullah.J et al.,(2003), tested the impact of vitamin A supplement(two doses ,24,000 IU each) soon after birth in a large double-blind, randomized, placebo-controlled community trial in rural Tamilnadu. These neonates were followed by bi-weekly to the age of six months. Infants in the vitamin A group had a 22% reduction in total mortality compared with those in the placebo group. This beneficial effect was more marked in the low birth weight infants, particularly in infants less than 4000grams.

Bang.R et al.,(2002), conducted feasibility studies and introduced kangaroo mother care in their units. Experience with this modality in Ahmedabad has shown significant improvement in weight gain among low birth weight without any increase in mortality & morbidity including sepsis & hypothermia. This method was found to be culturally acceptable by the mother and the health personnel in the unit.

Krouse.A et al.,(2002), suggested that the family management of breast feeding low birth weight infants. Families play an important role in the breast feeding experience and therefore may contribute to the overall success or lack of the experience. This qualitative study used naturalistic inquiry to describe the family management styles of 13 breast feeding families of low birth weight infants. These families described facilitating, identification& obstructing family management styles. Through the identification of the district management styles, interventions may be developed that will assist these families to achieve their breastfeeding goals.

3. LITERATURE RELATED TO PREVENTION OF HIGH RISK NEWBORN

James.A et al.,(2006), reported that the prevention of preterm birth can be achieved by new Initiatives based on microbial-host

Interaction. In recent studies, administration of erythromycin and tocolytic agents was associated with an improved outcome in selected women with preterm labor.

Abonyi.LE et al.,(2005), reported the prevention of high risk newborn are simple and sustainable interventions such as promotion of clean and timely deliveries, modern newborn care and specialized diagnostic facilities, hand washing, barrier nursing, and restriction of antibiotics may help to reduce the burden of neonatal infection.

Aliyu.MH et al.,(2005), found that the association between high parity and fetal morbidity outcomes. High parity is a risk factor for adverse fetal outcomes. However the impact of heightened parity is more manifest as shortened gestation rather than physical size restriction. These findings could prove beneficial for counseling women of high parity.

Osborn.DA et al.,(2005),conducted a study on early volume expansion versus inotrope for prevention of morbidity and mortality in very preterm infants.Studies comparing volume expansion, using albumin, with dopamine were included. In this study, albumin had a higher failure rate for correcting hypotension. Dopamine produced a significant increase in mean blood pressure when compared to infants who received albumin or no treatment. Albumin and dopamine

produced similar increases in left ventricular output but no significant change in cerebral blood flow. Dopamine was more successful than albumin at correcting low blood pressure in hypotensive preterm infants.

Ian.M et al.,(2004), conducted a study on cost-effectiveness of postnatal home nursing visits for prevention of hospital care for jaundice and stated that a total of 73 (2.8%) of 2641 newborns who did not receive a home visit were readmitted to the hospital in the first 10 days of life with jaundice and/or dehydration compared with 2 (0.6%) of 326 did receive a home visit. Similarly, 92 (3.5%) of 2641 newborns who were discharged without subsequent home nursing care had an emergency department visit for these reasons in the first 10 days of life compared with 0 (0%) of 326 did have such a visit. Of infants who received a home visit, 324 (99.4%) of 326 did not require subsequent hospital services in this time period compared with 2497 (94.5%) of 2641 of those who did not receive a visit. After nursery discharge, the average cost per child who received a home health visit was \$109.80 compared with \$118.70 for each newborn who did not receive a visit. The incremental cost-effectiveness ratio of a routine home visit strategy compared with a no visit strategy was – \$181.82. A home nursing visit after newborn nursery discharge is highly cost-effective for reducing the need for subsequent hospital-based services.

Valero De Bernade.J et al.,(2004), reviewed that low birth weight is one of the main predictors of infant mortality. The global incidence of low birth weight is around 17% although estimates vary from 19% in the developing countries to 5-7% in the developed countries. The incidence in Spain in the decade 1980-1989 was about 5-7%.Low birth weight is generally associated with uterine malnutrition, socioeconomic factors, medical risks before or during maternal life styles.

Offenbacher.S et al.,(2004), associated the maternal periodontitis and prematurity. These studies underscore the need for further consideration of periodontal disease as a potentially new and modifiable risk for birth and growth restriction.

CHAPTER-III

METHODOLOGY

This chapter provides brief description of the method adopted by the investigator. This study was designed to find out the effectiveness of nursing care on high risk newborn.

RESEARCH DESIGN

Evaluative research design was used for this study to evaluate the effectiveness of nursing care on high risk newborn.

SETTING

The study was conducted in neonatal intensive care unit at Melmaruvathur Adhiparasakthi Institute of medical sciences and research, Melmaruvathur, Kancheepuram district. It is 550 bedded multi-speciality hospital.

POPULATION

The target population of this study were high risk newborn admitted in Melmaruvathur Adhiparasakthi Institute of Medical Sciences and Research, Melmaruvathur, Kancheepuram district.

SAMPLE SIZE

The sample was comprised of thirty high risk newborn.

SAMPLING TECHNIQUE

Convenient sampling technique were adopted to select the high risk newborn.

CRITERA FOR SAMPLE SELECTION

INCLUSION CRITERIA

- ✚ Babies born before completion of 37 weeks of gestation regardless of birth weight.
- ✚ Babies' birth weight is less than 2500g, regardless of gestational age.
- ✚ Babies born for appropriate age for gestation with serum bilirubin level $>5\text{mg/dl/day}$.
- ✚ Babies born for appropriate age for gestation with total serum bilirubin level $>12\text{-}15\text{mg/dl/day}$.
- ✚ Mothers who were willing to participate.

EXCLUSION CRITERIA

- ✚ Babies born with hemolytic disease, respiratory distress syndrome, infectious processes.
- ✚ Babies born with chromosomal abnormalities, congenital anomalies.

PILOT STUDY

Pilot study was conducted in the neonatal intensive care unit in Melmaruvathur Adhiparasakthi Institute of Medical Sciences and Research, Kancheepuram district, to test the reliability, feasibility and practicability. The nursing assessment on high risk newborn was done and rating was given. From the next day onwards, nursing interventions on thermoregulation, breast feeding, maintenance of hydrational status, position change, skin care, eye care, cord care, genital care, prevention of infection, promoting mother newborn bonding (kangaroo care) were done and assisted for 10 days. After 10 days, post assessment was done. There was a good response for the nursing intervention. On the basis of the results of the pilot study, the nursing interventions were modified and refined and the validity and reliability of the effectiveness of nursing care were established.

Calculated value is 3.45

Tabulated value : 2.13

By using paired t test the calculated value is greater than the tabulated value and hence there is a significance of nursing care on high risk newborn.

CHAPTER-IV

DATA ANALYSIS AND INTERPRETATION

This chapter deals with the description of the tool, report of the pilot study, reliability, validity, informed consent, scoring, interpretation, plan for data analysis and results.

DESCRIPTION OF THE TOOL

Details of the tools used in the study were given below

1. Proforma for demographic variables
2. Rating scale
3. Checklist regarding selective nursing care.

TOOL-1: DEMOGRAPHIC VARIABLES

In this section information on the demographic variables such as the gestational age of the neonate, gender ,birth weight, birth order, religion, monthly income, place and mode of delivery, type of marriage, type of family.

TOOL – 2: RATING SCALE

Rating scale was used to monitor the physical status, neurobehavioral status, vital signs of high risk newborn. This section

consists of 20 questions. Each question carries maximum score of three; minimum score of one, the total number of score is sixty. Based on this information the data were classified as follows;

SCORE:

- < 50 - Mild health deterioration
- 51-75 - Moderate health deterioration
- > 75 - Severe health deterioration

TOOL – 3: CHECKLIST REGARDING SELECTIVE NURSING CARE.

VALIDITY AND RELIABILITY

Effectiveness of nursing care on high risk newborn was developed by the investigator based upon the review of literature. Reliability was established by test and retest method. The pre assessment or pre test was done first time for five samples and reassessment or post assessment was done after a week. The test was measuring the same attribute. The tool was found to reliable one.

DATA COLLECTION PROCEDURE

The investigator introduced her to post natal mothers and developed a good rapport. The sample size was comprised of thirty high risk newborn. Convenient sampling technique were adopted to select the thirty high risk newborn. The samples were selected according to the inclusion criteria and exclusion criteria. The inclusion criteria for

sample selection were babies born before completion of 37 weeks of gestation regardless of birth weight, babies' birth weight is less than 2500g, regardless of gestational age, babies born for appropriate age for gestation with serum bilirubin level >5mg/dl/day, babies born for appropriate age for gestation with total serum bilirubin level >12-15mg/dl/day, mothers who were willing to participate. The data collection period was limited to 6 weeks. The pre assessment or pre test were done for thirty samples and the selective nursing care for high risk newborn were given for a week and post assessment were done.

SCORING INTERPREATION

Tool 1: The Demographic variables as mentioned earlier were coded to assess the background of the newborn and thereby, to subject it for descriptive analysis.

Tool 2: Consists of rating scale regarding the physical status, neurobehavioral status, vital signs of high risk newborn.

Score of (3), (2), and (1) marks were given for each option to a question. Totally 20 questions which concludes total score of "60 marks".

The score can be interpreted by

$$\text{Score interpretation} = \frac{\text{Obtained score}}{\text{Total score}} \times 100$$

The scores were interpreted as follows

- < 50 - Mild health deterioration
- 51-75 - Moderate health deterioration
- > 75 - Severe health deterioration

Tool – 3: Selective nursing care for high risk newborn.

PLAN FOR DATA ANALYSIS

The descriptive statistical analysis method was used to find out the total number of score, percentage of score. The sign test and correlation test were adapted and interpreted with pre and post test score.

S.No	DATA ANALYSIS	METHODS	REMARKS
1.	Descriptive statistics	Number, Percentage,	to describe the demographic variable.
2.	Descriptive statistics	Mean and standard deviation	to evaluate the effectiveness of nursing care
3.	Inferential statistics	Sign test	to evaluate the pre and post test effectiveness of nursing care
4.	Inferential statistics	Correlation	correlation between the demographic variables and the nursing care.

This analysis of data were organized and presented based on the objectives in the following sections.

SECTION - A

Frequency and percentage distribution of demographic variables of high risk newborn.

SECTION - B

Frequency and percentage distribution of level of assessment score and evaluation score on high risk newborn.

SECTION - C

Mean and Standard deviation, assessment score and evaluation score on high risk newborn.

SECTION - D

Correlation between demographic variables, improvement score, mean and standard deviation of assessment score and evaluation score and effectiveness of nursing care on high risk newborn.

SECTION - E

Correlation between demographic variables and effectiveness of nursing care on high risk newborn.

SECTION - A

TABLE.4.1: FREQUENCY AND PERCENTAGE DISTRIBUTION OF THE DEMOGRAPHIC VARIABLES OF HIGH RISK NEWBORN.

Demographic variable	Frequency	Percentage %
1.Gestational age		
a)36-38weeks	10	33
b)38-40weeks	11	37
c)40-42weeks	9	30
2.Age of the newborn		
a)One day	11	37
b)Two day	13	43
c)Three day	6	20
3.Gender		
a)Male	14	47
b)Female	16	53
4)Birth weight		
a)1.5-2kg	6	20
b)2-2.5kg	14	47
c)Above 2.5kg	10	33
5) Birth order of the newborn		
a)First born	16	53
b)Second born	14	47
6) Type of birth		
a)vaginal delivery	22	73
b)caesarian delivery	8	27
7) Religion		
a)Hindu	20	67
b)Christian	9	30
c)Muslim	1	3

8)Type of marriage a)Consanguineous b)Non- consanguineous	8 22	27 73
9)Family income c)Rs.3001-5000per month d)Rs.5001& above	9 21	30 70
10) Type of family a)Nuclear family b)Joint family	23 7	77 23

Table 4.1 reveals that among 30 high risk newborn,11(37%) belongs to 38-40 weeks, nine(30%) belongs to 40-42 week, regarding the age of the newborn,13(43%) were on the second day,6(20%) were on the third day, regarding the birth weight, six(20%) were on the third day, regarding the gender 14(47%) were male,16(53%)were female, regarding the birth weight six(20%) were 1.5-2kg, 14(47%) were 2-2.5kg,regarding birth order 16(53%) were first born,14(47%) were second born, regarding type of birth 22(73%) were vaginal delivery ,eight(27%) were caesarian delivery, regarding religion one(3%) was muslim,20(67%) were Hindus, regarding type of marriage eight(27%) were born of consanguinity,22(73%) were born of non- consanguinity ,nine(30%) belongs to income group of Rs.3001-5000 per month,21(70%) belongs to income group of Rs.5001& above, regarding type of family seven(23%) were of joint family,23(77%) were of nuclear family.

SECTION - B

TABLE.4.2: FREQUENCY AND PERCENTAGE DISTRIBUTION OF ASSESSMENT SCORE AND EVALUATION SCORE OF HIGH RISK NEWBORN.

HEALTH STATUS OF THE HIGH RISK NEWBORN	MILD HEALTH DETERIORATION (< 50 %)		MODERATE HEALTH DETERIORATION (51 - 75%)		SEVERE HEALTH DETERIORATION (> 75%)	
	No	%	No	%	No	%
ASSESSMENT	2	7	26	87	4	13
EVALUATION	24	80	6	20	2	7

Table.4.2. depicts the effectiveness of nursing care among 30 high risk newborn. Among the 30 high risk newborn 26(87%) had moderate health deterioration, four (13%) had severe health deterioration on assessment day. Among the 30 high risk newborn 24(80%) had mild health deterioration, six (20%) had moderate health deterioration on evaluation. It shows the effectiveness of nursing care of high risk newborn at $p < 0.01$ level and improvement in health condition of 30 high risk newborn from severe to moderate and from moderate to mild health condition.

SECTION - C

TABLE.4.3: MEAN AND STANDARD DEVIATION OF ASSESSMENT AND EVALUATION SCORE OF HIGH RISK NEWBORN.

(N = 30)

TOPIC	MEAN	STANDARD DEVIATION	CONFIDENCIAL INTERVAL
Assessment score	41.7	2.13	40.84 - 42.55
Evaluation score	23.1	3.42	21.72 - 24.49

Table 4.3 reveals the mean and standard deviation of effectiveness of nursing care among 30 high risk newborn. The overall mean for assessment score is 41.7 with the standard deviation of 2.13. The overall mean evaluation score is 23.1 with the standard deviation of 3.42. The confidential interval of the assessment score is 40.84 - 42.55. The confidential interval of the evaluation score is 21.72 - 24.49. It shows the effectiveness of nursing care of high risk newborn at $p < 0.01$ level.

SECTION – D

TABLE.4.4: IMPROVEMENT SCORE OF MEAN AND S.D OF ASSESSMENT AND EVALUATIVE SCORE AND EFFECTIVENESS OF NURSING CARE HIGH RISK NEWBORN.

SIGN (S)	(K)
3	9.2

Table.4.4. Improvement of assessment and evaluative score and effectiveness of nursing care among high risk newborn .The total negative sign value is 3 and the 'K' value is 9.2.The comparison of sign and 'K' value represents that $S < K$ ($3 \leq 9.2$). So there is a significance between the assessment score and the evaluative score. Hence it shows effectiveness of nursing care of high risk newborn at $p < 0.01$ level and improvement in health condition of 30 high risk newborn from severe to moderate and from moderate to mild health condition.

SECTION - E

TABLE .4.5: CORRELATION BETWEEN DEMOGRAPHIC VARIABLES AND EFFECTIVENESS OF NURSING CARE OF HIGH RISK NEWBORN.

S.No	DEMOGRAPHIC VARIABLES	ASSESSMENT SCORE				EVALUATION SCORE				r
		Moderate 51 – 75%		Severe > 75%		Mild < 50%		Moderate 51 – 75%		
		No	%	No	%	No	%	No	%	
1)	Gestational age	-	-	-	-	-	-	-	-	0.3 S
	a)34-36weeks	8	80	2	20	3	30	7	70	
	b)36-38weeks	10	91	1	9	2	18	9	82	
	c)38-40weeks	8	89	1	11	9	100	-	-	
2)	Age of the newborn	10	9	1	9	11	100	-	-	0.1 NS
	a)first day	12	92	1	8	10	77	-	23	
	b)second day	5	83	1	17	4	67	-	33	
	c)Third day	-	-	-	-	-	-	-	-	
3)	Gender	10	71	4	29	13	93	1	7	0.2 NS
	a)Male	16	100	-	-	12	75	4	25	
4)	Birth weight	-	-	-	-	-	-	3	50	0.8 s
	a)1.5kg	6	100	-	-	3	-	3	21	
	b)1.5-2kg	10	71	4	29	11	79	3	30	
	c)2-2.5kg	6	60	4	40	7	-	-	-	
	d)Above 2.5kg	-	-	-	-	-	-	-	-	

5)	Birth order of the newborn									0.52
	a)First born	13	81	3	19	14	88	2	12	
	b)Second born	13	93	1	7	13	93	1	1	
	c)Third born	-	-	-	-	-	-	-	-	NS
	d)Fourth born&above	-	-	-	-	-	-	-	-	
6)	Type of birth									
	a)vaginal delivery	19	86	3	14	18	82	4	18	0.35
	b)caesarian delivery	7	88	1	12	7	88	1	12	
	c)forceps/ vacuum delivery	-	-			-	-			S
7)	Religion									
	a)Hindu	17	85	3	15	18	90	2	10	0.10
	b)Christian	8	89	1	11	6				
	c)Muslim	1	100	-	-	-	67	3	33	
	d)others	-	-	-	-	-				NS
8)	Type of marriage									
	a)Consanguineous	7	88	1	12	6	75	2	25	0.2
	b)Non- consanguineous	19	86	3	14	19	86	3	14	NS
9)	Family income									
	a)Rs.1000 per month	-	-	-	-	-	-	-	-	0.6
	b)Rs.1001-3000per month	-	-	-	-	-	-	-	-	NS
	c)Rs.3001-5000per month	7	78	2	22	7	78	2	22	
	d)Rs.5001& above	19	90	2	10	18	86	3	14	
10)	Type of family									
	a)Nuclear family	20	87	3	13	21	91	2	9	
	b)Joint family	6	86	1	14	4	57	3	43	0.8 NS

Table 4.4; reveals that there is a correlation between the effectiveness of nursing care of high risk newborn among 30 newborn babies and selected demographic variables such as gestational age, birth weight, type of birth. Hence there is an effectiveness of nursing care of high risk newborn among 30 newborn babies.

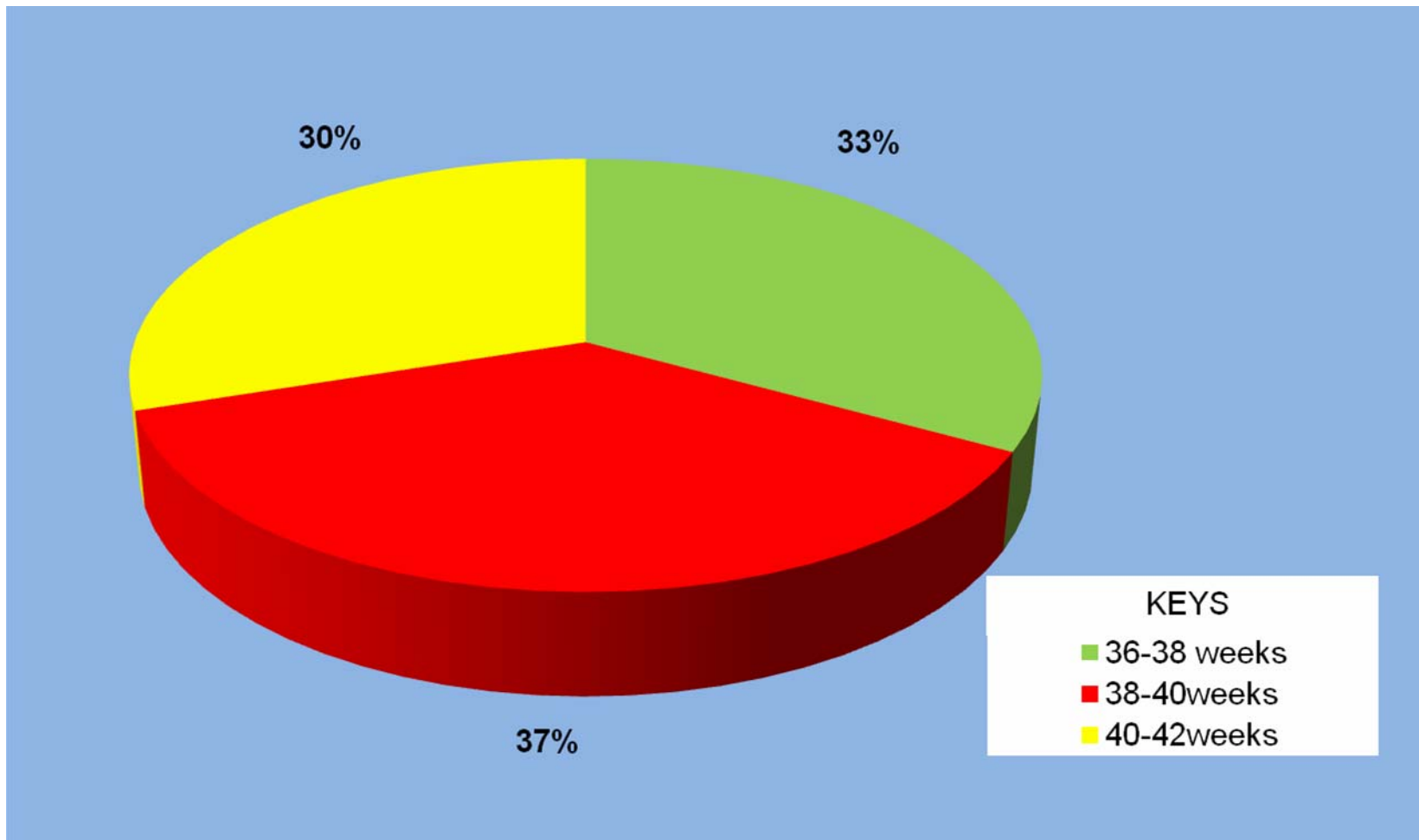


FIGURE. 4.1: PERCENTAGE DISTRIBUTION OF DEMOGRAPHIC VARIABLE BASED ON GESTATIONAL AGE

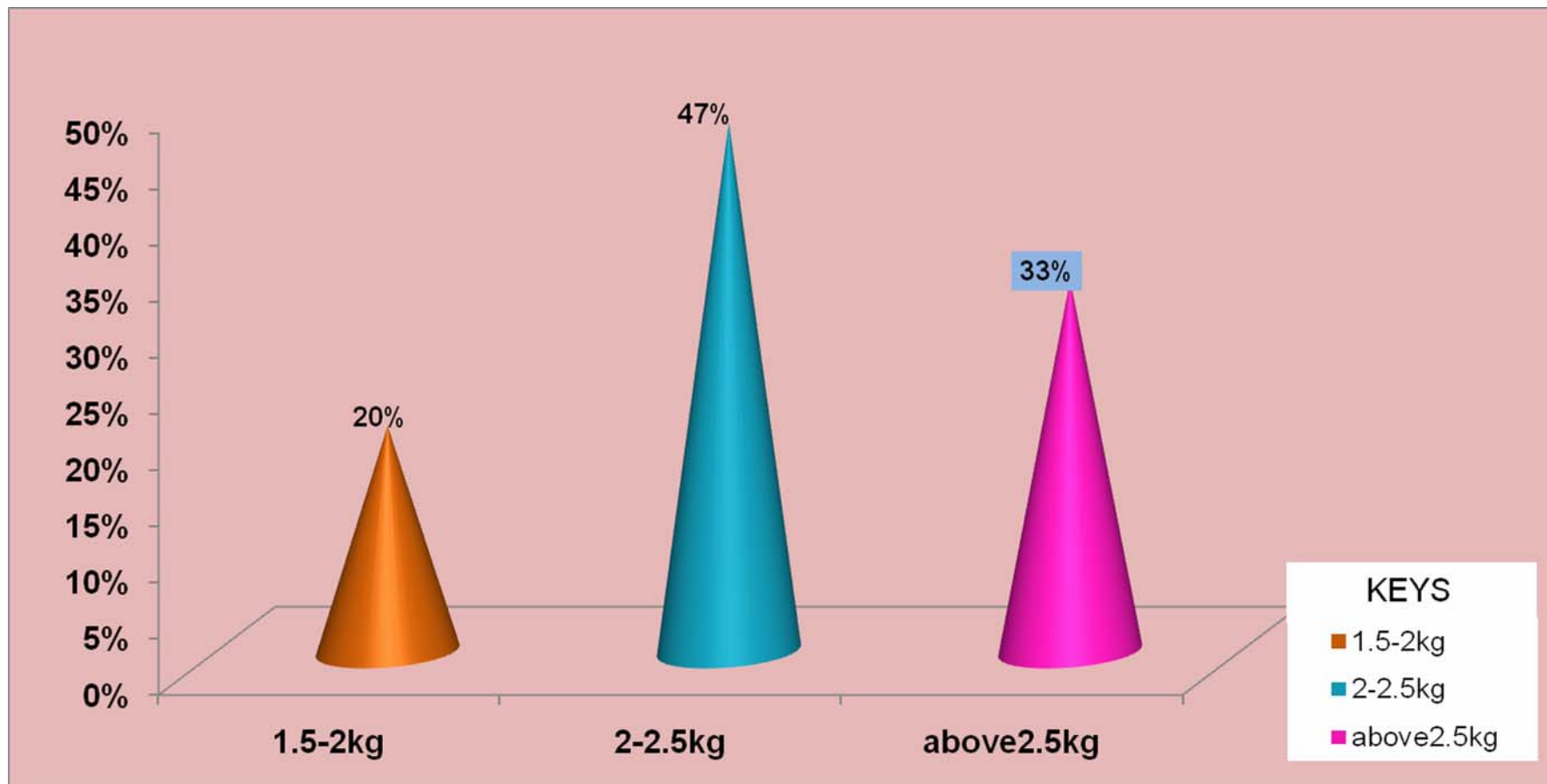


FIGURE. 4.2 : PERCENTAGE DISTRIBUTION OF DEMOGRAPHIC VARIABLE BASED ON BIRTH WEIGHT

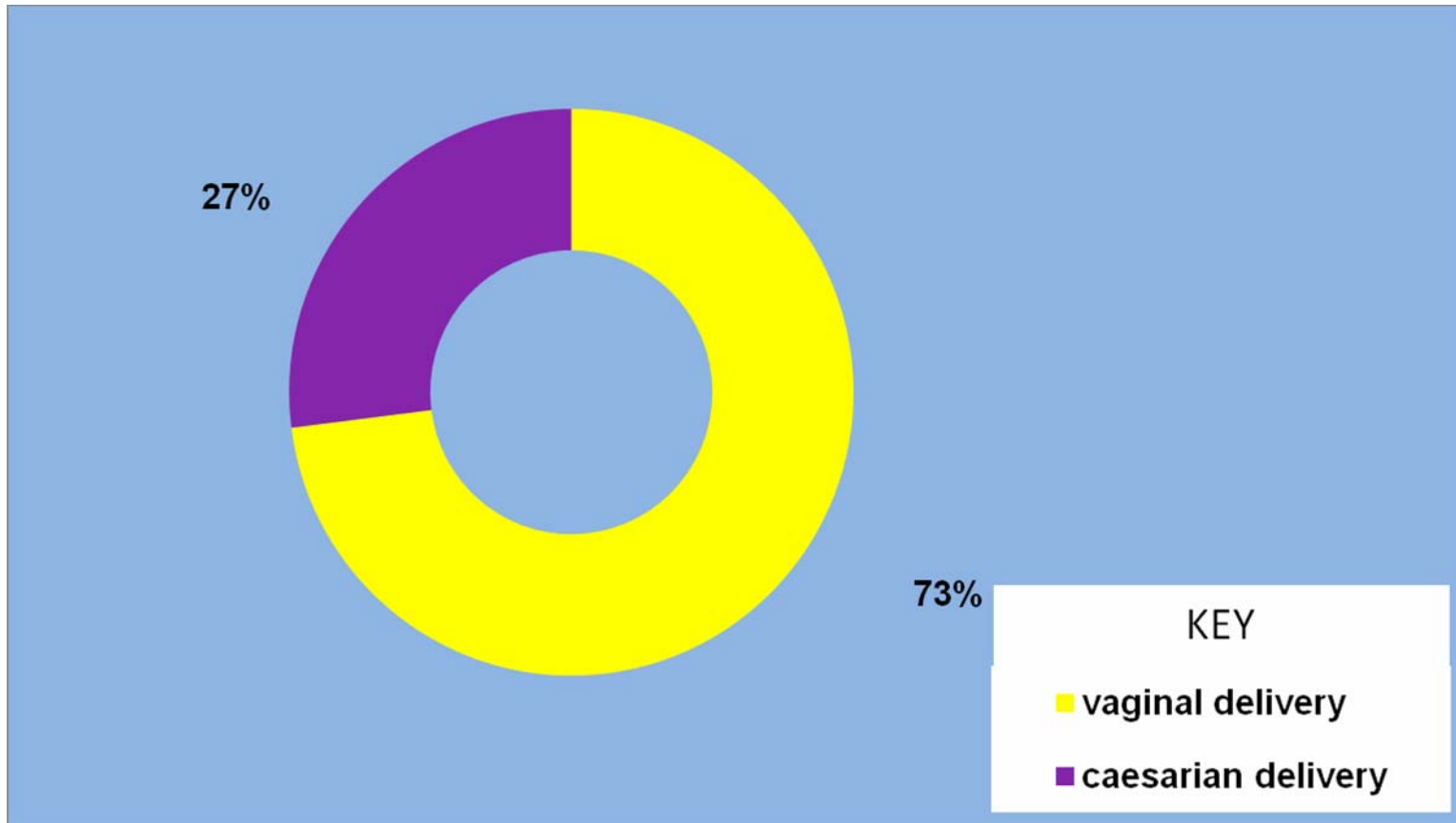


FIGURE. 4.3: PERCENTAGE DISTRIBUTION OF DEMOGRAPHIC VARIABLE BASED ON TYPE OF BIRTH

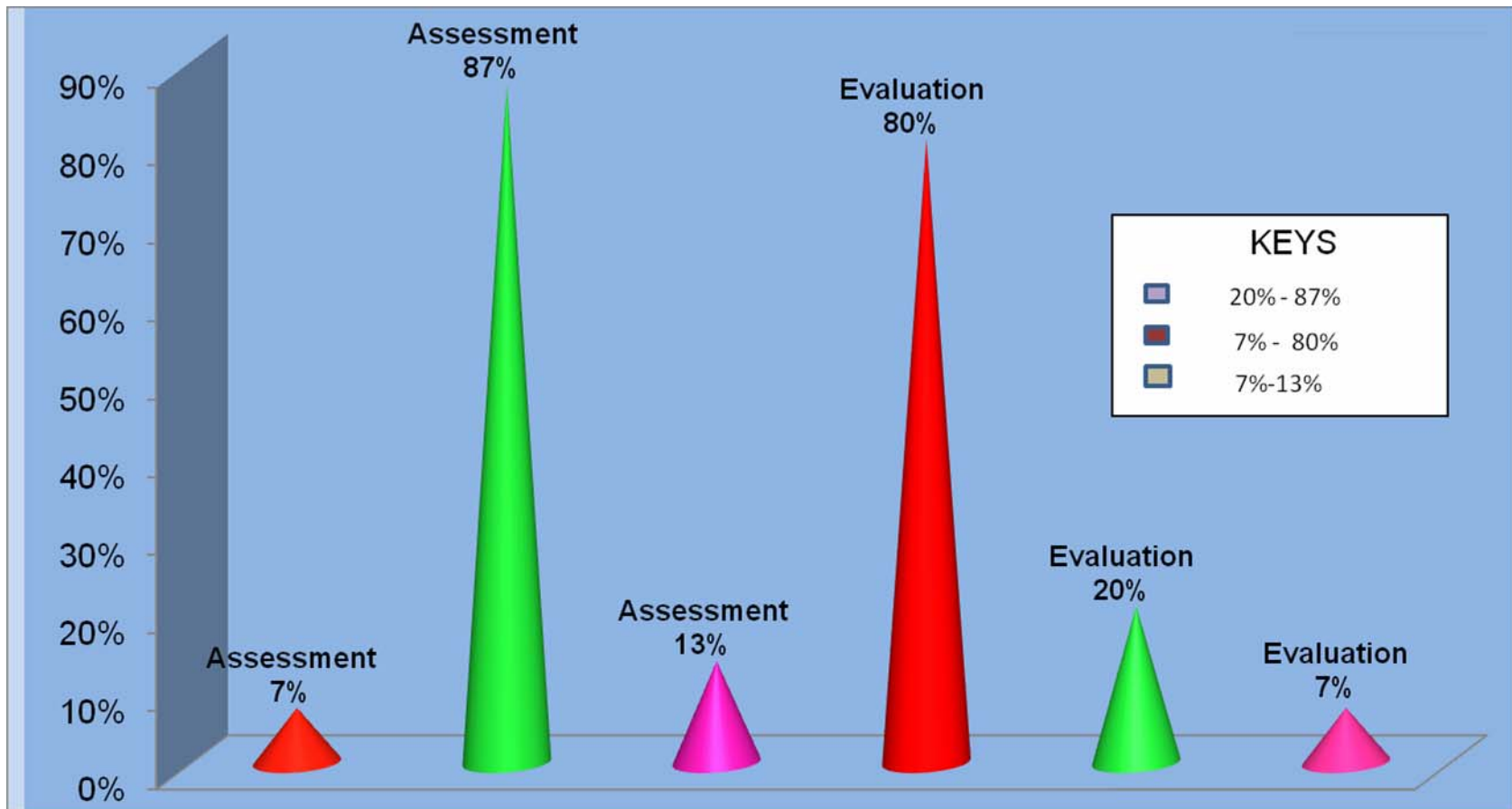


Figure 4.5: PERCENTAGE DISTRIBUTION OF ASSESSMENT AND EVALUATION SCORE OF HIGH RISK NEWBORN

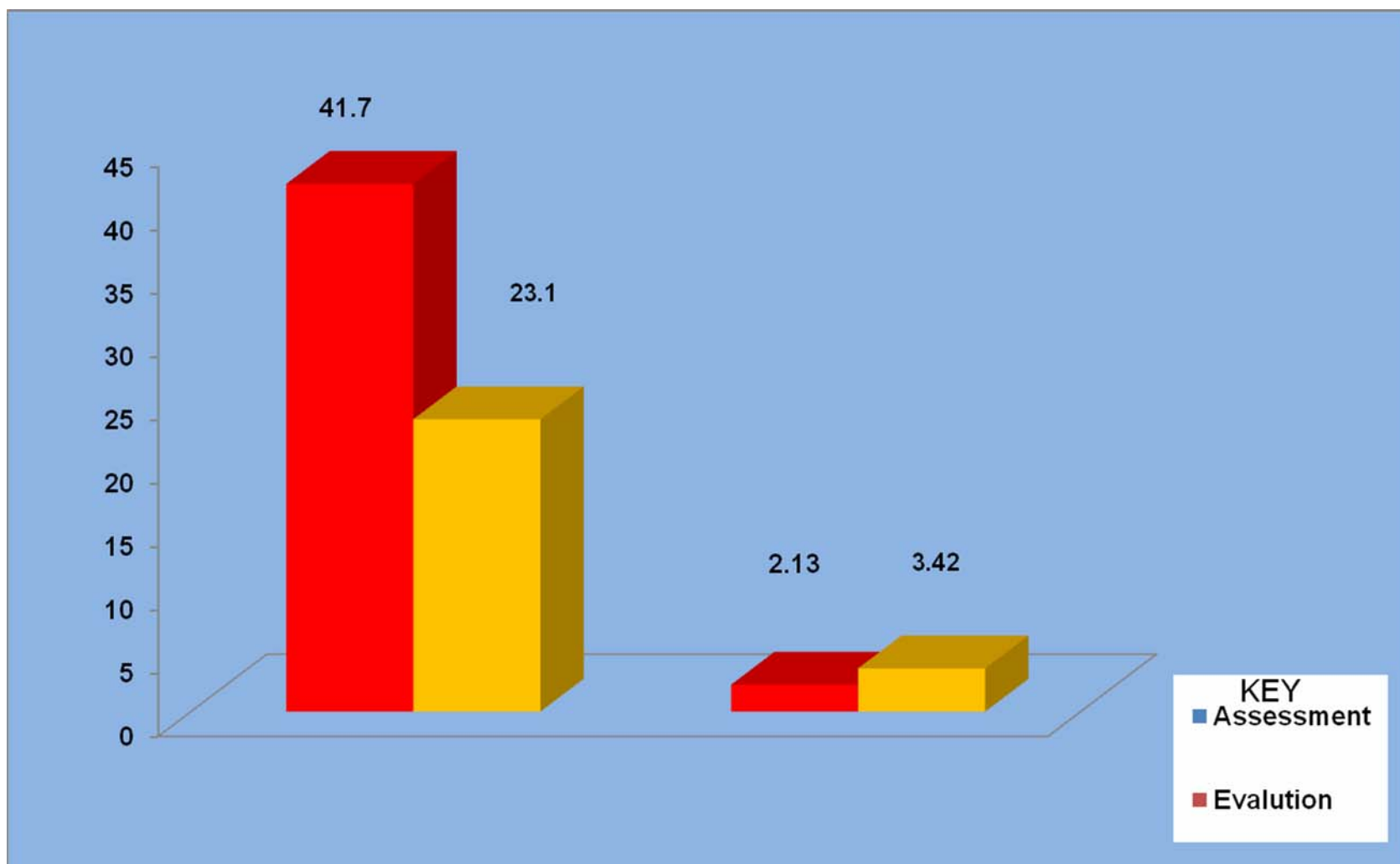


FIGURE 4.6: MEAN AND STANDARD DEVIATION OF ASSESSMENT AND EVALUATION SCORE OF HIGH RISK NEWBORN

CHAPTER - V

RESULTS AND DISCUSSION

The aim of the study was to evaluate the effectiveness of nursing care on high risk newborn. The effectiveness of selective nursing care was assessed with the help of rating scale regarding the newborns developmental assessment by pretest and posttest method. The sample was selected using a convenient sampling method. In the pretest, the developmental assessment was done before the nursing care and then selective nursing care were given, after one week of the application of the selective nursing care, post test was done.

The first objective of the present study was to assess the health condition of the high risk newborn. In assessment score 26(87%) had moderate health deterioration, four(13%) had severe health deterioration. The overall mean in assessment is 41.7 with the standard deviation of 2.13.

The second objective was to evaluate the effectiveness of nursing care on high risk newborn. In evaluation 24(80%) had mild health deterioration, six (20%) had moderate health deterioration. The overall mean for post assessment score is 23.1 with the standard deviation of 3.42. The comparison of sign and 'K' value represents that $S \leq K$ ($9 \leq 9.2$). So there is a significance between the assessment score and the evaluative score. The confidential interval

of the assessment score is 40.84 - 42.55. The confidential interval of the evaluation score is 21.72 - 24.49.

The third objective of the study was to find out the correlation between the demographic variables and the effectiveness of nursing care on high risk newborn reveals that there is a positive relationship between the effectiveness of nursing care of high risk newborn among 30 newborn babies and demographic variables such as gestational age, birth weight, and type of birth.

CHAPTER – VI

SUMMARY AND RECOMMENDATIONS

Evaluative research design was adopted to evaluate the effectiveness of selective nursing care on high risk newborn. Individualized nursing care was provided to babies those who met the inclusion criteria. The study was conducted at Melmaruvathur Adhiparasakthi Institute of Medical Sciences and Research, Melmaruvathur, Kancheepuram district. The convenient sampling technique was administered and sample size determined as thirty.

Ongoing assessment was done with the rating scale prepared to analyze the health condition of the high risk newborn and standard nursing care plan was prepared to render care as changing the position every two hours, providing skin care, cord care, eye care, genital care, feeding warmth, thermoregulation and prevention of infection.

The progress in health condition of the high risk newborn reveals that among the 30 high risk newborn 26(87%) had moderate health deterioration, four (13%) had severe health deterioration on the assessment day. Among the 30 high risk newborn 24(80%) had mild health deterioration, six(20%) had moderate health deterioration on the evaluation day. It shows the effectiveness of nursing care of high risk newborn and prognosis in the health condition of high risk newborn

NURSING IMPLICATION

Nursing care is the core of any disease. Holistic nursing care for neonates focused on helping the individual, family, and community to achieve the optimal health.

1)The present study can help nurses to enrich knowledge on nursing care.

2)Understanding the needs of the neonates with hyperbilirubinemia may help nurse to plan and provide appropriate nursing care to neonate.

NURSING SERVICE

1)Nurses working in neonatal intensive care unit should have special training about neonatal nursing.

2) Nurses working in neonatal intensive care unit should have enough knowledge about care of neonate, they should be keen observes since the neonates cannot verbalize their needs.

3) Nurses should never fail to assess the neonate before starting care, so that they can plan the nursing care accordingly.

4)Not only nurses but all the health care providers such as the auxiliary nurses and midwives ,village health nurses, nurses working in community centers should be also given in-service education.

5) Rewards can be given to the outstanding nurses in each year in all institution, which will booster the nurses.

6) Facilities to be made available for managing neonatal hyperbilirubinemia in all hospital including the community setup.

NURSING EDUCATION

- 1) Nursing curriculum can be modified with increased emphasis of child health nursing.
- 2) Recommended for short term courses of neonatal nursing.
- 3) Students can be also trained to work in neonatal intensive care unit under proper guidance.

NURSING ADMINISTRATION

- 1) People at the administration position can make necessary policies to implement the concept of the pediatric nursing.
- 2) The ideal set up of the neonatal intensive care unit should be beneficial for better care.
- 3) Administration can organize in-service education programme.
- 4) Adequate staffing in neonatal intensive care to be given per norms.

RECOMMENDATIONS

Based on the findings of the study the investigator proposed the following recommendations.

1. A replication of present study can be conducted with more effective and constant nursing intervention.
2. The study can be done in large sample.
3. A study can be done by using the true experimental design.
4. A descriptive study to assess the knowledge, attitude, practice regarding various aspects of high risk newborn can be conducted.

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APPENDIX – I

SECTION - A: DEMOGRAPHIC VARIABLES

- 1) Gestational age
 - a) 36 – 38 weeks
 - b) 38 – 40 weeks
 - c) 40- 42 weeks

- 2) Age of the newborn
 - a) One day
 - b) Two day
 - c) Three day

- 3) Gender

 - a) Male
 - b) Female

- 4) Birth weight
 - a) 1.5 – 2kg
 - b) 2 – 2.5kg
 - c) Above 2.5kg

- 5) Birth order of the newborn
 - a) First order
 - b) Second order

6) Type of the birth

a) Vaginal delivery

b) Cesarean delivery

7) Religion

a) Hindu

b) Christian

c) Muslim

8) Type of the marriage

a) Consanguineous

b) Non-consanguineous

9) Family income / month

a) Rs.3001 – 5000 per month

b) Above Rs.5001 per month

10) Type of the family

a) Nuclear

b) Joint

APPENDIX – II

SECTION - B: ONGOING ASSESSMENT TOOL

S. NO	OBSERVATION	DAYS				
		1	2	3	4	5
1.	PHYSICAL STATUS General appearance a) Active (1) b) Lethargy (2) c) Passive (3)					
2.	Appearance of skin a) Pink (1) b) Pallor (2) c) Jaundice (3)					
3.	Colour of the sclera a) White (1) b) Pale (2) c) Yellow (3)					

4.	<p>Cry</p> <p>a)High pitched cry (1)</p> <p>b)Vigorous cry (2)</p> <p>c)Weak (3)</p>					
5.	<p>Nail beds</p> <p>a)Pink (1)</p> <p>b)Pale (2)</p> <p>c)Yellow (3)</p>					
6.	<p>Bowel sounds</p> <p>a)Good (1)</p> <p>b)Fair (2)</p> <p>c) Poor (3)</p>					
7.	<p>Urine colour</p> <p>a)Straw (1)</p> <p>b)colourless (2)</p> <p>c)Yellow(3)</p>					
8.	<p>Abdomen</p> <p>a)Soft (1)</p> <p>b)Distended (2)</p> <p>c)spleen palpable (3)</p>					

9.	Keeping warmth a) Wrapped (1) b) Under radiant warmer(2) c) Under incubator (3)					
10.	Umbilical cord redness a) Absence (1) b) present in the tip (2) c) extends towards the base(3)					
11.	Umbilical cord discharge a) absence (1) b) serous discharge(2) c) purulent (3)					
II	NEUROBEHAVIOURAL STATUS					
12.	Feeding activity a) Strong & co-ordinated b) Weak&dis-co-ordinated c) Poor feeding					

13.	<p>Sleep pattern</p> <p>a)Well sleeping(1)</p> <p>b)Disturbed(2)</p> <p>c)With irritable cry(3)</p>					
14.	<p>Activity</p> <p>a)highly active (1)</p> <p>b)response to stimuli(2)</p> <p>c)lethargy(3)</p>					
15	<p>Reflexes</p> <p>a)active</p> <p>b)Grimace</p> <p>c)No response</p>					
16.	<p>Temperature</p> <p>a)36.5 c-37 c (1)</p> <p>b)37.6c-38.5c(2)</p> <p>c)<36.4c-38.6c(3)</p>					
17.	<p>Heart rate</p> <p>a)120-140 beats/min(1)</p> <p>b)140-170 beats/min(2)</p>					

18.	<p>c)<120->170 beats/min(3)</p> <p>Respiration</p> <p>a)30-50 breaths/min(1)</p> <p>b)50-70 breaths/min(2)</p> <p>c)<40->70 breaths/min(3)</p>					
19.	<p>Posture</p> <p>a)Flexed (1)</p> <p>b)relaxed (2)</p> <p>c)extended (3)</p>					
20.	<p>Muscle tone</p> <p>a)Active movements</p> <p>b)Some flexion of extremities</p> <p>c)Flaccid</p>					

APPENDIX – III

OBSERVATIONAL CHECK LIST

SECTION – C;NURSING CARE ON HIGH RISKNEWBORN

S.NO	OBSERVATION	DAYS				
		1	2	3	4	5
1.	Thermoregulation					
2.	Breast feeding					
3.	Maintaining hydration status					
4.	Promoting kangaroo care					
5.	Position change					
6.	Skin care					
7.	Eye care					
8.	Cord care					
9.	Genital care					
10.	Prevention of infection					

APPENDIX – IV

S. No	Assessment	Nursing Diagnosis	Goal	Planning	Implementation	Rational	Evaluation
1.	<p>Subjective data: The mother verbalizes that her child is having cold skin, shivering, poor feeding and weak cry.</p> <p>Objective data: The child is having shivering and temperature between 35.5`c – 36`c cold skin, poor sucking reflex and weak cry.</p>	Altered body temperature (hypothermia) related to poor temperature regulation as evidenced by decreased body temperature.	The thermal status will maintain at optimal level.	<ul style="list-style-type: none"> - Monitor vital signs - Monitor environmental baby temperature - Place the baby in mummification - Promote kangaroo care - Observe for 	<p>Vital signs monitored</p> <p>Monitored environment and baby temperature</p> <p>The baby is in mummification</p> <p>Promoted kangaroo care</p> <p>Observed for</p>	<p>It helps to know the baseline data</p> <p>It helps to keep the environmental temperature warm</p> <p>It helps to maintain the neutral thermal environment</p> <p>It helps to improve the nutritional status</p> <p>It helps to prevent complications</p>	Baby's thermal status was maintained within normal limits

2.	<p>Subjective data: The mother verbalizes her child is not feeding</p> <p>Objective data; Baby looks dull, drowsy, feeble cry.</p>	Altered nutritional status less than body requirement related to immaturity, parental knowledge deficit.	The baby's nutritional status will maintain at normal level.	<ul style="list-style-type: none"> - Monitor the infants condition - Daily weigh the baby - Support and assist breast feeding mothers during initial feeding - Maintain input output chart - Place the infant on right side after feeding 	<p>Infants condition monitored</p> <p>Weighted the baby</p> <p>Supported during feeding baby feeds well</p> <p>Input output chart maintained</p> <p>Placed the infant on the right side after feeding</p> <p>Prepared for demand feeding</p>	<p>It provides baseline data</p> <p>It shows improvement or deterioration condition</p> <p>It helps to maintain the hydrational status</p> <p>It helps to detect the nitrogenous balance</p> <p>It helps to prevent the aspiration</p> <p>It helps to know the child response</p>	Baby's nutritional status maintained
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3.	<p>Subjective data: The mother verbalizes rashes in the skin</p> <p>Objective data: The child is having hypothermia</p>	Impaired skin integrity related to retential adverse physiological response	Baby's normal skin integrity will maintain	<ul style="list-style-type: none"> - Observe the color of the skin - Provide bathing by using warm water - Change the position frequently - Apply moisturizers - Apply ointment for and excoriation 	<p>Observe the skin color parlor rashes present</p> <p>Cleaned the skin with warm water</p> <p>Changed the position every one hour</p> <p>Moisturizers applied</p> <p>Applied sdoderm ointment</p> <p>Promoted kangaroo care</p>	<p>It provides the baseline data</p> <p>It provides personal hygiene</p> <p>It prevents complications</p> <p>It maintains the skin integrity</p> <p>It helps to treat the anal excoriation</p> <p>It helps to maintain the skin temperature</p>	Baby's skin integrity is maintained
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4.	Objective data: Exhibits evidence of infection	High risk for infection related to poor immune response	The baby will be prevented for infection	<ul style="list-style-type: none"> - Inspect the umbilical cord - Maintain warm environment - Provide baby bath - Provide cord care - Ensure aseptic technique while doing procedures - Administer antibiotic as per prescription 	Umbilical cord was inspected, swelling, redness and discharge present. Maintained warm environment Baby bath provided Cord care provided Ensured aseptic technique Administered antibiotics as prescribed	It helps to know the child derodition It helps to prevent hypothermia It promotes personal hygiene It helps to treat the condition It prevents the complications It helps to treat the condition	The baby's risk for infection is reduced
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5.	Objective data: Using rectal thermometer for checking the temperature	High risk for injury related to immature physiological response	Baby will prevent from injury	<ul style="list-style-type: none"> - Assess the baby's condition - Never leave the baby without side rails - Change the diapers frequently - Avoid visitors - Maintain skin integrity 	Assessed the baby's condition Baby was always supervised Changed the diapers Only mother was allowed to serve the baby Maintained skin integrity of the baby Used aseptic technique during procedures	It provides the baseline data It helps to prevent the baby from falling It provides comfort It helps to reduce the infection It helps to maintain the normal skin It helps to prevent the infection	Baby remains once from injury
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6.	Subjective data: Mother express regarding the change in family unit and care for the baby.	Altered family process related to maturational crisis, birth of term infant, change in family unit.	Families coping process will improve	<ul style="list-style-type: none"> - Check the family general condition - Explain child condition to the parents - Give the baby to the mother for feeding - Explain about kangaroo mother care - Promote parent infant interaction 	<p>Checked the family general condition</p> <p>Explained the child condition to the parents</p> <p>Baby given to the mother for feeding</p> <p>Explained about kangaroo mother care</p> <p>Promoted parent infant interaction</p> <p>Provided psychological support to the parents</p>	<p>To know the baseline data</p> <p>To alleviate the fears anxiety</p> <p>To provide emotional support to the mother</p> <p>To provide mother child bonding</p> <p>To promote confident about the baby condition</p> <p>It helps to alleviate the fear and anxiety</p>	Family coping process is maintained
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7.	Subjective data: Mother verbalizes her doubt regarding the growth and development of the baby.	Altered growth and development related to term birth	Baby will maintain normal growth and development	<ul style="list-style-type: none"> - Provided optimum nutrition - Provide regular periods of undisturbed rest - Provide appropriate developmental intervention - Recognizes the signs of over stimulation - Promote parent child interaction 	<p>Provided optimum nutrition</p> <p>Provided regular periods of rest</p> <p>Provided appropriate developmental intervention</p> <p>Recognized the signs of over stimulation</p> <p>Promoted parent child interaction</p> <p>Promoted self relating behaviors</p>	<p>It helps to improve the growth</p> <p>It promotes normal growth</p> <p>It improves the growth and development</p> <p>It helps to detect early</p> <p>Promotes bonding</p> <p>Improves an normal growth</p>	Baby achieved normal growth and development
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APPENDIX- V

CASE ANALYSIS

SAMPLE NO: 1

The baby was admitted in neonatal intensive care unit. The birth weight of the neonatal was 2.5kg and the total serum bilirubin level was 14mg%.vital signs recorded once in 15 minutes for the first 2 hours and then once in 4 hours. Neonate was placed on the phototherapy. Care for the neonate in phototherapy includes the position change every 30 minutes. Eyes and the genital shielded, skin cleaned with warm water and cord care given. Expressed breast milk was given orally. On the second day neonate was given to the mother for feeds. On the third day feeding activity was strong and coordinated and neonate slept well. On the fourth day the neonate was highly active and the skin colour was pink. On the fifth day the total serum bilirubin level was 1.8mg% and the neonate was discharged from the neonatal intensive care unit.

SAMPLE NO: 2

The baby was admitted in neonatal intensive care unit. The birth weight of the neonatal was 3kg and the total serum bilirubin level was 18mg%.vital signs recorded once in 15 minutes for the first 2 hours and then once in 4 hours. Neonate was placed on the phototherapy. Care for the neonate in phototherapy includes the position change every 30 minutes. Eyes and the genital organ shielded, skin cleaned with warm water and cord care given. Expressed breast milk was given orally. On the second day neonate was given to the mother for feeds. On the third day

feeding activity was strong and coordinated and neonate slept well. On the fourth day the neonate was highly active and the skin colour was pink. On the fifth day the total serum bilirubin level was 1.5mg% and the neonate was discharged from the neonatal intensive care unit.

SAMPLE NO: 3

The baby was admitted in neonatal intensive care unit. The birth weight of the neonatal was 2kg and the total serum bilirubin level was 14mg%. vital signs recorded once in 15 minutes for the first 2 hours and then once in 4 hours. Neonate was placed on the phototherapy. Care for the neonate in phototherapy includes the position change every 30 minutes. Eyes and the genital shielded, skin cleaned with warm water and cord care given. Intravenous fluids administered for 2 days. On the third day expressed breast milk was given orally. On the fourth day feeding activity was strong and coordinated and neonate slept well, was highly active and the skin colour was pink. On the fifth day the total serum bilirubin level was 2mg% and the neonate was discharged from the neonatal intensive care unit.

SAMPLE NO: 4

The baby was admitted in neonatal intensive care unit. The birth weight of the neonatal was 2.4kg and the total serum bilirubin level was 16mg%. vital signs recorded once in 15 minutes for the first 2 hours and then once in 4 hours. Neonate was placed on the phototherapy. Care for the neonate in phototherapy includes the position change every 30 minutes. Eyes and the genital shielded, skin cleaned with warm water and cord care given. Expressed

breast milk was given orally. On the second day neonate was given to the mother for feeds. On the third day feeding activity was strong and coordinated and neonate slept well. On the fourth day the neonate was highly active and the skin colour was pink. On the fifth day the total serum bilirubin level was 1mg% and the neonate was discharged from the neonatal intensive care unit.

SAMPLE NO: 5

The baby was admitted in neonatal intensive care unit. The birth weight of the neonatal was 2.5kg and the total serum bilirubin level was 14mg%.vital signs recorded once in 15 minutes for the first 2 hours and then once in 4 hours. Neonate was placed on the phototherapy. Care for the neonate in phototherapy includes the position change every 30 minutes. Eyes and the genital shielded, skin cleaned with warm water and cord care given. Expressed breast milk was given orally. On the second day neonate was given to the mother for feeds. On the third day feeding activity was strong and coordinated and neonate slept well. On the fourth day the neonate was highly active and the skin colour was pink. On the fifth day the total serum bilirubin level was 2mg% and the neonate was discharged from the neonatal intensive care unit.

SAMPLE NO: 6

The baby was admitted in neonatal intensive care unit. The birth weight of the neonatal was 3.5kg and the total serum bilirubin level was 18mg%.vital signs recorded once in 15 minutes for the first 2 hours and then once in 4 hours. Neonate was placed on the phototherapy. Care for the neonate in phototherapy includes the position change every 30 minutes. Eyes and the genital shielded,

skin cleaned with warm water and cord care given. Intravenous fluids administered for 2 days. On the third day expressed breast milk was given orally. On the fourth day feeding activity was strong and coordinated and neonate slept well, was highly active and the skin colour was pink. On the fifth day the total serum bilirubin level was 2mg% and the neonate was discharged from the neonatal intensive care unit.

SAMPLE NO: 7

The baby was admitted in neonatal intensive care unit. The birth weight of the neonatal was 2.5kg and the total serum bilirubin level was 14mg%. vital signs recorded once in 15 minutes for the first 2 hours and then once in 4 hours. Neonate was placed on the phototherapy. Care for the neonate in phototherapy includes the position change every 30 minutes. Eyes and the genital shielded, skin cleaned with warm water and cord care given. Expressed breast milk was given orally. On the second day neonate was given to the mother for feeds. On the third day feeding activity was strong and coordinated and neonate slept well. On the fourth day the neonate was highly active and the skin colour was pink. On the fifth day the total serum bilirubin level was 2mg% and the neonate was discharged from the neonatal intensive care unit

SAMPLE NO:8

The baby was admitted in neonatal intensive care unit. The birth weight of the neonatal was 2kg and the total serum bilirubin level was 14mg%.vital signs recorded once in 15 minutes for the first 2 hours and then once in 4 hours. Neonate was placed on the phototherapy. Care for the neonate in phototherapy includes the position change every 30 minutes. Eyes and the genital shielded, skin cleaned with warm water and cord care given. Intravenous fluids administered for 2 days. On the third day expressed breast milk was given orally. On the fourth day feeding activity was strong and coordinated and neonate slept well,was highly active and the skin co lour was pink. On the fifth day the total serum bilirubin level was 2mg% and the neonate was discharged from the neonatal intensive care unit.

SAMPLE NO: 9

The baby was admitted in neonatal intensive care unit. The birth weight of the neonatal was 2.5kg and the total serum bilirubin level was 14mg%.vital signs recorded once in 15 minutes for the first 2 hours and then once in 4 hours. Neonate was placed on the phototherapy. Care for the neonate in phototherapy includes the position change every 30 minutes. Eyes and the genital shielded, skin cleaned with warm water and cord care given. Expressed breast milk was given orally. On the second day neonate was given to the mother for feeds. On the third day feeding activity was strong and coordinated and neonate slept well. On the fourth day the neonate was highly active and the skin colour was pink. On the fifth day the total serum bilirubin level was 1.8mg% and the neonate was discharged from the neonatal intensive care unit.

SAMPLE NO: 10

The baby was admitted in neonatal intensive care unit. The birth weight of the neonatal was 3kg and the total serum bilirubin level was 18mg%.vital signs recorded once in 15 minutes for the first 2 hours and then once in 4 hours. Neonate was placed on the phototherapy. Care for the neonate in phototherapy includes the position change every 30 minutes. Eyes and the genital organ shielded, skin cleaned with warm water and cord care given. Expressed breast milk was given orally. On the second day neonate was given to the mother for feeds. On the third day feeding activity was strong and coordinated and neonate slept well. On the fourth day the neonate was highly active and the skin colour was pink. On the fifth day the total serum bilirubin level was 1.5mg% and the neonate was discharged from the neonatal intensive care unit.

SAMPLE NO: 11

The baby was admitted in neonatal intensive care unit. The birth weight of the neonatal was 3kg and the total serum bilirubin level was 18mg%.vital signs recorded once in 15 minutes for the first 2 hours and then once in 4 hours. Neonate was placed on the phototherapy. Care for the neonate in phototherapy includes the position change every 30 minutes. Eyes and the genital organ shielded, skin cleaned with warm water and cord care given. Expressed breast milk was given orally. On the second day neonate was given to the mother for feeds. On the third day feeding activity was strong and coordinated and neonate slept well. On the fourth day the neonate was highly active and the skin

colour was pink. On the fifth day the total serum bilirubin level was 1.5mg% and the neonate was discharged from the neonatal intensive care unit.

SAMPLE NO: 12

The baby was admitted in neonatal intensive care unit. The birth weight of the neonatal was 3kg and the total serum bilirubin level was 18mg%.vital signs recorded once in 15 minutes for the first 2 hours and then once in 4 hours. Neonate was placed on the phototherapy. Care for the neonate in phototherapy includes the position change every 30 minutes. Eyes and the genital organ shielded, skin cleaned with warm water and cord care given. Expressed breast milk was given orally. On the second day neonate was given to the mother for feeds. On the third day feeding activity was strong and coordinated and neonate slept well. On the fourth day the neonate was highly active and the skin colour was pink. On the fifth day the total serum bilirubin level was 1.5mg% and the neonate was discharged from the neonatal intensive care unit.

SAMPLE NO: 13

The baby was admitted in neonatal intensive care unit. The birth weight of the neonatal was 3kg and the total serum bilirubin level was 18mg%.vital signs recorded once in 15 minutes for the first 2 hours and then once in 4 hours. Neonate was placed on the phototherapy. Care for the neonate in phototherapy includes the position change every 30 minutes. Eyes and the genital organ shielded, skin cleaned with warm water and cord care given. Expressed breast milk was given orally. On the second day

neonate was given to the mother for feeds. On the third day feeding activity was strong and coordinated and neonate slept well. On the fourth day the neonate was highly active and the skin color was pink. On the fifth day the total serum bilirubin level was 1.5mg% and the neonate was discharged from the neonatal intensive care unit.

SAMPLE NO: 14

The baby was admitted in neonatal intensive care unit. It was a male baby 35 weeks of gestational age, birth weight was 2kgs.baby born by vaginal delivery. Vital signs were checked. On the first day baby was pallor, having weak cry, poor feeding. Baby was kept under the warmer, umbilical cord redness, swelling and serous discharge present. Intravenous fluid was administered. On the third day expressed breast milk was given orally. On the fourth day the baby was given to the mother for breast feeding. Sucking ability was improved, there was no discharge from the umbilicus and was healthy. On the fifth day baby was normal and discharged.

SAMPLE NO: 15

The baby was admitted in neonatal intensive care unit. It was a male baby 35 weeks of gestational age, birth weight was 2kgs.baby born by vaginal delivery. Vital signs were checked. On the first day baby was pallor, having weak cry, poor feeding. Baby was kept under the warmer, umbilical cord redness, swelling and serous discharge present. Intravenous fluid was administered. On the third day expressed breast milk was given orally. On the fourth

day the baby was given to the mother for breast feeding. Sucking ability was improved, there was no discharge from the umbilicus and was healthy. On the fifth day baby was normal and discharged.

SAMPLE NO: 16

The baby was admitted in neonatal intensive care unit. It was a male baby 35 weeks of gestational age, birth weight was 2kgs.baby born by vaginal delivery. Vital signs were checked. On the first day baby was pallor, having weak cry, poor feeding. Baby was kept under the warmer, umbilical cord redness, swelling and serous discharge present. Intravenous fluid was administered. On the third day expressed breast milk was given orally. On the fourth day the baby was given to the mother for breast feeding. Sucking ability was improved, there was no discharge from the umbilicus and was healthy. On the fifth day baby was normal and discharged.

SAMPLE NO:17

The baby was admitted in neonatal intensive care unit. It was a male baby 35 weeks of gestational age, birth weight was 2kgs.baby born by vaginal delivery. Vital signs were checked. On the first day baby was pallor, having weak cry, poor feeding. Baby was kept under the warmer, umbilical cord redness, swelling and serous discharge present. Intravenous fluid was administered. On the third day expressed breast milk was given orally. On the fourth day the baby was given to the mother for breast feeding. Sucking ability was improved, there was no discharge from the umbilicus

and was healthy. On the fifth day baby was normal and discharged.

SAMPLE NO: 18

The baby was admitted in neonatal intensive care unit. It was a male baby 35 weeks of gestational age, birth weight was 2kgs.baby born by vaginal delivery. Vital signs were checked. On the first day baby was pallor, having weak cry, poor feeding. Baby was kept under the warmer, umbilical cord redness, swelling and serous discharge present. Intravenous fluid was administered. On the third day expressed breast milk was given orally. On the fourth day the baby was given to the mother for breast feeding. Sucking ability was improved, there was no discharge from the umbilicus and was healthy. On the fifth day baby was normal and discharged.

SAMPLE NO: 19

The baby was admitted in neonatal intensive care unit. It was a male baby 35 weeks of gestational age, birth weight was 2kgs.baby born by vaginal delivery. Vital signs were checked. On the first day baby was pallor, having weak cry, poor feeding. Baby was kept under the warmer, umbilical cord redness, swelling and serous discharge present. Intravenous fluid was administered. On the third day expressed breast milk was given orally. On the fourth day the baby was given to the mother for breast feeding. Sucking ability was improved, there was no discharge from the umbilicus and was healthy. On the fifth day baby was normal and discharged.

SAMPLE NO:20

The baby was admitted in neonatal intensive care unit. It was a male baby 35 weeks of gestation age, birth weight was 2kgs.baby born by vaginal delivery. Vital signs were checked. On the first day baby was pallor, having weak cry, poor feeding. Baby was kept under the warmer, umbilical cord redness, swelling and serous discharge present. Intravenous fluid was administered. On the third day expressed breast milk was given orally. On the fourth day the baby was given to the mother for breast feeding. Sucking ability was improved, there was no discharge from the umbilicus and was healthy. On the fifth day baby was normal and discharged.

SAMPLE NO: 21

The baby was admitted in neonatal intensive care unit. It was a male baby 35 weeks of gestational age, birth weight was 2kgs.baby born by vaginal delivery. Vital signs were checked. On the first day baby was pallor, having weak cry, poor feeding. Baby was kept under the warmer, umbilical cord redness, swelling and serous discharge present. Intravenous fluid was administered. On the third day expressed breast milk was given orally. On the fourth day the baby was given to the mother for breast feeding. Sucking ability was improved, there was no discharge from the umbilicus and was healthy. On the fifth day baby was normal and discharged.

SAMPLE NO:22

The baby was admitted in neonatal intensive care unit. It was a male baby 35 weeks of gestational age, birth weight was 2kgs.baby born by vaginal delivery. Vital signs were checked. On the first day baby was pallor, having weak cry, poor feeding. Baby was kept under the warmer, umbilical cord redness, swelling and serous discharge present. Intravenous fluid was administered. On the third day expressed breast milk was given orally. On the fourth day the baby was given to the mother for breast feeding. Sucking ability was improved, there was no discharge from the umbilicus and was healthy. On the fifth day baby was normal and discharged.

SAMPLE NO: 23

The baby was admitted in neonatal intensive care unit. It was a male baby 35 weeks of gestational age, birth weight was 2kgs.Baby born by vaginal delivery. Vital signs were checked. On the first day baby was pallor, having weak cry, poor feeding. Baby was kept under the warmer, umbilical cord redness, swelling and serous discharge present. Intravenous fluid was administered. On the third day expressed breast milk was given orally. On the fourth day the baby was given to the mother for breast feeding. Sucking ability was improved, there was no discharge from the umbilicus and was healthy. On the fifth day baby was normal and discharged.

SAMPLE NO:24

The baby was admitted in neonatal intensive care unit. It was a male baby birth weight was 1.8kg. Baby born by vaginal delivery. Vital signs were checked. On the first day baby was pallor, having weak cry, poor feeding, diminished reflex, baby was on phototherapy, umbilical cord redness & swelling present. On the third day expressed breast milk was given orally. On the fifth day baby was normal and discharged.

SAMPLE NO: 25

The baby was admitted in neonatal intensive care unit. It was a male baby birth weight was 2.3kg. Baby born by vaginal delivery. Vital signs were checked. On the first day baby was pallor, having weak cry, poor feeding, poor response diminished reflex, umbilical cord redness & swelling present. On the third day expressed breast milk was given orally. On the fifth day baby was normal and discharged.

SAMPLE NO: 26

The baby was admitted in neonatal intensive care unit. It was a female baby birth weight was 2.1kg. Baby born by vaginal delivery. Vital signs were checked. On the first day baby was pallor, having weak cry, poor feeding, diminished reflex, baby was on phototherapy, umbilical cord redness & swelling present. On the third day expressed breast milk was given orally. On the fifth day baby was normal and discharged.

SAMPLE NO: 27

The baby was admitted in neonatal intensive care unit. It was a female baby birth weight was 2kg. Baby born by vaginal delivery. Vital signs were checked. On the first day baby was pallor, having weak cry, poor feeding, diminished reflex umbilical cord redness& swelling present. On the third day expressed breast milk was given orally. On the fifth day baby was normal and discharged.

SAMPLE NO:28

The baby was admitted in neonatal intensive care unit. It was a male baby birth weight was 1.8kg. Baby born by vaginal delivery. Vital signs were checked. On the first day baby was pallor, having weak cry, poor feeding, diminished reflex, baby was on phototherapy, umbilical cord redness& swelling present. On the third day expressed breast milk was given orally. On the fifth day baby was normal and discharged.

SAMPLE NO:29

The baby was admitted in neonatal intensive care unit. It was a male baby birth weight was 2.2kg. Baby born by vaginal delivery. Vital signs were checked. On the first day baby was pallor, having weak cry, poor feeding, diminished reflex, baby was on phototherapy, umbilical cord redness& swelling present. On the third day expressed breast milk was given orally, umbilicus was healthy. On the fifth day baby was normal and discharged.

SAMPLE NO:30

The baby was admitted in neonatal intensive care unit. It was a male baby birth weight was 1.8kg. Baby born by vaginal delivery. Vital signs were checked. On the first day baby was pallor, having weak cry, poor feeding, diminished reflex, baby was on phototherapy, umbilical cord redness & swelling present. On the third day expressed breast milk was given orally. On the fifth day baby was normal and discharged.