# EVALUATE THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON KNOWLEDGE RECORDING IMMEDIATE CARE OF NEW BORN AMONG 3RD YEAR B.SC NURSING STUDENTS OF SELECTED COLLEGE OF NURSING AT BANGALORE

**By MS. GOWRI. M**

Dissertation Submitted to the

**Rajiv Gandhi University of Health Sciences, Bangalore, Karnataka**

In partial fulfilment of the requirements for the degree of

**MASTER OF SCIENCE IN NURSINGIN**

CHILD HEALTH  NURSING

*Under the guidance of*

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2018

# RAJIVGANDHI UNIVERSITY OF HEALTH SCIENCES,

# BANGALORE KARNATAKA

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I hereby declare that this dissertation entitled **"EVALUATE THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON KNOWLEDGE RECORDING IMMEDIATE CARE OF NEW BORN AMONG 3ʳᵈ YEAR B.SC NURSING STUDENTS OF SELECTED COLLEGE OF NURSING AT BANGALORE"** is a bonafide and genuine research work carried out by me under the guidance of Mr .KENCHE GOWDA P.R **SOFIA COLLEGE OF NURSING, BANGALORE-560 064.**

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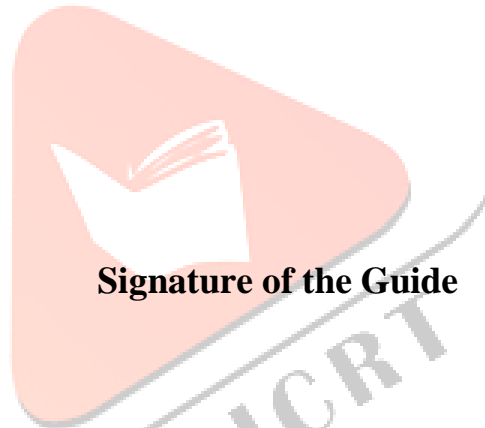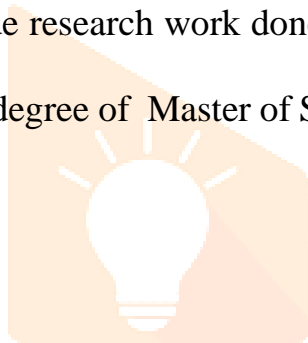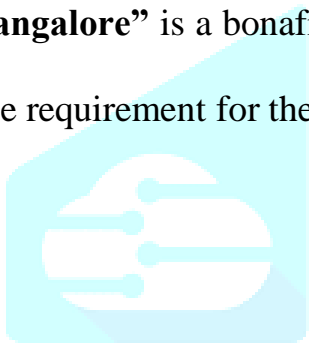
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**"I can do all things through god who strengthen me always"**

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**Date:**                                                                    **Signature of Candidate**

**Place: Bangalore**                                                              **(GOWRI)**

# LIST OF ABBREVIATIONS USED

| | |
|---|---|
| WHO | World Health Organization |
| IUGR | Intra uterine growth retardation |
| SaO2 | Saturation Level of Oxygen |
| PaCO2 | Partial pressure of carbon dioxide |
| EMCO | Extracorporeal membrane oxygenation |
| AGA | Appropriate for gestational age |
| DCC | Delayed cord clamping |
| SGA | Small for gestational age |
| LBW | Low birth weight |
| NBW | Normal birth weight |
| STSC | Skin to skin care |
| HDN | Haemorrhagic disease of new born |
| X2 | Chi-Square |
| STP | Structure Teaching Program |

# ABSTRACT

### BACKGROUND AND PURPOSE OF THE STUDY:

Immediate care of new born is one of the main aspect of neonatal care, which contributes to the reduction in Neonatal mortality and morbidity in our country. The aspect included in immediate Care of new born are clearing the airway, umbilical cord care, prevention of heat loss,Identification and assessment of baby's condition and continued early care. The aim of the present study is to assess the effectiveness of a structure teaching programme on Immediate care of new born among nursing students among selected college at Bangalore.

**OBJECTIVES:**

(1)     assess the knowledge of the nursing students regarding immediate care of new born.

(2)     Find out the difference between the mean pre test and post test knowledge scores for student nurses on immediate care of newborn

(3)      determine association between the mean post test knowledge scores   of student nurses regarding immediate care of newborn with selected socio demographic variables.

**DESIGN** :True experimental design with experimental and control group was selected for the study .

**SUBJECTS**: The participants were 60 student nurses of selected nursing colleges at Bangalore.

**METHOD:** Probability sample random sampling technique was used to select the samples forthe study.

**DATA COLLECTION TOOL:** A structured knowledge questionnaire was used to collect datafrom the participations.

**DATA ANALYSIS:** The obtained data was analyzed by using descriptive and inferential statistics and interpreted in terms of objectives and hypothesis of the study. The level of significance was set at $p \leq 0.05$ levels.
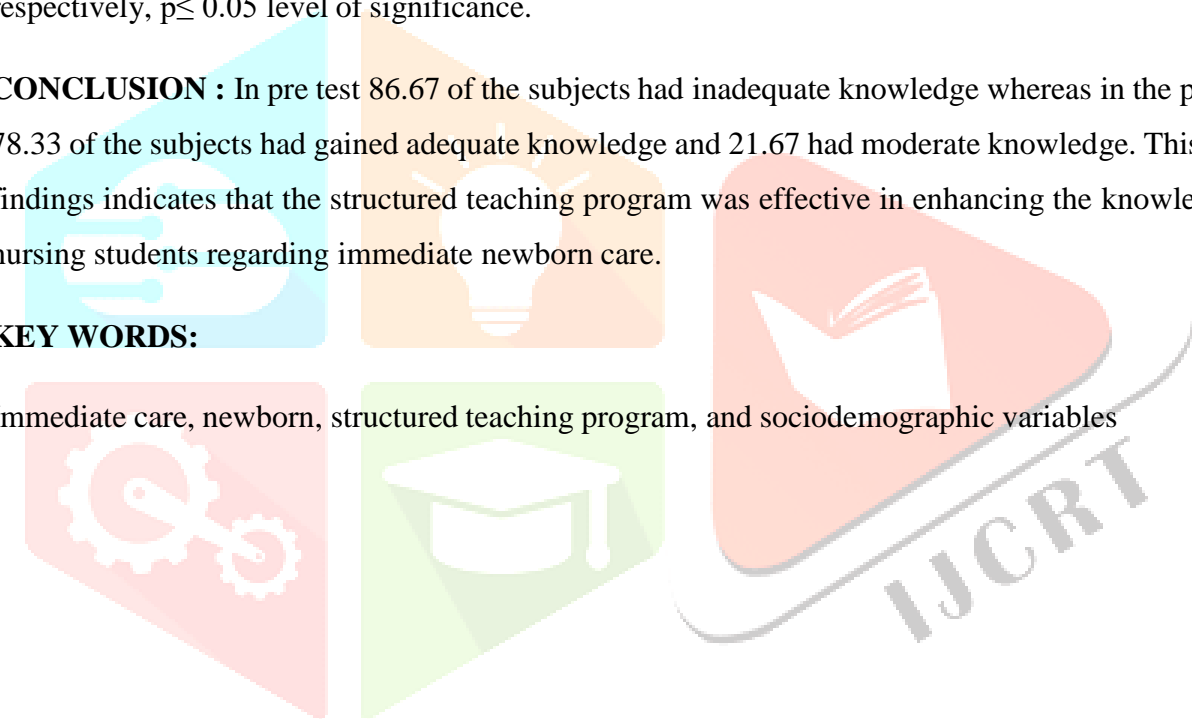
**RESULT:** The pre-test mean score was $21.82 \pm 2.26$ , whereas the mean post test score was $38.4 \pm 2.81$ . The overall enhancement was $16.58 \pm 0.55$ A significant association was found

between area of residence and source of information , the obtained chi – square value was 13.30 respectively, $p \leq 0.05$ level of significance.

**CONCLUSION :** In pre test 86.67 of the subjects had inadequate knowledge whereas in the posttest 78.33 of the subjects had gained adequate knowledge and 21.67 had moderate knowledge. This study findings indicates that the structured teaching program was effective in enhancing the knowledge of nursing students regarding immediate newborn care.

**KEY WORDS:**

Immediate care, newborn, structured teaching program, and sociodemographic variables

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# CHAPTER 1

## INTRODUCTION

**"A Baby is sweet new blossom of humanity" "You can't buy happiness,**

**happiness is born"**

The transition from intrauterine to extrauterine life presents a number of challenges for the new born. To leave the nurturing environment of the mother's womb, it must endure intense contractions of the uterus and pass through the birth canal or the mother's abdomen to the waiting world. Upon birth, the newborn's body must establish circulation, initiate respiration and maintain own metabolism tasks previously managed by the mother through the placenta. Incredible and formidable as all these tasks are, most newborn sail through this transition smoothly.

Yet, when difficulty is encountered, an astute midwife is often the first to note the changes and alert the unit, so that prompt interventions can be given.[1]

There are approximately 4 million neonatal deaths occur worldwide each year. 2 million neonatal deaths occur with in 24 hours of birth. The current infant mortality rate in India is 32.3 per 1000 live births, mainly contributed by neonatal deaths. Despite efforts by Government and other agencies, neonatal morbidity and mortality continues to be high in India. Among other reasons, newborn care practices are major contributors for such high rates. [2,3]

A research article had highlighted that the proportion of child deaths that occurs in the neonatal period (38%) is increasing. Three-quarters of neonatal deaths happen in the first week, in which the highest risk of death is on the first day of life. Almost all (99%) neonatal deaths arise in low and middle socio economic countries, yet most epidemiological and other research focuses on the 1% of deaths in high socio economic countries. The highest numbers of neonatal deaths are in south-central Asian countries. Preventing deaths in newborn babies has not been a focus of child survival or safe motherhood programmes. While we neglect

these challenges, 450 newborns die every hour, mainly from preventable causes, which is unconscionable in the 21st century. [4]

A research study had highlighted that more than 50% of infant deaths in India occur during the neonatal period. High priority therefore needs to be given to improve the survival of newborns. A large number of neonatal deaths have their origin in the perinatal period and are mainly determined by the health and nutritional status of the  mother, the quality of care during pregnancy and delivery, and the immediate care of the newborn at birth.[5]

The nurse is in a unique position to aid the neonate in the stressful transition from a warm, dark, fluid-filled environment to an outside world filled with light sound and novel tactile stimuli. Depending on the type of birthing  facility the women chooses, a certified nurse midwife or delivery room nurse has to be with the her and her partner. The nurse performs an initial assessment to evaluate the neonate, its immediate post birth adaptations, and the need for further support.

Later, a paediatric or neonatal nurse practitioner or nursery nurse will conduct a comprehensive assessment to determine the infant's status and to identify internal andexternal stressors that might jeopardize successful adaptation. Despite efforts by Governmentand other agencies, neonatal morbidity and mortality continues to be high in India. Amongother reasons, newborn care practices are major contributors for such high rates.[6]

Now, more than ever before nurses play a central role in planning for and during the experience of birth, and in how families feel about the experience afterward. In addition, nurses working with child-bearing families today are challenged by a variety of forces affecting the provision of nursing care. We believe that pregnancy and child birth are normal life processes and that family members are co-participants in care. We remain committed to provide a text that is accurate and readable which helps to develop the skills and abilities needed for present and in an ever-change health care environment.[7,8]

Learning  is a continuous process. A continuous process of learning is a pre-requisite to acquire depth of knowledge, besides developing specialized skill in a specialized area. The role of the nurse is of unique importance and they are normally responsible for the care of newborn immediately after birth. Hence it is essential to reorient health care providers regarding immediate care of newborn.

## NEED FOR THE STUDY:

In nursing practice it is found that some procedures or Interventions are often proved to be helpful. In midwifery practices, the immediate Care of new born is a very important aspect for new born survival. The main function Of nurses is to care for the welfare of the child and family. In India due to dearth to nurses, the Nurses who are pivot should be adequately trained by student period itself.[9]

Neonatal mortality rates are often used as indicators of the quality of Neonatal care. Nearly 5 million neonates' worldwide die each year, 96% of them in developing Countries. Neonatal mortality rate per 1000 live births varies from 5 in developed countries to 53 in

The least developed countries. Immunisation, oral rehydration, and control of acute respiratory infections have reduced the post-neonatal component of the infant mortality rate.[9,10] Hence, neonatal mortality now constitutes 61% of infant mortality and nearly half of child mortality in developing countries. For further substantial reduction in infant mortality, neonatal mortality in developing countries must be lowered. Neonatal care for most neonates in developing countries, where 96% of the global burden of neonatal deaths occurs, is practically non-existent. These neonates are a vulnerable group and efforts to reduce mortality in such groups will be highly rewarding.[11]

According to the World Health Organization, (2010) the majority of all neonatal deaths (75%) occur during the first week of life. Of those deaths, between 25% and 45% occur within the first 24 hours. Further, the neonatal period—which comprises of the first 28 days of life—accounts for 37% of all deaths among children under five. Abdelareem (2008). Each year 62,000 new born babies die and an additional 43,000 are stillborn. Most of these babies die from preventable or treatable causes, and it is estimated that up to two-thirds could be saved if essential care reached all mothers and new-borns. Maternal and new born survivalis interconnected and the most dangerous time in a child's life is during birth, as the majority of new-borns die due to stressful events surrounding delivery. New born babies account for more than 40% of deaths amongst children under age five.[12]

WHO had also highlighted that about 50% of children 1 year old in developing countries die during the 1st month of life, and 97% of all infant deaths occur in developing

countries. Major factors contributing to these deaths are the mother's poor health before and during pregnancy, unhygienic childbirth practices, and inadequate care after delivery[9]. WHO has estimated that the direct causes of neonatal deaths globally are;infections,32%asphyxia, 29%; complications of prematurity, 24%; congenital anomalies, 10%, and other, 5%.[13]

Worldwide about 8 new born babies die every minute. Every year more than 4 millionbabies die during first week of life due to inadequate care. Further reduction of new born mortality can be accomplished by improving the quality of care provided to new born babies. Globally, the average NMR has fallen by more than a quarter over 20 year, (1990-2009) from

33.2     to 23.9 per 1,000 live births, or an average of 1.7% per year. Over 130 million babies are born every year, and more than 10 million infants die before their fifth birthday, almost 8 million before their first.[14]

This study aimed to determine the frequency of delivery and new born-care practices in southern Tanzania, where neonatal mortality is higher than the national average. All households in five districts of southern Tanzania were approached to participate in home delivery.15 Although 95% of these women reported that the cord was cut with a clean razor blade, only half reported that it was tied with a clean thread. Furthermore, out of all respondents 10% reported that their baby was dipped in cold water immediately after delivery, around two-thirds reported bathing their babies within 6 hours of delivery.. Although 83% of women breastfed within 24 hours of delivery, only 18% did within an hour.The findings suggest a need to promote and facilitate health facility deliveries, hygienic delivery practices for home births, delayed bathing and immediate and exclusive breastfeeding in Southern Tanzania to improve new born health.[16,17]

Several studies have been conducted in Nepal collecting information on maternal and child health care practices. A hospital based study in Nepal shows that Birth asphyxia, low birth weight, hypothermia and infection were most common causes of neonatal death and most could be reduced by better care during delivery and immediate attention after birth. Information on these practices will form the foundation of any Behaviour Change Communication (BCC) strategy for improving new born health and survival. Practices regarding new born care are largely governed by various factors such as knowledge of caretaker, traditional beliefs and practices, socio-economic status of family, accessibility of health services and handling by trained birth attendants. It is therefore, this study was

designed to identify behavioural determinants for new born care in Kaillie districts focusing on immediate care of new born and to provide information that will inform the development of an appropriate BCC strategy for the district and Nepal[18, 24].

In Bangladesh, high proportions of infant deaths (two-thirds) and deaths among children aged less than five years (38%) occur in the neonatal period. Although most of practices and these deaths occur at home due to preventable causes, little is known about routine domiciliary new born-care care-seeking for neonatal illness.[19]

A research study had highlighted that more than 50% of infant deaths in India occur during the neonatal period. High priority therefore needs to be given to improve the survival of new-borns. A large number of neonatal deaths have their origin in the prenatal period and are mainly determined by the health and nutritional status of the mother, the quality of care during pregnancy and delivery, and the immediate care of the new born at birth. A paediatric or neonatal nurse practitioner or nursery nurse will conduct a comprehensive assessment to determine the infant's status and to identify internal and external stressors that might jeopardize successful adaptation. Despite efforts by Government and other agencies, neonatalmorbidity and mortality continues to be high in India. Among other reasons, new born care practices are major contributors for such high rates[20].

The present article reports a study to assess the knowledge regarding the newborncare among staff nurses working in Kumareshwar Hospital and Medical Research Centre,Bagalcot, with a view to develop an information booklet. In pre-experimental study, a total of50 subjects selected through simple random sampling technique. The study employed pre-experimental one group pre-test design while data was collected by structured knowledgequestionnaire. The study concluded that majority 30 (60%) of study subjects had mediumknowledge and 20, (40%) of subjects had adequate knowledge regarding newbornfindings of the present study showed that the majority 60% of study subjects had only medium knowledge and 40% of them had adequate knowledge regarding newborn care.[21]

A study was conducted a study on newborn care practices including delivery practices, immediate care given after birth and breast-feeding practices in an urban slum of Delhi. They found out more than half of home deliveries 26(56.1%), are mostly conducted bydais (24, 91.3%) or relatives 4(8.7%).Bathing the baby immediately after birth was commonly practiced in 38 (82.6%) of home deliveries. Finger was used to clean the air

passage in most of the home deliveries (29, 63%). About 61% (28) of home delivered newborns were not weighed at birth. The study concluded that there is an urgent need to reorient health care providers and to educate on clean delivery practices and early neonatal care .[22]

A study was conducted on birth related practice patterns amongst women from an urban slum population in Dhaka city. The study result showed that 95% reported that the umbilical cord was cut with a razor blade, and 5% used a strip of bamboo. 13% reported boiling the razor blade for sterilization. 71% applied nothing to the umbilical cord. Breast feeding delays over 24 hours occurred more frequently among traditional birth attendant deliveries.The study concluded that there is a need of education and awareness more on following right practices to prevent the maternal as well as neonatal mortality rate.[23]

A study was conducted on neonatal care practices with an aim to provide information about home care practices for newborns in order to improve neonatal home care through preventive measures and prompt recognition of danger signs.   The result showed that several practices could be modified to improve neonatal care and survival. Thermal control was not practiced, although mothers perceived 22% of newborns to be hypothermic. The study concluded that there is a need to provide a framework  for  communicating behavior change and setting research priorities for improving neonatal health .[24]

From the above mentioned literatures it is clear that, the immediate newborn care practices is one of the important cause for neonatal mortality and morbidity. Though I felt that, after the nursing course, most of the students will go  for clinical posting. Today's student nurses are tomorrow's staff nurse. so the researcher finds that there is a need educate the nursing students regarding immediate newborn care through structured teaching programme which will enable them to provide care accordingly.

# CHAPTER 2

## OBJECTIVES

This chapter deals with statement of the problem, objectives of the  study. Assumptions to meet the objectives,  limitations of the study and conceptual frame work which provides a frame of reference. The statement of the problem selected for the study and its objectives are as follows**.**

**STATEMENT OF THE PROBLEM:**

A study to evaluate the effectiveness of structured teaching programme regarding knowledge on Immediate Care of New Born among 3rd Year BSc Nursing students  at selected Nursing College, Bangalore.

**OBJECTIVES**

**The objective of the study are to:**

1.                Assess the level of knowledge of 3rd Year BSc Nursing students regarding immediate Care of New Born.

2.                Find out the difference between the mean pre-test and post-test knowledge scores of 3rd Year BSc Nursing students regarding immediate Care of New Born.

3.                Determine the association between the pre-test knowledge levels of 3rd Year BSc Nursing students regarding immediate newborn care with their selected socio demographic variables.

**HYPOTHESIS:**

H1:- The mean post-test knowledge scores of 3 rd year BSC nursing students will be

significantly higher than the mean pre test scores.

H2:- There will be significant association between mean pre-test knowledge levels of 3rd Year BSc Nursing students regarding immediate Care of New Born with selected socio demographic variables.

**OPERATIONAL DEFINITIONS:**

**In this study it refers to**

**Assess:-** Analysing the knowledge of 3rd Year BSc Nursing regarding Immediate Care of New Born Babies.

**Effectiveness:-** The desired changes that can be brought about by structured teaching programme measured by structured questionnaire.

**Structured Teaching Programme (STP):-** The planned teaching programme to provide information to improve knowledge regarding Immediate Care of New Born Babies among 3rd Year BSc Nursing students.

**Knowledge:-** Response of the 3rd Year BSc nursing students on Immediate Care of New Born Babies.

**Immediate Care of New Born:-** The care event to the baby at birth like clearing the airway, umbilical cord care, prevention of heat loss, identification and assessment of baby's condition and continued early care.

**3rd Year BSc Nursing Students:-** The BSc in nursing students who are studying in 3rd year selected College of nursing at Bangalore.

**Selected Socio Demographic Variables:-** Attributes on elements of the subject, that are used to control the decided samples. Socio demographic variables described in this study are age, marital status, religion, residential area, family monthly income, experience in handling newborn, problems faced during handling and sources of information

**ASSUMPTIONS:**

1.      3rd year BSc nursing students may have some knowledge regarding the care of new born.

2.      Education may enhance level of knowledge.

3.      3rd year BSc nursing students act according to the information receive and precise.

## DELIMITATIONS:

**The study is delimited to:**

a)      3rd Year BSc nursing students from selected nursing college, Bangalore.

b)      Evaluation of knowledge is based only on the correct responses given to the items in the structured knowledge questionnaire.

# CONCEPTUAL FRAMEWORK

Concepts are the building blocks of a theory. A framework is the conceptual underpinning of the study. It has a specific conceptual model; the framework is often called the conceptual framework. Conceptual framework helps to maintain the relationship between concepts.

Conceptualization refers to the process of developing and refining abstract ideas. A conceptual model provide logical thinking and systematic observation and interpreting the observed data. The model also gives the direction for relevant questions and phenomena. It points out the solution to practical problems.

Conceptual framework is a group of concepts and a set of proportion that spells outthe relationship between them, conceptual framework deals with abstract (concepts) that are assembled by virtue of their relevance to a common theme, and conceptual framework plays several inter related roles in the progress of science. It serves as a spring board for the generation of research hypothesis and can provide an important concept for scientific research. The conceptual framework facilitates communication and provides systematic approach to nursing research, education and administration. 25

The present study aims at evaluating the effectiveness of a structured teaching programme on immediate care of new born among 3rd year BSC nursing students of selected college of nursing at Bangalore.

The conceptual frame work of the present study was developed by the investigator based on Bertanlanffy's general systems-theory. This consists of components like, input, through put, output and feedback.

**Conceptual Frame Work based on Von Bertanlanffy's general systems-theory (1930's):**

Open systems are those in which is an exchange of energy, materials and information with the environment. They are characterized by,

•       Input of energy into the system.

•       Throughput during which the system process, changes and recognizes imported energy.

• Output of energy into the environment in the form of goods, services and intellectual products.

• Feedback by which a part of the output returns to the system. In the present study the student nurses were considered as an open system. Because they receive the information from the environment, the system uses this input to maintain homeostasis.

**Input:**

The first component of a system is input, which is the information, energy or matter

that enters a system. For a system to work well, input should contribute to achieve the purpose of

the system. It refers to student nurses selected socio-demographic data (age, religion, residence,

family monthly income, experience in handling newborn, problems during handling and source of

information) and existing knowledge regarding clearing the air way, umbilical cord care, prevention

of heat loss, identification and assessment of the baby's condition and continued early care of new

born. These factors were taken into consideration on input for evaluation of effectiveness of

structured teaching programme regarding immediate care of new born in bringing out change in the

knowledge level of student nurses regarding immediate care of new born. [26]

**Throughput/Process:**

The action needed to accomplish the desired task, to achieve the desired that is to evaluate the effectiveness of structured teaching programme regarding immediate care of newborn. The following process is adopted. Assessment of knowledge of student nurses regarding immediate care of new born through a structured knowledge questionnaire(pre- test),preparation of validation of structured teaching programme administration.

**Out put:**

The information is continuously processed through the system and released as output in an altered state. Here the output refers to change in knowledge after administration of STPon immediate care of newborn (adequate/moderate/inadequate) which was measured by using

a structured knowledge questionnaire (post test). If knowledge level is found inadequate, rectification can be done by strengthening the existing knowledge through continuous monitoring, which is not under the purview of the study. [27]

**Feed back:**

The process of communicating what found in the evaluation of the system. Feedback can be measured by the output whether the knowledge is adequate, moderate or inadequate, that is if the student nurses gain adequate knowledge after the administration of Structured teaching programme on immediate care of new born or not. The developed structured teaching programme will be considered useful to update the student nurses knowledge regarding immediate care of newborn. If the knowledge gained was inadequate it refers that the systems input and throughput has to be re-evaluated which is not included in the study.
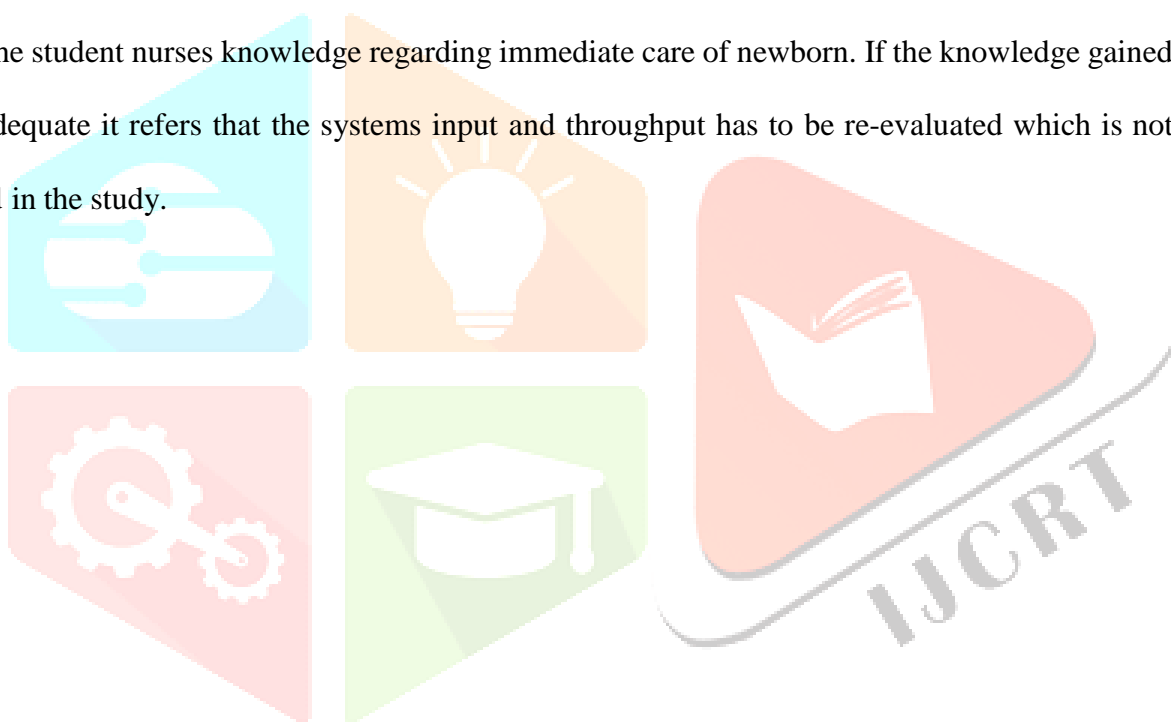
**Figure 1 Conceptual Framework**

# CHAPTER 3

## REVIEW  OF LITERATURE
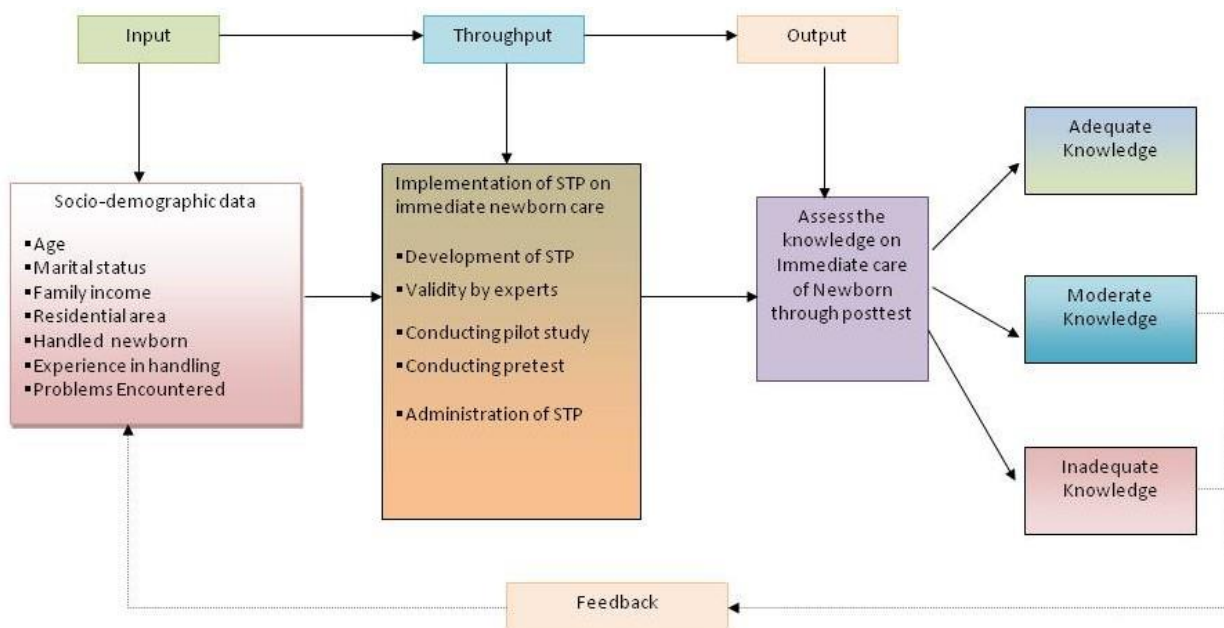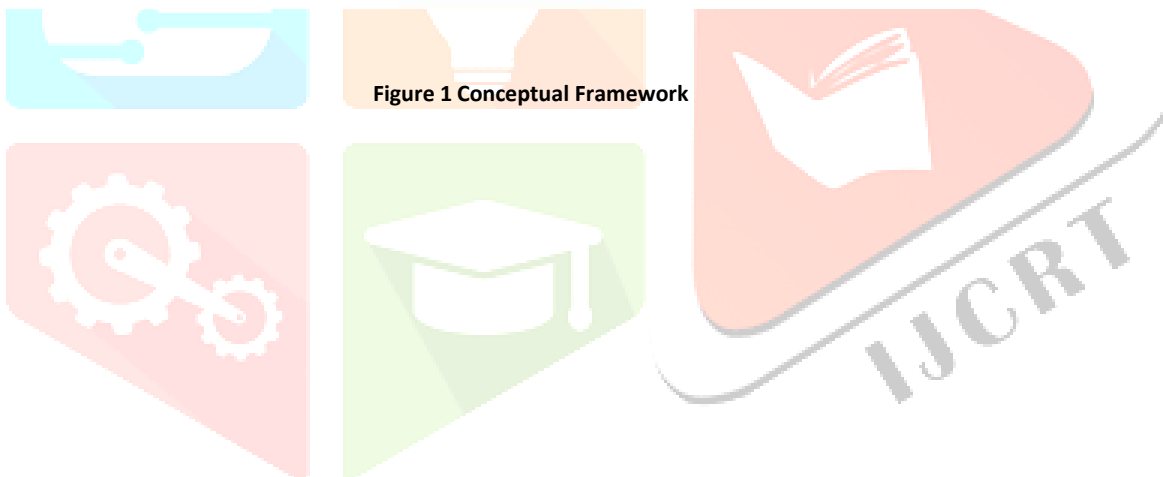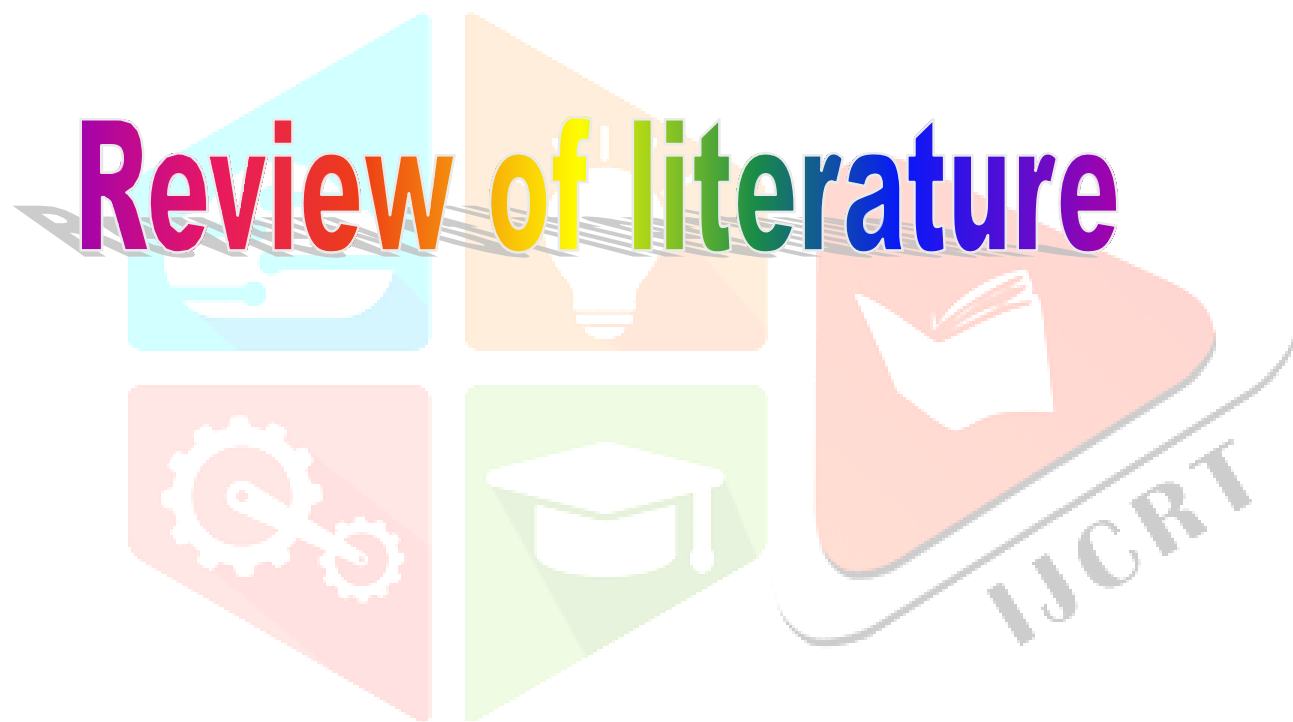
Review of literature is a key step in research process. It is used by investigators in the activities involved in identifying and searching for information on a problem and developing an understanding of the state of knowledge.

A Literature is a compilation of resources that provides the ground work for further study. It is an essential work in the development of a research project. It helps the researcher to design the proposed study in a scientific manner so as to achieve the desired result. An attempt has made by the investigator to discuss the related literature[18]

The investigator did an extensive review of the research and non research literatures related to the present study and made an attempt through MEDLAR search which contributedto deep insight into the problem area and methodology.

This chapter deals with the review of literature relevant to the present study. It is presented under the following subheadings.

1.      Studies related to effectiveness of structured teaching programme.

2.      Studies related to clearing the airway

3.      Studies related to umbilical cord care

4.      Studies related to prevention of heat loss

5.      Studies related to identification and assessment

6.      Studies related to continued early care.

**1.      Effectiveness of structured teaching program:**

A study was conducted on impact of structured teaching program (STP) for the nurses on nursing management of chest tube drainage among 100 staff nurses. The studyfindings reveal that subjects had poor knowledge related to clamping (35%), clamping duringleak (28%) and about indications for chest tube removal (19%). After introducing STP, knowledge of the subjects

improved to 75%, 65%, and 74% respectively. They found that subjects with B. Sc Nursing were possessing more to knowledge in their pretest (13.28) and posttest (21.00) as compared to subjects having diploma in nursing (pretest 11.55 and posttest18.17). The study suggested that further study can be conducted to assess the effect of STPon large number of nurses at different hospital settings.[27]

A study was conducted on effectiveness of a structured teaching program in increasing nurses' knowledge of genetics among sixty-five registered nurses working at reproductive health centers. The result showed that there was a significant increase of 20.8% in participants' mean knowledge score on the posttest (M = 89.0%, SD = 8%, range = 67%- 100%) as compared with the pretest (M = 69.0%, SD = 12%, range = 42%-92%), based on paired t-test analysis (t = 11.74, SE = 0.426, p < .0001). The study concluded that a structuredteaching program for registered nurses was effective in increasing knowledge of basic human genetic concepts and risk assessment. More in depth independent study programs for nurses are recommended.[28]

A study was conducted on evaluation of structured teaching program for staff nurses on care of child receiving oxygen therapy. The present study was carried out with the objectives of determining the learning needs of Staff Nurses regarding care of children receiving oxygen therapy; finding association between learning needs and selected variables such as age, total years of experience, experience in Paediatric Ward, married with or without children; determining validity of self-instructional module, on "care of child receiving Oxygen Therapy", and evaluating the effectiveness of the self-instructional module or STP. Itwas found that age, total years of experience, experience in Paediatric Ward and married withor without children were independent of their learning need. STP was effective in terms of gain in knowledge score as well as acceptability and utility scores of Staff Nurses. [29]

A study was conducted to find out the effectiveness of STP on body  mechanics among staff nurses in selected hospitals at Mangalore. Simple random sampling technique was used and the study sample was 100. The findings revealed that, mean test with post test increased to 39.2% after the administration, from the mean percentage of 35.4%  in the pretest. This indicates that there was gain in knowledge about the body mechanics among the staff nurses after the administration of the STP. [30]

A study was conducted to evaluate the effectiveness of a STP for school teachers regarding management of convulsions among children in selected rural primary school at Mangalore (n =100).

Purposive sampling technique was used. The study revealed that mean percentage in post test increased to 40.82% after the administration of STP from the mean percentage of 29.65% in the pretest. The study concluded that the STP was effective in improving the knowledge of primary school teachers.[31]

## 2.        Clearing the air way:

A pilot study was conducted on newborn bulb suctioning at birth. The purpose ofthe study was to examine the effects of bulb suctioning on healthy, term newborns and thefeasibility of conducting a large-scale study of this practice. In a randomized, controlled two-group design pilot study, 10 newborns received oronasopharyngeal bulb suctioning at birthand 10 did not. Differences in Apgar scores, heart rates, and oxygen saturation levels weredetermined. Infants were randomized to groups before delivery. There were no statisticallysignificant differences in Apgar scores between groups. Apgar scores at 5 and 10 minuteswere 9 or 10 for all newborns. The study concluded that newborns receiving bulb suctioningshowed a statistically significant, lower heart rate ($P = .042$) during the first 20 minutes and asignificantly higher SaO2 level ($P = .005$) by 15 minutes of age. Although statisticallysignificant,these findings were not considered clinically significant because values remained within normal parameters.[32]

A study was conducted on initiation and maintenance of continuous breathing at birth. Changes in arterial PaCO2 and body temperature normally occurring at the moment of birth may play a role in the initiation and maintenance of continuous breathing. To clarify these mechanisms, five chronically instrumented fetal lambs were connected to an extracorporeal membrane oxygenation (ECMO) system. The study concluded that maintenance of fetal PaCO2 and a slow decrease in central temperature after cord occlusion delays the establishment of continuous breathing, and that the level of PaCO2 is important in the maintenance of breathing activity during early postnatal life.[33]

A study was conducted on oxygen saturation trends immediately after birth. The objective of the study is to describe the changes in oxygen saturation (SaO2) in healthy infants during the first 10 minutes of life. The result showed that the process of transitioning to a normal postnatal oxygen saturation requires more than 5 minutes in healthy newborns breathing room air.[34]

A cross sectional community based survey at Murewa and Medziwa rural areas in Zimbawe. 644 women were interviewed. Nurses (60.4%) were the commonest attendants at delivery. Morbidity following delivery was noted in (14.5%), resuscitation carried out in 61/72 infants. Beating / shaking (58.0%), pouring cold water over the baby (18.0%) were the commonest method of resuscitation . The findings revealed that increased mortality followingdelivery was high and methods of neonatal

resuscitation was inappropriate. Hence, it was emphasized that more studies related to health workers skills, particularly in initiation of breathing.[35]

A study was conducted on oronasopharyngeal suction versus no suction in normal, term and vaginally born infants. This prospective randomized controlled trial aimed to compare the effects of oronasopharyngeal suction with those of no suction in normal, term and vaginally born infants and was performed at a Turkish tertiary hospital from June 2003 toJanuary 2004. A total of 140 newborns were enrolled in the trial (n = 70 per group). The study concluded that suction group showed lower mean heart rates through the 3rd and 6th minutes and higher SaO2 values through the first 6 mins of life (P < 0.001). The maximum time to reach SaO2 of >or= 92% (6 vs. 11 min) and >or= 86% (5 vs. 8 min) were shorter in the no suction group (P < 0.001).[36]

## 3.       Umbilical cord care:

A study was conducted on effect of timing of umbilical cord clamping of term infants on maternal and  neonatal outcomes. The objective of the study was to  determine the effects of different policies of timing of cord clamping at delivery of the placenta on maternal and neonatal outcomes. The result showed that infant ferritin levels remained higher in the late clamping group than the early clamping group at six months. One definition of active management includes directions to administer an uterotonic with birth of  the  anterior shoulder of the baby and to clamp the umbilical  cord within 30-60 seconds of birth of the baby (which is not always feasible in practice). It also says that delaying clamping of the cordfor at least two to three minutes seems not to increase the risk of postpartum haemorrhage. In addition, late cord clamping can be advantageous for the infant by improving iron status which may be of clinical value particularly in infants where access to good nutrition is poor, although delaying clamping increases the risk of jaundice requiring phototherapy.[37]

A study was conducted on systematic review and meta analysis of late versus earlyclamping of the umbilical cord in full term neonates. The objective of this study was tocompare the potential benefits and harms of late versus early cord clamping in term infants.The data sources include six electronic data bases. The study selection includes controlledtrails comparing late versus early cord clamping following birth in infants born at 37 or moreweeks gestation. Data was extracted by two reviewers independently assessed eligibility andquality of trials and extracted data for infant hematological status; iron status; and risk ofadverse events such as jaundice, polycythemia, and respiratory distress. The result shows thatdelaying clamping of the umbilical cord in full-term neonates for a minimum of 2 minuesfollowing birth is beneficial to the newborn, extending into infancy. Although there was anincrease in polycythemia among infants

in whom cord clamping was delayed, this condition appeared to be benign.[38]

A study was conducted on delayed umbilical cord clamping for reducing anaemia inlow birthweight infants.The objectives of the study was to examine the short- and long-termeffects in SGA infants of DCC compared with immediate clamping, and to assess therelationship between time of clamping and the potential postnatal haematological complications of DCC in SGA infants. Three reviewers assessed eligibility and trial quality. They concluded that DCC in a group that contains both AGA and SGA infants wasassociated with higher haemoglobin levels at 2-3 months of age in term infants and areduction in the number of blood transfusions needed in the 1st 4- 6 weeks of life in preterminfants. No reliable conclusions could be drawn about the potential adverse effects of DCC.The paucity of information on DCC in SGA infants justifies further research, especially in developing countries where the baseline risk for polycythaemia-hyperviscosity

syndrome is likely to be lower than in industrialized countries.[39]

An intervention study of umbilical cord care reveals that during a study of pregnancy in a poor rural tropical area, a high prevalence of neonatal fever and umbilical cord infection was detected. Interim analysis showed that this was associated with subsequent development of neonatal sepsis. Therefore an intervention was introduced in two stages. In the first stage, acriflavine spirit and new razor blades were supplied to mothers, along with instructions for use, through antenatal clinics. In the second stage, when excessive cord bleeding was reported, umbilical cord clamps were added to the pack. The packs were associated with reduction of serious morbidity in the neonatal period. The study concluded that the importance of umbilical cord care in the aetiology of life threatening neonatal morbidity in village births in a developing country and the effect of a simple intervention in reducing morbid episodes in the neonate.[40]

A study was conducted on assessment of the umbilical cord. In the delivery room inspection of the umbilical cord is an integral part of the first minutes of life. Any abnormalities either within the cord structure or in the areas surrounding the base of the cord may necessitate a delay in shortening the cord. The study concluded that process of umbilical cord separation is outlined conditions associated with delayed cord separation.[41]

**4.       Prevention of heat loss:**

A study was conducted on heat loss prevention in neonates. Maintaining a neutral thermal environment is one of the key physiologic challenges a newborn infant faces after delivery. Attention to detail regarding the management of an infant's neutral thermal environment may lead to improvement in clinical outcome, including improved survival. The details of this management cover a broad spectrum of interventions, from attention to the general environment (such as delivery room temperature) to specific individualized therapies,such as the use of polyethylene occlusive skin wrap. Although an integral part of the routine care of all newborns (whether term or preterm), these interventions have unfortunately received little attention and study. A commitment to greater understanding of these issues andtheir impact on newborns is essential if we hope to improve their outcome.[42]

A study was conducted on hypothermia at birth and its associated complications in newborns. Hypothermia is one of the main causes of neonatal mortality in developing countries. The aim of this prospective study was to determine the relationship between hypothermia at birth and the risk of mortality or morbidity among neonates born in Imam Hospital in Tehran, Iran. The study concluded that significant relationship was found betweenhypothermia and respiratory distress in the first six hours of birth and death, as well as with jaundice, hypoglycemia and metabolic acidosis in the first three days of birth.[43]

A study was conducted on radiant warmers versus incubators for regulating body temperature in newborn infants. The objective of the study was to assess the effects of radiantwarmers versus incubators on neonatal fluid and electrolyte balance, morbidity and mortality.The result showed that, in the overall comparison of radiant warmers vs incubators, radiant warmers caused a statistically significant increase in insensible water loss. [44]

A study on introduction of skin to skin care in a community revealed Incidence of hypothermia ($<36.5°C$) was high in both low birth weight (LBW) and normal birth weight (NBW) infants. The mean body temperature of newborns was lower (p,0.01) in ambient temperatures <20 oC (35.9 oC, n=225) compared to >20 oC (36.5 oC, n=1450). The study concludes that STSC was highly acceptable in rural India when introduced through appropriate cultural paradigms. STSC may be of benefit for all newborns and for many mothers as well.[45]

A study was conducted in Jaipur to evaluate the knowledge attitude and practice on neonatal hypothermia among medical and paramedical staff dealing with newborn care. A total of 160 subjects were assessed, using a structured questionnaire, study revealed gross lacunae in knowledge regarding

various aspects of neonatal hypothermia among paediatric and paramedical staffs working in the labour room and postnatal wards.[46]

## 5. Identification and assessment:

A study was conducted on mortality and immediate morbidity in term babies with low Apgar scores Overall mortality in these patients was 42%, and in those in whom Apgar scores remained 0-3 at 5 min, mortality was 77%. Evidence of severe to-moderate hypoxic- ischaemic encephalopathy was noted in 44 (52%) and 17 (20%) failed to establish spontaneous respiration within the 1st few hours of life. Meconium aspiration syndrome was diagnosed in 29 (35%). A control group of 141 term babies with 5 minute Apgar scores of 7 or more were identified and the presence of possible risk factors associated with low Apgar scores was assessed. Primiparity and prolonged second stages of labour in all parities were found to be significantly associated with low Apgar scores. The study concluded that improved obstetric care and appropriate management of the newborn at delivery and in the neonatal period may help to reduce mortality and morbidity in some term babies.[47]
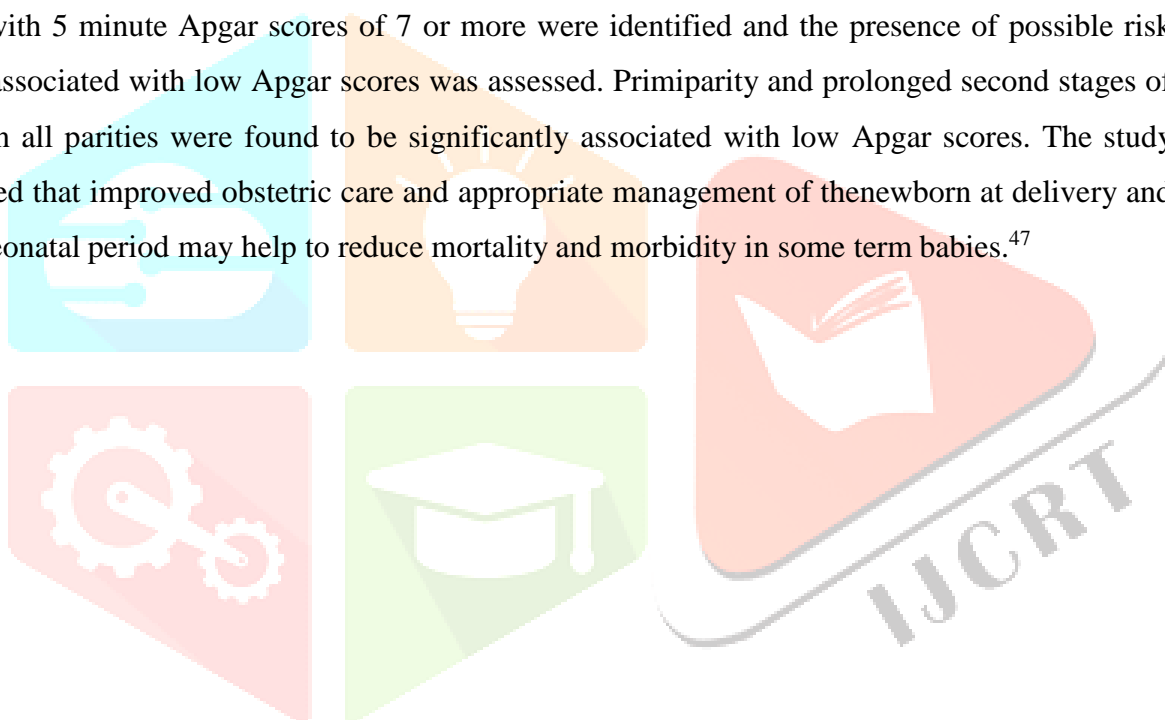
Pediatricians conducted a prospective study of 35,959 live births to determine whetheror not new technology and equipment, resulting in improved obstetric and neonatal services, have affected the trends in neonatal outcome with low Apgar scores. . The findings show that improved obstetric and neonatal services increased neonatal survival and that prolonged hypoxia remains a challenge. The study concluded that early referral and regionalization of perinatal services would further reduce asphyxia-related neonatal mortality.[48]

A study was conducted on the validity of the Apgar Scores in the assessment of asphyxia at birth. A prospective study was performed in 613 consecutively live born infants to investigate the validity of 1 and 5 minute Apgar Scores as an index for asphyxial assessment at birth. The independent and combined relationship between Apgar Scores, metabolic acidemia, pulse oximeter measurements and neonatal outcome were determined. The study concluded that the 5 minute Apgar score is useful for immediate clinical assessment and care of the neonate.[49]

A study was conducted on immediate outcomes of babies with low Apgar score . The objective was to determine the prevalence of low Apgar score and establish immediate outcome and possible risk factors for poor outcome in babies with low Apgar score. The subjects were babies delivered in Mulago hospital, Uganda. The result showed that even though the prevalence of low Apgar was only 8.4%, adverse outcomes associated with it wereobserved in more than half the patients. The study concluded that there is need to carefully evaluate and monitor babies with low Apgar scores immediately after birth.[50]

A study reviewed that careful examination of the neonate at delivery can detect anomalies, birth injuries, and disorders that may compromise successful adaptation to extra uterine life. A newborn with anatomic malformation should be evaluated for associated anomalies and treated immediately to reduce the neonatal morbidity and mortality.[51]

A study was conducted to investigate the prevalence of intra oral findings and other minor developmental malformations in newborns from San Luis Potosi, Mexico. Study subjects were neonates born in San Luis Potosi Morones Prieto Hospital. All subjects are examined at this hospital within 20 hours of birth. Premature babies or those requiring intensive care were excluded. Examinations are performed by a team consisting of a geneticist, an oral pathologist, 2 dentists, and an oral surgeon using mirrors, tongue blades, and a flashlight. The team examined 2,182 neonates and found a frequency of 99% for

congenital oral cysts, 2% for natal teeth, 11% for ankyloglossia, 8% for commissural lip pits, and 54% for congenital vascular malformations. The male/female ratios for ankyloglossia andnatal teeth were 1.5:1 and 1:2.3, respectively. The study concluded that babies born at the same hospital demonstrated a high rate of oral cysts, natal teeth, ankyloglossia, and commissural lip pits.[52]

## 6. Continued early care:

A pilot study was conducted on ocular diseases screening for neonates in China. The objective was to explore the clinical strategies for the screening of newborn eye diseases and obtain information concerning the incidence of newborn ocular diseases. The study concludesthat early intervention is of great importance for the prevention and treatment of neonatal ocular diseases. The study concluded that screening of newborn ocular diseases is not only feasible but also effective in the monitoring and control of the eye diseases in neonates.[53]

A study was conducted on prophylactic vitamin k for vitamin deficiency bleeding inneonates. The objectives of the study were to review the evidence from randomized trials inorder to determine the effectiveness of vitamin K prophylaxis in the prevention of classic andlate HDN. All trials using random or quasi-random patient allocation, in which methods ofvitamin K prophylaxis in infants were compared to each other, placebo or no treatment, wereincluded. The investigators concluded that a single dose (1.0 mg) of intramuscular vitamin Kafter birth is effective in the prevention of classic HDN. Either intramuscular or oral (1.0 mg) vitamin K prophylaxis improves biochemical indices of coagulation status at 1-7 days.Neither intramuscular nor oral vitamin K has been tested in randomized trials with respect toeffect on late HDN. Oral vitamin K, either single or multiple dose, has not been tested inrandomized trials for its effect on either classic or late HDN.[54]

A study was conducted on topical umbilical cord care at birth. The objective was to assess the effects of topical cord care in preventing cord infection, illness and death. The selection criteria were randomized and quasi – randomized trials of topical cord care compared with no topical care, and comparisons between different forms of care. The result revealed no difference was demonstrated between cords treated with antiseptics compared with dry cord care or placebo. There was a trend to reduced colonization with antibiotics compared to topical antiseptics and no treatment. Antiseptics prolonged the time to cord

separation. The study concluded that use of antiseptics was associated with a reduction in maternal concern about the cord.[55]

A study was conducted on effect of early mother-baby close contact over the duration of exclusive breastfeeding. This article reviews 30 years of work demonstrating that interactions between mother and newborn infant in the period just after birth influence the physiology and behavior of both. Close body contact of the infant with his/her mother helps regulate the newborn's temperature, energy conservation, acid-base balance, adjustment of respiration, crying, and nursing behaviors. Similarly, the baby may regulate that is, increase the mother's attention to his/her needs, the initiation and maintenance of breastfeeding, andthe efficiency of her energy economy through vagus activation and a surge of gastrointestinal tract hormone release resulting in better exploitation of ingested calories. The study concluded that the effects of some of these changes can be detected months later.[5]
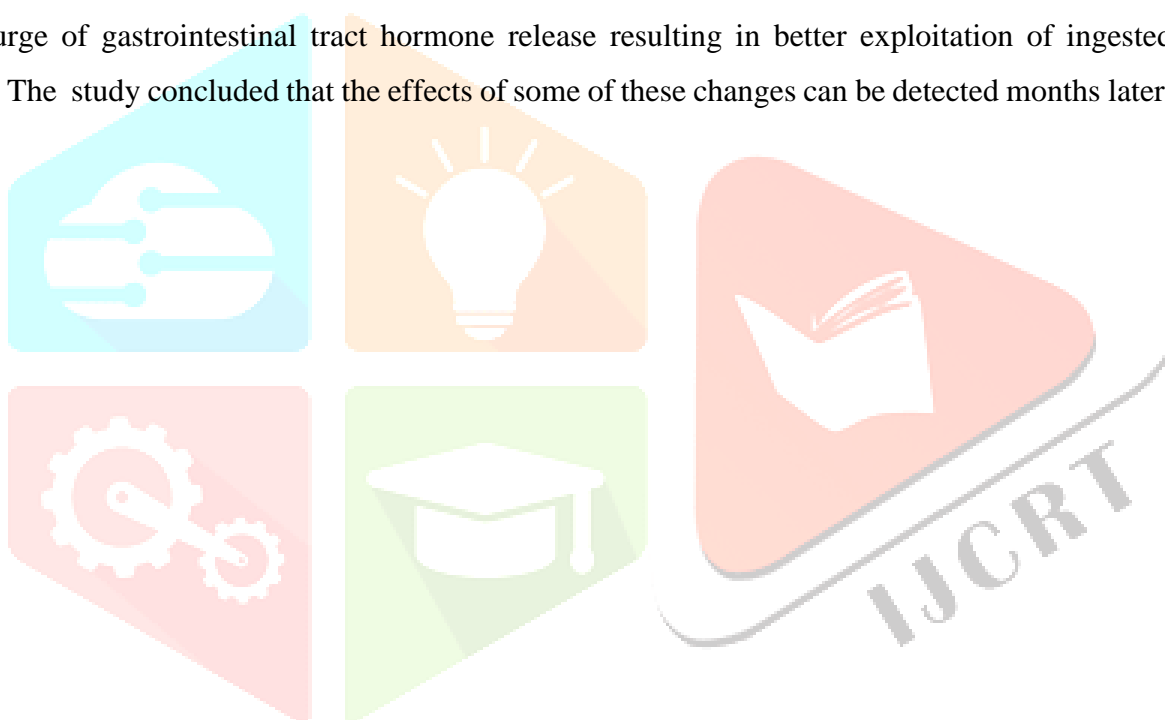
# CHAPTER – 4

## METHODOLOGY

This section deals with the methodology adopted for the study. The methodology of the investigation is of vital importance. "Research methodology is a way to solve problems. It is a systematic procedure in which the researcher starts from initial identification of the problems to final conclusions". [15]

The methodology of research indicates the general pattern of organizing the procedure it gathers valid and reliable data for the problem under the investigation. This chapter includes research approach, research design, setting of the study, population
,sampling technique, sample size, sampling criteria , instrument, validity, and realibility pilot study, method of collection of data, plan for data analysis, and interpretation , ethical implications in the study.

### Research approach

"Research approach is an umbrella that covers the basic procedure for conducting research". [15]The research approach selected for this study was an evaluative approach. Evalu ative approach which helps to explain the effect of independent variable on the dependent variable.

### Research Design

The research refers to " the researcher's overall plan for obtaining answer to the research question and it spells out strategies that the researcher adopted to develop information that is accurate , objective and interpretable .The selection of design depends upon the purpose of the study, research approach and variables to be studied. The research design used for the present study was quasi experimental design which includes manipulationand randomization without control .
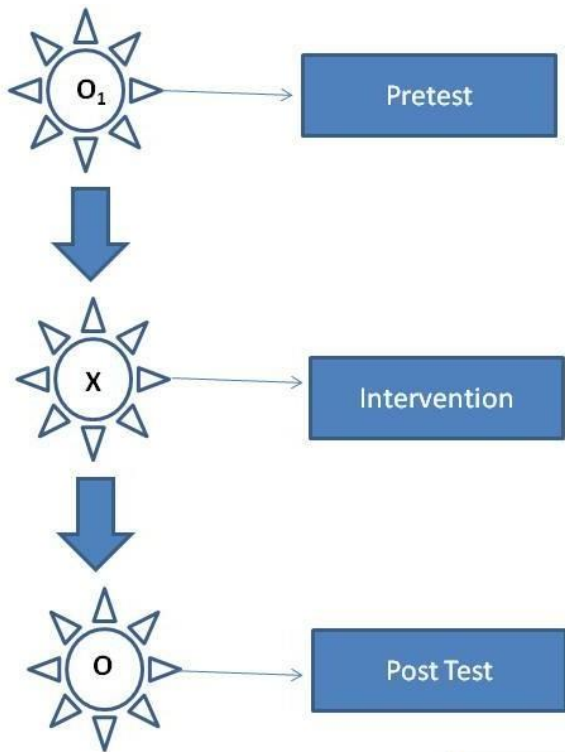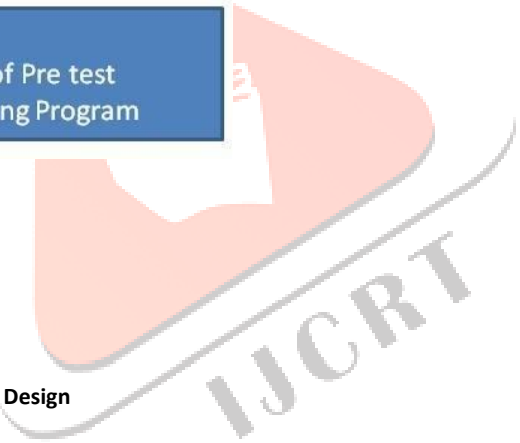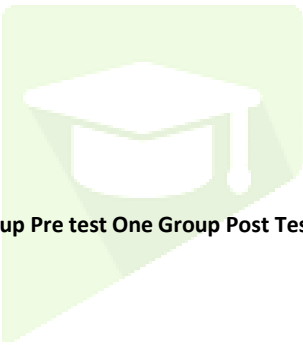
**Figure 2 Semantic Representation of One Group Pre test One Group Post Test Design**

PURPOSE:- Finding the effectiveness of structured teaching programme on knowledge of immediate new born care among 3rd year Bsc Nursing Student

RESEARCH APPROACH:- Experimental Approach

RESEARCH DESIGN:- One Group Pre and Post Test Pre Experimental Design

SETTING:- Nursing Colleges

POPULATION:- Target population: Nursing Students
Accessible population: Nursing Student from 3rd Year Bsc

SAMPLE:- 60 Nursing Student

SAMPLING TECHNIQUE:- Non Probability Purposive Sampling Technique

Tool: Structured interview schedule

INTERVENTION: Structured Teaching Programme

METHOD:- Pre-test- intervention- post-test $(O_1 - X - O_2)$

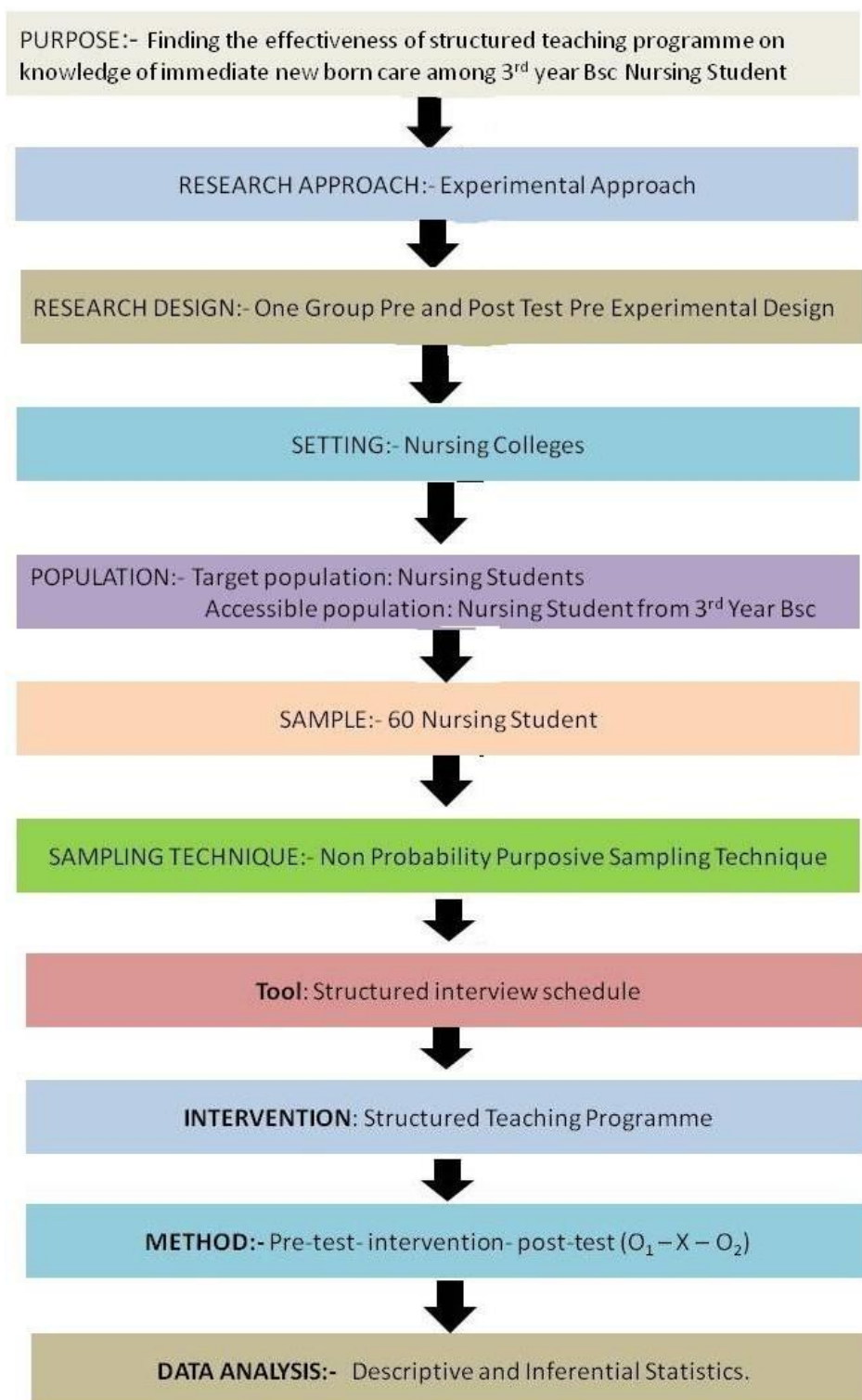DATA ANALYSIS:- Descriptive and Inferential Statistics.

**Figure 3 Schematic Representation of Research Plan**

## Variables

Variables are qualities , properties or characteristics of person, thing or situations that change or vary.
In this study 3 types of variables were used .They are :

1.     Independent Variable

2.     Dependent Variable

3.     Extraneous Variable

## Independent Variable

According to Polit Variables under the study

"A variable is a measurable or potentially measurable component of an object or event that may fluctuate in quantity and quality or that may be different in quantity and quality from oneindividual object or event to another object or event of same general class."[15]

## Dependent Variable

The dependent variable is the variable that the researcher is interested inunderstanding, explaining or predicting,( Polit and Hungler,1999). In this study the dependentvariable refers to the knowledge scores regarding  immediate newborn care. r the present study based on inclusion criteria.

## Extraneous Variable

Extraneous variables are those variables that are present in research environment which may interfere with research findings by acting as unwanted independent variables.(Woods and Kahn,1994)
In the present study it refers to the selected socio demographic variables such items of demographic variables such as age ,marital status,type of family,religion, residential area,economic  status  of family  per  month,  handling  newborn,                                    problems encountered during handling, sources of information.

**Setting of the Study**

Setting refers to the physical locations and conditions in which data collection takes place ina study. (Polit and Hungler , 1999) .This study was undertaken in selected rural area in Bangalore. This samples were selected on the basis of ,

❖ Feasibility of conducting study

❖ Availability of the sample.

**Population**

"Population refers to a total category of person or object that meets the criteria for study established by the researcher, any set of persons , or objects or measurements having anobservable characteristics in common''.[15]

The population of this study were 3[rd year] Bsc nursing students from selected nursingCollege , Bangalore.

**Sample**

"A sample is a selected proportion of the defined population. It is a subset of a population of interest".[15] The samples used in this study were 60 nursing students from selected nursing College Bangalore.

**Sampling technique**

In the present study simple random sampling technique was adopted to select the samples fo and Hungler (1999) independent variable is believed to cause or influence the dependent variable; in experimental research, the manipulated (treatment) variable. In this study the independent variable refers to structured teaching program given on immediate newborn care.

## SAMPLING CRITERIA

The study includes student who are

**A)        Inclusion Criteria:**

1.        3rd Year BSc nursing students.

2.        Students who are willing to participate in the study.

**B)        Exclusion Criteria**

This study excludes student who

1.        Have done duty in labour room.

2.        Have attended any educational programmes within 6 months.

## DESCRIPTION OF THE TOOL

To meet the objectives of the study the tool was developed by the investigator the tool used for the study comprised of a structured knowledge questionnaire and self instructional module on immediate newborn care.

## STRUCTURED KNOWLEDGE QUESTIONNAIRE

Structured knowledge questionnaire consists of two parts namely part-I and part-II.

## PART-I:

The characteristics included were age, marital status, religion, family monthly income, total years of work experience, years of work experience in maternity ward and exposure to health education in immediate care of newborn

## PART-II:

This part consists of 50 multiple choice questions regarding immediate care of newborn. There are five sub sections for this part.

**Section-A: -** This section consists of 10 questions which are used to assess knowledge of staff nurses regarding clearing the airway.

**Section-B: -** This section comprise of 7 questions regarding umbilical cord care.

**Section-C: -** In this section there are 7 questions regarding prevention of heat loss. **Section-D: -**

This section consists of 17 questions regarding identification and assessment.**Section-E: -** In

this section there are 9 questions regarding continued early care **STRUCTURED TEACHING**

**PROGRAM:**

A structured teaching programs on immediate care of newborn was also prepared by

the investigator which covers major content areas such as clearing the air way, umbilical cordcare,

prevention of heat loss, identification and assessment of the baby's condition and continued early

care.

**Development of structured teaching program on immediate care of newborn**

A structured teaching program on immediate care of newborn was developed based onliterature.

The following steps were adapted to develop STP based on literature.

- Preparation of first draft STP
- Content validity of STP
- Preparation of final draft of STP
- Description of STP

## SCORING AND INTERPRETATION

| Level of Knowledge | Sores | Percentage |
|---|---|---|
| Inadequate | 1-25 | <50% |
| Moderate | 26-38 | 51-75% |
| Adequate | 39-50 | >75% |
| Total | | |

**Preparation of first draft STP**

A first draft of STP was developed keeping in mind the objectives, literature reviewed and the opinion of experts. The main factors that were kept in mind while preparingSTP were the level of understanding of samples, simplicity of language and relevance of illustration/pictures.

**Preparation of final draft of STP**

The final draft of the STP was prepared after incorporating expert's suggestions.

**CONTENT VALIDITY**

Validity refers to the degree to which the tool measures what it intend to measure.[58]

Content validity of the tool was ensured by a team of ten experts. The experts include two medical specialists, one statician and seven nursing experts. Suggestions of the expert were considered and modifications of the tool were done, the number of questions for the structured knowledge questionnaire was decreased from 57 to50. For edition of tool in English language expert help was taken. Based on the expert's suggestion, the tool got its final form.

**RELIABILITY**

Reliability refers to the accuracy and consistency of the measuring tools.[25] The reliability of the structured knowledge questionnaire was established by using split half method. In order to establish the reliability, the tool was administered to 7 nursing students who fulfilled the inclusion criteria . These samples were excluded from the main study. The tool was found to be reliable with the reliability co-efficient of 0.84 (Karl Pearson's).

**PILOT STUDY**

Pilot study was conducted at Diana Nursing College among 7 samples. This was conducted after obtaining administrative permission from the Principal of nursing college. Pilot study was done to check the clarity of items in the tool and feasibility in conducting the

study. Student nurses who fulfilled the inclusion criteria were selected by convenience sampling technique. Confidentiality was assured to all the respondents.

A pre test was conducted by administering the structured knowledge questionnaire after which the structured teaching program was administered. A post test was given after a period of 7 days. Data were analyzed and it was found to be feasible. The pilot study participants were excluded from the main study. The pilot study did not show any major flaw in the design.

• Majority of the student nurses (57.1) were in the age group of 21-23 years.

• None of the samples were married.

• Regarding type of family of the student nurses (57.1) were belong to nuclear family.

• About (69.3%) of student nurses belong to urban area.

• About (48.1%) of samples belong to hindu religion.

• Most of the samples 84% had no experience in handling newborn

• About 62.6% had fear and anxiety while handling newborn

• It was observed that about (71.4%) were exposed to health education on immediate care of newborn.

• In the pretest, it was observed that about ( 57. 1%) of the respondents had inadequate knowledge regarding immediate care of newborn, only (42.9%) had moderate knowledge regarding immediate care of newborn.

• The aspect wise analysis of the pretest knowledge scores showed that the student nurses had least knowledge (mean percentage,54.0%) in the aspect of continued early care and they had the highest (mean percentage, score 63.3%) in the aspect of umbilical cord care.

• It was observed that after the intervention (STP) in the post test there was an enhancement in the knowledge of the student nurses. About (85.7%) of the respondents had adequate knowledge and (14.3%) of the respondents had moderate knowledge.

•     In order to evaluate the effectiveness of the STP , a paired 't'test was done. The't' value (12.65) was found to be significant at 0.05 level of significance (t (0.05,df) =2.441).

•     Comparison of aspect wise mean pretest and post test knowledge scores was done. It was observed that in all the areas under investigation there was a significant enhancement in the mean post test knowledge scores.

## PROCEDURE FOR DATA COLLECTION

Formal permission was obtained from the concerned authority to conduct the study. The data collection period was four weeks. Samples were selected in accordance with laid down criteria's. Consent was obtained from each subject after giving assurance of confidentiality. Pre test was given on day one followed by administration structured teaching program and onday eighth day post test was taken.

## PLAN FOR DATA ANALYSIS:

Data analysis is the systematic organization and synthesis of research data and testingof research hypothesis using those data.[25]The data obtained were planned to  be analyzed using both descriptive and inferential statistics on the basis of objective and hypothesis of the study.

•     Demographic data containing sample characteristics would be analyzed using frequency and percentage.

•     The knowledge score before and after the administration of the STP will be calculated by using mean, standard deviation, 't' test, chi-square will used to depict the data. A $\chi_2$ was done to find out association between the mean pretest knowledge score and selected demographic variables.

•     The level of significance used to test the hypothesis will be at 0.05.

•     The significant difference between the mean pretest and post test knowledge score would be analyzed by paired 't' test at 0.05 level of significance.

## PROTECTION OF HUMAN RIGHTS

The proposed study was conducted after the approval of dissertation committee of Sophia College of nursing, Bangalore. Permission was obtained from the Principl of Sophia college of nursing and Florence college of nursing. Consent of each subject was obtained before starting the data collection. Assurance was given to them that the anonymity of each individual would be maintained.

## SUMMARY

This chapter described the research methodoly adopted for the study. It included research approach, research design , setting , variables , population ,sample , sample size, andsampling technique, criteria for sample selection ,study of tools and plan for the developmentof content in immediate newborn care among nursing students.
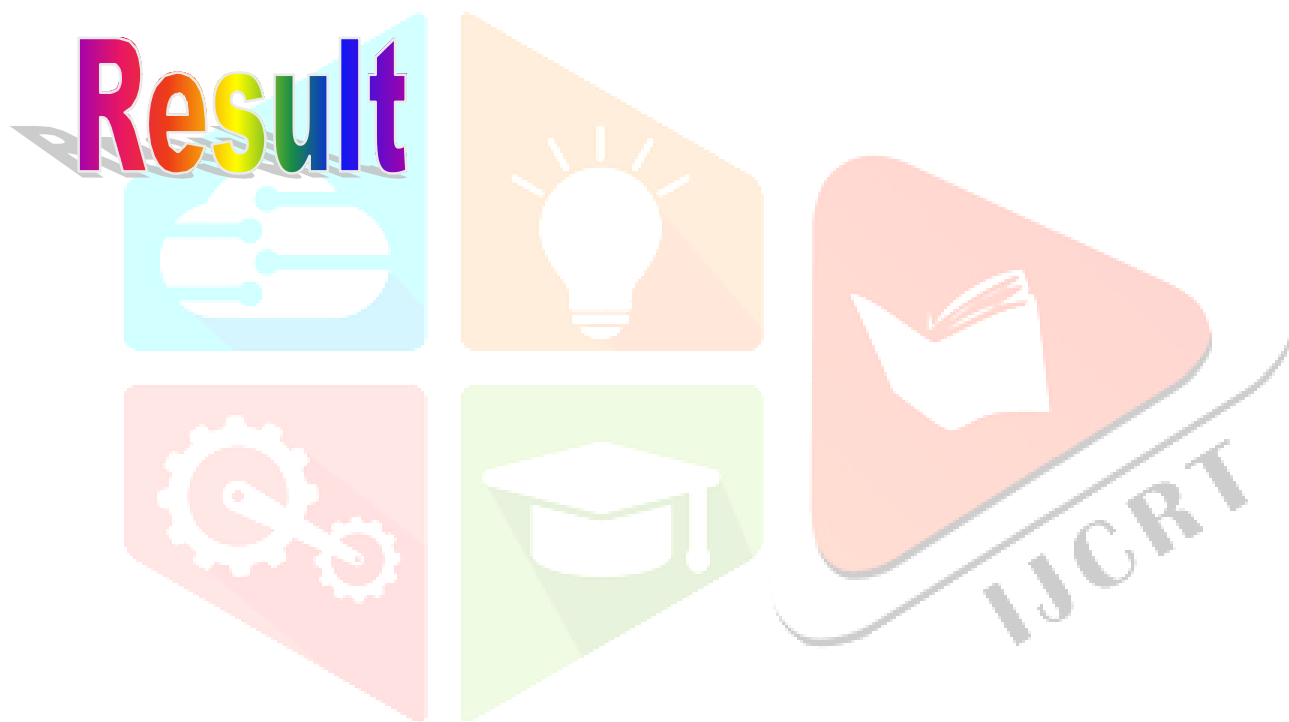
# CHAPTER 5

# RESULTS

Statistical analysis is a method of rendering quantitative information meaningfully and intelligently. Statistical procedures enable the researcher to reduce, summarize, organize, evaluate, interpret and communicate the obtained data into numeric information.[35]

This chapter deals with analysis and interpretation of data collected from 60 students from selected nursing colleges, Bangalore. The data was collected from the respondents before and after the administration of STP. The collected information was organized, tabulated, analyzed, and interpreted using descriptive and inferential statistics. Analysis was done based on the objectives and hypotheses of the study.

## OBJECTIVES OF STUDY

**The objective of the study is to**

1. Assess the level of knowledge of 3rd Year BSc Nursing students regarding immediate Care of New Born.

2. Find out the difference between the mean pre-test and post-test knowledge scores of 3rd Year BSc Nursing students regarding immediate Care of New Born.

3. Determine the association between the mean post-test knowledge scores of 3rd Year BSc Nursing students with their selected socio demographic variables.

## HYPOTHESIS:

H1:- There will be significant difference between the mean pre-test and post-test knowledge level on Immediate Care of New Born among 3rd Year BSc Nursing students.

H2:- There will be significant association between mean post-test knowledge 3rd Year BSc Nursing students regarding immediate Care of New Born with selected socio demographic variables.

**PART-I**

**Description of socio-demographic profile of the sample**

This section deals with distribution of participants according to the socio demographic characteristics. The obtained data on socio-demographic profile are described under the following sub heading which are age, religion, residence, type of family, family monthly income, experience in handling newborn, problems encountered during handling newborn

,sources of information regarding immediate newborn care. The data was analyzed by using descriptive statistics and are summarized in terms of frequency and percentage distribution.

# PART-I

## SOCIO-DEMOGRAPHIC PROFILE OF SAMPLES

**Table 1 Classification of sample by socio-demographic characteristics**

| Characteristics | Category | Respondents | |
|---|---|---|---|
| | | N | % |
| Age in Year | 18-20 years | 58 | 96.67 |
| | 21-23 years | 2 | 3.33 |
| | 24-26 Years | 0 | 0 |
| Marital status | Married | 0 | 0 |
| | Unmarried | 60 | 100 |
| Religion | Hindu | 27 | 45 |
| | Muslim | 4 | 6.67 |
| | Christian | 29 | 48.33 |
| | Others | 0 | 0 |
| Type of family | Nuclear | 51 | 85 |
| | Joint | 9 | 15 |
| | Extended | 0 | 0 |
| Residence | Rural | 41 | 68.33 |
| | Urban | 19 | 31.67 |
| | Slum | 0 | 0 |
| | Residential area | 0 | 0 |
| Total Income of family | Below Rs 5000 | 0 | 0 |
| | Rs 5001 to 10001 | 9 | 15 |

|  |  |  |  |
|---|---|---|---|
|  | **10001 to 15000** | **16** | **26.67** |
|  | **15001 and above** | **35** | **58.33** |
| **Have you handled newborn** | **Yes** | **53** | **88.33** |
|  | **No** | **7** | **11.67** |
| **Any problem encountered during handling new-born** | **Yes** | **4** | **6.67** |
|  | **No** | **56** | **93.33** |
| **Experience of handling new born** | **Fear and anxiety** | **19** | **35.85** |
|  | **Confident** | **34** | **64.15** |
| **Source of information** | **Health education** | **36** | **60** |
|  | **Mass media** | **16** | **26.67** |
|  | **Elders and relatives** | **0** | **0** |
|  | **Other** | **8** | **13.33** |

Table 1 shows that among 60 samples 58(96.6%) samples were in the age group between 18- 20years, 2(3.33% ) samples were in the age group   between 21-23 years and none of them belong to the age group of 24-26 years. All the samples 60 (100%) were unmarried and none were married.

According to the religion of nursing students, 27(45%) of them were Hindus, 29(48.3%) of them were Christians , 4(6.67%) of them were Muslims and none of them belong to other religion. According to the type of family , 9(15%) of them belongs to joint family51(85%) of them were nuclear family , none of them belong to extended family. It was observed that in residence of nursing students, 41(68.3%) of them were from rural areas and 19(31.67%) of them were from urban areas and none of them were from slum areas.

It was observed that in family monthly income of nursing students,none of them
had below Rs.5, 000, 9(15%) had in between Rs.5001-Rs. 10,000, 16(26.6%) of them had Rs.10,001 –Rs. 15,000 and 35(58.33%)had 15,000 above.

With regard to handling the newborn 53(88.3%) had experienced handling newbornand 7(11.67%) had no experience of handling newborn. Out of 60 samples 4(6.67%) hadproblem during handling newborn and 56(93.33%) had no problem during handling newborn. According to their experience of handling newborn 19(35.85%) had fear and anxiety while handling newborn and 34(64.15%) had confident in handling newborn. The socio demographic history of source of information shows that among nursing students, 36(60%) ofthem accessed information from health education , 16(26.67%) of them accessed information from mass media , none of them received information from elders and relatives  and 8(13.33%) gathered information from other resources.
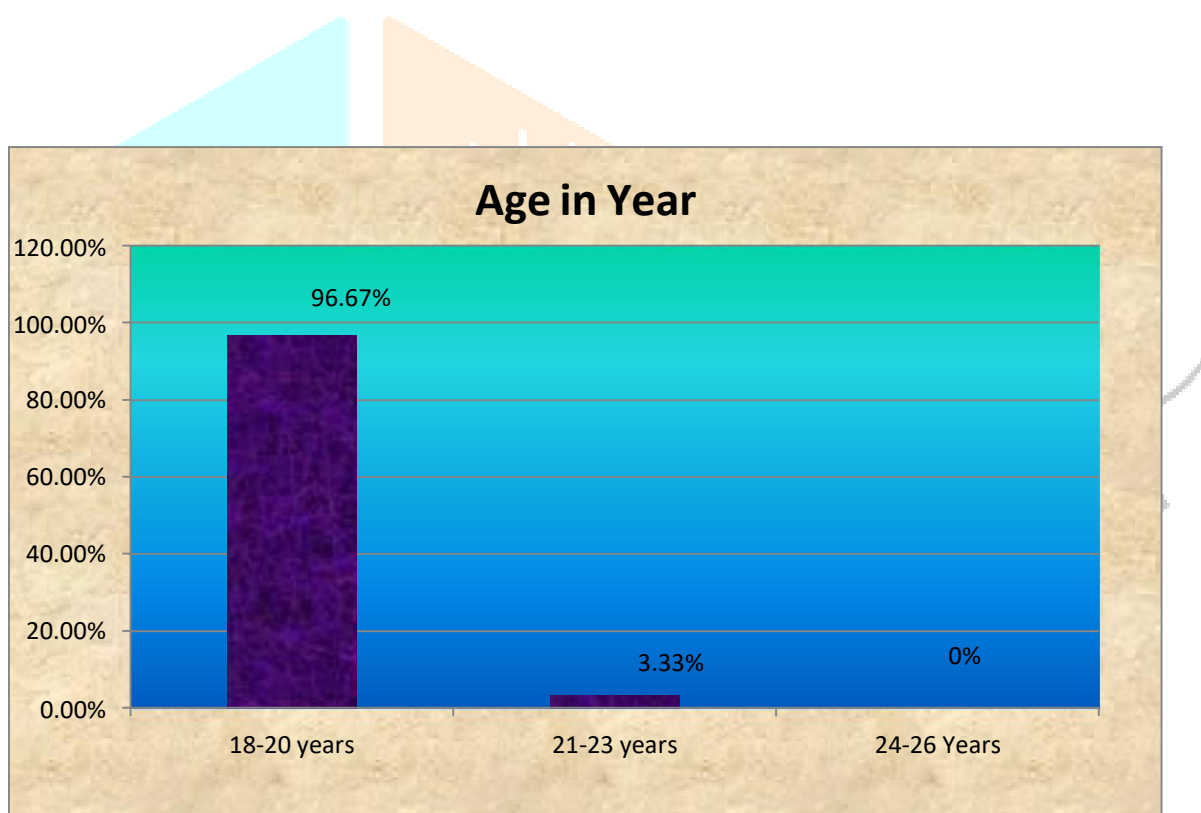


Figure 4 Classification of Sample by Age
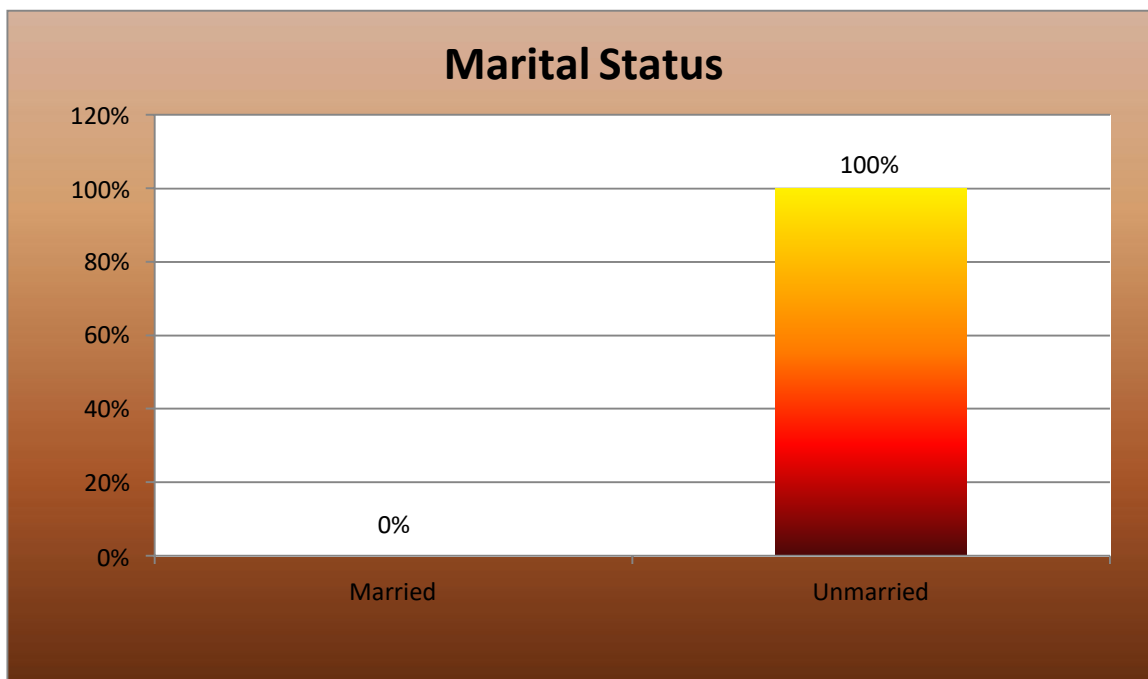
Figure 5 Classification of sample by Marital Status



Figure 6 Classification of sample by Religion
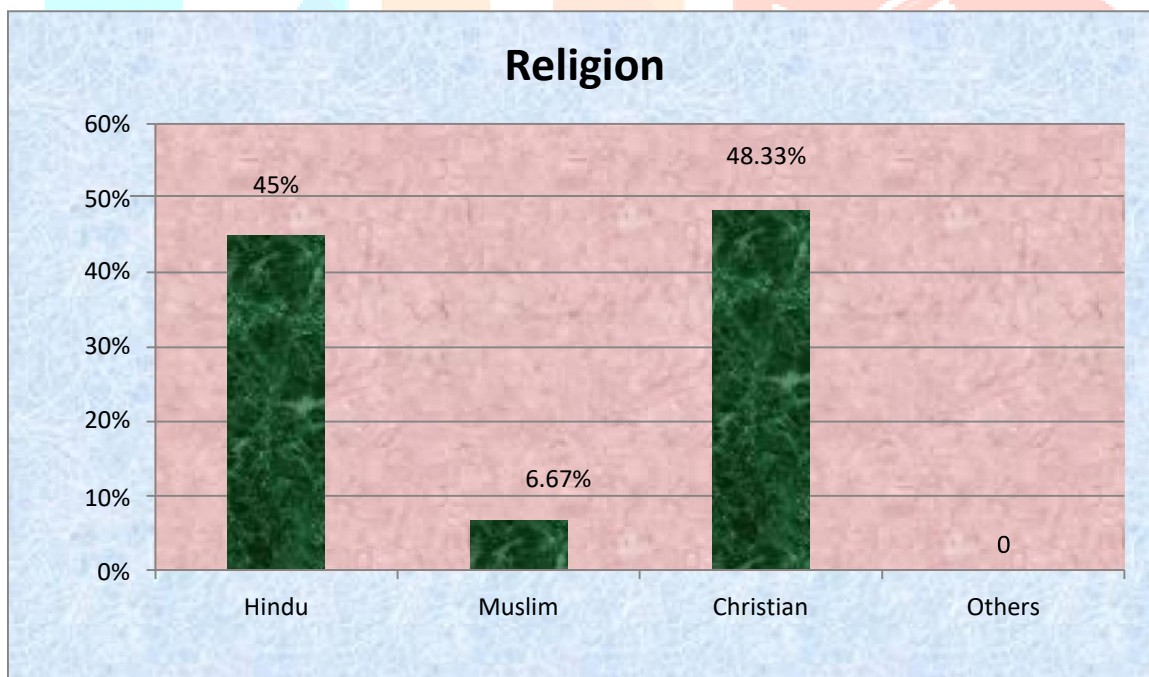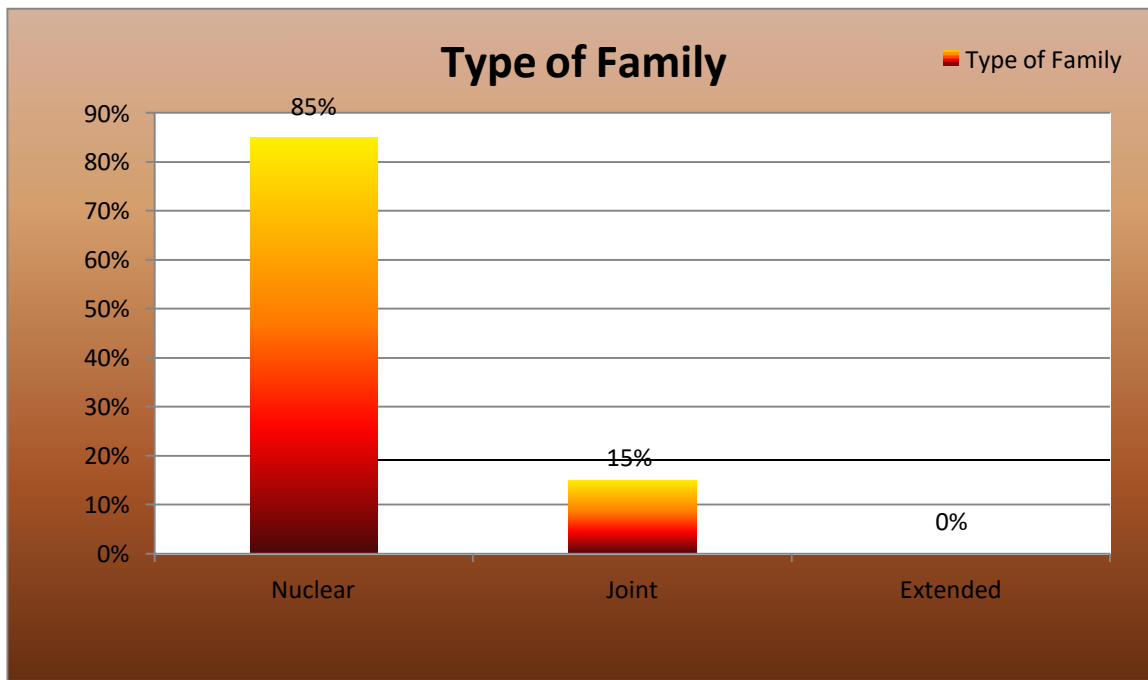
Figure 7 Classification of Sample by Type Of Family
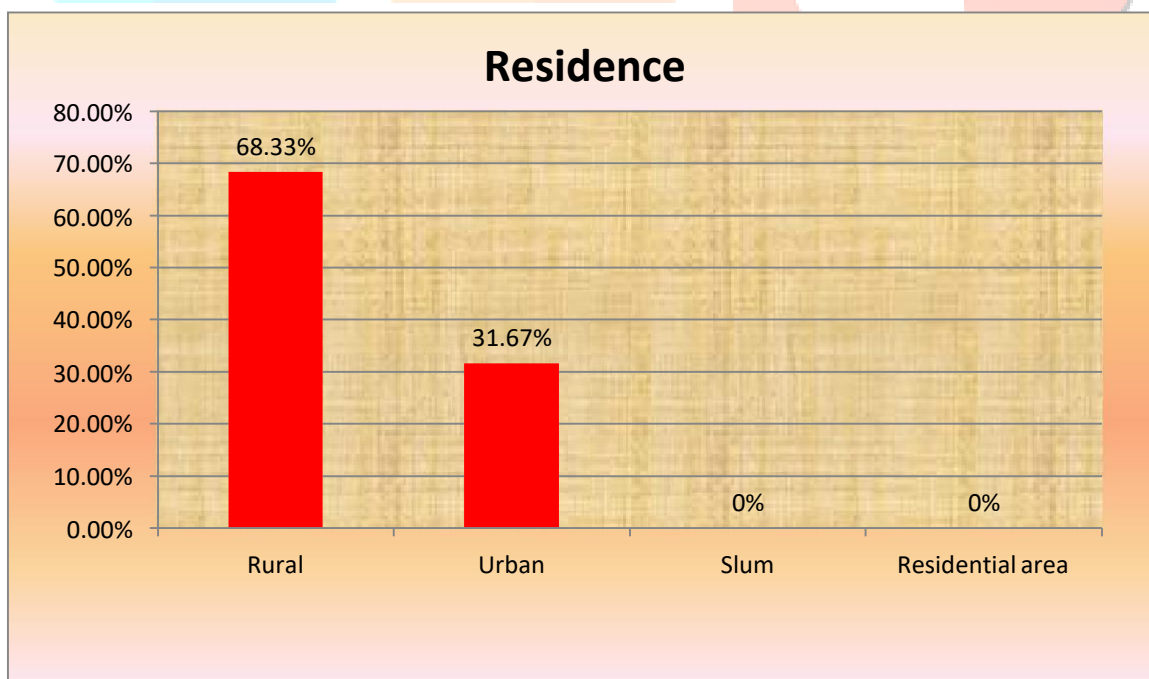


Figure 8 Classification of Sample by Type of Residence
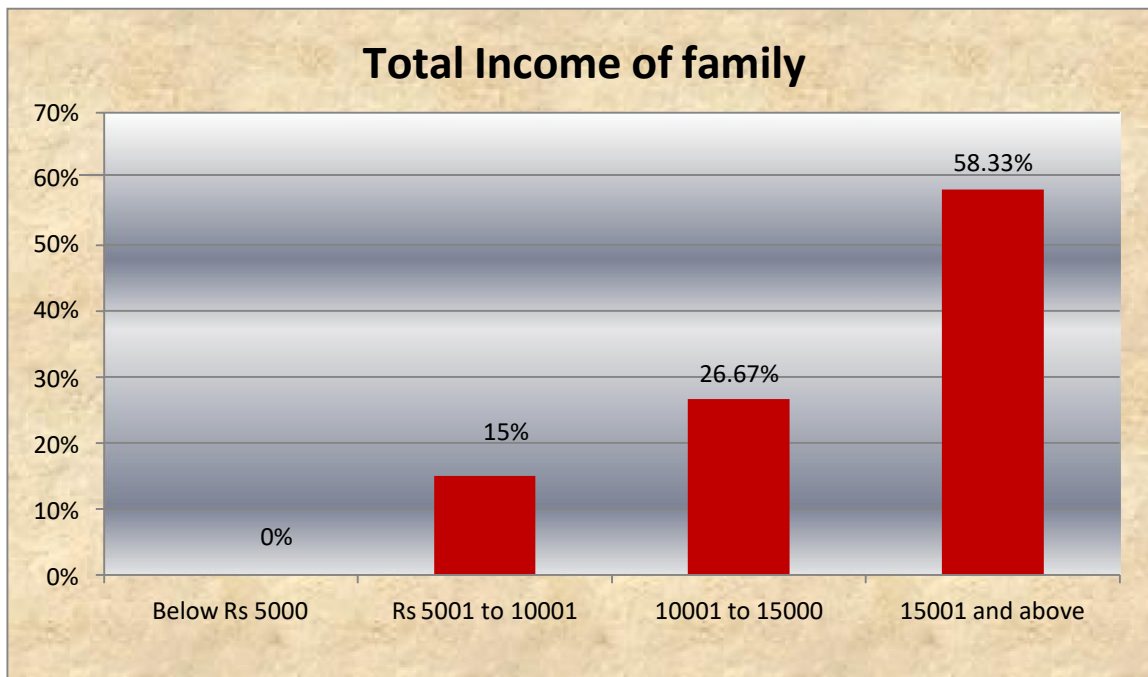
Figure 9 Classification of Sample by Total Income of Family
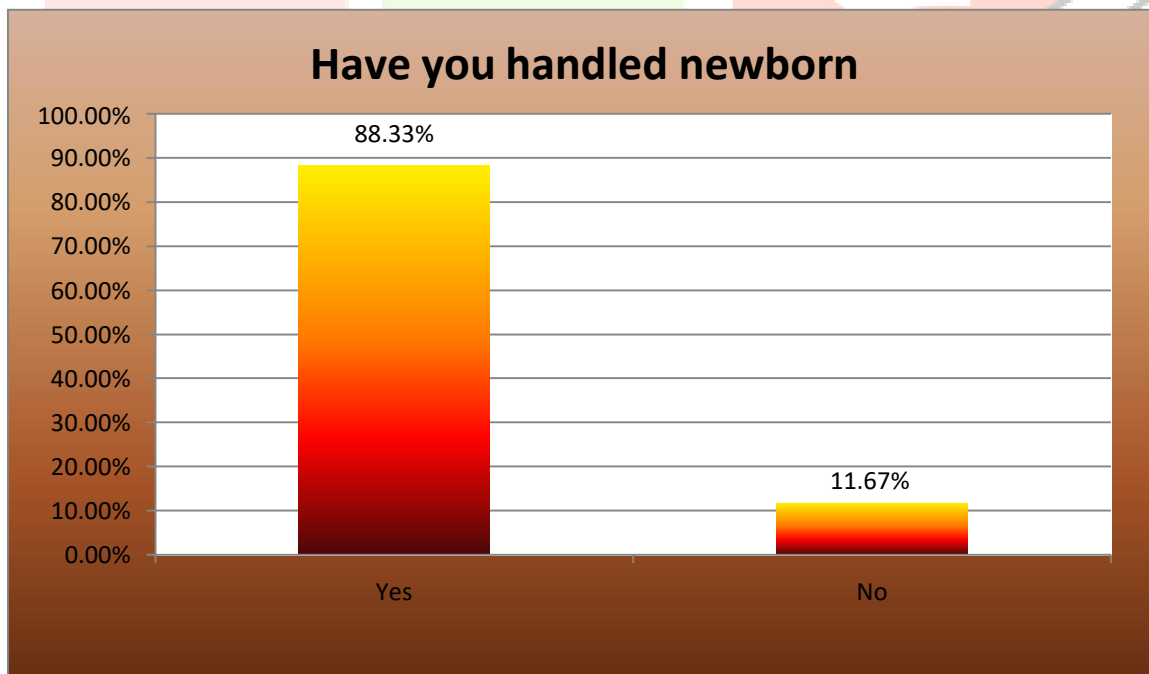


Figure 10 Classification of sample by Newborn Handling
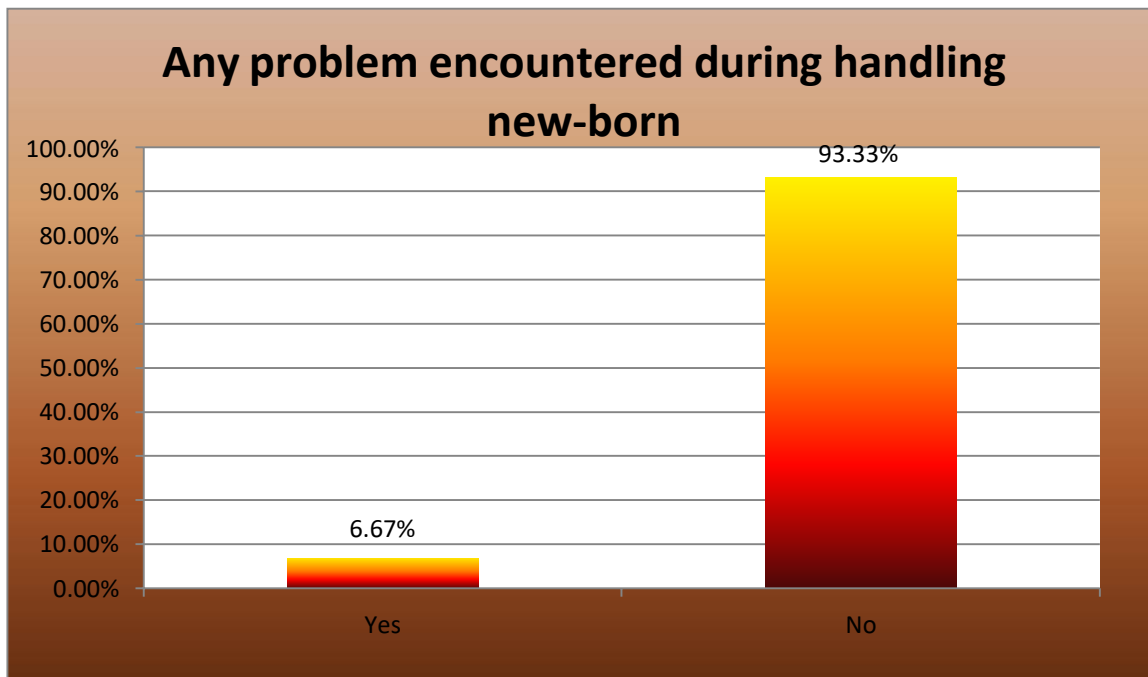
Figure 11 Classification of sample by Problem Encountered during Handling Newborn
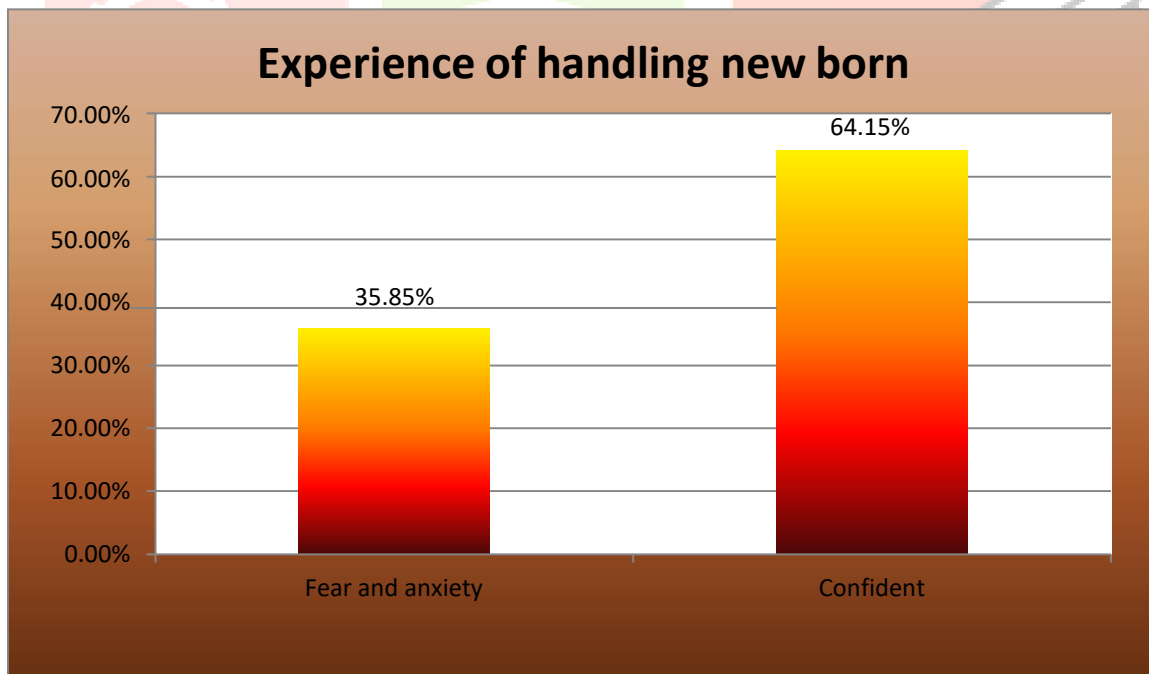


Figure 12 Classification of sample by Experience in Handling Newborn
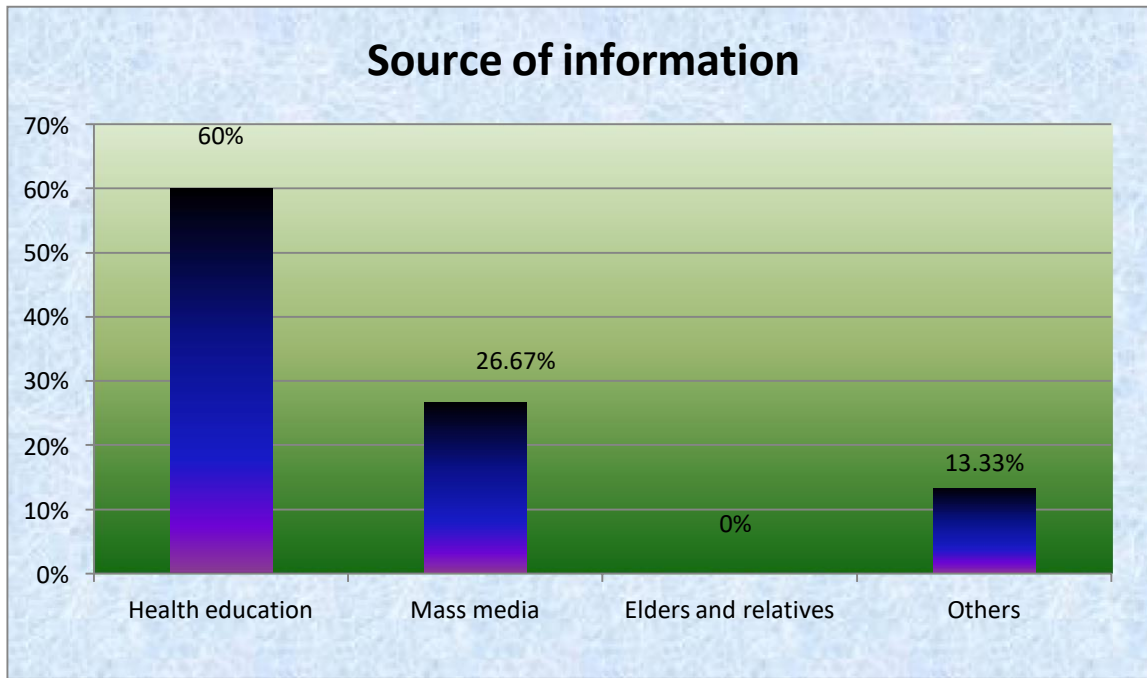
Figure 13 : Classification of sample by Source Of  Information

**PART-II (A)**

**Overall and aspects wise knowledge scores on immediate care of newborn among nursing students**

Table 2 Classification of pre-test knowledge scores on on immediate care ofnewborn among nursing students

N=60

| Level of Knowledge | Score | No of Respondents (%) | |
| --- | --- | --- | --- |
| | | No | % |
| Inadequate | <50% | 52 | 86.67 |
| Moderate | 51-75% | 8 | 13.33 |
| Adequate | >75% | 0 | 0 |
| Total | | 60 | 100 |

The above Table-2 shows the classification of nursing students on pre-test level of knowledgeon immediate care of newborn among 60 nursing students , 52(86.67%) of them had inadequate level of knowledge, 8(13.33%) of them had moderate  level of knowledge and none had adequate level of knowledge regarding on immediate care of newborn among 60 nursing students.
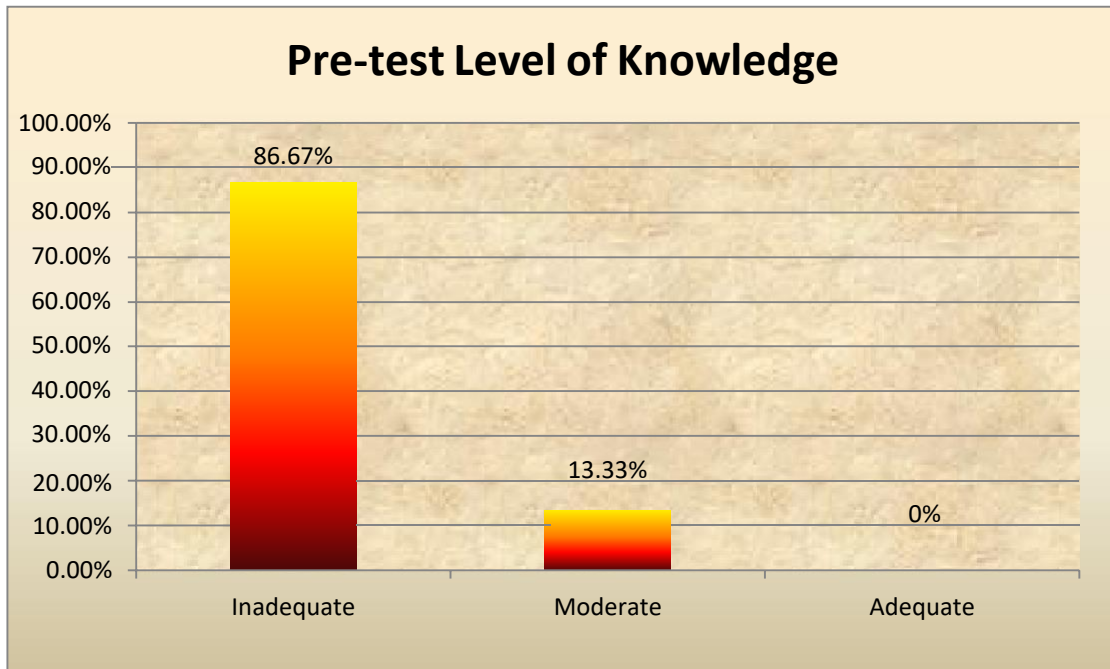
**Figure 14 Classification of samples on pre-test level of knowledge**

**Table 3 Aspect wise pre-test mean knowledge scores on immediate care of newborn among Nursing students**

N=60

| Aspects wise knowledge | Max Statement | Max Score | Range | Mean | SD |
|---|---|---|---|---|---|
| Clearing the air way | 10 | 10 | 2-7 | 4.03 | 1.11 |
| Umbilical cord care | 7 | 7 | 2-6 | 3.2 | 0.98 |
| Prevention of heat loss | 7 | 7 | 0-5 | 3.15 | 1.01 |
| Identification and assessment | 17 | 17 | 3-11 | 7.82 | 1.68 |
| Continued early care | 9 | 9 | 1-6 | 3.62 | 1.03 |
| Overall | 50 | 50 | 17-27 | 21.82 | 2.26 |

The above table-3 shows, aspect wise pre-test mean knowledge scores of nursing students regarding immediate newborn care. In general information of Clearing the air way the mean knowledge score was 4.03±1.11. In the area of umbilical cord care, the mean knowledge score was 3.2±0.98. With regard to prevention of heat loss the mean knowledge score was 3.15±1.01. I n the area of identification and assessment the mean knowledge score was 7.82±1.68. With regard to continued early care the mean knowledge score was 3.62±1.03 . The overall mean pre-test score was 21.82±2.26.

## Table 4 Classification of post-test level of knowledge on immediate care of newborn among nursing students

N=60

| Level of Knowledge | Score | No of Respondents (%) | |
| --- | --- | --- | --- |
| | | No | % |
| Inadequate | ≤50% | 0 | 0 |
| Moderate | 51-75% | 13 | 21.67 |
| Adequate | ≥75% | 47 | 78.33 |
| Total | | 60 | 100 |

The above Table-4 shows the classification of post-test level of knowledge on on immediate care of newborn among 60 nursing students . Among 60 nursing students,majority, 47(78.33%) of them had adequate level of knowledge, 13(21.67%) of themhad moderate level of knowledge and none of them had inadequate level of knowledge.
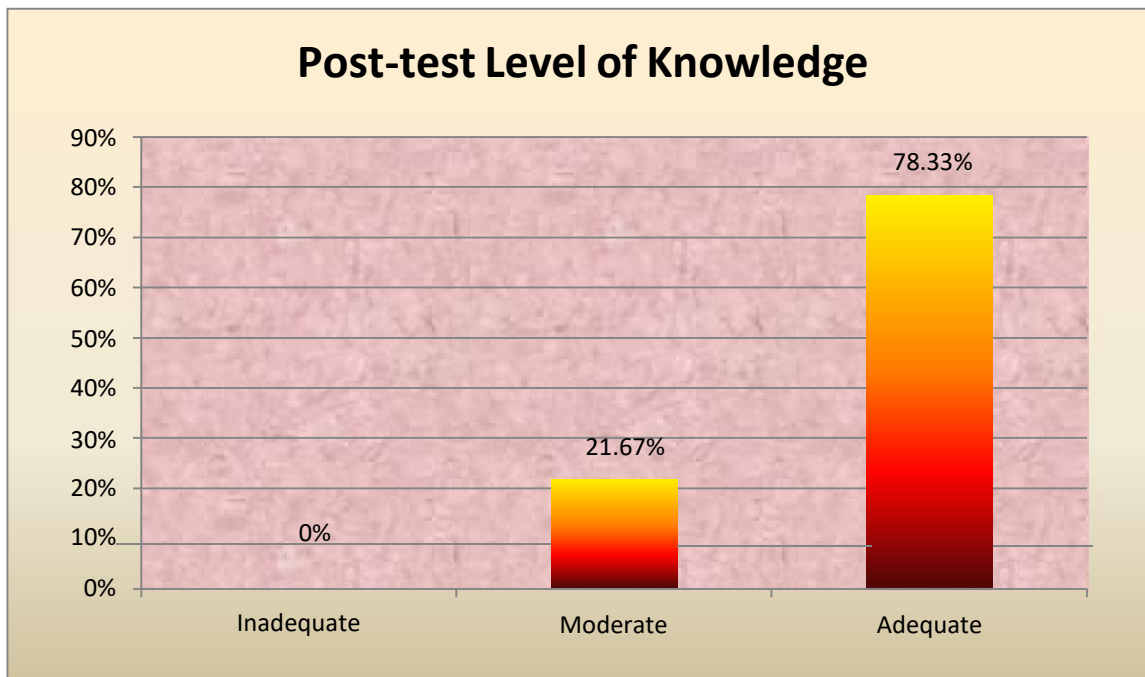
Figure 15 Classification of samples on post-test level of knowledge

**Table 5 Aspect wise post-test mean knowledge scores of nursing students regarding immediate newborn care**

N=60

| Aspects wise knowledge | Max Statement | Max Score | Range | Mean | SD |
|---|---|---|---|---|---|
| Clearing the air way | 10 | 10 | 6-10 | 8.42 | 1.24 |
| Umbilical cord care | 7 | 7 | 3-7 | 5.1 | 1.01 |
| Prevention of heat loss | 7 | 7 | 5-7 | 5.53 | 0.96 |
| Identification and assessment | 17 | 17 | 9-16 | 13.22 | 2.04 |
| Continued early care | 9 | 9 | 5-8 | 6.13 | 1.01 |
| Overall | 50 | 50 | 29-44 | 38.4 | 2.81 |

The above table-3 shows, aspect wise post-test mean knowledge scores of nursingstudents

regarding immediate newborn care. In general information of clearing the air way

the mean knowledge score was 8.42±1.24. In the area of umbilical cord care, the mean knowledge score was 5.1±1.01. With regard to prevention of heat loss the mean knowledge score was 5.53±0.96. I n the area of identification and assessment the mean knowledge score was 13.22±2.04. With regard to continued early care the mean knowledge score was 6.13±1.01 . The overall mean post-test score was 38.4±2.81.

**PART-II (B)**

**Comparison of mean pre-test and post-test knowledge scores toevaluate the Immediate newborn care among nursing students.**

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**Table 6 Overall mean pre-test and post-test knowledge on Immediatenewborn care among nursing students**

| Aspect | Maximum Score | Knowledge of Respondents | | Paired 't' test |
|---|---|---|---|---|
| | | Mean | SD | |
| Pre-test | 50 | 21.82 | 2.26 | 39.73** |
| Post-test | 50 | 38.4 | 2.81 | |
| Enhancement | 50 | 16.58 | 0.55 | |

*\*\*Significant at P<0.05 level, df 59, table-value 2.7*

The table 6 depicts the difference of knowledge of the samples in pretest and posttest regarding immediate newborn care. The pre test mean score was21.82± 2.26 , where as the .obtained t value was 39.73 which were higher than the table value 2.7 [t(0.05,59df)] which is highly significant at P<0.05 level.

*Inference:*

The data depicted in above table shows that the mean post test knowledge scores were significantly higher than the mean pre test knowledge score at *P<0.05* levels of significance . Hence the research hypothesis H$_1$ is accepted.
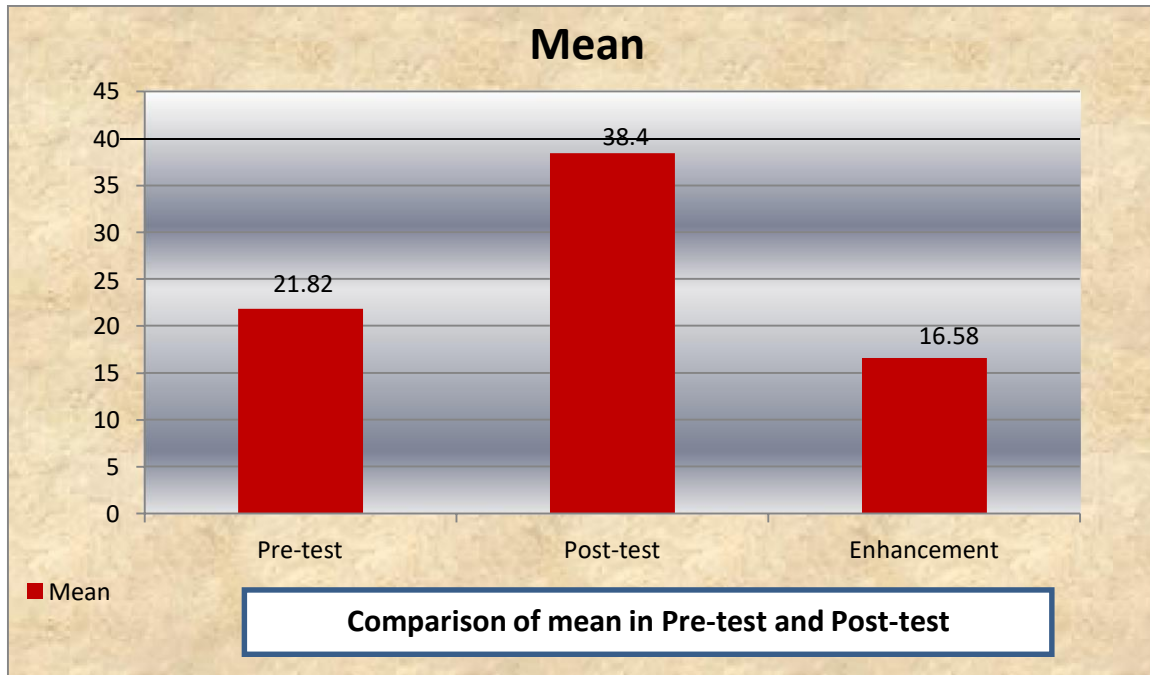


Figure 16 Overall Pretest and Posttest mean knowledge on immediate newborn care

**Table 7 Aspect wise mean pre-test and post-test knowledge scores on Immediate newborncare among nursing students.**

| Sl: No: | Aspect wise knowledge | Knowledge of respondents | | | | Paired 't' test |
|---------|----------------------|----------|----|-----------|----|------|
| | | Pre-test | | Post-test | | |
| | | Mean | SD | Mean | SD | |
| I | Clearing the air way | 4.03 | 1.11 | 8.42 | 1.24 | **21.14*** |
| II | Umbilical cord care | 3.2 | 0.98 | 5.1 | 1.01 | **10.18*** |

| | | | | | | |
|---|---|---|---|---|---|---|
| III | Prevention of heat loss | 3.15 | 1.01 | 5.53 | 0.96 | **13.15*** |
| IV | Identification and assessment | 7.82 | 1.68 | 13.22 | 2.04 | **16.05*** |
| V | Continued early care | 3.62 | 1.03 | 6.13 | 1.01 | **14.34*** |
| | Overall | 21.82 | 2.26 | 38.4 | 2.81 | **39.73**** |

*\*\*Significant at P<0.05 level, df 59, table-value 2.7*

The data depicted above table-7 shows that, the aspect wise mean pre-test and post-test knowledge scores on immediate newborn care among nursing students. With regard to knowledge on Clearing the air way , the mean scores in pre-test and post test were 4.03 ±1.11 and 8.42±1.24 respectively, obtained 't' value was 21.14 . In area of Umbilical cord care the mean scores in pre-test and post test were 3.2 ±0.98 and 5.1±1.01 respectively, obtained 't' value was 10.18. With regard to Prevention of heat loss I the mean scores in pre- test and post test were 3.15 ±1.01 and 5.53±0.96 respectively, obtained 't' value was 13.15.In area of identification and assessment the mean scores in pre-test and post test were 7.82 ±1.68 and 13.22±2.04 respectively, obtained 't' value was 16.05. In relation to  continued early care the mean scores in pre-test and post test were 3.62 ±1.03 and 6.13±1.01 respectively, obtained 't' value was 14.34. The overall t  value was 39.73 which was above the table value 2.7 at P<0.05 level of significance. From this it was evident that the structured teaching program  was effective in enhancing the knowledge of samples in all aspects .
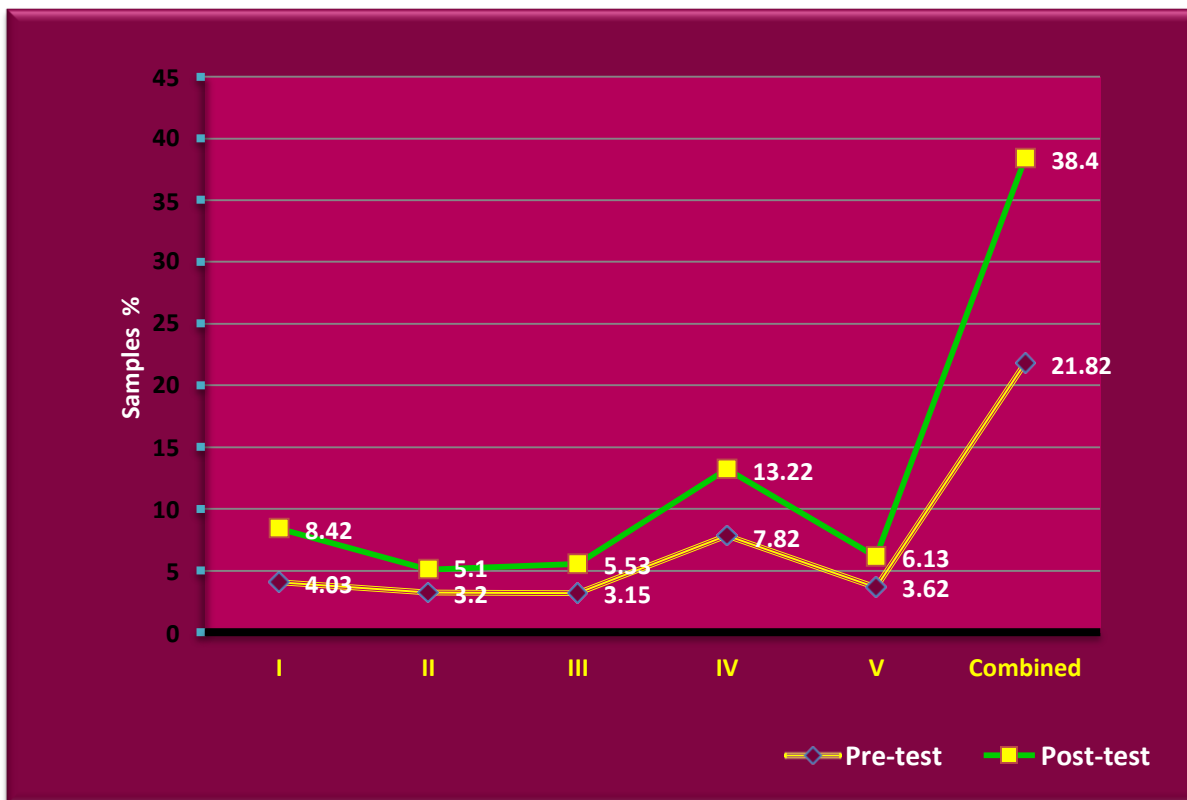
Figure 17 Aspect wise Mean Pretest and Posttest Knowledge on Immediate newborn care

**PART-III(B)**

**Table 8 Association between pre-test level of knowledge of nursing students and theirselected socio demographic variables**

| Characteristics | Category | N | Level of Knowledge | | $\chi^2$ |
| | | | Inadequate | Moderate | |
|---|---|---|---|---|---|
| Age in Year | 18-20 years | 58 | 50 | 8 | 0.32 |
| | 21-23 years | 2 | 2 | 0 | NS |
| | 24-26 Years | 0 | 0 | 0 | |
| Marital status | Married | 0 | 0 | 0 | 0.0 |
| | Unmarried | 60 | 52 | 8 | NS |
| Religion | Hindu | 27 | 23 | 4 | 0.75 |
| | Muslim | 4 | 3 | 1 | NS |

| | | | | | |
|---|---|---|---|---|---|
| | Christian | 29 | 26 | 3 | |
| | Others | 0 | 0 | 0 | |
| Type of family | Nuclear | 51 | 46 | 5 | 3.67 |
| | Joint | 9 | 6 | 3 | NS |
| | Extended | 0 | 0 | 0 | |
| Residence | Rural | 41 | 40 | 1 | 13.30 |
| | Urban | 19 | 12 | 7 | S* |
| | Slum | 0 | 0 | 0 | |
| | Residential area | 0 | 0 | 0 | |
| Total Income of family | Below Rs 5000 | 0 | 0 | 0 | 3.43 |
| | Rs 5001 to 10001 | 9 | 9 | 0 | NS |
| | 10001 to 15000 | 16 | 15 | 1 | |
| | 15001 and above | 35 | 28 | 7 | |
| Have you handled newborn | Yes | 53 | 45 | 8 | 1.22 |
| | No | 7 | 7 | 0 | NS |
| Any problem encountered during handling new-born | Yes | 4 | 3 | 1 | 0.29 |
| | No | 56 | 49 | 7 | NS |
| Experience of handling new born | Fear and anxiety | 19 | 16 | 3 | 0.01 |
| | Confident | 34 | 29 | 5 | NS |
| Source of information | Health education | 36 | 30 | 6 | 1.58 |
| | Mass media | 16 | 14 | 2 | NS |
| | Elders and relatives | 0 | 0 | 0 | |
| | Other | 8 | 8 | 0 | |

The above table-8 depicts the association of pre-test level of knowledge of nursing students with their selected socio-demographic variables. The obtained chi square value for residence was 13.30 were higher values when compared to the table value at P≤0.001level of significance.

**Inference**

In this study the obtained chi square value for area of residence was higher when compared to the table value at P≤0.001level of significance hence the research hypothesis and hence H2 is accepted. In relation to age ,marital status, religion,type of family,income, newborn handling, problem encountered   the obtained chi square value was found to be lesser than the table value and the research hypothesis is rejected.
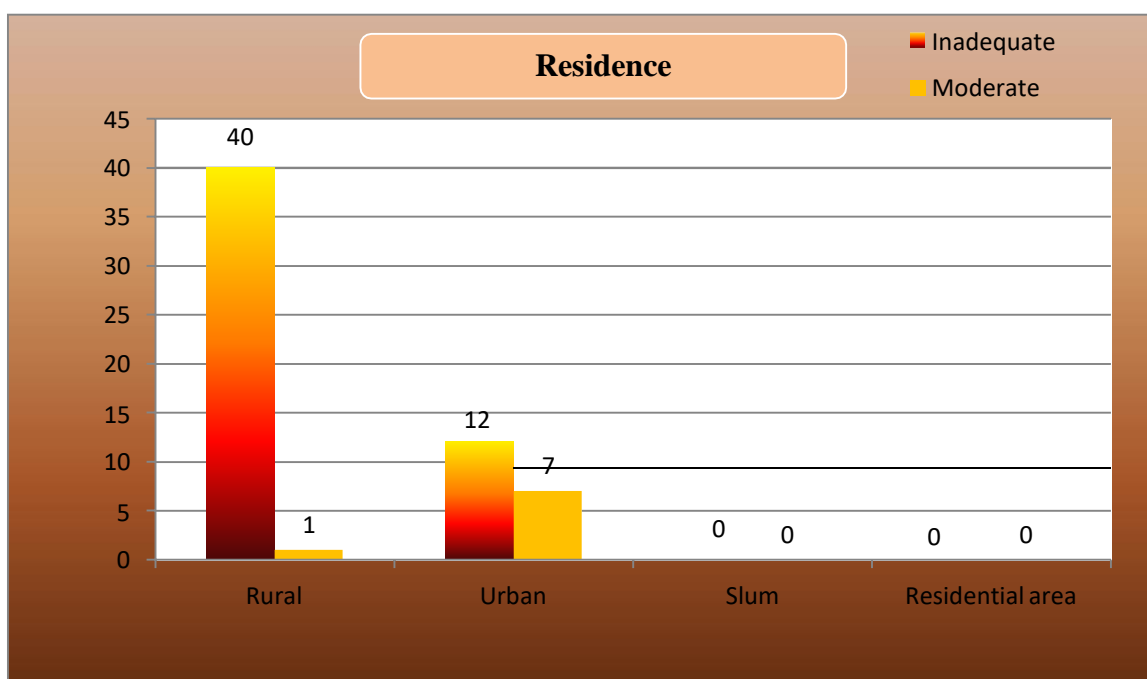


Figure 18 Association between residential area and immediate newborn care

# CHAPTER -6

## DISCUSSION

Therefore the present study was undertaken to evaluate effectiveness of STP on the knowledge on Immediate Care of New Born among Nursing students at selected Nursing College, Bangalore. In order to achieve the objective of the study, simple random sampling technique was used to select the samples and data was collected from 60 nursing students from selected nursing colleges, Bangalore. The structured knowledge questionnaire (pre-test) was administered, followed by the administration of STP. The post test was conducted after seven days with the same questionnaire to the same group. The finding of the study was discussed according to the objectives and hypothesis.

## 1.        Socio-demographic characteristics of samples

The study shows that, among 60 nursing students, 58(96.6%) of them were between18-20 years, 2(3.3%) of them were 21-23 years of age and none of them were from between 24-26 years of age. In regard to marital status none of them were married all the samples 60 (100%) were unmarried. According to the religion of nursing students, 27(45%) of them were Hindus, 29(48.3%) of them were Christians and 4(6.67%) of them were Muslims. According to the type of family , 9(15%) of them belongs to joint family ,51(85%) of them were  nuclear family , of them were extended family. It was observed that in residence of nursing students, 41(68.3%) of them were fromrural areas and 19(31.6%) of them were from urban areas and none of them were from slum areas.It was observed that in family monthly income of students ,none of them had below Rs.5, 000, 9(15%) had in between Rs.5001-Rs. 10,000, 16(26.6%) of them had Rs.10,001 –Rs. 15,000 and 35(58.3%)had 15,000 above. It was recorded that, 53(88.3%) have handled the newborn and 7(11.6%) have not handled the newborn. It is also observed that 4(6.6%) had problem in handling newborn and 56(93.3%) had no problem handling newborn. Out of the samples 19(35.8%) had experiencedfear and anxiety and 34(64.1%) had confidence in handling newborn.

The socio demographic history of source of information shows that among 60 samples, 16(26.6%) of them got information from mass media, 36(60%) of them accessed

information from health Education, none of them got information from elders and relatives and 8(13.3%) of them got information from other sources.

**2.        Overall and aspects wise knowledge scores on immediate newborn care among nursing students.**

With regard to overall pre-test knowledge scores on immediate newborn care among nursing students prevention , 52(86.6%) of them had  inadequate level of knowledge, 8(13.3%) of them had moderate level of knowledge and none of them had adequate level of knowledge regarding immediate newborn care whereas in post-test, majority, 47(78.3%) of them had adequate level of knowledge, 13(21.6%) of them had moderate level of knowledge and none of them had inadequate knowledge regarding immediate newborn care.

Above finding of the present study was supported by a descriptive study was

conducted to assess the knowledge of nursing students regarding immediate newborn care. Structured questionnaire was used to collect the information from the nursing students. Around 60 nursing students were enrolled for the study. Result showed that, majority 52(86.6%) of students had poor knowledge regarding immediate new born care with a mean score of 23±1.3. Thus the study concluded that, nursing students had poor knowledge about the immediate newborn care so there is a need for education of this group to get proper knowledge and properly handle the newborn.

**2.        Comparison of pre-test and post-test mean knowledge score of nursing students in order to evaluate the effectiveness of STP on immediate newborn care.**

In this study a comparison was done between the pre-test mean scores and post-test mean scores in order to evaluate the effectiveness of STP on immediate newborn care among nursing students. It was observed that, with regard to clearing the airway, the mean scores in pre-test and post test were 21.82±2.81 and 38.4±2.81 respectively, obtained 't' value was

39.73. An enhancement of 16.58±0. Thus the research hypothesis H1 is accepted. Hence the structured teaching program was effective in enhancing the knowledge of students.

Above finding of the present study was supported by a study was conducted to assess the effectiveness of STP on knowledge of immediate newborn care among nursing students. Around 60 nursing students were selected from selected PU college. A quasi experimental study design was used. Structured interview schedule were used for collecting the data from

the students. STP was found to be effective in improving the knowledge of nursing students regarding immediate newborn care with paired t value of 39.73 at p≤0.001 level. Thus the study concluded that STP was effective in improving the knowledge of nursing students.

**3.      Association between mean pre-test level of knowledge of nursing students and their socio demographic variables.**

The association between mean pre-test level of knowledge of nursing students and their selected socio demographic variables were analyzed by chi square test. In this study, obtainedchi square value for residence and family were higher values ( respectively) when comparedto the table value at P≤0.001 level of significance. Hence the research hypothesis H2 is accepted. The results revealed that there was no significant association between pretest level of knowledge and socio demographic variables in relation to age, status of married, religion, family income, handling newborn, problems encountered experience while handling, source of information the obtained chi square value is 0.32, 0.75, 3.67, 3.43, 1.22, 0.29,0.01 respectively. It is found to be lesser than the table value.
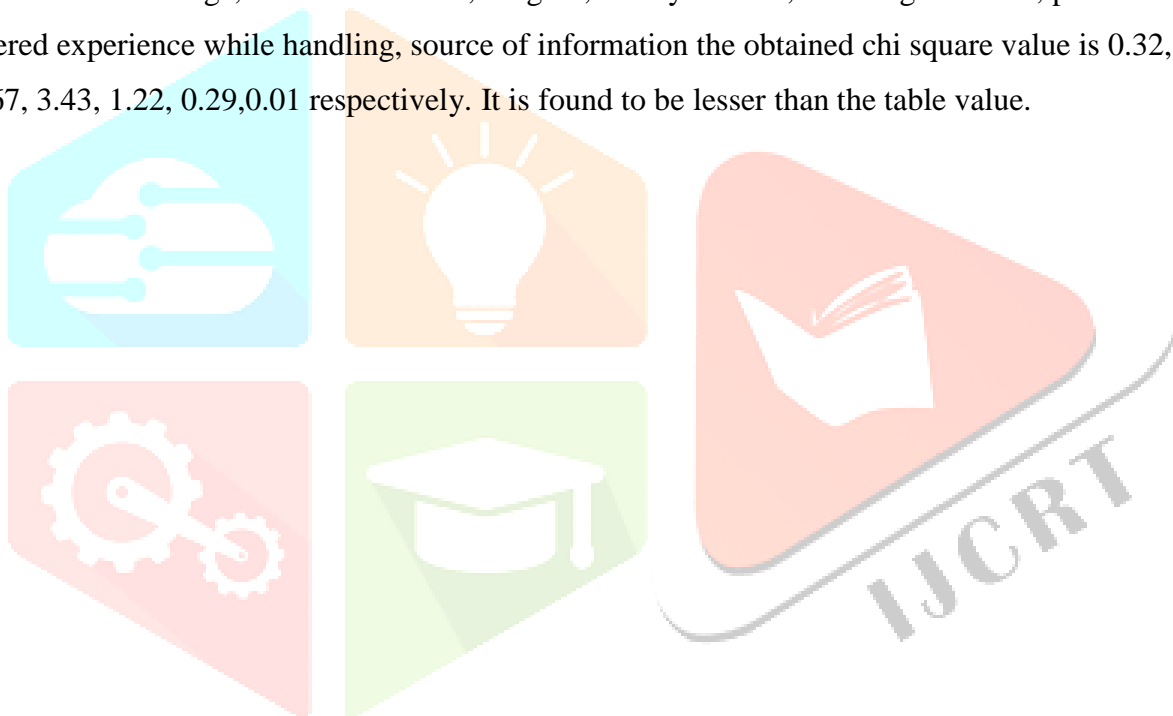
# CHAPTER -7

# CONCLUSION

The study was conducted to evaluate the effectiveness of a structured teaching program on immediate care of newborn among student nurses in selected colleges at Bangalore. In the present study 60 student nurses in nursing colleges were selected using convenience sampling technique.

The research approach adopted in the present study is a Pre experimental design with a view to measure the knowledge on pre test and effectiveness associated in the post test to know the gain in the knowledge of student nurses. A structured knowledge questionnaire was used to assess the knowledge of student nurses. The data was interpreted by suitable appropriate statistical methods.

This Chapter Deals With the Following Conclusions

➢ The study shows that, among 60 nursing students, majority of the sample 58(96.6%) of them were between18-20 years and least 2(3.3%) of the were 21-23 years of age.

➢ In regard to marital status majority of the samples 60 (100%) were unmarried.

➢ According to the religion of nursing students, majority of samples 29(48.3%) were Christians and least 4(6.67%) of them were Muslims.

➢ According to the type of family, majority of the samples 51(85%) were nuclear family and least 9(15%) of them belongs to joint family.

➢ It was observed that in residence of nursing students,majority 41(68.3%) of them were from rural areas and 19(31.6%) of them were from urban areas.

➢ It was observed that in family monthly income of students , majority of samples 35(58.3%)had 15,000 above and least 9(15%) had in between Rs.5001-Rs. 10,000.

➢ It was recorded that, majority 53(88.3%) have handled the newborn and least 7(11.6%) have not handled the newborn.

➢ It is also observed that majority of samples 56(93.3%) had no problem handling newborn and least 4(6.6%) had problem in handling newborn .

➢ Out of the samples 19(35.8%) had experienced fear and anxiety and 34(64.1%) had confidence in handling newborn.

➢     The socio demographic history of source of information shows that among 60 samples majority of them 36(60%) accessed information from health Education and minority 8(13.3%) of them got information from other sources.

**2.     Overall and aspects wise knowledge scores on immediate newborn care among nursing students.**

➢     In concern to pre-test level of knowledge on immediate care of newborn among 60 nursing students , 52(86.67%) of them had inadequate level of knowledge.

➢     Based on the overall mean pre-test score of samples on immediate care of newborn the knowledge score is $21.82 \pm 2.26$.

➢     In concern to pre-test level of knowledge on immediate care of newborn among 60 nursing students , none of them had inadequate level of knowledge.

➢     The aspect wise post-test mean knowledge scores of nursing students regarding immediate newborn care  the overall mean post-test score was $38.4 \pm 2.81$.

➢     To evaluate the effectiveness of structured teaching program on immediate newborn care a paired t test was done. The t value was 39.73 which were found to  be significant at $p \leq 0.05$ level.

➢     There was association on the area of residence , the obtained chisquare value was 13.30 whereas there was no association between other areas.

**NURSING IMPLICATIONS**

The results of the study show that student nurses had inadequate knowledge on immediate care of newborn during pretest. So the study has several implications for nursing practice, nursing education, nursing administration and nursing research.

**NURSING PRACTICE**

Nurses are the key persons of health team, who play vital role in promotion and maintenance of health. They should involve in planning immediate care for  newborn. Neonatal nursing care is an art which needs sound knowledge and skill .Neonatal nursing care is an art which needs sound knowledge and skill in providing quality care. This study implies a basis for developing standards of care in the hospital.

## NURSING EDUCATION

Nursing tutors can teach the student nurses to acquire adequate knowledge and skills in immediate care of newborn. They can also teach student nurses the causes for neonatal mortality. Nursing tutors can teach to student nurses about essential newborn care to prevent neonatal mortality. Findings of the present study shows that majority of the students have not been exposed on immediate care of newborn. This is an alarming information which tells about a need to organize education programmes in all colleges based on their speciality.

## NURSING IMPLICATION

The implications of the findings had been discussed in relation to nursing service, nursing education, nursing administration and nursing research.

### Implications of study in nursing service

1.          Nurses have great responsibility for giving information regarding immediate newborn care to students for preventing newborn complications.

2.          Nursing personnel must know regarding available new technologies of Immediate newborn care.

3.          The nursing personal should demonstrate proper techniques of immediate newborn care and rationale behind each steps of care.

### Implications of study in nursing education

1.          Nursing personnel working in various health setting specially nursing schools and colleges should be given in service education to update their knowledge regarding iediate newborn care.

2.          There should be more emphasis on the nursing curriculum about current concepts and trends regarding immediate new born care.

3.          The nursing students may be motivated to demonstrate newborn care by using artificial dummy .

4.          This study will encourage nurse administrators to arrange for conference and

seminars related to immediate newborn care.

**Implications of study in nursing administration**

Nurse administrator can organize inservice education programme for nursing tutors to update their knowledge both theory and practical. The concept of extended role of nurse offers many opportunities for a nurse administrator to neonatal mortality. Nurses as administrators are in key position to organize in service education programme, refresher courses and workshops for nurses and encourage them to participate in these activities.

**Implications of nursing research**

1.      This study will be valuable reference and pathway to further researchers.

2.      The findings of the study would help to expand the scientific body of professional knowledge upon which further researchers can be conducted.

3.      The learning module developed by the researcher can be used as a blue print for further investigations to develop more effective instructional materials like CD cassettes, and handouts among learning packages.

4.      Extensive research can be conducted to create awareness to the nurses

regarding handling newborn emergenies and to prevent complicaions.

**Limitation of the study**

The limitation of the present study were follows:

1.      The assessment of knowledge will be based only as the correct responses given to the items in the structured interview schedule.

2.      Collection of data is only from nursing students of selected nursing Colleges, Bangalore.

**Suggestions**

The finding of the study suggest

1.      The nursing tutor should give importance for giving information to PU

students in the colleges about preventive of neonatal mortality by proper newborn care.

2.      Adequate knowledge of nursing students regarding immediate newborn care.

**Recommendations for further studies**

In the light of the finding of the present study, the researcher puts forward the following recommendation for conducting further research.

1. A study can be done on a larger scale in different setting

2. Similar study can be replicated on nursing students in various Colleges.

3. Similar study can be replicated on diploma nursing students and staff nurses.

4. A cross sectional study can be conducted on knowledge, practice and attitude on prevention of immediate newborn care among nursing students.

5. A comparative study can be done to assess the knowledge level on immediate newborn care among nursing students in urban and rural College.
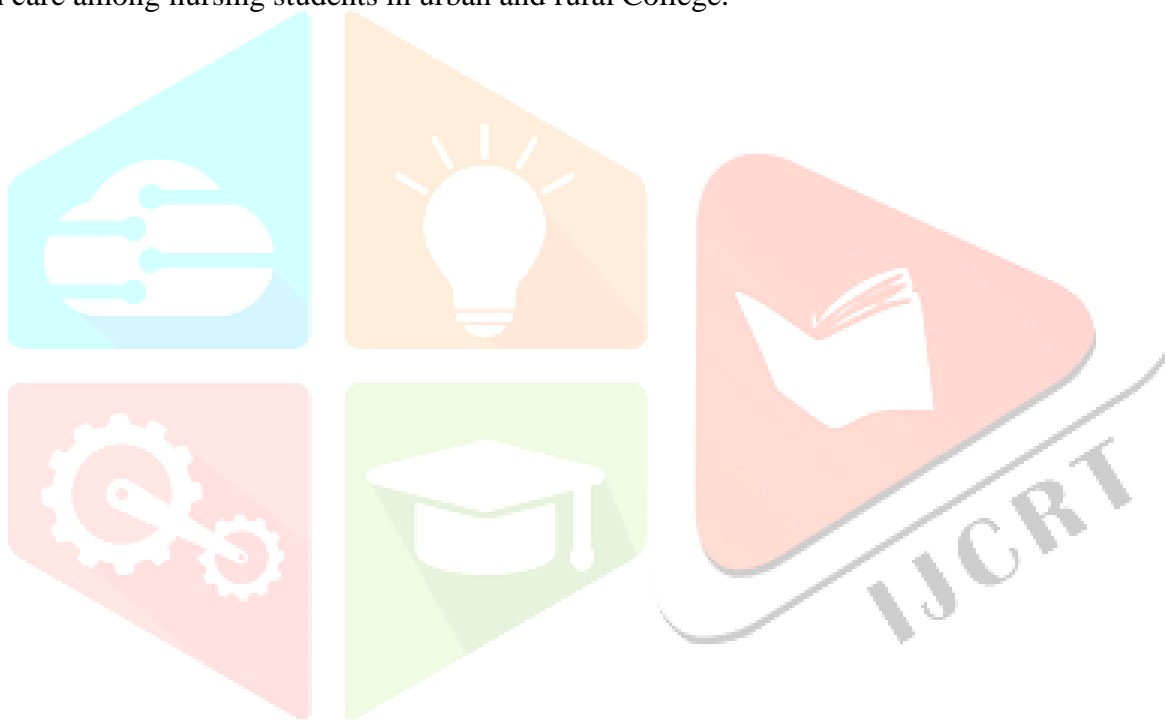
# CHAPTER – 8

# SUMMARY

This chapter provides the process employed in this study. The primary aim of the study was to evaluate the effectiveness of structured teaching programme regarding knowledge on Immediate Care of New Born among 3rd Year BSc Nursing students at selected Nursing College, Bangalore.

In order to achieve the objectives of the study , a purposive sampling technique was used to collect data. The data was collected from 60 nursing students rom selected colleges, Bangalore. The data collected from the students was analyzed using descriptive  and inferential statistics , and was presented in the form of tables , graphs, and diagrams.

**OBJECTIVES**
**The objective of the study are to:**

1.              Assess the level of knowledge of 3rd Year BSc Nursing students regarding immediate Care of New Born.

2.               Find out the difference between the mean pre-test and post-test knowledge scores of 3rd Year BSc Nursing students regarding immediate Care of New Born.

3.              Determine the association between the pre-test knowledge levels of 3rd Year BSc Nursing students regarding immediate newborn care with their selected socio demographic variables.

**HYPOTHESIS:**

H1:- The mean post-test knowledge scores of 3 rd year BSC nursing students will be

significantly higher than the mean pre test scores.

H2:- There will be significant association between mean pre-test knowledge levels of 3rd Year BSc Nursing students regarding immediate Care of New Born with selected socio demographic variables.

A review of literature enables the investigator to develop the conceptual frame work, methodology for the study and to plan for the data analysis in the most effective and efficient way. The research approach used for this study was pre-experimental research approach and Research design was quasi experimental one group pre-test post-test design.

The Setting for the study was nursing College, Bangalore.

The Sample consists of 60 PU students in selected nursing Colleges, Bangalore.Each

sample is selected by using simple random sampling technique.

The variables in the study are as follows;

a)      **Independent variables:** Structured teaching programme regarding immediate newborn care .

b)      **Dependent variables:** Knowledge of nursing students regarding immediate newborn care.

c)      **Demographic variables:** Characteristics of degree students such as age, religion, type of family, residence, family monthly income , problems faced during handling newborn, experience in handling newborn, sources of information .

d)      The tool used for the study was structured knowledge questionnaire for assessment of nursing students of knowledge on immediate newborn care.

Level of knowledge was assessed in to 3 levels inadequate, moderate and adequate.

Lesson plan was developed, which covered the knowledge on all aspects of immediate newborn care.

The tool and lesson plan was validated by experts and their suggestions were incorporated.

Pilot study was conducted among 60 nursing students and the pilot study was feasible.

The split half method was used for determining the reliability of the tool. The reliability coefficient (r) was 0.84 for knowledge questionnaire, which was highly positive  hence the tool was reliable.

Main study was conducted among 60 nursing students in selected nursing  Colleges,Bangalore, within a time period of 4 weeks

The collected data was analyzed and interpreted by using descriptive and inferentialstatistical method.

**Major Finding of the study Finding was presented under the following sections:Section-**

**A:** Analysis of socio-demographic variables of samples

**Section-B:**Overall and aspects wise knowledge scores on immediate newborn care amongnursing students.

**Section-C:** Comparison of pre-test and post-test mean knowledge score of samples in order to evaluate the effectiveness of STP on immediate newborn care among nursingstudents

**Section-D:** Association between mean pre-test level of knowledge of nursing  students andtheir socio demographic variables.

**Section-A:Analysis of socio-demographic variables of samples**

The study shows that, among 60 nursing students, 58(96.6%) of them were between18-20 years, 2(3.3%) of them were 21-23 years of age and none of them were from between 24-26 years of age. In regard to marital status none of them were married all the samples 60 (100%) were unmarried. According to the religion of nursing students, 27(45%) of them were Hindus, 29(48.3%) of them were Christians and 4(6.67%) of them were Muslims. According to the type of family , 9(15%) of them belongs to joint family ,51(85%) of them were  nuclear family , of them were extended family. It was observed that in residence of nursing students, 41(68.3%) of them were fromrural areas and 19(31.6%) of them were from urban areas and none of them were from slum areas.It was observed that in family monthly income of students ,none of them had below Rs.5, 000, 9(15%) had in between Rs.5001-Rs. 10,000, 16(26.6%) of them had Rs.10,001 –Rs. 15,000 and 35(58.3%)had 15,000 above. It  was recorded that, 53(88.3%) have handled the newborn and 7(11.6%) have not handled the newborn.It  is also observed that 4(6.6%) had problem in handling newborn and 56(93.3%) had no problem handling newborn. Out of the samples 19(35.8%) had experienced fear and anxiety and 34(64.1%) had confidence in handling newborn.

The socio demographic history of source of information shows that among 60 samples, 16(26.6%) of them got information from mass media, 36(60%) of them accessed information from health Education, none of them got information from elders and relatives and 8(13.3%) of them got information from other sources.

**SECTION - B: Overall and aspects wise knowledge scores on immediate newborn care among nursing students.**

With regard to overall pre-test knowledge scores on immediate newborn care among nursing students prevention , 52(86.6%) of them had  inadequate level of knowledge, 8(13.3%) of them had moderate level of knowledge and none of them had adequate level of knowledge regarding immediate newborn care whereas in post-test, majority, 47(78.3%) of them had adequate level of knowledge, 13(21.6%) of them had moderate level of knowledge and none of them had inadequate knowledge regarding immediate newborn care . Above finding of thepresent study was supported by a descriptive study was conducted to assess the knowledge of nursing students regarding immediate newborn care. Structured questionnaire was used to collect the information from the nursing students. Around 60 nursing students were enrolled for the study. Result showed that, majority 52(86.6%) of students had poor knowledge regarding immediate new born care with a mean score of 23±1.3. Thus the study concluded that, nursing students had poor knowledge about the immediate newborn care so there is a need for education of this group to get proper knowledge and properly handle the newborn.

**SECTION – C : Comparison of pre-test and post-test mean knowledge score of nursing students in order to evaluate the effectiveness of STP on immediate newborn care.**

In this study a comparison was done between the pre-test mean scores and post-test mean scores in order to evaluate the effectiveness of STP on immediate newborn care among nursing students. It was observed that, with regard to clearing the airway, the mean scores in pre-test and post test were 21.82±2.81 and 38.4±2.81 respectively, obtained 't' value was

39.73. An enhancement of 16.58±0. Thus the research hypothesis H1 is accepted. Hence the structured teaching program was effective in enhancing the knowledge of students.

Above finding of the present study was supported by a study was conducted to

assess the effectiveness of STP on knowledge of immediate newborn care among nursing students. Around 60 nursing students were selected from selected nursing college. A quasi experimental study design was used. Structured interview schedule were used for collecting

the data from the students. STP was found to be effective in improving the knowledge of nursing students regarding immediate newborn care with paired t value of 39.73 at p≤0.001 level. Thus the study concluded that STP was effective in  improving the knowledge of nursing students.

**SECTION - D. Association between mean pre-test level of knowledge of  nursing students and their socio demographic variables.**

The association between mean pre-test level of knowledge of nursing students and their selected socio demographic variables were analyzed by chi square test. In this study, obtainedchi square value for residence and family were higher values ( respectively) when compared to the table value atP≤0.001 level of significance. Hence the research hypothesis H2 is accepted. The results revealed that there was no significant association between pretest level of knowledge and socio demographic variables in relation to age, religion, family income, handling newborn, problems encountered experience while handling, source of information the obtained chi square value is . It is found to be lesser than the table value.
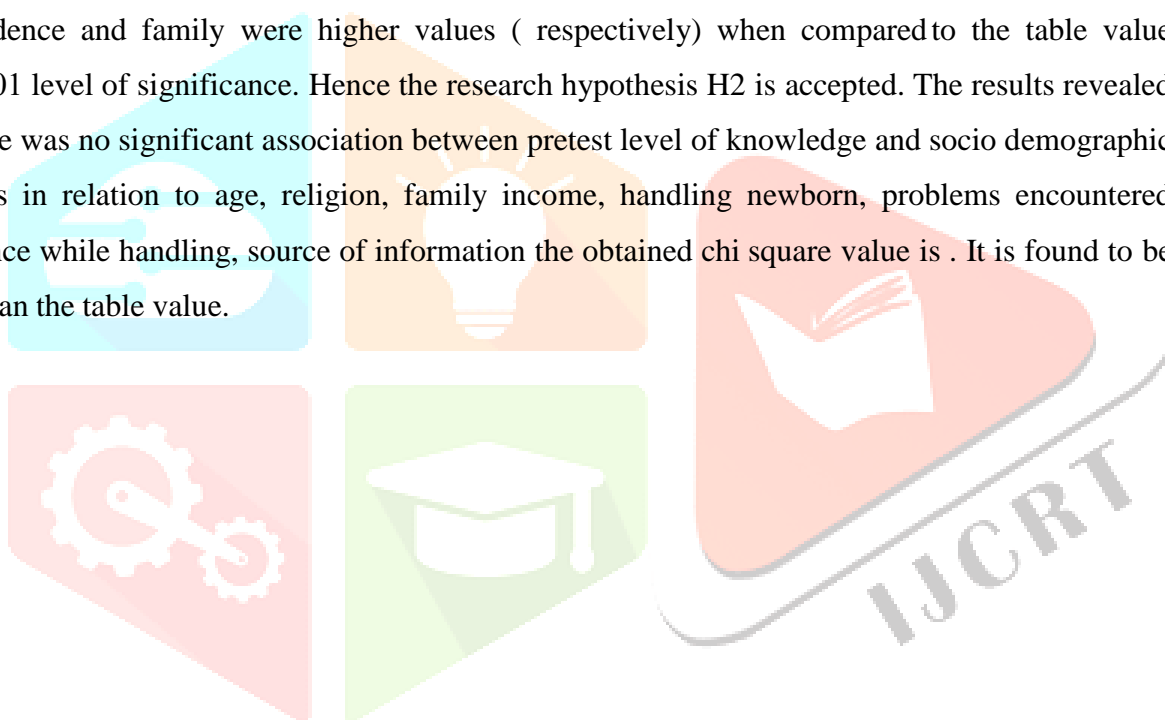
# CHAPTER - 9

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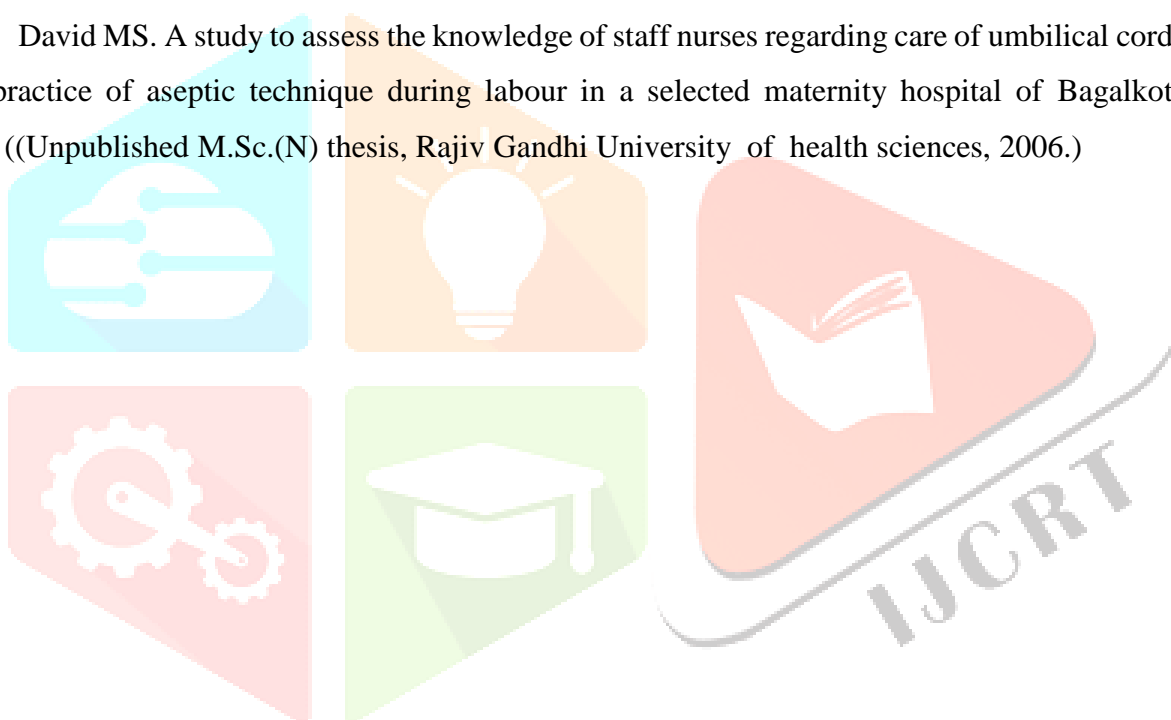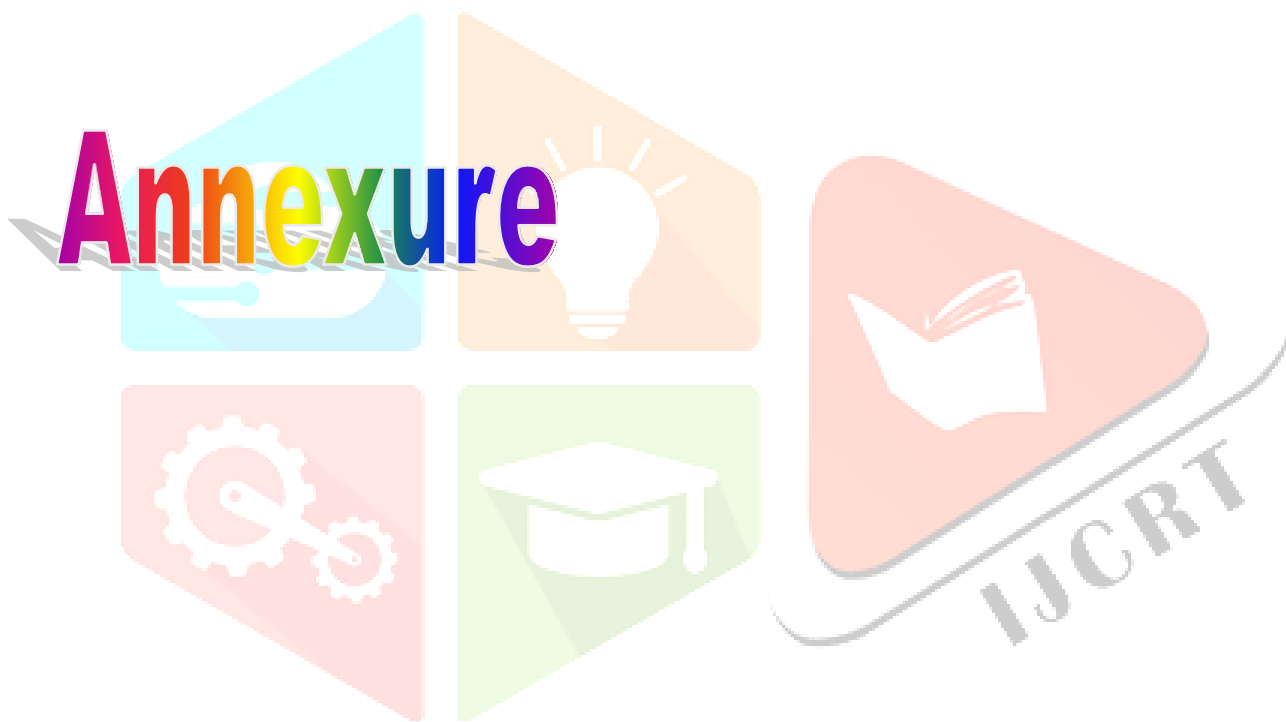
# ANNEXURE I

**LETTER REQUESTING OPINION AND SUGGESTIONS OF EXPERTS FOR ESTABLISHING CONTENT VALIDITY OF RESEARCH TOOL**.

From,
Ms. Gowri.M
2nd year M. Sc Nursing Sofia
College of NursingBangalore-
43


To, Through,
The Principal
Sofia College of Nursing
Bangalore- 43

Respected Sir/Madam

Sub:- Request for opinion and suggestions of experts for establishing content validity Of the research

tool

Myself a post graduate student in Child health Nursing of the Sofia College of Nursing, Bangalore

have selected the below mentioned topic for my research project to be submitted toRajiv Gandhi

University of Health Sciences as a partial fulfilment of Masters of Science in Nursing


**Title :-**

**"Evaluate the effectiveness of Structured Teaching Programme on knowledge of Immediate newborn care among 3 rd year BSC nursing students in selected nursing Colleges, Bangalore."**


With regard to this, I humbly request you to validate my tool for its appropriateness and relevancy. I am enclosing the objectives of the study, the structured questionnaire and the criteria rating scale for your reference. I would be highly obliged for your kindness in validating my tool

Thanking You,

                 Yours Truly
                 **Ms. GOWRI .M**


Enclosures
Structured Questionnaire
Criteria Rating Scale and Lesson Plan

U. K. MEMORIAL EDUCATIONAL TRUST (R)

# SOFIA COLLEGE OF NURSING

(Recognised by Govt. Of Karnataka, K.N.C. & I.N.C.)

Ref. :                                                                      Date :

## <u>LETTER REQUESTING TO CONDUCT THE STUDY</u>

To
The Principal,
Sofia  College of Nursing,
Bangalore.

Respect Sir / Madam,
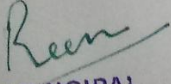
         Sub : Permission to do Dissertation work reg.

     With reference to the above cited subject. Mrs . **<u>GOWRI .M</u>** , is a student studying  II year M.Sc Nursing course in above mention institution for the academic year  2015 – 2018. As  a part of the M.Sc Nursing programme, she has to conduct her Dissertation work.
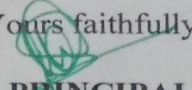
     Topic :  " A study to evaluate the effectiveness of strucrured teaching programme on knowledge regarding immediate care of new born among  3$^{rd}$ year BSc nursing students of selected college of nursing at Bangalore."

     With regard to this, I request you to kindly geant her permission to conduct study in your institution.

         Thanking you

                                                Yours faithfully

**PRINCIPAL**
FLORENCE COLLEGE OF NURSING
KALYANANAGAR, HRBR LAYOUT
BANGALORE - 560 043

                                    **PRINCIPAL**

                                   *Principal*
SOFIA COLLEGE OF NURSING
# 63/2, Chokkanahalli,
Hegde Nagar Main Road,
Yelahanka Hobli, Bengaluru - 560 064.

# 63, Chokkanahalli, Hegde Nagar Main Road, Yelahanka Hobli, Bangalore - 560 064.
Ph : 080-65737800.  Mobile : 98450 22400 / 98800 96518. Email : uk_trust@rediffmail.com

U. K. MEMORIAL EDUCATIONAL TRUST (R)

# SOFIA COLLEGE OF NURSING

(Recognised by Govt. Of Karnataka, K.N.C. & I.N.C.)

Ref. :                                                 Date :

## LETTER REQUESTING TO CONDUCT THE STUDY

To
The Principal,
Florence College of Nursing,
Bangalore.

Respect Sir / Madam,

        Sub : Permission to do Dissertation work reg.

    With reference to the above cited subject.Mrs . **GOWRI .M** , is a student studying  II year M.Sc Nursing course in above mention institution for the academic year  2015 – 2018. As  a part of the M.Sc Nursing programme, she has to conduct her Dissertation work.

    Topic :  " A study to evaluate the effectiveness of strucrured teaching programme on knowledge regarding immediate care of new born among  3$^{rd}$ year BSc nursing students of selected college of nursing at Bangalore."

With regard to this, I request you to kindly geant her permission to conduct study in your institution.

        Thanking you

                                       Yours faithfully

                                       **PRINCIPAL**

*Principal*
SOFIA COLLEGE OF NURSING
# 63/2, Chokkanahalli,
Hegde Nagar Main Road,
Yelahanka Hobli, Bengaluru - 560 064.

# ANNEXURE II

**ACCEPTANCE LETTER**

**TOPIC**

**"Evaluate the effectiveness of structured teaching programme on knowledge regarding Immediate newborn care among 3 rd year BSC nursing students of selected nursing Colleges, Bangalore."**
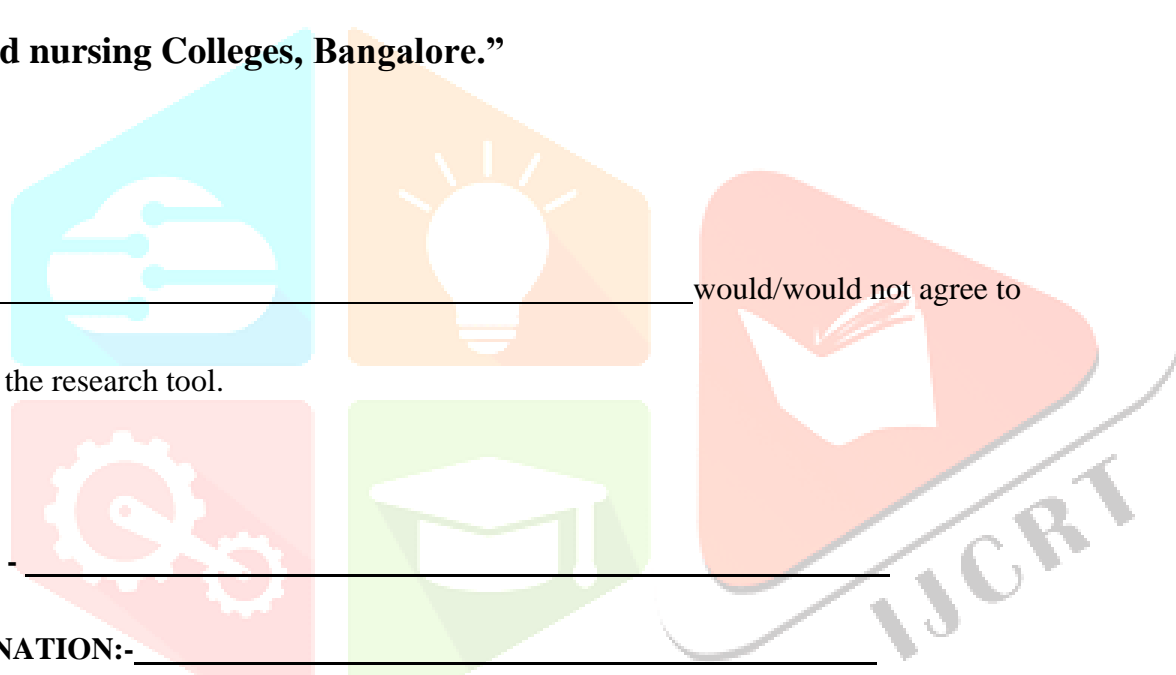
I_____would/would not agree to

validate the research tool.

**NAME: -**_____

**DESIGNATION:-**_____

**SIGNATURE:-**_____

**DATE:-**_____

# ANNEXURE III

## CRITERIA RATING SCALE FOR VALIDATION OF THE TOOL

**Respected Sir/Madam**

Kindly go through the evaluation criteria rating scale for validation of tool. There are two columns given for your response and a column for remarks. Kindly please tick in the appropriate column and give your remarks.

| Sl: No: | CONTENT | YES | NO | REMARKS |
|---|---|---|---|---|
| 1 | **Baseline Data:** All characteristics necessary forthe study are included | | | |
| 2 | **Questionnaire:** 1. Covers the adequate content about immediate newborn care 2. Questions are arranged in logical order 3. Language is simple and easy to follow 4. All items necessary to achieve the objective of the study are included 5. Any technical terms that can be replaced by simple terms | | | |

# ANNEXURE IV

**Respected Madam/Sir**

Kindly go through the content and place right mark (√) against questionnaire in the following columns ranging from very relevant to not relevant, when found to be not relevant and needs modification kindly give your opinion in the remarks column.

**PART I: RATING SCALE FOR SOCIO-DEMOGRAPHIC PROFORMA**

| SL No. | Item | Very Relevant | Relevant | Needs Modification | Not Relevant | Remarks |
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| 1 | | | | | | |
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**PART-       II  RATING  SCALE  FOR  STRUCTURED KNOWLEDGE REGARDING IMMEDIATE NEW BORN CARE**

| SL No. | Item | Very Relevant | Relevant | Needs Modification | Not Relevant | Remarks |
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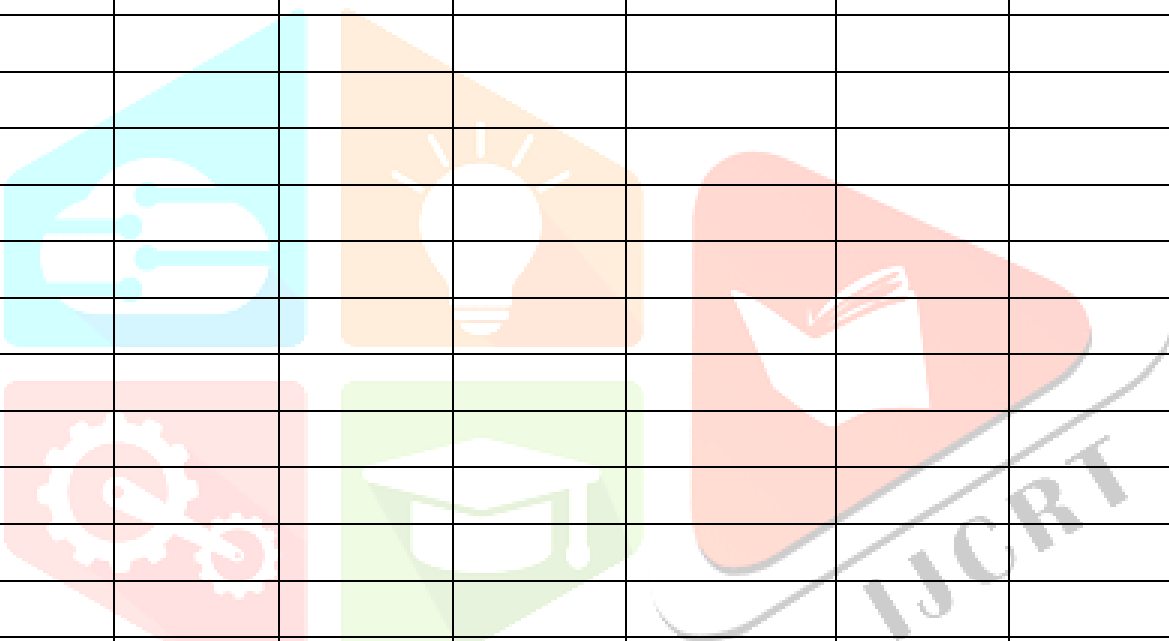
# ANNEXURE-V

**CRITERIA CHECKLIST FOR VALIDATION OF STRUCTURED TEACHING PROGRAMME ON KNOWLEDGE OF IMMEDIATE NEW BORN CARE AMONG NURSING STUDENTS.**

**INSTRUCTION**

The expert is requested to go through following evaluation criteria checklist prepared for validating the STP on immediate newborn care. There are three columns given for response and a column to facilitate your remarks. Your expert opinion and kind co-operation will be highly appreciated

| SL NO | CONTENT | YES | NO | REMARKS |
|---|---|---|---|---|
| 1 | **Baseline Data:**<br>All characteristics necessary for the study are included | | | |
| 2 | **Questionnaire:**<br>• Covers the adequate content about immediate newborncare<br>• Questions are arranged in logical order<br>• Language is simple and easy to follow<br>• All items necessary toachieve the objective of the study are included<br>• Any technical terms that can be replaced by simple terms. | | | |

# ANNEXURE-VI

**LIST OF EXPERTS CONSULTED FOR THE CONTENT VALIDITY OF THE TOOL**

**1.      Mr. Divya Reghunath**
Assistant Professor, Florence
college of NursingBangalore

**2.      Ms. Kavitha**
Assistant Professor Dhanwanvanthri
college of nursingBangalore

**3.      Mrs.Anju John**
Associate Professor, HOD
Florence College of Nursing
Bangalore.

**4.      Ms. Poornima**
Assistant Professor, HOD
Vijayanagar College of nursing
Bangalore.

**5.      Prof. Blossom**
Principal
Christian  College of NursingBangalore

**6.      Mrs . Sunitha Caloin**
Associate  Professor Faran
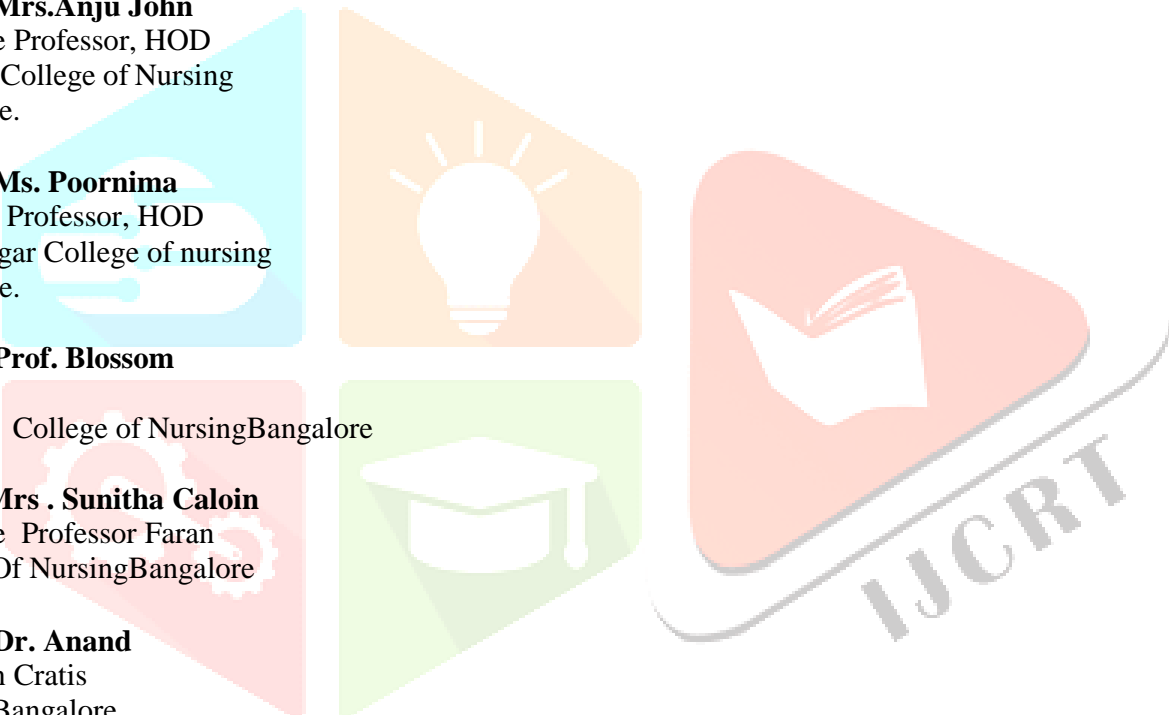College Of NursingBangalore

**7.      Dr. Anand**
Physician Cratis
HospitalBangalore

**8.      Dr.Krishna moorthy**
Paediatrician Zion
HospitalBangalore

**9.      Mrs.Jeeva Rani**
Senior Statistical analystZyme
Solutions Bangalore.

# ANNEXURE-VII

**LETTER SEEKING CONSENT OF THE SUBJECTS TO PARTICIPATE IN RSEARCH STUDY**

**Dear Participant,**

I am a post graduate nursing student of the Sofia College of Nursing, Bangalore. I am conducting a study on**"Evaluate the effectiveness of structured teaching programme on knowledge regarding Immediate newborn care among 3 rd  year BSC nursing studentsof selected nursing Colleges, Bangalore."**

This study will help to empower the nursing students with the knowledge regarding immediate newborn care and therby to prevent neonatal mortality rate. I have attached a questionnaire along with this and your opinion and experience are very important to the successful completion of my study.

The questionnaire is completely anonymous, so you are not asked to write your name on it or to identify yourself in any way. I therefore request you to be honest in all your answers and kindly answer all the questions. I assure you that the information you provide will be kept confidential and will be used only for the study purpose. Kindly sign the consent form given below.
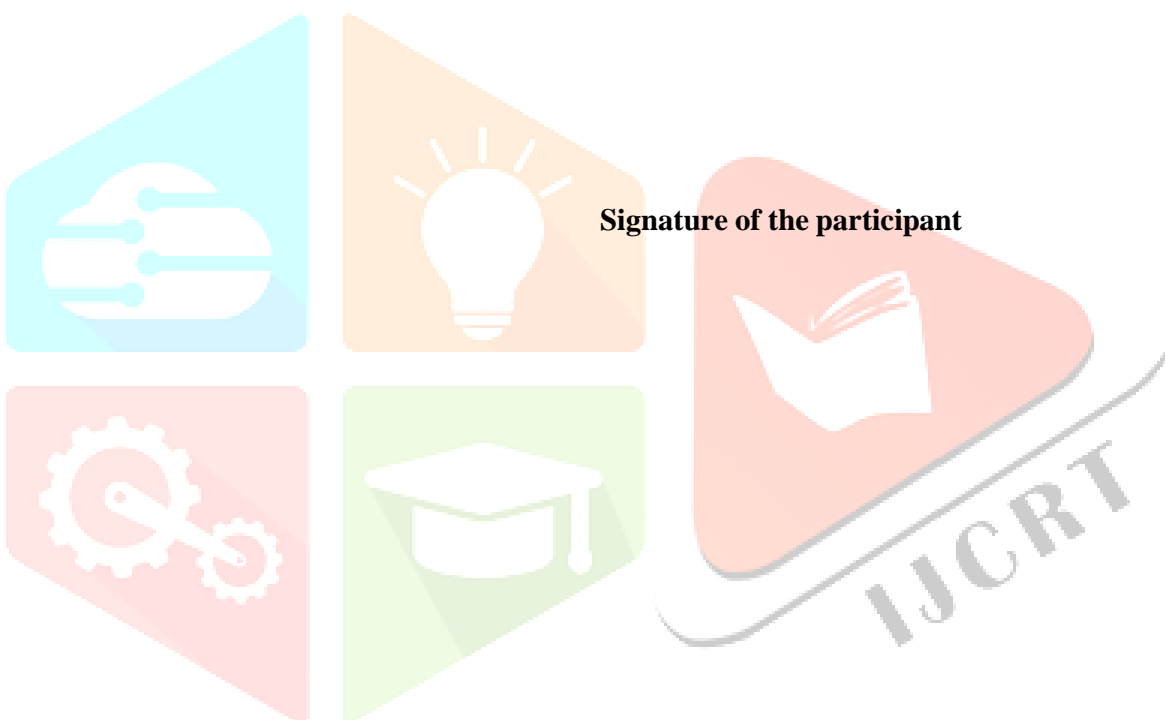
Yours Truly

**Ms. Gowri M**
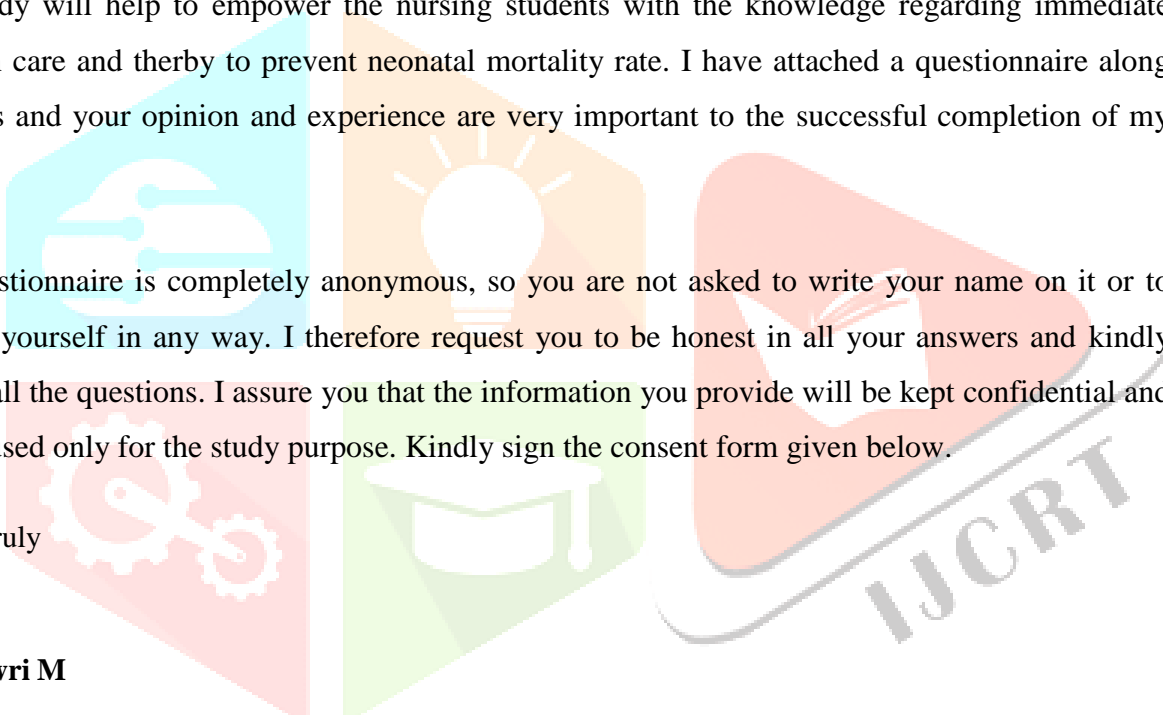
## CONSENT FORM

I, hereby consent for the above said study knowing that all the information provided by me will be treated with utmost confidentiality by the investigators and this will be helpful to find the effectiveness of STP on immediate newborn care among nursing students.

Date:                                                    **Signature of the participant**

Place:

# ANNEXURE-VIII

**Instructions to the participant**

Dear participant, the following are the questions related to immediate care of newborn. Read each part carefully in the structured questionnaire. You are requested to put a (√) for the option, which you feel appropriate. The confidentiality and anonymity of the information provided by you will be maintained.

Part – I  Demographic Performa.

Part – II  Knowledge questionnaire on immediate care of newborn.

Section – A Clearing the airway Section – B

Umbilical cord care Section – C  Prevention

of heat loss

Section – D  Identification and assessmentSection – E

Continued early care

## PART -I

**DEMOGRAPHIC PROFORMA:**

1.      Age in years

a] 18-20

b] 21-23

c] 24-26

2.      Marital status

a]        Married

b]        Unmarried


3.        Type of family

a] Nuclear

b]        Joint

c]        extended


4.        Residential area

a] Rural

b] Urbanc]

Slum

d] Residential area


5.        Total income of family [Monthly]

a] Below Rs 5000

b] Rs 5001 to 10001

c] 10001 to 15000

d] 15001 and above


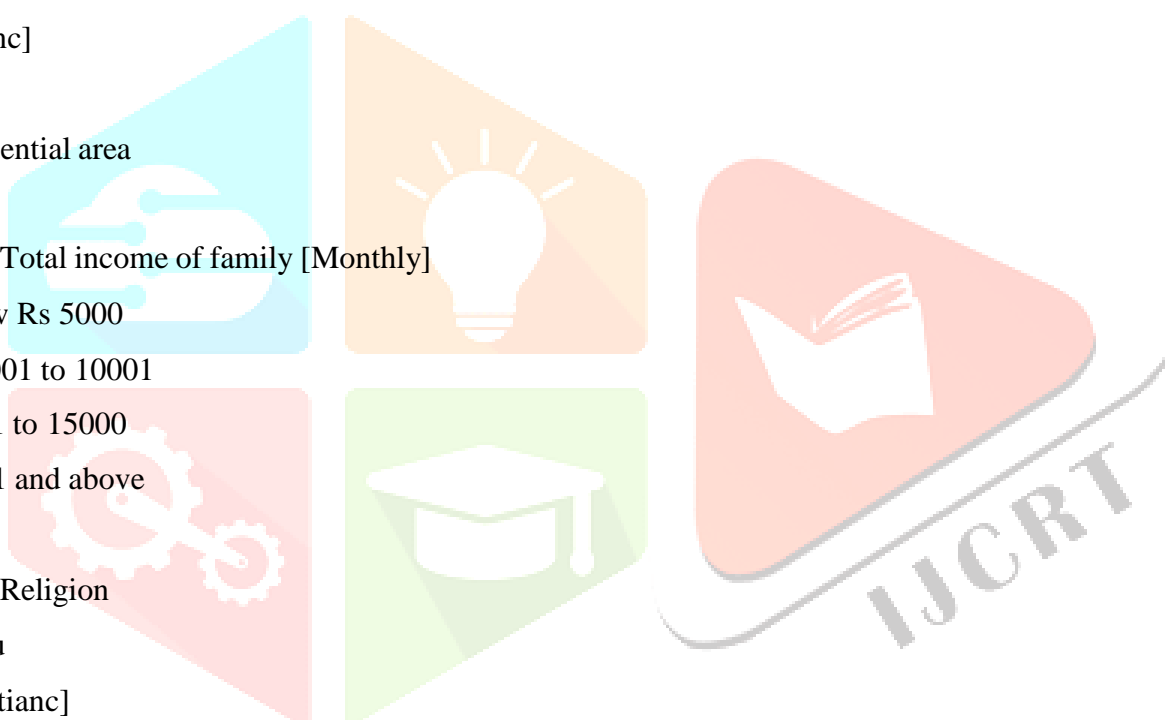6.        Religion

a] Hindu

b] Christianc]

Muslim

d] others if specify------------

7.        Have you handled new born

a] yes

b] No


8.        Any problem encountied during handling new-born if yes how was your experience

a] Fear and anxiety

b] Confident

9. Sources of information

a] Health education

b] Mass media

c] Elders and relatives

d] 0thers

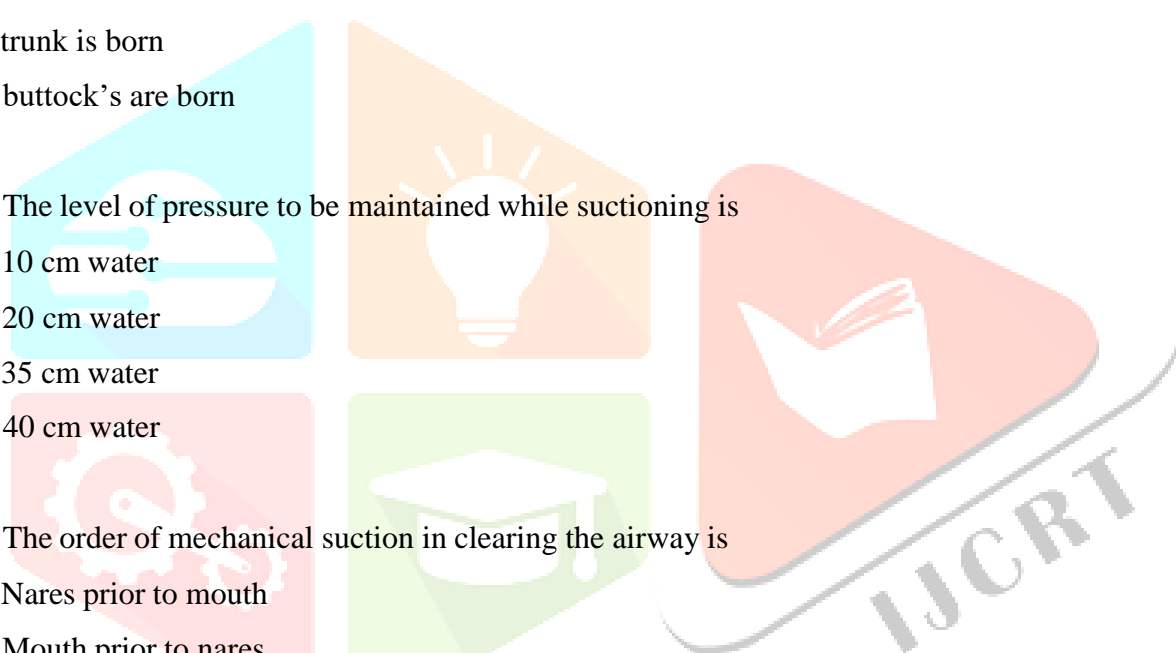## PART-II

**SECTION –A:**

**QUESTIONS RELATED TO CLEARING THE AIR WAY:**

1. The organ responsible for foetal respiration prior to delivery is the
a. Heart
b. Lungs
c. Liver
d. Placenta.

2. The primary concern at the time of delivery is the establishment of
a. Heart beats
b. Respiration
c. Feeding
d. Temperature.

3. The chemical change responsible for initiation of respiration is high
a. Oxygen
b. Carbondioxide
c. Nitrogen
d. Helium.

4.  Sustained regular respirations are established normally within

a.  15 seconds

b.  30 seconds

c.  45 seconds

d.  60 seconds

5.  Excess mucous from the mouth is wiped as the baby's

a.  head is born

b.  shoulders are born

c.  trunk is born

d.  buttock's are born

6.  The level of pressure to be maintained while suctioning is

a.  10 cm water

b.  20 cm water

c.  35 cm water

d.  40 cm water

7.  The order of mechanical suction in clearing the airway is

a.  Nares prior to mouth

b.  Mouth prior to nares

c.  Only mouth

d.  Only nares.

8.  Reversing the order of mechanical suction may result in inhalation of

a.  Debris

b.  Oxygen

c.  Carbon dioxide

d.  Amniotic fluid

9.  The excess mucous can be suctioned with a

a.  10 ml syringe

b.      5 ml syringe

c.      Bulb syringe

d.      Disposable syringe.

10.      The hazard with excess suction of newborn is

a.      Cardiac arrest

b.      Paralysis

c.      Tachycardia

d.      Laryngospasm

## SECTION:B

## QUESTIONS RELATED TO UMBILICAL CORD CARE:

11.      The life line of the baby in the first few minutes after birth is

a.      Ductus venosus

b.      Portal vein

c.      Umbilical cord

d.      Foramen ovale

12.      Early cord clamping is generally carried out within

a.      20 seconds

b.      30 seconds

c.      60 seconds

d.      90 seconds.

13.      Delayed clamping in newborn causes

a.      Polycythemia

b.       Anaemia

c.       Hypovolemia

d.       Hypercalcaemia.

14.       In Rh incompatibility cord clamping is done

a.       Soon after the birth

b.       With in 90 seconds

c.       After 60 seconds

d.       After 3 minutes.

15.       The forceps used to clamp the cord is

a.       Ovum forceps

b.       Allis forceps

c.       Green armytage forceps

d.       Kocher's forceps

16.       The distance for applying clamp from the neonate's cord is

a.       9-15 cm

b.       8-10 cm

c.       7-11 cm

d. 15-17 cm

17.       If the cord is not clamped properly, it results in loss of

a.       Amniotic fluid

b.       Surfactant

c.       Blood

d.       Cerebro spinal fluid

## SECTION-C

**QUESTIONS RELATED TO PREVENTION OF HEAT LOSS:**
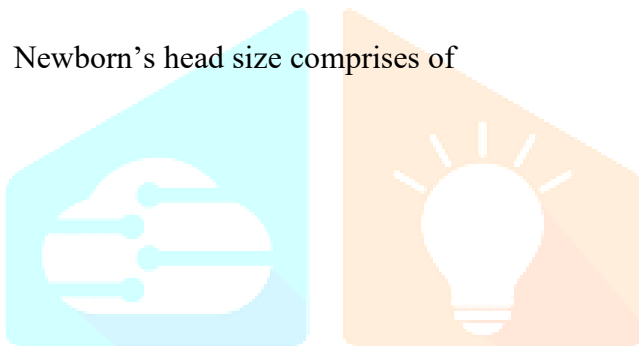
18.       The ideal temperature of delivery room is

a. 15 - 20$_0$ C

b. 21 - 25$_0$ C

c. 22 - 27$_0$ C

d. 25 - 30$_0$ C

19.     The expected fall in newborn's temperature in first few minutes is

a. 1 – 2.5$_0$ C

b. 2 – 4.5$_0$ C

c. 3 – 4.5$_0$ C

d. 5 – 5.5$_0$ C

20.     Newborn's head size comprises of

a. 25 %

b. 30 %

c. 35 %

d. 40 %

21.     Brown fat in newborn's body is located in

a.     Axillae

b.     Lower thorax

c.     Lower buttocks

d.     Genital area.

22.     Newborns produce heat by

a.     Shivering thermogenesis

b.     Non – shivering thermogenesis

c.     Anaerobic metabolism

e. Gluconeogenesis.

23.     Placing the newborn close to mother prevents

a.     Convection

b.     Radiation

c.     Conduction

d.      Evaporation.

24.      Transporting the neonate in a crib with solid sides reduces

a.      Air flow

b.      Temperature

c.      Cold

d.      Fluid loss

## SECTION-D

**QUESTIONS RELATED TO IDENTIFICATION AND ASSESSMENT:**

25.      The time of birth should be noted and recorded, when the

a.      Head is born

b.      Baby is expelled

c.      Shoulder's are born

d.      Placenta is expelled.

26.      For newborn's identification, secure a

a.      Name band

b.      Place near the mother

c.      Label for the cot

d.      Code the baby.

27.      The Apgar score should be checked and recorded at

a.      1 and 7 minutes

b.      2 and 8 minutes

c.      3 and 5 minutes

d.      1 and 5 minutes

28.        'P' in Apgar score represents

a.        Pressure

b.        Pink colour

c.        Paleness

d.        Pulse


29.        The score for limp muscle tone in Apgar score is

a.        1

b.        2

c.        0

d.        3

35. Edema of soft scalp tissue in newborn is

a.        Cephalhaematoma

b.        Caput succedaneum

c.        Hydrocephalous

d.        Macrocephalous133


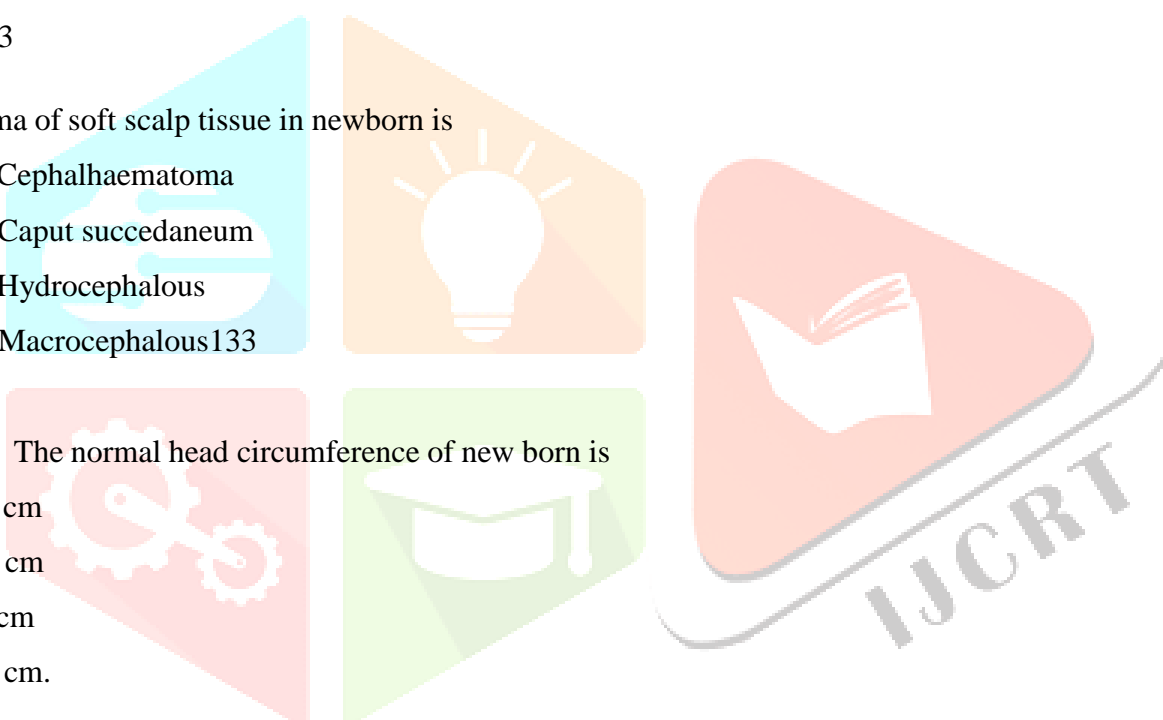31.        The normal head circumference of new born is

a. 30-34 cm

b. 31-36 cm

c. 32-33cm

d. 33-35 cm.


32.        The white cheesy substance covering the neonate's skin is

a.        Lanugo

b.        Brown fat

c.        Adipose tissue

d.        Vernix caseosa


33.        Tiny white papules on the nose of newborn is

a.        Miliaria

b.        Erythema

c. Sclerema

d. Milia

34. Irregular deep blue pigmentation in gluteal area is

a. Mangolian spots

b. Black spots

c. Epstein pearls

d. Stork bites

35. Edema of soft scalp tissue in newborn is

a. Cephalhaematoma

b. Caput succedaneum

c. Hydrocephalous

d. Macrocephalous

36. Normally, upper part of the pinna should be at the level of

a. Canthus of eye

b. Iris of eye

c. Cornea of eye

d. Sclera of eye

37. Presence of natal teeth at birth indicates

a. Renal anomalies

b. Cardiovascular anomalies

c. Torticolis

d. Hormonal anomalies.

38. Epstein pearls on mouth are cluster of several

a. Blue spots

b. Red spots

c. Black spots

d. White spots
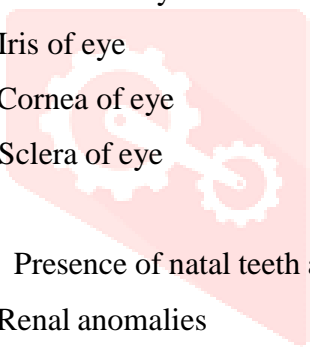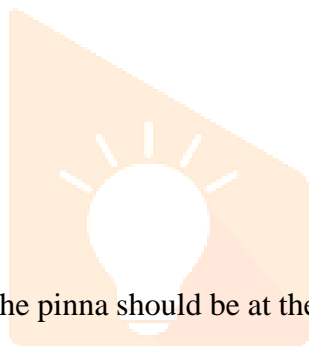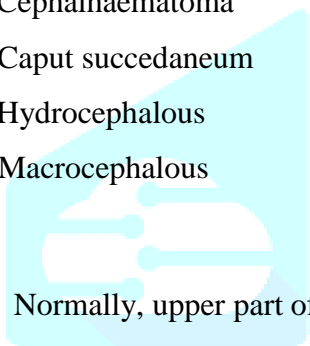
39.      Umbilical cord consists of two arteries and

a.      Two veins

b.      One vein

c.      Three veins

d.      No veins.

40.      Blood –tinged or mucoid discharge from female genitalia at birth is

a.      Menstruation

b.      Menarchy

c.      Early menarchy

d.      Pseudomenstruation

41.      Fused or webbed digits are termed as

a.      Polydactyly

b.      Phocomelia

c.      syndactyly

d.      Hemimelia

**SECTION –E:**

**QUESTIONS RELATED TO CONTINUED EARLY CARE:**

42.      Silver nitrate solution used in prophylactic eye treatment is

a.      2%

b.      3%

c.      1%

d.      4%

43.      Silver nitrate is effective against

a.      Staphylococcal conjunctivitis.

b.      Gonococcal conjunctivitis.

c.      Streptococcal conjunctivitis.

d.      Chlamydial conjunctivitis.

44.      The pharmacological name of injection vitamin K is

a.      Nicotinic acid

b.      Cyanocobalamine

c.      Phytomenadione

d.      Ascorbic acid

45.      Vitamin K is administered to prevent

a.      Infection

b.      Convulsion

c.      Haemorrhage

d.      Fluid loss

46.      The single intra muscular dose of vitamin K is

a. 0.5-1 mg

b. 1-1.5 mg

c. 0.5-2 mg

d. 2-2.5 mg

47.      The oral dose of vitamin K should be repeated in case of

a.      Constipation

b.      Fever

c.      Asphyxia

d.      Diarrhoea

48.      Bathing is usually performed in a newborn after the

a.      Establishment of respiration

b.      Stabilization of vital signs

c.      Stabilization of heart beats

d.      Identification of baby

49.      In normal labour, newborn is put at breast with in

a.      2 hours
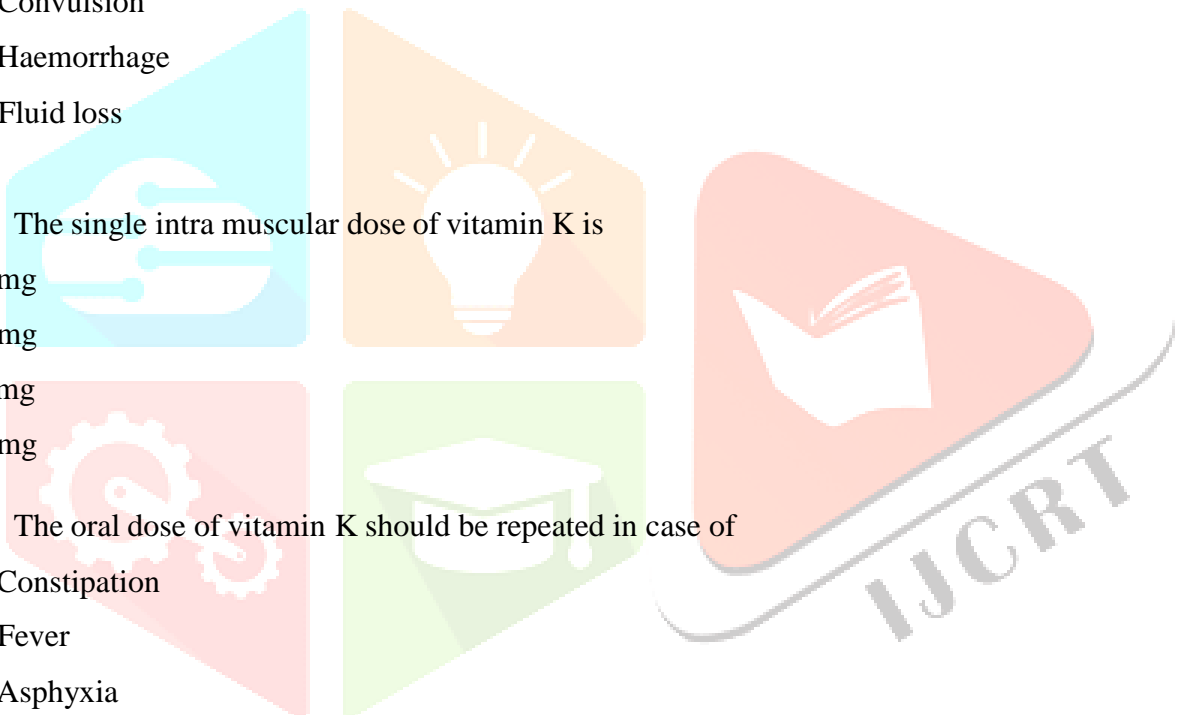
b.       1 ½ hours

c.       1 hour

d.       ½ hour.

50.       The purpose of rooming in is to promote

a.       Parent - baby interaction

b.       Parent - nurse interaction

c.       Baby - nurse interaction

d.       Paediatrician - baby interaction

# ANNEXURE-IX

## SCORING KEY:-

| SL NO | CORRECT RESPONSE | SCORE | SL NO | CORRECT RESPONSE | SCORE |
|---|---|---|---|---|---|
| 1 | D | | 26 | A | |
| 2 | B | | 27 | D | |
| 3 | B | | 28 | D | |
| 4 | D | | 29 | C | |
| 5 | A | | 30 | B | |
| 6 | A | | 31 | D | |
| 7 | B | | 32 | D | |
| 8 | A | | 33 | D | |
| 9 | C | | 34 | A | |
| 10 | D | | 35 | B | |
| 11 | C | | 36 | A | |
| 12 | C | | 37 | B | |
| 13 | A | | 38 | D | |
| 14 | A | | 39 | B | |
| 15 | D | | 40 | D | |
| 16 | B | | 41 | C | |
| 17 | C | | 42 | C | |
| 18 | B | | 43 | B | |
| 19 | C | | 44 | C | |
| 20 | A | | 45 | C | |

| 21 | A |  | 46 | A |  |
|---|---|---|---|---|---|
| 22 | B |  | 47 | D |  |
| 23 | C |  | 48 | B |  |
| 24 | A |  | 49 | D |  |
| 25 | B |  | 50 | A |  |

**Note:** Each Right Answer carries ONE Score and each wrong answer carries

# STRUCTURED TEACHING PROGRAMON

# IMMEDIATE CARE OF NEWBORN

**"Evaluate the effectiveness of structured teaching programme on knowledge regarding Immediate newborn care among 3 rd year BSC nursing students of selected nursing Colleges, Bangalore."**

**Name: Ms. Gowri. M**

**Subject: Child Health Nursing Topic:**

**Immediate Newborn Care**

**Group: 3rd year BSC nursing students Method of**

**Teaching : Lecture cum DiscussionAV aids: chart,**

**board,powerpoint**

**Time : 45 minute**

**GENERAL OBJECTIVES :** After completing the teaching program, the student nurses willbe

able to acquire knowledge regarding immediate newborn care.

**SPECIFIC OBJECTIVES:**

At the end of the teaching program the students will be able to

- understand about pulmonary and cardiovascular adaptation of newborn
- explain about suctioning
- list the ways for maintenance of clear air way in newborn
- understand about timing for cutting the cord
- explain about cord cutting
- list the modes of heat loss in newborn
- explain about the prevention of heat loss in newborn
- list the ways for identification of the newborn
- explain about the initial assessment with Apgar scoring
- understand about initial physical assessment
- understand about continued early care.

| SLNO | TIME | OBECTIVE | CONTENT | AV AIDS | TEACHERS/ LEARNERS ACTIVITY | EVALUATION |
|------|------|----------|---------|---------|------------------|------------|
| 1 | 2MIN | Introduce the topic | **INTRODUCTION:**<br><br>Newborn babies undergo numerous biologic changes during the first hours and days after birth. Although most infants make the necessary adjustments to extrauterine existence without undue difficulty, their well-being depends on the care they receive from others. The immediate care of the new born is based on the knowledge of the midwife of his or her transitional requirements and capabilities. | Black board | Explaining | |

| 2 | 4 min | Understa nd about pulmonary adaption | **CLEARING THE AIRWAY:**<br><br>The primary concern at the time of delivery is the establishment of respiration.<br><br>**PULMONARY ADAPTATION:**<br><br>The respiratory system is the most challenged in the change from intrauterine to extrauterinenvironment. Upon arrival into an atmospheric environment, there is a immediate demand on the neonate for respiration.<br><br>The organ responsible for foetal respiration prior to delivery is the placenta. Upondelivery, the lungs change from a fluid–filled state to a system well prepared for and<br><br>capable of respiration.<br><br>The first active breaths of air, once taken and | Power point | Explaining | |

| | | | | | |
|---|---|---|---|---|---|
| | | | sustained, set in motion a nearly inexorable chain of events that:<br><br>• Converts the foetal circulation to adult circulation.<br><br>• Empties the lungs of fluid.<br><br>• Establishes the neonatal lung volume and the characteristics of pulmonary functions. Sustained regular respirations are established normally within 60 seconds of delivery andare accompanied by simultaneous changes occurring in the cardiovascular system. | | |
| 3 | | Underswt and about cardiovas cular adaptatio n | **CARDIOVASCULAR ADAPTATION:**<br><br>Equally important as the initiation ofrespiration are the circulatory changes that allow blood to flow through the lungs.<br><br>These changes occur more gradually and are | | |

| | | | | | |
|---|---|---|---|---|---|
| | | | the result of pressure changes in the lungs, heart, and major vessels. The transition from fetal circulation to postnatal circulation involves the functional closure of the fetal shunts: the foramen ovale, the ductus arteriosus, and eventually the ductus venosus. | | | |
| 4 | | Explain about suctioning | **SUCTIONING:**<br><br>As the baby's head is born, excess mucus may be wiped gently from the mouth. However, care must be taken to avoid touching the naresas such action may stimulate reflex inhalation of debris in the trachea. Excess suction can result in vagal stimulation, with laryngospasm<br><br>and bradycardia. | Board | | |
| 5 | | Understa nd about | **UMBILICAL CORD CARE:** | Power point | | |

| | | cutting the cord | The umbilical cord is the life line of the foetus and of the baby in the first few minutes after birth. **TIMING FOR CUTTING THE CORD:** The optimal time for umbilical cord clamping after birth remains unknown. Still studies are continuing in this issue. Policies for timing of cord clamping vary. Early cord clamping is generally carried out in the first 60 seconds after birth, whereas late cord clamping usually involves clamping the umbilical cord greater than one minute after the birth or when cord pulsation has ceased. | | | |
|---|---|---|---|---|---|---|
| 6 | | explain about cord cutting | **CORD CUTTING:** Separation of the baby from the placenta is achieved by dividing the umbilical cord | Power Point | Explaining | |

| | | | | | |
|---|---|---|---|---|---|
| | | | between two Kocher's forceps which should be applied approximately 8-10 cm from the umbilicus of the baby. | | |
| 7 | | List the modes of heat loss in newborn | **PREVENTION OF HEAT LOSS:** Prevention of heat loss after birth remains important throughout, and after, the initiation and establishment of respirations. Heat can be minimized by having the room where the baby is born warm, drying the neonate as soon as possible after delivery, wrapping the baby in a warm blanket and placing the baby in a warm crib next to the mother. Particular care must be taken to prevent heat loss from head. | Power Point | Explaining |
| 8 | | List the ways for identification of the newborn | **IDENTIFICATION AND ASSESSMENT** **IDENTIFICATION OF THE BABY:** | | |

| | | | The time of birth and sex of the baby arenoted and recorded once the baby has been completely expelled from his mother When babies are born in the hospital, it is essential that they are identifiable from one another. Name bands are used in most places for this purpose. | | | |
| --- | --- | --- | --- | --- | --- | --- |
| 9 | | Explain about the initial assessment with APGAR score | **ASSESSMENT OF BABY'S CONDITION:**<br><br>The first initial assessment of the infant is done at birth, using the Apgar score and a brief physical assessment.<br><br>**INITIAL ASSESSMENT WITH APGAR SCORING:**<br><br>Whether a home or hospital birth, the midwife | Power point | Describing | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | at 1 minute and 5 minutes after the birth will make an assessment of the baby's general condition using the Apgar score invented by Dr.virginia Apgar in 1950's. The assessment at 1 minute is important for the further management of resuscitation. However, it has been shown that assessment at5 minutes is more reliable as a predictor of therisk of death during the first 28 days of life, and of the child's neurological state and risk of major disability at the age of 1 year. The higher the score the better the outcome for the baby. The Apgar score must be fully documented in the baby's records.<br><br>*A mnemonic for the Apgar score is:*<br>A- Appearance (i.e. colour) | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | P -Pulse (i.e. heart rate) G -Grimace (i.e. response to stimuli) A -Active (i.e. tone) R -Respirations. Apgar scoring is based on five signs ranked in order of importance and a scoring of 0 through 10. With absence of cardiac activity, a heart rate below 100, or the absence of respiratory effort, the Apgar scoring must be stopped immediately, resuscitation initiated, and help sought. The five signs and methods of evaluation for these are as follows: • Heart rate - check apical pulse, using a stethoscope and counting for 30 seconds. • Respiratory effort - when checking the heart | | | |

| | | | rate, note the respiration; if it is shallow, listen with stethoscope to chest. | | | |
|---|---|---|---|---|---|---|
| | | | • Muscle tone - this is checked by flexion and response of extremities; note flexion, straighten extremity and note response to return flexion. | | | |
| | | | • Reflex irritability - this is done by tickling the nostril or flicking the sole of the foot and looking for facial or foot changes. | | | |
| | | | • Color - check for the presence or absence of cyanosis; good places to check are the fingernails, palms of hands, soles of feet, tongue, lips, and mucous membranes. | | | |
| 10 | | Understand about the continued early care | **CONTINUED EARLY CARE:**<br><br>**EYE CARE:**<br><br>Prophylactic eye treatment against | chart | Explaining | |

*ophthalmianeonatorurn,* infectious conjunctivitis of the newborn, includes the use of Silver

nitrate is effective against gonococcal conjunctivitis.

Topical antibiotics such as tetracycline and erythromycin, silver nitrate, and a 2.5% povidone-iodine solution not proved to be effective in the treatment of chlamydial conjunctivitis.

**VITAMIN K ADMINISTRATION:**

Shortly after birth, vitamin K[phytomenadione] is

administered as a single intramuscular dose of 0.5 to 1 mg to prevent hemorrhagic disease of the newborn**.** Normally, vitamin K is

synthesized by the intestinal flora.

**CARE OF THE CORD:**

The initial cord clamp is replaced with another method of securing haemostasis by applying the disposable plastic clamp (or rubber band or three cord ligatures) approximately 2—3 cm from the umbilicus and cutting off the redundant cord. The nurse cleanses the cord and skinarea around the base of the cord with the prescribed preparation (erythromycin solution, triple blue dye, or alcohol) and checks daily for signs of infection.

**BATHING:**

Bath time is an opportunity for the nurse to accomplish much more than general hygiene.

It is an excellent time for observations of the infant's behaviour, state

of arousal, alertness, and muscular activity. Bathing is usually performed after the vital signs have stabilized, especially the temperature.

**BREAST FEEDING:**

In case of normal delivery baby should be put to breast with in ½

hour after birth. Most infants are on *demand feeding schedules* and are allowed to feed when they awaken. Ordinarily feedings are encouraged every 3 to 4 hours during

the day and only when the infant awakens during the night in the first few days after birth. Breastfed babies will nurse more often

than bottle-fed babies since human breast milkis digested faster than formulas made fromcow's milk, because the stomach will empty sooner.

**PARENT-BABY BONDING:**

Nurse can positively influence the attachment of parent and child. Rooming in facilitates parent-baby interaction. The process of bonding is based on a mutual relationship between parent and infant .It is apparent that promoting positive parent-baby relationships necessitates an understanding of factors involved in identifying behavioural steps in attachment All babies should remain with their mother during the first few hours of life,

providing both mother and baby are in good

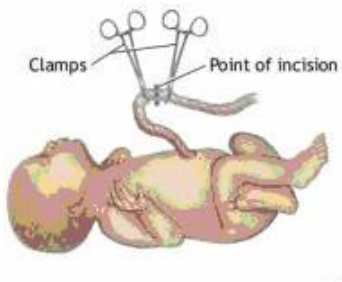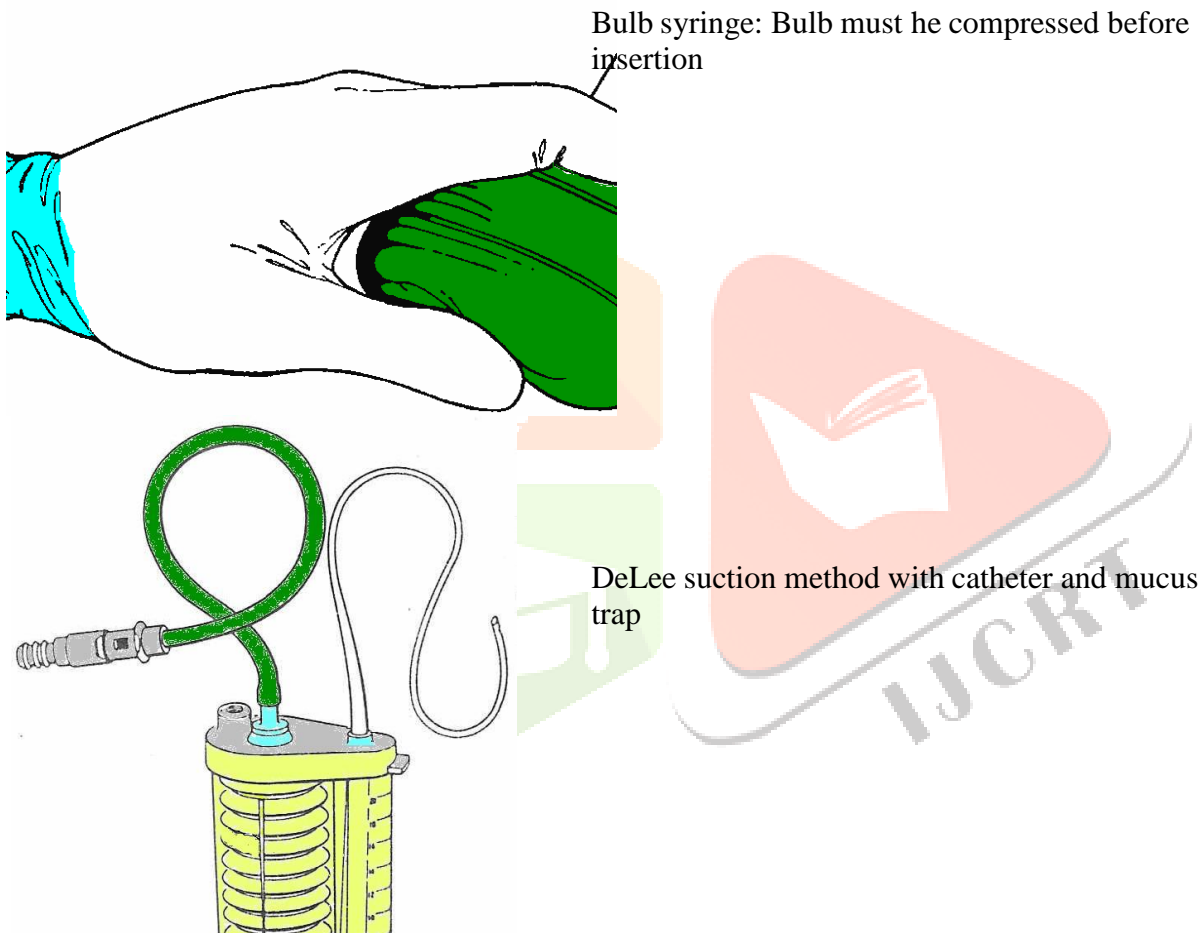| | | | | | | |
|---|---|---|---|---|---|---|
| | | | condition. This is the time when parent-baby bonding is initiated and the reality of parenthood begins. | | | |
| 11 | | Conclude the topic | **CONCLUSION:**<br><br>A number of traditional health practices for the care of newborn babies based on sound scientific knowledge and logic must be promoted and actively encouraged in the society. These practices are more appropriate to serve our health needs as they are based on simple technology. | | | |

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Suctioning the newborn

Bulb syringe: Bulb must he compressed before insertion

DeLee suction method with catheter and mucus trap

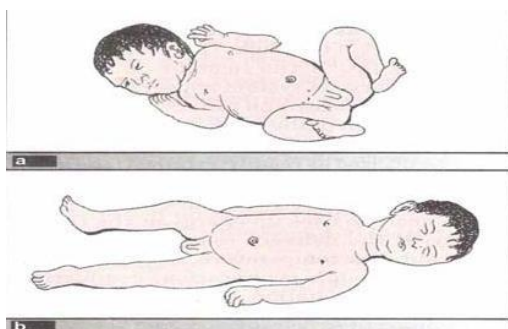Clamping the umbilical cord for cutting

Drying the baby

Newborn placed under overhead radiant warmer

Skin – to- skin contact

Neonate's crib

(a)    Newborn with good muscle tone-Apgar score 2,

(b)    Newborn with poormuscle tone – Apgar score 0

Disposable plas