Assess the Effect of Educational Intervention Regarding Knowledge of Essential New-Born Care Among the G.N.M 3rd Year Students.

Shipra Vashisht¹, Madhu Kumari Gupta²

¹Nursing Tutor Child Health Nursing, Era College of Nursing
²Associate Professor Medical Surgical Nursing, Era College of Nursing

ABSTRACT
Assess the effect of educational intervention regarding knowledge of essential new-born care among the G.N.M 3rd year students.

Objectives:
- To assess the knowledge on essential new-born care among the G.N.M 3rd Year nursing students.
- To evaluate the effectiveness of planned teaching programme regarding knowledge of Essential New-born Care.
- To associate the Pre-test- Post-test level of knowledge of students regarding Essential New-born Care.

Materials and Methods:
The Pre-experimental with one group pre-test post-test design was used on 75 students of class G.N.M 3rd year were included in the study, each student were given structured teaching program on essential new-born care. The socio demographic data was collected. The knowledge level of students of G.N.M 3rd year was assessed by structured questionnaire. Descriptive statics and inferential statistics were used to analyses the data.

Results:
Findings related to planned teaching program by comparing pre-test and post-test knowledge level of the students of G.N.M 3rd year students. There was no significant association exist in age group of 17-35 years at p value <0.05. According to knowledge level of pre-test among 75 students of age group 17-35 years, the 2.7% students were having inadequate knowledge 88% were having moderately adequate knowledge and 9.3% were having adequate knowledge regarding selected aspects of essential new born care. According to post-test level of knowledge, the 0 %students were having inadequate knowledge. 22.7% students were having moderately adequate knowledge and 77.3% were having adequate knowledge regarding selected aspects of essential new-born care. The data shows that there was significant difference between level of knowledge with age (1.380), education (1.614), previous knowledge (0.353), source of knowledge (2.730), place of residence (0.215).

Conclusion:
The following conclusions were made on the basis of the finding of the study: there was significant difference in the pre-test and post-test knowledge level regarding selected aspect of essential new-born care. There was no significant association existing in students of age group 17-35 years at p value< 0.05. According to knowledge level of pre-test among 75 students of age group 17-35 years, the 2.7% students...
were having inadequate knowledge 88% were having moderately adequate knowledge and 9.3% were having adequate knowledge regarding selected aspects of essential new born care. According to post-test level of knowledge, the 0% students were having inadequate knowledge. 22.7% students were having moderately adequate knowledge and 77.3% were having adequate knowledge regarding selected aspects of essential new born care.

There was no significant association existing in knowledge level of students of age group 17-35 years at p<0.05.

INTRODUCTION

Slogan: “A baby is born with a need to be loved and never outgrows it “ - (Frank A Clark)
“Children are the wealth of tomorrow – Take care of them if you wish to see a strong India, with readiness of meeting future challenges”. (Pandit Jawahar Lal Nehru)

1.1 BACKGROUND OF THE STUDY

Essential New-born Care is a set of measures every new-born requires regardless of where it is born or its size. It is designed to protect the new-born in adverse environmental condition and is a framework that should be applied immediately after birth, continued at least for the first seven days. Knowledge of essential new-borns care and proper practice is important for the survival, growth, and development of a new-born in spite of its essentiality, most of the students do not know and follow the key steps of care. Essential new-born Care includes early initiation and exclusive breast feeding, thermal, this study is aimed at assessing knowledge of Essential new-born Care and associated factors among the nursing students studied at Era’s College of Nursing educate the nursing to gain knowledge about Essential new-born Care and the key steps in achieving goals.

High-quality universal new-borns health care is the right of every new-born everywhere. Babies have the right to be protected from injury and infection, to breathe normally, to be warm and to be fed. All new-borns should have access to essential new-born care, which is the critical care for all babies in the first days after birth. Essential new-born care involves immediate care at the time of birth, and essential care during the entire new-born period. It is needed both in the health facility and at home.

Essential new-born care includes:

- Immediate care at birth (delayed cord clamping, thorough drying, assessment of breathing, skin-to-skin contact, early initiation of breastfeeding)
- Thermal care
- Resuscitation when needed
- Support for breast milk feeding
- Nurturing care
- Infection prevention
- Assessment of health problems
- Recognition and response to danger signs
- Timely and safe referral when needed.

Knowledge of the essential new-born care and proper practice is important for the survival growth and development of a new-born. In spite of its essentiality, most health care worker and professionals do not know and follow the World Health Organization recommendation. Therefore, this study is aimed at
assessing knowledge of essential new-born care and associated factors among nurses and midwives working in maternal hospitals.

The essential new-born care (ENC) aims to ensure health workers have the skills and knowledge to provide appropriate care at the most vulnerable period in baby’s life. Health workers are taught to use WHO’s Pregnancy, Childbirth, Postpartum, and new-born Care. A guide for essential practices and particularly the sections concerned with new-born care – that provides up-to-date evidence-based information and management of babies with a range of needs in the initial new-born period. Neonatal mortality has continued increase as a percentage (>60%) of overall infant mortality. Any further reduction in infant mortality is dependent on saving more new-born lives. It is possible if the nurses and mothers are knowledgeable and provide proper new-born care.

Essential new-born care includes warmth and appropriate hygiene in handling new-borns, early and exclusive breastfeeding, umbilical cord care, eye care, thermal regulation are all key components of Essential new-born care. (ENC).

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

Neonatal mortality has continued to increase as a percentage of overall infant mortality. Any further reduction in infant mortality is depends on saving more new-born lives. It is possible if the nurses who are providing first care just after birth are knowledgeable and provide proper new-born care. Therefore, the objective of study was to find out knowledge of nursing students about new-born care. But healthy survival of the baby is threatened every moment. Baby’s health problems are very common throughout the world, especially in developing countries. Experts and empathetic approach is essential to minimize these problems and reduce the causes of neonatal morbidity, mortality and disability. It is estimated that globally neonatal contributes to 45% of under—five deaths, the leading cause being prematurity. Up to two third of these deaths could be prevented by practicing effective measures at birth and during the first week of life. Most deaths occur in the first 24 hours of life. In India the neonatal mortality was estimated at 29/1000 live births in 2020.

‘Essential new-born care’ is a set of recommendations from designed to improve the health of the new born through interventions pre conception, during pregnancy and post Nataly . It includes thermoregulation, clean delivery and clean cord, initiation of breastfeeding, eye care, care of preterm /low birth weight baby. Essential neo born care is care that every baby needs regardless of where it is born or size. Essential new-born care should be applied immediately after the baby is born and continued for at least the first 7 days after birth.

1.2 NEED FOR THE STUDY


New-born or neonatal period include the time from to 28 Days of life. This is crucial period in laying the foundation of good health. At this time specific biological and psychological needs must be met to ensure the survival and health development of the child into future adult.

(28%) sepsis, pneumonia (26%), birth asphyxia, birth injuries (23%), tetanus (7%), congenital anomalies (7%) and diarrhoea ,(3%). A study done by Beque at (2006) in rural Uttar Pradesh showed that out of 618 neonatal deaths , 32 percent were on the day of birth , and 50percent occurred during the 3rd day of life , and 71 %were during the first week of life (Indian institute of population 2010).
Care practice immediately after delivery play a major role in causing neonatal care, thermal care, and initiating breast feeding immediately after birth. The traditional practice like applying of cow dung on the umbilical stump morbidities and mortalities. These practice include clean cord care, thermal, oil instillation into nose.

WHO reported that each year about 4 million new-borns die before they are four weeks of life. Ninety eight percent of these deaths occurring in developing countries. Two thirds of new-born deaths occur in the WHO region of Africa (28) percent, and East Asia (36) percent. Two third of the babies are in our country are born at home and are at high risk of developing sepsis. Babies born in hospital may also develop an infection in the community are unhygienic practices during delivery at home which includes delivery in dark dirty room, cord cut with any available sharp instrument and the baby wrapped in old dirty cloth and other practices that increase the risk of infection include harmful application on cord, discarding colostrum. Unhygienic practices at birth are also responsible for infections deaths of both of the mother and baby.

The introduction of 5 cleans at delivery which includes Clean Surface, Clean Hands, Clean Blade, Clean Cord tie and Clean Cloths have contributed to the reduction of neonatal infections. Nearly 50% of all new-born deaths occur during the neonatal period. Half of this death occur in the first seven days due to prematurity, neonatal tetanus, birth asphyxia and infections, which can be prevented by proper and timely care of the new-born.

During pregnancy, need to interview and choose a health provider for new baby. A paediatrician specialized in children’s health care or may choose to see a family practitioner and keep family’s medical care in the same practice. Both options are equally viable and matter to preference. While in the hospital after the birth of baby, will be given tutorial in basic childcare.

Estimated that 4 million children die during the neonatal period each year, with most deaths occurring in developing countries. Infections are the single most important cause of neonatal mortality. It is estimated that 3,00000 infants die annually from tetanus, and a further 4,60,000 dies because of several bacterial infections, of which umbilical cord infection are an important precursor. Although increasing access to tetanus toxoid immunization during pregnancy must remain a priority, high rates of umbilical cord infection and sepsis can occur in areas free of tetanus, attributable to unhygienic delivery or immediate postpartum care practices that lead to contamination of the umbilical stump.

WHO’S report states that integrated approach, good feeding practice, immunization, improved hygiene and the healthy development of the children will help to reduce the child mortality rates. Among the almost 3.9 million neo born deaths that occur worldwide, about 30% occur in India. Any further reduction in infant mortality is dependent on saving more new-born lives. It is possible that if the students GNM 3rd year students are knowledgeable and provide proper new-born care. After the birth the health of new-born depends on the health care practice adopted by family.

The investigator during her posting observed that nursing students of GNM 3rd year were not having sufficient knowledge regarding new-born care so that’s why babies becomes sick and unhealthy. Globally 4 million new-borns die every year before they reach the age of one month, and approximately 3.4 million new-born die within the first week of life. Of these deaths, 66% occur during 24 hours. Late deaths i.e. after 24 hours, still occur 34% and may be prevented if mothers have knowledge about new-born care including danger signs of new-born. The aim of the study will to assess the level of knowledge of diploma 3rd year students towards essential new-born care practices. Several studies to showed that students dose not have sufficient knowledge that how to provide good care to new-born. It will leads to increase neonatal...
mortality and morbidity rates. So the investigator felt the need of assess the effect of teaching on knowledge regarding essential new-born care among the diploma 3rd year students of era college of nursing.

1.3 RESEARCH QUESTION:
Is there any effect of essential new born care on the G.N.M 3rd year students among in Era College of Nursing in Lucknow?

1.4 STATEMENT OF THE PROBLEM:
“A study to assess the effectiveness of structured teaching programme on knowledge regarding selected aspects of Essential new-born Care among the G.N.M 3rd year students at Era’s College Of Nursing, Lucknow.”

1.5 AIM OF THE STUDY:
To increases the level of knowledge on selected aspects of Essential new-born Care through teaching among G.N.M 3rd year students.

1.6 OBJECTIVES OF THE STUDY:
1. To assess the knowledge on essential new-born care among the G.N.M 3rd Year nursing students.
2. To evaluate the effectiveness of planned teaching programme regarding knowledge of Essential new-born Care.
3. To associate the Pre test- Post test level of knowledge of students regarding Essential new-born Care.

1.7 OPERATIONAL DEFINITIONS:
- **Assess**: It is the ability to estimate the knowledge of nursing students regarding Essential New-born care.
  “Evaluate or estimate the nature , ability , or quality of”. **By Oxford Dictionary**.
  For the present study as the assess refers to estimated the effect of structured teaching on selected aspects of Essential new-born Care among G.N.M 3rd year students.
- **Effectiveness**: “ A change that is caused by something” **By Oxford Dictionary**.
  It refers to the significant gain in knowledge determined by significant difference in pre-test and post-test knowledge scores.
  In my study effectiveness means it is desired level of knowledge gained by the G.N.M 3dr year students after teaching programme.
- **Structured teaching program**: It refers to systematically organized teaching program which is prepared by the investigators and validated by experts, containing information on Essential New-born care.
  **By Oxford Dictionary**
- **Knowledge**:“Facts, information and skills acquired through experience or education, the theoretical or practical understanding of a subject”.
  **By Oxford Dictionary**.
  In my study knowledge refers to existing information and awareness to the G.N.M 3rd year nursing students regarding the essential new-born care.
Selected aspects: In this study the selected aspects are (thermal care, cord care, eye care, breastfeeding, 

1. Thermal Care: This includes that the place of delivery is warm, newborn are immediately dried and either wrapped or placed on the mother for skin-to-skin contact. Parul Dutta
2. Cord Care: Cord care is a series of steps applied in handling of the umbilical cord after delivery of the newborn. Parul Dutta
3. Eye Care: Eye care is essential to prevent eye infection especially where sexually transmitted diseases are common. It is mandatory soon after delivery. Parul Dutta
4. Breastfeeding: Breastfeeding is the normal way of providing young infants with the nutrients they need for health growth and development. Virtually all mothers can breast feed, provided they have accurate information, and the support of their family, the health care system and society it large. Panchali Pal

Essential Newborn Care: “Care of all new-borns includes immediate and through drying, skin to skin contact of the new-born with the mother, cord clamping and cutting after minutes after birth, early initiation of breastfeeding, and exclusive breastfeeding”. DC Dutta Obstetrics Textbook of Nursing.

It is the care which is given to baby who is stay in the hospital or birthing centre, nurses help with basic baby care.

G.N.M 3rd Year Students: It includes students who are studies in Diploma course General Nursing And Midwifery 3rd years.

1.8 HYPOTHESIS:
H1: There is significant difference between pre-test and post-test knowledge among G.N.M 3rd year students at p<0.05 level of significance.
H2: There is significant association between knowledge and selected demographic variables among G.N.M 3rd year students at p <0.05 level of significance.

1.9 CONCEPTUAL FRAMEWORK:
Conceptual framework refers to concepts that offer a frame work of proposition for conducting the research. The conceptual framework set up for the study is modified model of Daniel. Shuffle Beam’s Evaluation Model of Planned Programme. The model is based on the premise that relevant information is foundational to sound judgment about the relative merits of alternatives available in the evaluation process. He proposes four decision types developed by crossing an ends means dimension and an intended actual dimensions, the four elements of the model are Context, Input, Process and Product. Thus named “CIPP” model. The model is adopted in a modified form for the present study. According to the model, the content identifies discrepancies between intended and actual programme outcome and the evaluator can develop casual explanation for the discrepancies.

The core value for present study is enhancing knowledge regarding essential new-born care in G.N.M 3rd year students.

CONTEXT According to the theorist, the context is used to define the operational context of programs and to assess needs and problems. In this study the context are collective demographic variable (age, education, previous knowledge regarding essential new-born care, if yes source of knowledge, place of
residence, and assessment of pre-test knowledge of essential new-born care. The knowledge is assessed by using structured questionnaire schedule for G.N.M 3rd year students.

**INPUT** According to the theorist, input is determined by structured decisions. Especially important to this component are decisions about human, material and resources. The input of present study is preparation and development of projected, audio-visual aids and implementation of planned teaching program regarding essential new-born care.

**PROCESS** According to the theorist, process monitors understanding and analysis about the given knowledge regarding essential new-born care.

**PRODUCT** According to the theorist the product provides information to inform decisions about congruence of intended and actual ends on achieving important outcomes, the product evaluation of present study is post-test evaluation of knowledge regarding essential new-born cares. Knowledge is interpreted as adequate knowledge, moderately adequate knowledge, and inadequate knowledge.
ASSESSMENT OF NEEDS

DEMOGRAPHIC VARIABLE

- Age
- Education
- Previous knowledge regarding essential new-born care.
- If yes source of knowledge
- Place of residence.

PLAN

Preparation and development of planned teaching program regarding essential new-born care.

Post test

Effectiveness of planned teaching program

Administration

of planned teaching program on essential new-born care.

Moderately adequate Knowledge
RESEARCH METHODOLOGY

The research methodology is the most important part of research as it is the framework for conducting a study. It indicates the general pattern for organizing the procedures to get valid and reliable data for an investigation.

This chapter deals with the methodology adopted for “A study to assess the effectiveness of structured teaching programme on knowledge regarding selected aspects of Essential New-born Care among the G.N.M 3rd year students at Era’s College Of Nursing, Lucknow.”

This chapter includes:
- Research approach
- Research design
- Research setting
- Target population
- Sample & Sampling technique
- Variables under study
• Inclusion & Exclusion criteria
• Selection & Development of the tool
• Description of the tool
• Criterion measures
• Validity of the tool
• Reliability of the tool
• Ethical considerations
• Pilot study
• Data collection procedure
• Plan for data analysis
• Summary

3.1 RESEARCH APPROACH
Sharma SK (2011) stated that the research approach involves the description of the plan to investigate the phenomenon under study in a structured (quantitative), unstructured (qualitative) or a combination of the two methods (quantitative-qualitative integrated approach).

For the present study, the **Quantitative evaluative research approach** is considered appropriate as it aimed **“to assess the effectiveness of planned teaching program on knowledge regarding essential newborn care among the G.N.M 3rd year students of Era’s College Of Nursing, Lucknow.”**

3.2 RESEARCH DESIGN
Pilot DF (2008) stated that a research design is a blueprint for conducting the study that maximizes control over factors that could interfere with the validity of the findings. It provides a path for the investigator to obtain answers to the research problem. The selection of the design depends on the purpose and variables of the study.

For the present study, **Pre experimental (one group pre-test post-test) research design** was used to achieve the objectives of the study.

<table>
<thead>
<tr>
<th>Pre test</th>
<th>Intervention</th>
<th>Post test</th>
</tr>
</thead>
<tbody>
<tr>
<td>O₁</td>
<td>X</td>
<td>O₂</td>
</tr>
</tbody>
</table>

O₁. Pre-test related to knowledge of selected aspects of Essential New-born care
X-Intervention (Structured teaching program)
O₂. Post-test related to knowledge of selected aspects of Essential New-born care
Fig 3.1 SCHEMATIC REPRESENTATION OF RESEARCH DESIGN

Students who are studying in G.N.M 3\textsuperscript{rd} year in Era’s College of Nursing are target population.

Inclusion criteria

Sample

The total number of students of Who are studying G.N.M 3\textsuperscript{rd} year in Era’s College Of Nursings, Lucknow.

Exclusion criteria

Sampling Technique

Non-probability convenient sampling technique

Sample Size- 75

Data Collection Procedure

Assess the knowledge level with the help of Structured Questionnaire

Data collection tools

- Demographic variables
- Structured questionnaire

Data Analysis

Statistical Interpretation and Graphical Representation
3.3 RESEARCH SETTING
Setting is the physical location and conditions in which data collection takes place. The present study was conducted at Era’s College Of Nursing, Lucknow. The rationale for selection of the present setting was researcher’s familiarity with the setting, convenience, feasibility, expected cooperation from the authorities in getting permission, language and geographical proximity.

3.4 POPULATION, SAMPLE, SAMPLE SIZE & SAMPLING TECHNIQUE

Population:
Sharma SK (2011) refer to population is the entire set of individual or object having some common characteristics. The population of present study was students of G.N.M 3rd year students.

Target population:
Sharma SK (2011) refers to population as the entire aggregate or totality of all the objects, subjects, cases or members that confirm to as designated set of specification or criteria for researcher. The target population of present study was students of G.N.M 3rd year studying in Era’s College Of Nursing Lucknow.

Accessible population:
Students of G.N.M 3rd year in Era’s College Of Nursing, Lucknow and who fulfils the inclusion criteria.

Sample & Sampling technique
Basavanthappa BT (2007) stated that sampling is the process of selecting a representative segment of the population under study and sample is representative unit of a target population. For the present study the sample was the students of G.N.M 3rd year (Diploma 3rd year) the total number of students Who are studying G.N.M 3rd year at Era’s College of Nursing Lucknow and who fulfil the inclusion criteria. Sample was selected by using Non-probability convenient sampling technique.

Sample size
According to Morgan statistical calculation the sample size is 75.

\[
\frac{n}{e^2(N-1) + X^2 P(1-P)} \cdot X^2 NP(1-P)
\]

\[
N=94, \quad P=0.5, \quad X^2 = 3.841, \quad e=0.05
\]

\[
\frac{n}{0.05^2 (94-1) + 3.841 \times 0.5 \times (1-0.5)} = 75.656 \approx 75
\]

3.5 RESEARCH VARIABLES:

Independent variable: The effectiveness of structured teaching programme (STP) on knowledge of Essential new born care

Dependent Variable: The dependent variables is the Knowledge of essential newborn care in the G.N.M 3rd year students

Demographic Variable: Age, Education, Previous knowledge, If yes source of knowledge, Place of residence.
3.6 INCLUSIVE AND EXCLUSIVE CRITERIA

**Inclusion Criteria:** The present study includes:
A  Student who are willing to participate in this study.
B  Student are present at time of data collection.

**Exclusion Criteria:**
A  Student are not present at the time of data collection.
B  Students are not willing to participate in the study.

3.7 SELECTION & DEVELOPMENT OF TOOL

Treece and Treece (1986), development of the tools emphasized as the instrument selected in research should as far as possible be the vehicle that could best obtain data for drawing conclusion pertinent to the study.

As the study is to assess the effect of structured teaching program on knowledge regarding selected aspects of Essential New-born Care among G.N.M 3rd year students at Era’s College Of Nursing Lucknow, a structured questionnaire was used to collect the data.

**SECTION-I: A Socio-demographic data**

It consists of socio-demographic information such as Age, Education, Previous knowledge regarding essential new-born care, If yes source of knowledge, Place of residence, previous information regarding Essential New-born Care

**SECTION -II: Structured knowledge questionnaire**

This section consists of self-instruct questionnaires to assess effectiveness of structured teaching program on knowledge regarding essential new-born care. It consists of 40 multiple choice questions and there will be only one correct answer. The score for correct response to each item was one and incorrect response was zero, thus for 40 items maximum obtainable score was 40 and minimum was zero.

**Questionnaire on knowledge consists of-**

- Questionnaire related to essential new-born care-4 questions
- Questions related to thermoregulation-10 questions
- Questions related to hyperthermia- 5 questions:
- Questions related to umbilical cord care-6 questions
- Questions related to eye care- 5 questions:
- Questions related to breast feeding-10 questions

\[ \text{Percentage} = \frac{\text{Obtained Score}}{100} \times 100 \]

**Total Score**

**SCORE INTERPRETATION**

<table>
<thead>
<tr>
<th>LEVEL OF KNOWLEDGE</th>
<th>SCORE</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inadequate knowledge</td>
<td>0-13</td>
<td>0-34%</td>
</tr>
</tbody>
</table>
Validity of Tool

Polit & Hungler (2010) stated that validity of an instrument refers to the degree to which an instrument measures what is supposed to be measuring.

Validity: Content and tool validity was obtained from 6 experts from the field of medical and nursing department.

Reliability of Tool

The reliability of tool was checked by split-half method and it was found \( r = 0.72 \), which means tool was Reliable. Reliability and practicability of the tool was tested through pilot study and used for main study.

3.8 PILOT STUDY

Polit & Beck (2008) stated that pilot study is a small scale version or trail run designed to test the methods to be used in a larger, more rigorous study. The purpose is to find out the feasibility and reliability of the study.

It was conducted from 03/2/2022 to 11/2/2022 at Harbilas School Of Nursing for a period of one week. The data was collected from 8 samples, by non-probability convenient sampling technique. Formal permission was obtained from the official authorities of the school. Socio- Demographic profile was used to collect personal information of subjects and structured questionnaire method was used to assess the knowledge of Essential New-born Care. According to Non-probability convenient sampling technique 8 samples had been taken and by using the questionnaire method the effectiveness of structured teaching program on Essential New-born Care among G.N.M 3rd year students was assessed. The result of the pilot study showed that there was a positive correlation between knowledge of Essential New-born Care among the G.N.M 3rd year students and the study was found to be feasible.

3.9 ETHICAL CONSIDERATION:

Keeping in mind the legal rights of the subjects, only those students will be included who are willing to participate. Verbal consent will be obtained from the subjects. Anonymity of the study subjects and confidentiality of the information was maintained.

The main study was conducted after the approval from the following-:

- The Principal of ERA College of Nursing
- The Ethical Committee of ERA University
- The Research Committee of ERA University

3.10 DATA COLLECTION PROCEDURE

Data for final study was collected from 01/6/2022 to 08/6/2022. The data was collected from 75 students of G.N.M 3rd year who were study in Era’s College Of Nursing, Lucknow by using Non-probability convenient sampling technique. Prior to the data collection procedure, Formal permission was obtained from the official authorities of the college. The investigator introduced herself to the student of G.N.M 3rd year and developed a good rapport and made them to cooperate and accept for the study. After getting
demographic data from the students pre-test was done with the help of the prepared tool. After the pre-test, structured teaching programme related to Essential New-born Care were conducted with the help of Power Point Presentation and Pamphlets. After seven days, post test was done to evaluate the effectiveness of structured teaching programme by using same evaluation tools. Based on the collected data, effectiveness was found by comparing the pre test and post test score.

PLAN FOR DATA COLLECTION

3.11 DATA ANALYSIS PROCEDURE:

Descriptive and inferential statistics was used for data analysis. The collected data will be presented in forms of tables, diagrams and graphs. Mean, mean%, percentage, standard deviation and chi-square was used for descriptive statistics. Paired t-test was used for inferential statistics.

3.11 DATA ANALYSIS PROCEDURE:
Descriptive and inferential statistics was used for data analysis. The collected data will be presented in forms of tables, diagrams and graphs. Mean, mean%, percentage, standard deviation and chi-square was used for descriptive statistics. Paired t-test was used for inferential statistics.
**Research Design**
Pre-experimental one group pre-test post-test design

**Population**
G.N.M 3rd year students of Era’s College Of Nursing are the target population.

**Sampling Technique**
Non-probability convenient sampling technique

**Sample size**
n = 75

**Pre-Test**
Assessment of knowledge regarding Essential New-born Care

Administration of structured teaching program regarding Essential New-born Care

**Post Test**
Reassessment of knowledge regarding Essential New-born Care

**Data Analysis**
Descriptive and Inferential Statistics

**Summary and Conclusion**

Fig.3.2 SCHEMATIC PRESENTATION OF THE RESEARCH METHODOLOGY
SUMMARY
This chapter deals with the research approach, research design, research setting, target population, sample & sampling technique, inclusion and exclusion criteria, selection & development of tool, description of the tool, validity of the tool, reliability of the tool, pilot study, data collection procedure, ethical considerations and plan of data analysis.

CHAPTER VI
6.1 SUMMARY
The present study was conducted to assess the effectiveness of structured teaching programme on selected aspects of essential new-born care among G.N.M 3rd year students. Pre-experimental one group pre-test post-test design was used for this study. 75 G.N.M 3rd year students, who met the inclusion criteria were selected from Era’s College of Nursing at Lucknow. The investigator introduced herself to the G.N.M 3rd year class and students and developed a good rapport and made them to cooperate and accept for the study. After getting demographic data from the student pre-test was done with the help of the prepared tool. After the pre-test, structured teaching programme related to selected aspects of essential new-born care among G.N.M 3rd year students had been conducted with the help of Power Point Presentation and pamphlets. After seven days, post-test was done to evaluate the effectiveness of structured teaching programme by using same evaluation tools. Based on the collected data effectiveness was found by comparing the pre-test and post test score. The data collected was grouped and analysed by using descriptive statistics and inferential statistics.

6.2 CONCLUSION
In pre-test out of 75 G.N.M 3rd year students, 2.7% children had inadequate knowledge, 88% had moderately adequate knowledge and 9.3% had adequate knowledge. In post-test 0% had inadequate knowledge, 22.7% had moderately adequate knowledge and 77.3% had adequate knowledge. The ‘t’ value 1.99 was compared with tabulated table value at the level of P < 0.05 was significant. So it has been concluded that the structured teaching programme on selected aspects of essential new-born care among G.N.M 3rd year students was effective.

6.3 NURSING IMPLICATIONS
The findings of the study have implications in different branches of nursing that is nursing practice, nursing education, nursing administration and nursing research, by assessing a level of G.N.M 3rd year students knowledge towards the selected aspects of essential new-born care. The investigator received a clear picture regarding the different steps to be taken in different field to improve the same.

Nursing Practice:
Nursing professionals working in the community as well as in the hospital can understand the importance of health education regarding essential new born care. So that there is a need for developing structured teaching programme and health education on different aspects about essential new born care in order to improve the knowledge and practice regarding essential new born care.
Mass health education campaigns should be organized regularly by health team to provide education towards essential new-born care and clear the doubts regarding essential new-born care and motivating them to practice new-born care.
Pediatrician, pediatric health nurse and other health professionals should be aware of selected aspects of essential new-born care and provide education to students.

The teaching given and it showed that there was an increase in the knowledge and attitude of the G.N.M 3rd year students regarding selected aspects of essential new-born care. This would facilitate awareness among selected aspects of essential new-born care.

**Nursing Education:**
The findings of the study indicate that more emphasis should be placed in the curriculum on the essential new born care. The nursing curriculum should consists of knowledge and practices related to teaching strategies and various modalities. So that nursing students can use different teaching methods to impart the appropriate knowledge on essential new born care of the focus group. The students learning experience should provide opportunity to conduct health education campaign and supervised nursing practices about specific topics

- The study outlines, the significance of short term courses and in-service education to equip nurses with the current knowledge on selected aspects of essential new-born care.
- Nurse educators when planning and instructing nursing students, should provide opportunities for students to gain the knowledge regarding selected aspects of essential new-born care.
- Nursing personnel should be given in-service education to update their knowledge.
- Nurse educators when instructing the students, should provide adequate opportunity for each student.

**Nursing Administration:**
The nurse administrator should organize the in-service education training program for nurses and other health care professionals to update their knowledge and practice about essential newborn care. The nurse administrator should motivate the health care professionals to organize campaign newborn care.

- Nursing administrator should implement teaching programmes to make the public aware about influence of mass media on selected aspects of essential new-born care.
- In-service education can be conducted for nurses regarding importance of knowledge regarding selected aspects of essential new-born care among Diploma 3rd year students.
- The nurse administrator should take active part in the policy making, developing protocol, standing orders related to selected aspects of essential new-born care.
- An educational programme on selected aspects of essential new-born care need adequate supervision by nursing administrator and motive them to carry out educative roles.

**Nursing Research:**
The findings of the study serves as basis for the professional and the student nurses to conduct further studies on essential newborn care. The study will motivate the beginning researchers to conduct the same study with different variables and large sacless

- In nursing there is scarce literature and research done on knowledge of regarding selected aspects of essential new-born care among nursing students. Research should be conducted to assess the level of knowledge about the selected aspects of essential new-born care among Diploma 3rd year students.
- Nurses should take initiative to conduct research on opinion of teachers regarding level of knowledge of essential new-born care.
- This study will motivate other investigator to conduct future studies regarding this topic.
This study will help the nurse researchers to develop insight into the developing module and set information towards awareness about selected aspects of essential new-born care and prevention of complication.

6.4 LIMITATIONS:
The study is restricted to the,
• Diploma 3rd year students who are study in Era’s college of Nursing, Lucknow.
• Sample size of 75 students of Diploma 3rd year
• The study was limited to the selected nursing college at Lucknow.
• Duration of the study is 4 weeks.

6.5 RECOMMENDATIONS:-
• Similar study can be undertaken on a large sample for making a more valid generalization.
• Similar study can be done by including additional demographic variables.
• A comprehensive study can be conducted between rural postnatal mothers and urban postnatal mothers.
• Similar study can be undertaken by descriptive study.
• An experimental study can be undertaken with control group for effective comparison.

CHAPTER IV
ANALYSIS AND INTERPRETATION
Data analysis is a method for rendering quantitative information on meaningful and intangible. It is a process of summarization, organization, evaluation, interpretation and communication of numeric information in such a way that they provide answer to the research problem. This chapter deals with the analysis and interpretation of data collected from 75 samples on knowledge regarding selected aspects of Essential New-born Care among students of G.N.M 3rd year to assess the effect of structured teaching program. The data obtained were computed and analysed by both descriptive and inferential statistics. The level of significance is set at 0.5.

OBJECTIVES OF THE STUDY:
1. To assess the knowledge on essential newborn care among the G.N.M 3rd Year nursing students.
2. To evaluate the effectiveness of structured teaching programme regarding knowledge of Essential Newborn Care.
3. To associate the Pre test- Post test level of knowledge of students regarding Essential Newborn Care.

The collected information was organized and presented in 2 parts:
Section I: Sample characteristics of students of G.N.M 3rd year
Section II: Objectives wise analysis.

SECTION-I
### DISTRIBUTION OF SAMPLES ACCORDING TO THE SOCIO-DEMOGRAPHIC VARIABLES.

Table 4.1 Frequency and Percentage Distribution of samples according to their selected socio-demographic variables.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Options</th>
<th>ADEQUATE KNOWLEDGE</th>
<th>MODERATE KNOWLEDGE</th>
<th>INADEQUATE KNOWLEDGE</th>
<th>Chi Test</th>
<th>P Value</th>
<th>df</th>
<th>Table Value</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age in Years</td>
<td>17-20 years</td>
<td>1</td>
<td>20</td>
<td>0</td>
<td>2.17</td>
<td>0.70</td>
<td>3</td>
<td>9.48</td>
<td>Not Significant</td>
</tr>
<tr>
<td></td>
<td>21-25 years</td>
<td>5</td>
<td>41</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>26-30 years</td>
<td>1</td>
<td>5</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>31-35 years</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>Senior secondary</td>
<td>3</td>
<td>30</td>
<td>1</td>
<td>0.03</td>
<td>0.98</td>
<td>3</td>
<td>5.99</td>
<td>Not Significant</td>
</tr>
<tr>
<td></td>
<td>Graduate</td>
<td>4</td>
<td>36</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Previous Knowledge</td>
<td>No</td>
<td>0</td>
<td>18</td>
<td>0</td>
<td>3.23</td>
<td>0.19</td>
<td>2</td>
<td>5.99</td>
<td>Not Significant</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>7</td>
<td>48</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Source of Knowledge</td>
<td>No Knowledge</td>
<td>0</td>
<td>18</td>
<td>0</td>
<td>8.00</td>
<td>0.62</td>
<td>1</td>
<td>18.30</td>
<td>Not Significant</td>
</tr>
<tr>
<td></td>
<td>Mass medias</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Public health worker</td>
<td>1</td>
<td>7</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Teacher</td>
<td>2</td>
<td>20</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 4.1 Reveals:

- According to Age among 75 samples of group, 17-20, 21 (28.0%) were from 21-25, year age group, 48 (64.0%) were from 26-30 year age group, 06 (8.0%) were from 31-35 year age group, 0 (0%).
- According to Education among 75 samples of group, 34 (45.3%) were senior secondary and 41 (54.7%) were graduate.
- According to previous knowledge among 75 samples of group, No 18 (24.0%) were from Yes 57 (76.0%).
- According to Source of knowledge among 75 samples of group, No knowledge 18 (24.0%) were from Mass media, 01 (1.3%) were from public health worker, 09 (12.0%) were from Teacher, 23 (30.7%) were from other social media, 0 (0.0%) and were from Family and relatives 15 (20.0%).
- According to Place of Residence from urban group, 36 (48.0%) and from Rural group, 39 (52.0%).

Fig. 4.1 (a): Bar graph showing percentage Distribution of age among age group of 17-35 years.
Fig. 4.1 (b): Bar graph showing percentage Distribution of education of G.N.M 3rd year students.

Fig. 4.1 (c): Bar graph showing percentage Distribution of percentage of previous knowledge.
Fig. 4.1 (d): Bar graph showing percentage Distribution of source of knowledge.

Fig. 4.1 (e): Bar graph showing percentage Distribution of place of residence.
SECTION-2
OBJECTIVE-1
Assess the pre-test and post-test level of knowledge regarding selected aspects of essential new-born care among the G.N.M 3rd year students.

Table 4.2 (a) Assessment of pre-test level of knowledge regarding selected aspects of essential new-born care among the G.N.M 3rd year students. n=75

<table>
<thead>
<tr>
<th>Level of knowledge</th>
<th>Frequency</th>
<th>Percentage</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inadequate knowledge</td>
<td>0-13</td>
<td>2 (2.7%)</td>
<td></td>
</tr>
<tr>
<td>Moderately adequate knowledge</td>
<td>14-26</td>
<td>66(88%)</td>
<td>21.17</td>
</tr>
<tr>
<td>Adequate knowledge</td>
<td>27-40</td>
<td>7(9.3%)</td>
<td></td>
</tr>
</tbody>
</table>

Minimum score=0
Maximum score=40

Table 4.2 (a) Depicts the pre-test frequency, percentage and mean distribution of knowledge regarding selected aspects of knowledge regarding essential new-born care. The 2(2.7%) students were having inadequate knowledge, 66 (88%) were moderately adequate knowledge, 7(9.3%) were having adequate knowledge.

Hence, it was concluded that G.N.M 3rd year nursing were having inadequate knowledge regarding selected aspects of essential new-born care.

Table No: Descriptive Statistics table

<table>
<thead>
<tr>
<th>Descriptive Statistics</th>
<th>Mean</th>
<th>S.D.</th>
<th>Median Score</th>
<th>Maximum</th>
<th>Minimum</th>
<th>Range</th>
<th>Mean%</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRETEST KNOWLEDGE</td>
<td>21.17</td>
<td>4.298</td>
<td>21</td>
<td>31</td>
<td>13</td>
<td>18</td>
<td>52.90</td>
</tr>
</tbody>
</table>
Fig. 4.2: Bar diagram depicts percentage distribution of knowledge regarding selected aspects of essential new-born care among the G.N.M 3rd year nursing students on pre-test day.

Table No: Descriptive Statistics table

<table>
<thead>
<tr>
<th>Descriptive Statistics</th>
<th>Mean</th>
<th>S.D.</th>
<th>Median Score</th>
<th>Maximum</th>
<th>Minimum</th>
<th>Range</th>
<th>Mean%</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRETEST KNOWLEDGE</td>
<td>21.17</td>
<td>4.298</td>
<td>21</td>
<td>31</td>
<td>13</td>
<td>18</td>
<td>52.90</td>
</tr>
</tbody>
</table>

Maximum= 40        Minimum= 0
Post Score

Table No: Table Showing Level of Scores

<table>
<thead>
<tr>
<th>CRITERIA</th>
<th>SCORE LEVEL (N= 75)</th>
<th>POST TEST f(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>INADEQUATE KNOWLEDGE</td>
<td>0(0%)</td>
<td></td>
</tr>
<tr>
<td>MODERATE KNOWLEDGE</td>
<td>17(22.7%)</td>
<td></td>
</tr>
<tr>
<td>ADEQUATE KNOWLEDGE</td>
<td>58(77.3%)</td>
<td></td>
</tr>
</tbody>
</table>

Maximum Score=40 Minimum Score=0

Fig. 4.3: Bar diagram depicts Mean(21.17), S.D(4.298), Median Score(21), Maximum Score(31), Minimum Score(13), Range(18) and Mean% of knowledge regarding selected aspects of essential newborn care among the G.N.M 3rd year nursing students.

Table 4.2 (b)
n=75
Minimum score=0 Maximum score=40

**Table 4.2 (b)** depicts the post-test frequency, percentage and mean distribution of knowledge regarding selected aspects of essential new-born care. The 0(0%) Diploma 3rd year students 0-13 years were having inadequate knowledge, 12 (22.7%) were moderately adequate knowledge, (77.3%) were having adequate knowledge.

Hence, it was concluded that G.N.M 3rd year nursing students were having adequate knowledge regarding selected aspects of essential new-born care.

Among G.N.M 3rd year nursing students on post-test day.

**Descriptive Statistics table:**

<table>
<thead>
<tr>
<th>Descriptive Statistics</th>
<th>Mean</th>
<th>S.D.</th>
<th>Median Score</th>
<th>Maximum</th>
<th>Minimum</th>
<th>Range</th>
<th>Mean%</th>
</tr>
</thead>
<tbody>
<tr>
<td>POST TEST KNOWLEDGE</td>
<td>29.93</td>
<td>4.304</td>
<td>31</td>
<td>38</td>
<td>16</td>
<td>22</td>
<td>74.80</td>
</tr>
</tbody>
</table>

OBJECTIONS -2
Evaluate the effectiveness of structured teaching program on the essential new-born care.
Table 4.3: Determine the effect of pre-test and post-test knowledge scores among G.N.M 3rd year nursing students regarding selected aspects of essential new-born care. 

n=75

<table>
<thead>
<tr>
<th>LEVEL OF KNOWLEDGE</th>
<th>PRETEST</th>
<th>POSTTEST</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>Percent age</td>
</tr>
<tr>
<td>Inadequate knowledge (0-13)</td>
<td>2</td>
<td>(2.7%)</td>
</tr>
<tr>
<td>Moderately adequate knowledge (14-26)</td>
<td>66</td>
<td>(88%)</td>
</tr>
<tr>
<td>Adequate knowledge (27-40)</td>
<td>7</td>
<td>(9.3%)</td>
</tr>
</tbody>
</table>

Minimum Score=0 Maximum Score=40

Mean & mean percentage % distribution comparison of Pre-test and Post-test knowledge scores. 

N=75

<table>
<thead>
<tr>
<th>Paired T Test</th>
<th>Mean±S.D</th>
<th>Mean%</th>
<th>Range</th>
<th>Mean Diff.</th>
<th>Paired T Test</th>
<th>P value</th>
<th>Table Value at 0.05</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRETEST KNOWLEDGE</td>
<td>21.17±4.298</td>
<td>52.90</td>
<td>13-31</td>
<td>8.760</td>
<td>16.347</td>
<td>&lt;0.001</td>
<td>1.99</td>
</tr>
<tr>
<td>POSTTEST KNOWLEDGE</td>
<td>29.93±4.304</td>
<td>74.80</td>
<td>16-38</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Significance Level 0.05 Maximum=40 Minimum=0

Table 4.3: The mean 74.80 of post-test score was more than the mean 52.90 of pre-test Diploma 3rd year nursing students. The comparison of Pre-test and Post-test knowledge on selected aspects of essential new-born care significant difference with t value (1.99) at p 0.05 Significance Level. Hence, it was concluded that there was significant difference between the Pre-test and Post-test knowledge on selected aspects of essential new-born care among the G.N.M 3rd year nursing students.
Table No: Comparison of PRE and POST Scores

N=75

<table>
<thead>
<tr>
<th></th>
<th>Mean±S.D.</th>
<th>Mean%</th>
<th>Range</th>
<th>Mean Diff.</th>
<th>Paired T Test</th>
<th>P value</th>
<th>Table Value at 0.05</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRETEST KNOWLEDGE</td>
<td>21.17±4.298</td>
<td>52.90</td>
<td>13-31</td>
<td>8.760</td>
<td>16.347</td>
<td>*Sig</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>POSTTEST KNOWLEDGE</td>
<td>29.93±4.304</td>
<td>74.80</td>
<td>16-38</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

** Significance Level 0.05     Maximum=40 Minimum=0

Figure No: Line diagram showing Individual Scores
**Diagram Showing Pre and Post Mean & SD scores**

**Diagram Showing Individual Score Gain (Effectiveness)**

<table>
<thead>
<tr>
<th>Mean %</th>
<th>PRE TEST KNOWLEDGE</th>
<th>POST TEST KNOWLEDGE</th>
<th>DIFFERENCE</th>
<th>PRE TEST KNOWLEDGE SCORE %</th>
<th>POSTTEST KNOWLEDGE SCORE %</th>
<th>DIFFERENCE %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average</td>
<td>21.17</td>
<td>29.93</td>
<td>8.76</td>
<td>52.93</td>
<td>74.83</td>
<td>21.90</td>
</tr>
</tbody>
</table>
Table No: Table Showing Association of Scores and Demographic Variables
This section deals with the findings related to the association between score and selected demographic variables. The chi-square test was used to determine the association between the score levels and selected demographic variables.

OBJECTIVES 3
Associate between knowledge score regarding selected aspects of essential new-born care with selected socio demographic variables.

Table 4.4: This section deals with the findings related to the association between score and selected demographic variables. The chi-square test was used to determine the association between the score levels and selected demographic variables.

| ASSOCIATION OF PRETEST KNOWLEDGE SCORES WITH SELECTED SOCIO-DEMOGRAPHIC VARIABLES. |
|-----------------------------------------|----------------------------------|------------------------------|-----------------|-----------------|-------------------|-----------------|-----------------|-----------------|
|             |                             | ADEQUATE KNOWLEDGE | MODERATE KNOWLEDGE | INADEQUATE KNOWLEDGE | Chi Test | P Value | d f | Table Value | Result          |
| Variables   | Options                     |                    |                  |                        |          |         |     |              |                 |
| Age in Years| 17-20 years                 | 1                  | 20               | 0                      | 2.17     | 0.70    | 4   | 9.48          | Not Significant |
|             | 21-25 years                 | 5                  | 41               | 2                      |          |         |     |              |                 |
|             | 26-30 years                 | 1                  | 5                | 0                      |          |         |     |              |                 |
| Education   | Senior secondary school     | 3                  | 30               | 1                      | 0.03     | 0.98    | 2   | 5.99          | Not Significant |
|             | Graduate                    | 4                  | 36               | 1                      |          |         |     |              |                 |
| Previous Knowledge | No   | 0                  | 18               | 0                      | 3.23     | 0.19    | 2   | 5.99          | Not Significant |
|             | Yes                         | 7                  | 48               | 2                      |          |         |     |              |                 |
| Source of Knowledge | No Knowledge | 0                  | 18               | 0                      | 8.00     | 0.62    | 1   | 18.3          | Not Significant |
|             | Mass media(s)               | 0                  | 1                | 0                      |          |         |     |              |                 |
Table 4.4: Shows that the association between the level of score and socio demographic variable. Based on the objectives used to Chi-square test used to associate the level of knowledge and selected demographic variables. There is no significance association between the level of scores and other demographic variables (Age, Education, Previous knowledge, If yes source of knowledge ,Place of residence). The calculated chi-square values were less than the table value at the 0.05 level of significance.

Table 4.5: This section deals with the findings related to the association between score and selected demographic variables. The chi-square test was used to determine the association between the score levels and selected demographic variables.
| Table 4.5: Shows that the association between the level of score and socio demographic variable. Based on the objectives used to Chi-square test used to associate the level of knowledge and selected demographic variables. There is no significance association between the level of scores and other demographic variables (Age, Education, Previous knowledge, If yes source of knowledge ,Place of residence). The calculated chi-square values were less than the table value at the 0.05 level of significance. |
| REFERENCES |
8. Application of Nursing Theories (1st edition), New delhi, jaypee brothers company.
54. Pal panchali’s , pediatric nursing (2020). CBS publications ,New Delhi

Online Abstract

Online Abstract
e. K.0DGKX, (2002). ³ %UHDVIIIHGfQJ DQG QHIZERUQ cDUH SUDeWicHV´, IQGiDQ jRXUQDO RI paediatrics: 271-283
i. WHO/FHE/MSM/93.


