A Study to Assess the Knowledge Regarding Essential New Born Care among Nursing Students

[1]Sanjukta Nongthombam, [2]Jayashree Kakoti

Abstract-

Background of the study: High quality universal new born 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 born should have access to essential new born care, which is the critical care for all babies in the first days after birth. Despite global efforts to reduce infant mortality, an estimated 2.4 million new born die every year within the first month of life, with over 80% of this death occurring in low- and middle – income countries. Many of these deaths are preventable through evidence- based intervention such as essential new born care. Despite the availability of evidence – based intervention, the uptake of essential new born care practices remains in low in many low – and middle- income countries. This is due to a lack of knowledge and awareness among mothers and health care providers, inadequate infrastructure and resources, and cultural and traditional beliefs and practices. 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 is a set of strategic and cost-effective interventions planned to improve the health of new born through the care they receive from birth up to 28days. Essential new-born care includes: Immediate care at birth (delayed cord clamping, thorough drying, assessment of breathing, skin to skin contact, and early initiation of breast feeding),Thermal care, Resuscitation when needed, Support for breast milk feeding, Nurturing care, Infection prevention, Assessment of health problem, Recognition and response to danger signs, Timely and safe referral when needed.

Objectives: To assess the knowledge of essential new-born care among nursing students of NEMCARE Institute of Nursing Sciences. To find out association between knowledge of essential newborn care with selected demographic variables.

METHODOLOGY: Research methodology is defined as a systematic way to solve a research problem by collecting data, using various techniques, proving a interpretation of the collected data and drawing conclusions about the research data. The present study is aimed at assessing the knowledge regarding essential new born care among nursing students in NEMCARE Institute of Nursing Sciences.

RESULTS: This chapter represents the analysis and interpretation of the study. The study was conducted to assess the knowledge regarding essential new born care among nursing students. The data collection was done on 8/8/2023 in the NEMCARE Institute of Nursing Sciences among 40 students after confirming the inclusion criteria. Convenience sampling technique was used. The purpose of the study was explained, participant information sheet was provided to each students and informed written consent was obtained to collect data from the nursing students. Study was conducted using self-administered questionnaire prepared by investigator assessment of knowledge regarding essential new born care. Descriptive statistics was used to assess the distribution of subjects based on demographic variables frequencies; percentage, were used to present data the results were represented in tables and figures under the following section- Section A- Distribution of the nursing students based on demographic variables. Section B- Distribution of samples according to adequacy of knowledge regarding essential new born care.

CONCLUSION: Essential new born care is crucial for promoting the health and well- being of infants, encompassing measures like immediate skin-to-skin contact, breastfeeding support, and routine health assessments. Prioritizing these practices lays a foundation for a positive start in a new born life, fostering their growth and development.

Keywords: **Essential, New born, care.**

INTRODUCTION:

High quality universal new born 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 born should have access to essential new born care, which is the critical care for all babies in the first days after birth. Despite global efforts to reduce infant mortality, an estimated 2.4 million new born die every year within the first month of life, with over 80% of this death occurring in low- and middle – income countries. Many of these deaths are preventable through evidence- based intervention such as essential new born care.

Despite the availability of evidence – based interventions, the uptake of essential new born care practices remains in low in many low – and middle- income countries. This is due to a lack of knowledge and awareness among mothers and health care providers, inadequate infrastructure and resources, and cultural and traditional beliefs and practices.
 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 is a set of strategic and cost-effective interventions planned to improve the health of new born through the care they receive from birth up to 28days.

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

II Statement of the Problem
A study to assess the knowledge regarding essential new born care among nursing students of NEMCARE Institute of Nursing Sciences, Mirza, Kamrup Rural District, Assam.
Objectives:
  To assess the knowledge of essential new born care among nursing students of NEMCARE Institute of Nursing Sciences.
To find out association between knowledge of essential newborn care with selected demographic variables.

III RESEARCH METHODOLOGY:
Research methodology is defined as a systematic way to solve a research problem by collecting data, using various techniques, proving an interpretation of the collected data and drawing conclusions about the research data.
The present study is aimed at assessing the knowledge regarding essential new born care among nursing students in NEMCARE Institute of Nursing Sciences.

CRITERIA FOR SAMPLE SELECTION:
Inclusion criteria:
- Undergraduate nursing students who were willing to participate in the study.
- Undergraduate nursing student who were available on the day of the data collection.
Exclusion criteria:
- Those who were not willing to participate in the study.
- Those who were absent on the day of data collection.

DATA COLLECTION TOOLS AND TECHNIQUES:
The data collection tools had the following:
Section-A: Demographic profile of the students.
Section-B: Self administered questionnaire for assessment of knowledge regarding essential new born care.

SCORING AND INTERPRETATION:
Section A: Demographic profile of the students. This consist of demographic variables such as age, gender, religion, source of information, experiences of a student with essential new born care. Data was collected at the initial interaction between investigator and the students.
Section B: knowledge questionnaire prepare by the investigator for the assessment of knowledge regarding essential new born care.

The score was given as follows:
- Correct answer- 1
- Incorrect answer- 0
- Total score- 20

For the purpose of analysis, the total score was converted to a percentage and will be interpreted as follows:
- 0-49% - inadequate
- 50-74% - moderately adequate
- 75-100% - adequate

DATA COLLECTION PROCEDURE:
The data collection period was scheduled on (date). The time schedule was from (time). Permission was obtained from the principal of the NAMCARE Institute of Nursing Sciences, Mirza. Data was collected by self-administered knowledge questionnaire.

PLAN FOR DATA ANALYSIS
Analysis was based on the objectives of the study using descriptive statistics. Demographic variables and knowledge questionnaire were analysed by frequency and percentage distribution.

ETHICAL CONSIDERATION:
The study was done after getting permission from principal of NEMCARE Institute of Nursing Sciences.
An informed written consent was obtained from all the subjects before the data collection procedures, after explaining the following:
- Purpose of the study
- Voluntary participation by nursing students
- Maintenance of confidentiality

Privacy of the subjects and confidentiality of the information was maintained throughout the study.

IV RESULTS
ANALYSIS AND INTERPRETATION
This chapter represents the analysis and interpretation of the study. The study was conducted to assess the knowledge regarding essential new born care among nursing students. The data collection was done on 8/8/2023 in the NEMCARE Institute of Nursing Sciences among 40 students after confirming the inclusion criteria. Convenience sampling technique was used. The purpose of the study was explained, participant information sheet was provided to each students and informed written consent was obtained to collect data from the nursing students. Study was conducted using self-administered questionnaire prepared by investigator assessment of knowledge regarding essential new born care.

Descriptive statistics was used to assess the distribution of subjects based on demographic variables frequencies; percentage, were used to present data

The results were represented in tables and figures under the following section-

Section A- Distribution of the nursing students based on demographic variables.

Section B- Distribution of samples according to adequacy of knowledge regarding essential new born care.

SECTION A

Frequency and percentage distribution of sample according to demographic variables

Table 1 : Distribution of sample according to age group
(n=40)

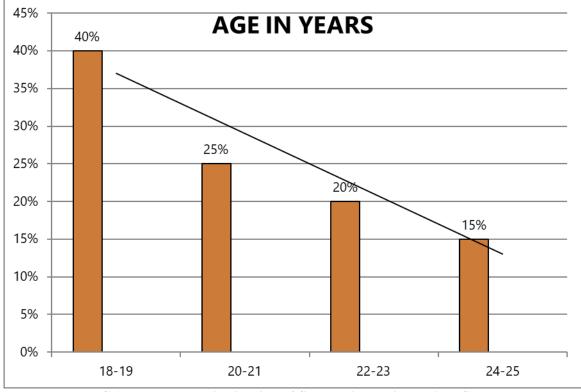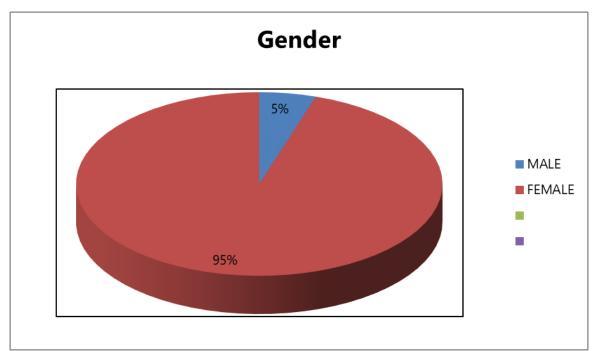| AGE	FREQUENCY	PERCENTAGE
(a) 18 – 19	16	40%
(b) 20 - 21	10	25%
(c) 22 - 23	8	20%
(d) 24 - 25	6	15%

FIG 1: **Percentage Distribution of Sample According to Age Group**

Fig 1 shows that out of 40 sample, 40% of students are in age group 19 to 19 yrs., 25% of students are in age group of 20 to 21 years, 20% students are in age group of 22 to 23 years, 15% of students are in the age group of 24 to 25 years.

Table 2: Percentage distribution of sample according to gender

GENDER	FREQUENCY	PERCENTAGE
MALE	2	5%
FEMALE	38	95%

FIG 2: Percentage distribution of sample according to Gender

Fig 2 shows that majority are female i.e. 95% and minority are male i.e. 5% **Table 3: Distribution of sample according to Religion**

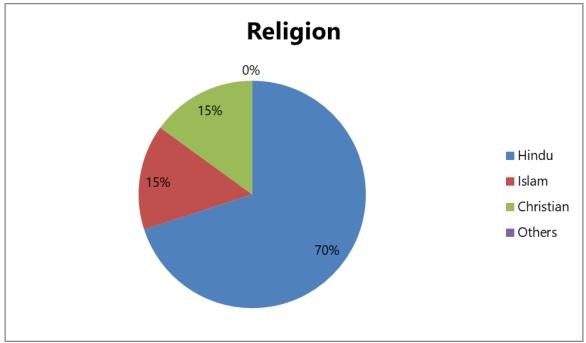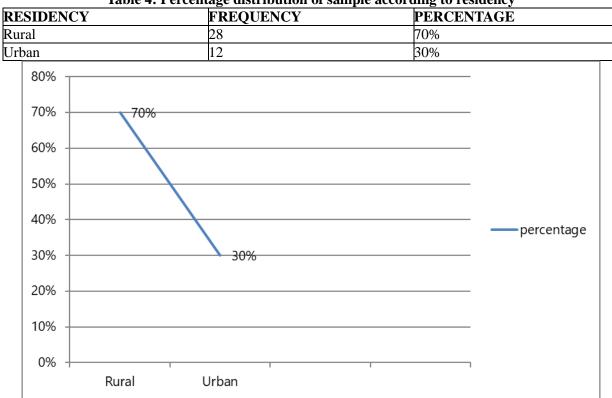| Religion	Frequency	Percentage
Hindu	28	70%
Islam	6	15%
Christian	6	15%
others	0	0%

FIG 3 Percentage distribution of sample according to Religion

Fig 3 shows that 70% of sample are from Hindu Religion, 15% of sample are from Islam religion, , 15% of sample are from Christian religion, , 0% of sample are from others religion.

Table 4: Percentage distribution of sample according to residency

RESIDENCY	FREQUENCY	PERCENTAGE
Rural	28	70%
Urban	12	30%

FIG 4: Percentage distribution of sample according to Residency

Fig 4 shows that 70% of sample are resident of Rural area and 30% of sample are resident of Urban area.
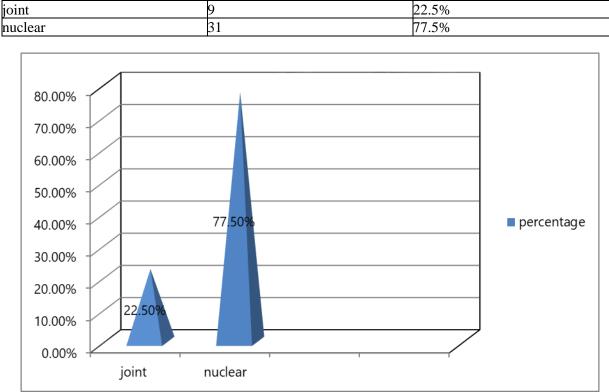
Table 5: Percentage distribution of sample according to type of family

Type of family	Frequency	Percentage
joint	9	22.5%
nuclear	31	77.5%

FIG 5 : Percentage distribution of sample according to Type of Family

Fig 5 shows that 22.5% of sample are from Joint Family and 77.5% of sample are from Nuclear family.

Table 6: Percentage distribution of sample according to Father's occupation

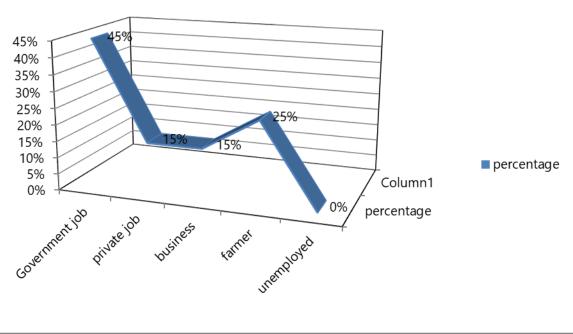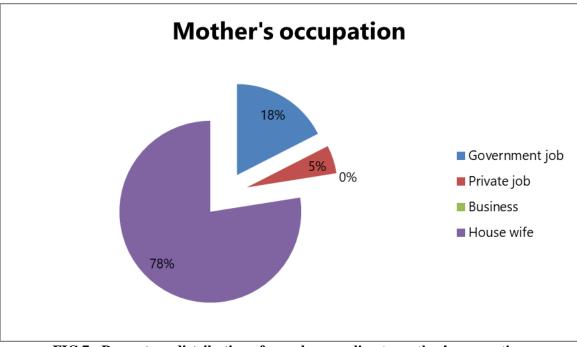| Father's occupation	Frequency	Percentage
Government job	18	45%
Private job	6	15%
Business	6	15%
Farmer	10	25%
Unemployed	0	0%

FIG 6 : Percentage distribution of sample according to Father's occupation

Fig 6 shows that 45% sample's Father's occupation is Government job, 15% sample's Father's occupation is private job, 15% sample's Father's occupation is Business, 25% sample's Father's occupation is Farmer, 0% sample's Father's occupation is Unemployed.

Table 7: Percentage distribution of sample according to mother's occupation

Mother's occupation	Frequency	Percentage
Government job	7	17.5%
Private job	2	5%
Business	0	0%
House wife	31	77.5%

FIG 7 : Percentage distribution of sample according to mother's occupation

Fig 7 shows that 17.5% sample's Mother's occupation is Government job, 5% sample's Mother's occupation is private job, 0% sample's Mother's occupation is Business, 77.5% sample's Mother's occupation is House wife.

Table 8 : Percentage distribution of sample according to Family income

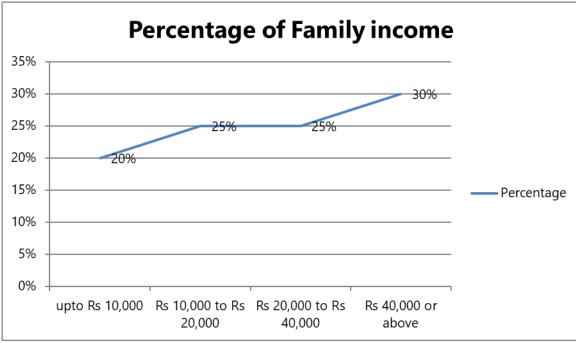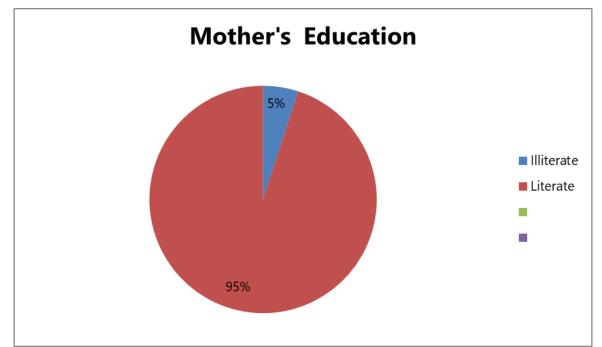| Family income	Frequency	Percentage
Up to RS 10,000	5	20%
RS10,000 – RS 20,000	10	25%
RS 20,000 – RS 40,000	10	25%
RS 40,000 or above	15	30%

FIG 8: Percentage distribution of sample according to Family income

Fig 8 shows that 20% of Sample's Family income is up to RS 10,000 , 25% of Sample's Family income is RS10,000-20,000 , 25% of Sample's Family income is RS 20,000 – 40,000, 30% of Sample's Family income is RS 40,000 or above.
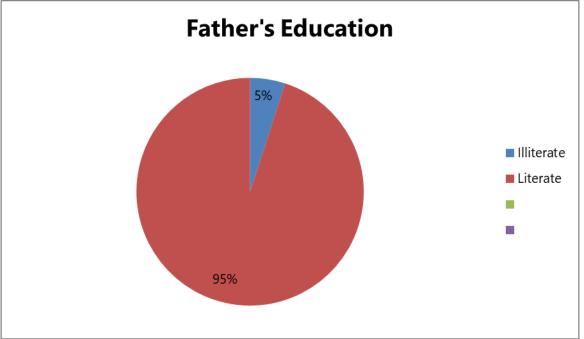
Table 9: Percentage distribution of sample according to Parents Education
9.1 : Percentage distribution of sample according to mother's Education

Mother's Education	Frequency	Percentage
Illiterate	2	5%
Literate	38	95%

FIG 9.1: Percentage distribution of sample according Mother's Education

Fig 9.1 shows that 5% of sample's mothers are illiterate, 95% of sample's mothers are Literate.

Table 9.2: Percentage distribution of sample according to sample Father's education

Father's education	Frequency	Percentage
Illiterate	2	5%
Literate	38	95%

FIG 9.2: Percentage distribution of sample according to Father's Education

Fig 9.2 shows that 5% of Sample's Fathers are illiterate, 95% of sample's Fathers are Literate

Table 10 Percentage Distribution of sample according to source of information

HEARD ABOUT ESSENTIAL NEWBORN CARE BEFORE	FREQUENCY	PERCENTAGE
YES	33	82.5%
NO	7	17.5%

FIG 10: shows that 82.5% of sample have heard about essential new born care and 17.5% of sample haven't heard about essential new born care.

SECTION B
Table 2: distribution of nursing students based on knowledge
n=40

Knowledge in percentage	Frequency	Percentage
Poor (0 – 49%)	8	20%
Average (50 – 74%)	28	70%
Good (75-100%)	4	10%

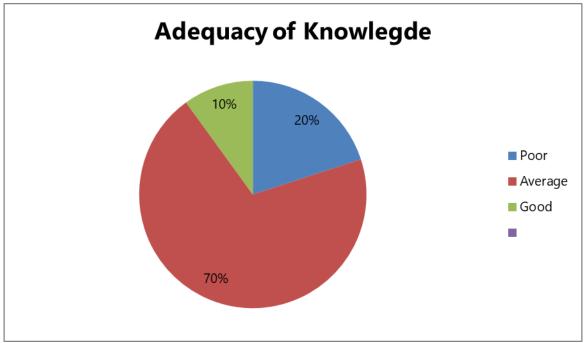**Table:** Frequency and percentage regarding knowledge on essential new born care among nursing students .

Fig: Shows that majority of the sample 70% had Average knowledge, 20% had Poor knowledge and 10% had Good knowledge

DISCUSSION:
Essential new born care is a crucial aspects of ensuring the wellbeing of a new born in the first few hours and days of life. It encompasses a range of practices aimed at promoting the baby's health, bonding with parents, and preventing potential complications. Key components include thermal care, early and exclusive breastfeeding, hygienic practices, and routine health assessments. Implementing these measures promptly contributes to the overall health and development of the new born.

This chapter deals with discussion of present study finding in relation to the various studies conducted in this field. The aim of the study to assess the knowledge regarding essential new born care among the nursing students of NEMCARE institute of nursing sciences. A structured questionnaire with 20 questions was used to assess the knowledge among the nursing students. The Knowledge level of entire subjects (40) were graded as "adequate knowledge", "moderately adequate knowledge" and "inadequate knowledge".

The finding of the study has been discussed under the following headings

SECTION 1: DISTRIBUTION OF THE STUDY SUBJECTS ACCORDING TO THE CHARACTERISTICS
In this present study the democratic data of the subjects were analysed and interpreted. The selected demographic data of nursing students were age , gender, religion, residency, type of family, occupation(father's and mother's) , family income, education of parent's, heard about essential new-born care and sources of information.
The age wise distribution of nursing students reveal that majority of the students were in the age group of 18 – 19 years i.e. 40% , followed by 25% in the age group of 20 – 21 years, 20% in the age group of 22- 23years , only 15% were in the age group of 24 – 25 years.
In this present study, out of 40 nursing students, 95% were female and only 5% were male.
    According to religion, 70% were Hindu, 15% were Islam, 15% Christian, and 0% from other religion.
    Distribution of the nursing students according to residency that majority of the students are from rural area i.e. 70% and minority are from the urban area i.e. 30%.
In this study 77.5% samples belong to nuclear family and only 22.5% samples belong to joint family.
Regarding Father's occupation, 45% were government employee ,15% were private employee, 15% were businessman and 25% were farmer and 0% were unemployed.
Regarding mother's occupation, 77.5% were housewives, 17.5% were government employee and 5% were private employee.
In the present study, family income showed that, 30% had family income of RS 40,000 and above, 25% had family income of RsS20,000-40,000, 25% had family income of RS 10,000 – 20,000 and 20% had family income of up to RS 10,000.
In this present study, Distribution of nursing students according to parent's education, 95% were literate and 5% were illiterate.
Distribution of nursing students according to source of information 82.5% heard about essential new born care and 17.5% haven't heard about essential new born care. The sources of information 57.5% were from literature (books and magazine), 22.5% were from health care provider, 10% from media or internet, 7.5% from friends and 2.5% from other sources.

SECTION 2: ASSESS THE KNOWLEGDE AMONG NURSING STUDENTS
In this study the findings reveals that majority of the sample i.e. 70% had average knowledge, 20% had poor knowledge and 10% had good knowledge.

VI NURSING IMPLICATION:
The following implication has been derived from the study which is a vital concern to the field of nursing service, nursing education, nursing administration.
•   Ensure nursing students receive comprehensive education on essential newborn care, covering aspects like neonatal assessment, temperature regulation, and feeding technique.
•   Provide ample opportunities for nursing students to engage in hands on clinical practices, allowing them to apply theoretical knowledge in a controlled environment under supervision.

LIMITATION:
•   The data were collected by using structured questionnaire, hence response was limited.

VII CONCLUSION:
Essential new born care is crucial for promoting the health and well- being of infants, encompassing measures like immediate skin-to-skin contact, breastfeeding support, and routine health assessments. Prioritizing these practices lays a foundation for a positive start in a new born life, fostering their growth and development.

REFERENCES:
1.   https://www.hilarispublisher.com/open-access/knowlegde-of-oessesntial-newborn-care-among-nurses-and-midwivesworking-in-lideta-sub-city-government-health-center-84652.html
2.   Mayo   clinic.   Available   from   :   RL https://www.proquest.com/openview/43e4b700fb818cfd9ee33e801fa250ad/?pq-origsite=gscholar&cbl=5425106
3.   Dovepress. Available from : RL http://www.dovepress.com/essential-newborn-care-and-associated-factors-among-obstetrical-care-peer-reviewed-fulltext-article-PHMT
4.   Indianjournal.com. Available from : Rl https://www.indianjournals.com/mobile/home.aspx
5.   Polson. Available from : RL https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0208984

6. Evaluation of the educational impact of the WHO essesntial Newborn Care course in Zambia. Available from   :   RL https://scholar.google.com/scholar?hl=en&sdt=0%2c5&q=essential+newborn+care+review+of+literature+&btnG=#d=gs_qads&t+1699520777811&u=%23p%3DIWOJOwGmvM8J

7. Aseb arba, Knowlegde regarding essential newborn care and associated among nurses and midwives in Wolaita Zone, Southern Ethiopia 2019. https://www.academia.edu/48038767

8. World Health Organisation. Essential newborn care. https://www.who.int/teams/maternal-newborn-and-ageing/newborn-care#:~:%text=essential%20newborn%20newborn%20care20%includes%3A,Resuscitation%20when%20needed

9. International journal of advance in nursing management. https://ijanm.com/HTMLpaper.aspx?journal=international%20journal%20f%20advances%20in%20nursing%20management:PID=2021-9-3-1

10. David A Kola, Metilda S Bijapur. A study to evaluate the effectiveness of simulation on newborn care among III year B.Sc Nursing Students of SDM institute of nursing sciences, sattur, DharwadKarnataka. https://schoolar.google.com/scholar?hl=en&as_sdt=0%2C5&q=knowledge+regarding+essential+newborn+&btnG=#d=gs_qabs&t=1699598415774&u=%23p%3Df_ie9cDODscJ

11. Sudhakar A. Essential of Pediatric Nursing.1st edition. JAYPEE BROTHERS medical publishers(p) LTD. Page no. 89 to 96

12. Basavanthappa BT. Child health nursing.1st edition. JAYPEE BROTHERS medical publishes (p) LTD. Page no. 263 to 273

13. Datta Parul. Pediatric Nursing. 4th Edition. JAYPEE BROTHERS Medical Publishers (p) LTD. Page no. 68 to 70

14. World Health Organization, 2013, http://www.who.int/gho/child health/mortality/neonatal text/en/

15. Informed Decisions for Actions in Maternal Newborn Health. Community-based newborn care, (accessed 30 December 2013).

16. WHO, recommendations on home-based records for maternal, newborn, and child health. Geneva: World Health Organization, 2018.

17. World Health Organization (WHO). Newborn health guideline. 2nd ed. Geneva: WHO, May 2017, pp. 9-11.

18. Shahjahan M, Ahmed MR, Rahman MM, et al. Factors affecting newborn care practices in Bangladesh. Paediatric Perinatal Epidemiologic 2012; 26: 13-18.

19. P. Waiswa, K. Kallander, S. Peterson, G. Tomson, and G. W. Pariyo, "Using the three delays model to understands why newborn babies die in eastern Uganda," Tropical Medicine & International Health, vol. 15, no. 8, pp. 964-972, 2010. View at: Publisher Site/ Google Scholar

20. S. Malhotra, S. P. Zodpey, A. L. Vidyasagaran et al., "Assessment of essential newborn care services in secondary-level facilities from two districts of India," Journal of health, population, and nutrition, vol. 32, no. 1, p. 130, 2014.View at: Google Scholar

21. J. de Graft-Johnson, L. Vesel, H. E. Rosen et al., "Cross-sectional observational assessment of quality of newborn care immediately after birth in health facilities across six sub-Saharan African countries," BMJ open, vol. 7, no. 3, 2017.View at: Publisher Site/ Google Scholar

22. A. N. Faiza, " Assessment of knowledge, attitude and practices of nurse midwives towards immediate care of newborn in Khartoum State teaching hospitals," Journal of American Science, vol. 9, no, pp. 263-270, 2013.View at: Google Scholar

23. B. Worku and M. Gessessie, "Newborn care training manual, essential new born care for every baby," Federal Ministry of Health Ethiopia EPS, 2012.View at: Google Scholar

24. World Health Organization, WHO Recommendation on Newborn Health: Guideline Approved by the WHO Guidelines Review Committee, World Health Organization, Geneva, 2017.

25. Y. Yemaneh and E. Dagnachew, "Knowledge and practice of immediate new born care (inc.) among health professional in governmental health facilities of Bahir Dar City, North Ethiopia 2016," Quality in Primary Cre, vol. 25, no. 6, pp. 360-367, 2017. View at: Google Scholar

26. B. B. Negussie, F. B. Hailu, and A. D. Megenta, " Knowledge and practice of essential newborn care and associated foctors among nurses and midwives working at health canters in Jimma Zone, Ethiopia, 2016," Journal of Nursing & Care, vol. 7, no. 1, 2017. View at: Publisher Site/ Google Scholar