A Descriptive Study to Assess the Knowledge Regarding Neonatal Resuscitation among Nursing Students at Dasmesh College of Nursing, Faridkot, Punjab, India

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Abstract: **The descriptive study was conducted on 58 nursing students to assess the knowledge regarding neonatal resuscitation among nursing students at Dasmesh College of Nursing, Faridkot. Questionnaire was prepared to assess the knowledge regarding neonatal resuscitation. Sampling technique was non-probability purposive sampling. The data was collected and analyzed by using SSPS version 20 by descriptive and inferential statistics Chi square value. The study had revealed that majority of students have average knowledge (60.34%), good knowledge (31.03%) and poor knowledge (8.62%). There is significant association between gender, class of students and profession of parents but non significant association between age, source of information, and previous exposure to neonatal resuscitation, previous year score and interest of students in subject.**

Keywords: **Neonate; Resuscitation; knowledge; Nursing Students.**

1. INTRODUCTION

A newborn is precious not only to his parents, family, community and nation but also to the world at large.Child is the foundation of the health and wealth of nation.The maintance of health is very important.Newborn baby is considered to be tiny and powerless, completely dependent on others for life within one minute of birth.[1]

Newborn is also called neonate. In neonatal period, the first 4 weeks of child life-represent a time when changes are very rapid and many critical events can occur.2

The birth of baby is a wonderful yet very complex process. Many physical and emotional changes occur for mother and baby. A baby must make many physical adjustments of life outside the mother's body. The baby's body systems must work together in a new way. Some times, a baby has difficulty making the transition to the world. Being born prematurely having a difficult or birth defects can make changes more challenging. Fortunately for these babies special newborn care with resuscitation is required.[3]

Perinatal asphyxia and extreme prematurity are the two complications of pregnancy that most frequently require complex resuscitation by skilled personnel. However only 60% of asphyxiated newborn can be predicted antepartum. The remaining newborns are identified until time of birth.[4]

Approximately 80% of low birth weight infants require resuscitation and stabilization at delivery. About 5-10% of newborns need resuscitation nearly 1 million newborns die because of birth asphyxia the world over? In our role as a health provider, recognizing when a baby has breathing problems and using resuscitation skills, when needed are essential to newborn.[5]

Oxygen is important for every part of the human body. Without oxygen the cells that make up our organs, brain and other body parts will die. During pregnancy a baby receives oxygen from his mother through the placenta. After the baby is born, the baby stars to use his own lungs to get the oxygen he needs. For most babies this change happens without any problems. But some babies need help to start or continue breathing. The skill of newborn resuscitation gives that help.[6]

Newborn care is of immense important for proper development and healthy life of a baby. Neonatal resuscitation program has been launched in India since 1990. This program provides a uniform systematic and action- oriented approach to the resuscitation of the newborn. Prospective evaluation of the resuscitation program in teaching hospitals has revealed the use of rational resuscitation practices and a significant decline in asphyxia related death. Birth asphyxia is an important cause of preventable neonatal mortality and morbidity in developing countries. Of the 26 million births each year in India, 4-6 % of neonates fail to establish spontaneous breathing at birth. These babies can be helped if heath care professionals present at the time of birth are skilled in the art of neonatal resuscitation.[7]

World Health Organization (WHO) defines birth asphyxia as —failure to initiate and sustain breathing at birth. Birth asphyxia occurs when an inadequate amount of oxygen is delivered to the fetus. It is third major cause of neonatal death in developing countries and accounts for an estimated 23% of the annual 4 million neonatal death.[8]

A study was conducted to evaluate the post delivery newborn resuscitation practice in delivery room of a maternity hospital. The participants were 33 nurses and 11 paediatric physicians. The main goal of study was to make improvement in delivery room preparation in the evaluation and management of the newborn. Although there was a trend to use more free-flow oxygen following the introduction of the newborn resuscitation program, this was not statistically significant. However, there were no significant differences in the use of endotracheal intubation, chest compressions and medications. 15 of the 51 infants become hypothermic prior to the newborn resuscitation program; none of the infant developed hypothermia in the post neonatal resuscitation program part of the study. This study reveals the effectiveness of newborn resuscitation program among nurses and doctors to make special effort to obtain continuing neonatal resuscitation education to ensure optimal outcomes when newborn emergencies arises in maternity hospital.[9]

WHO, 1995 has reported that, birth asphyxia accounts for about 19% of the approximately 5 million neonatal deaths that occurs each year world wide. Of the 26 million infant born in this country, 3.5 % experience asphyxia at birth. Perinatal asphyxia results from the conditions that interfere with transport of oxygen from the placenta to the fetal tissues. This suggests that the outcome of more than 1 million newborns each year can be improved by using the correct newborn resuscitation techniques. Most newborn babies are vigorous at birth and make a smooth transition from intrauterine lives to the extra uterine environment. About 8-10% of babies require some assistance at birth; however the absolute number becomes more due to the large number of birth in our country. Only about 1-1.5% needs extensive resuscitative techniques including chest compression and medication.[11]

2. OBJECTIVES

- To assess the knowledge regarding Neonatal resuscitation among nursing students.

- To find out the association between knowledge regarding neonatal resuscitation among nursing students with their selected socio-demographic variables.

3. METHODOLOGY

VARIABLES UNDER STUDY:

Researchable variables: Knowledge regarding Neonatal resuscitation among nursing students.

Demographic variables: Age of the students, gender, type of schooling, source of information, previous scoring, and profession of parents and interest of students in subject.

Research approach: Quantitative research approach was employed for the study.

Research design: Descriptive research design employed for this study.

Research setting: Research setting includes Dasmesh College of Nursing Faridkot.

Target population: Target population of study was the Nursing students of Dasmesh college of Nursing, Faridkot, Punjab.

Sample and sample size: The sample was nursing students of Dasmesh College of Nursing faridkot,

Sample size: The sample size was 58 Nursing students of Dasmesh college of Nursing, Faridkot.

Sampling technique: The non-probability purposive sampling technique was used for the study.

SELECTION AND DEVELOPMENT OF TOOL:

The tool consist of 2 parts

PART-1 Socio demographic variables

PART-2 Questionnaire on the knowledge regarding neonatal resuscitation.

PART-1: Demographic Characteristics

It consists of age of the students, gender, type of schooling, source of information, previous scoring, and profession of parents and interest of students in subject.

PART-2: Questionnaire on the knowledge regarding neonatal resuscitation.

It consists of structured question of knowledge regarding neonatal resuscitation among nursing students. It comprised 30 multiple choice questions and correct answer was given a score of 1 and each wrong answer was score of 0.

TABLE 1 Frequency and Percentage distribution of demographic characteristics N=58

Demographic characteristics	n	%
Age of students		
• 19 – 21 years	39	67.24%
• 22 – 23 years	11	18.96%
• 24 – 26 years	5	8.62%
• Above 26 years	3	5.15%
Gender of student		
• Male	4	6.89%
• Female	54	93.10%
Source of information		
• Mass media	1	1.72%
• Classteaching/Workshop	35	60.34%
• Class demonstration	14	24.13%
• Hospital	8	13.79%
Any previous exposure to N.R.		
• Yes	13	22.41%
• No	45	77.58%
Class of students		
☐ B.Sc(N) 3RD year	30	51.7%
☐ GNM 3RD year	13	22.41%
☐ Post basic 1st year	15	25.86%
Previous year scoring		
☐ 50%-60%	7	12.06%
☐ 61%-70%	37	63.79%
☐ 71%-80%	13	22.4%
Profession of parents		
☐ Medical profession	5	8.62%
☐ Teaching profession	7	12.06%
☐ Agriculturist	26	44.82%
☐ Others	20	34.48%
Interest of students in subjects		
☐ Medical surgical nursing	32	55.17%
☐ Paediatrics	16	27.58%
☐ Psychiatrics	4	6.89%
☐ OBG	6	10.34%

TABLE 2 TO ASSESS THE KNOWLEDGE REGARDING NEONATAL RESUSCITATION AMONG NURSING STUDENTS N-58

Level of knowledge	Score	n	%
Poor	0-10	5	8.62%
Average	11-20	35	60.34%
Good	21-30	18	31.03%

TABLE: 3 ASSOCIATION OF KNOWLEDGE WITH SELECTED SOCIO- DEMOGRAPIC VARIABLES

S.NO	Variables	Level of knowledge			Chi - square	df	Table value	Level of significance
		average	good	Poor				
1.	**Age**							
	19-21years	20	15	4	6.638	6	12.59	5%NS
	22-23	9	2	0				
	24-25	3	1	1				
	Above 26	3	0	0				
2.	**Gender**							
	Male	2	0	2	9.943	2	5.99	5% S
	Female	33	18	3				
3.	**source of information** Mass media	1	0		9.536	6	12.59	5%NS
	Class teaching/workshop	23	10					
	Class demonstration	5	8					
	Hospital	6	0					
4.	**Previous exposure to NR** Yes	11	2	1	2.731	2	5.99	5%NS
	No	24	16	4				
5.	**Class of student** B.sc(N) 3rd year	13	17	0	25.573	4	9.49	5%S
	GNM 3rd year	10	0	4				
	Post basic 1st year	12	1	1				
6.	**Previous year scoring** 50%-60%	4	4	0	5.972	4	9.49	5%NS
	61%-70%	20	13	4				
	71%-80%	11	1	1				

4. MAJOR FINDINGS

According to the age 67.24% of students were in the age group of 19-21 years, 18.96% of students were in the age group of 22-23 years, 8.62% of students were in the age group of 24-26 years, 5.17% of students were in the age group of above 26 years.

According to gender 6.89% were males and 93.10% were females.

According to the source of information 1.72% students gained information from mass media, 60.34% students gained information from class teaching/workshop, 24.13% students gained information from class demonstration, and 13.79% students gained information from hospital.

According to previous exposure 22.41% students were having exposure to neonatal resuscitation and 77.58% students not having exposure to neonatal resuscitation.

According to class of students 51.7% students belongs to B.Sc (N) 3rd year, 22.41% students belongs to GNM 3rd year and 25.86% belongs to Post basic 1st year.

According to previous year scoring 12.06% students scored 50%-60%, 63.79% students scored 61%-70% and 22.4% students scored 71%-80%.

According to profession of parents 8.62% parents belongs to medical profession, 12.06% parents belongs to teaching profession, 44.82% parents belongs to agriculture and 34.48% parents belongs to other.

According to interest of students 55.17% students are interested in Medical-Surgical Nursing, 27.58% students are interested in Paediatrics, 6.89% students are interested in Psychiatry and 10.34% students interested in OBG.

5. DISCUSSION

Majority of students have average knowledge (60.34%), good knowledge (31.03%) and poor knowledge (8.62%). The results reveals that there is significant association between gender, class of students and profession of parents but no significant association between age, source of information, previous exposure to neonatal resuscitation, previous year score and interest of students in subject. Similar findings were supported by a study conducted by Benazeera, Shlipa G.S, Umarani. J (2014)[1], in selected Nursing College at Mangalore. The samples comprised of 100 nursing students. The samples were selected using purposive sampling technique. Data was collected using demographic Performa, structured knowledge questionnaire on neonatal resuscitation. Data was analyzed using descriptive and inferential statistics. The research design adopted for the study was descriptive research design. The study concluded that Nursing students, as the key personnel in acquiring adequate knowledge regarding management of neonatal resuscitation, practical training programme regarding neonatal resuscitation should consider in the nursing education to ensure acceptable neonatal outcome.

6. IMPLICATIONS

The finding of study has implication in various areas of nursing practice, nursing education, nursing administration and nursing research.

7. RECOMMENDATIONS

On the basis of the findings of the study is recommended that:

- A study can be undertaken with the large sample for better generalization.
- A similar study can be undertaken by adopting an experimental design.
- A comparative study can be done between nursing students.
- A similar study can be done to assess the knowledge of students.

CONFLICT OF INTEREST:

There is no conflict of interest as researcher had not received any financial support from institute or individual. Project was self financed.

8. CONCLUSIONS

From the findings of study following conclusions were drawn that the knowledge of maximum nursing student regarding neonatal resuscitation was average knowledge.

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