



A STUDY TO ASSESS THE KNOWLEDGE AND PRACTICE ON NEONATAL HYPOTHERMIA AMONG POSTNATAL MOTHERS IN SELECTED HOSPITAL IN MANGALORE

Nursing

Charitha C Lewis	Students fourth year B. Sc. Nursing, Father Muller College of Nursing, Mangalore. Karnataka India
Barikynti Shadap	Students fourth year B. Sc. Nursing, Father Muller College of Nursing, Mangalore. Karnataka India
Ann M Paul	Students fourth year B. Sc. Nursing, Father Muller College of Nursing, Mangalore. Karnataka India
Anni Philip	Students fourth year B. Sc. Nursing, Father Muller College of Nursing, Mangalore. Karnataka India
Anju M Anthony	Students fourth year B. Sc. Nursing, Father Muller College of Nursing, Mangalore. Karnataka India
Wilma S. Noronha*	Assistant Professor, Department Of Child Health Nursing, Father Muller College of Nursing. Karnataka India *Corresponding Author

ABSTRACT

Neonatal hypothermia is a contributing factor for neonatal morbidity and mortality. According to World Health Organization (WHO) hypothermia has been defined as body temperature below the normal range 36.5°C – 37.5°C and has been sub classified in to three grades: mild (36.0°C-36.5°C), moderate (32.0°C-35.9°C), and severe (< 32.0°C).¹ The aims of the study was to assess the knowledge and practice among postnatal mothers and to find the correlation and association of knowledge and practice with selected demographic variables. The study was conducted among 105 postnatal mothers at Father Muller Medical College Hospital in Mangalore. The samples were selected using a convenient sampling technique and the data was collected by using baseline proforma, structured knowledge questionnaire, self-reported practice checklist. The study findings shows that 86.66% of the postnatal mothers had average knowledge, 12.38% had good knowledge and 0.95% had poor knowledge on neonatal hypothermia. Majority of the postnatal mothers i.e., 92.38% had adequate practice and 7.61% had inadequate practice on neonatal hypothermia. There is no significant correlation and association of knowledge and practice among postnatal mothers on neonatal hypothermia with selected demographic variables.

KEYWORDS

Postnatal mothers; neonatal hypothermia; knowledge, practice.

INTRODUCTION

Neonates between birth and first 28 days of life are called newborn neonates. They truly constitute the foundation of human life. Many critical events can occur in this period. They have unique health issues and problems due to structural and functional immaturity of body organs depending upon their gestational age and birth weight.²

Most of the babies rapidly lose body temperature because they are born naked and wet and they come from a warm womb to cold room. If the baby is not promptly dried or covered effectively or not kept under the radiant warmer, he or she is likely to develop hypothermia and its consequences.

Hypothermia can be prevented by certain techniques – Kangaroo mother care and facilitate breastfeeding, bathing the neonate- timing of bath that is till the cord falls or preferably till 2.5 kg weight. The procedure while bathing is important that is warm room and warm water, bath quickly and gently, dry quickly and thoroughly wrap in a warm dry towel and place close to mother, and also should take care of not switching on the fan as soon as the baby bath.³

Despite the improvement in child survival over past 25 years, there is still virtually no effective health care system for newborn in developing countries. The issues of neonatal death are a serious national health concern, especially in developing countries where 96% of worlds approximates 5 million annual neonatal deaths occur (World Health Organization, WHO 2014). India's current neonatal mortality rate of 44 per 1000 live births represents 1.2 million children who die each year accounting for 30% of world's neonatal death (World Bank 2014). It is estimated that 15 percent of newborn babies develop hypothermia at birth in developing countries.⁴ According to UNICEF 2014 during 1989-2013 a total of 16,555 deaths in United States average of 720 per year, were attributed to excessive natural cold. It is estimated that annually 17 million neonates have hypothermia in developing countries. In some states of India has also faced certain problems of neonates regarding thermoregulation.⁵

OBJECTIVES

1. To assess the knowledge of the postnatal mothers on neonatal hypothermia.
2. To assess the practice of postnatal mothers on neonatal hypothermia.
3. To correlate between knowledge and practice among postnatal mothers on neonatal hypothermia.
4. To find association between knowledge and practice among postnatal mothers on neonatal hypothermia with selected demographic variables.

MATERIALS AND METHODS

Research approach: A quantitative approach to assess the knowledge and practice on neonatal hypothermia among postnatal mothers

Research design: The descriptive survey design was used to conduct a study.

Variables under study

Key variables

In this study, the key variables are knowledge and practice on neonatal hypothermia among postnatal mothers.

Extraneous variables

In this study, the extraneous variables include age, religion, type of the family, education, occupation, monthly income, order of birth, mode of delivery.

Research setting: The study was carried out in the maternity wards of Father Muller Medical College Hospital, Mangalore.

Sampling technique and sample size: Convenient sampling technique was used to select the subjects. The study sample consists of 105 postnatal mothers who were admitted in maternity wards of Father Muller Medical College Hospital, Mangalore.

INSTRUMENTS USED FOR DATA COLLECTION

1. Baseline proforma
2. Structured knowledge questionnaire
3. Self-reported practice checklist

DATA COLLECTION PROCESS

The data was collected after getting ethical clearance from institution ethics committee. Written informed consent is obtained from the participants. The data was collected from the postnatal mothers who were admitted in maternity ward in Father Muller Medical College Hospital, Mangalore from 15th June 2018 to 22th June 2018. The investigators introduced themselves and the purpose of the study was explained to the subjects and the baseline information, structured knowledge questionnaire and self-reported practice checklist on neonatal hypothermia were given to the subjects and allotted 30 minutes.

PLAN FOR DATA ANALYSIS

Data was analysed using descriptive and inferential statistics

- Baseline proforma was analysed using frequency and percentage.
- Knowledge and practice on neonatal hypothermia was analysed using frequency, percentage, mean, standard deviation and mean percentage.
- Correlation between knowledge and practice on neonatal hypothermia was analysed using Karl Pearson Correlation Coefficient
- Association of knowledge and practice with selected demographic variable was analysed using chi-square.

RESULTS

The findings of the data were organized in the following headings:

Section I: Description of sample characteristics.

Section II: Assessment of knowledge and practice on neonatal hypothermia among postnatal mothers.

Section III: Area wise assessment of knowledge on neonatal hypothermia among postnatal mothers among postnatal mothers.

Section IV: Correlation between knowledge and practice on neonatal hypothermia among postnatal mothers.

Section V: Association of the knowledge and practice on neonatal hypothermia among postnatal mothers with selected demographic variables.

Section I: Description of sample characteristics

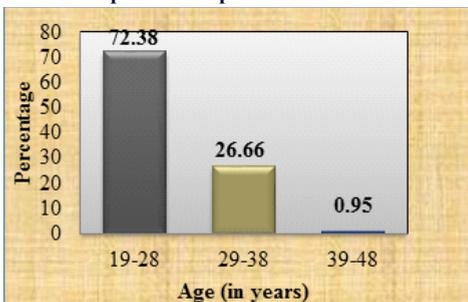


Figure 1: Distribution according to age

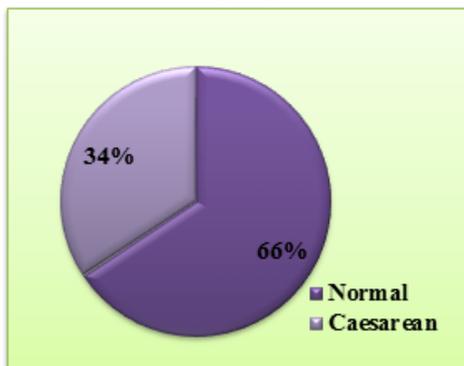


Figure 2: Distribution according to the mode of delivery

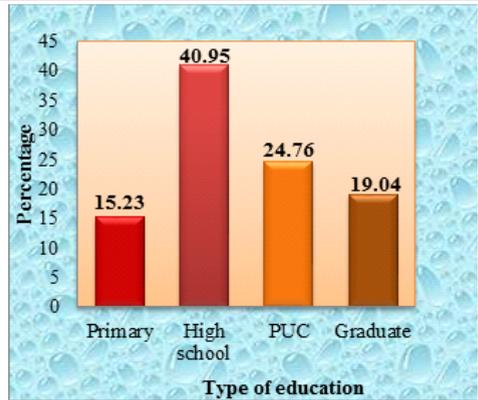


Figure 3: Distribution according to education

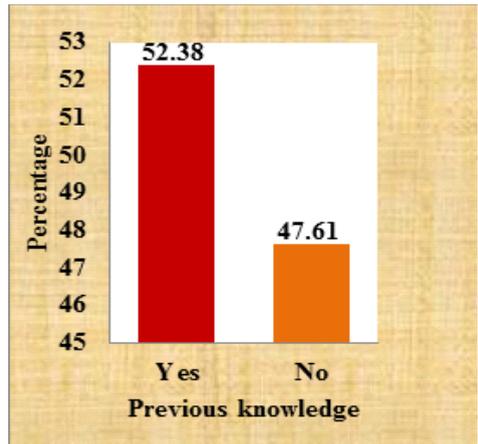


Figure 4: Distribution according to previous knowledge

Age

The data in Figure 1 reveals demographic characteristics of the sample of postnatal mothers; majority of the postnatal mothers belongs to the age group of 19 to 28 years (72.38%) and (62.85%) were Muslims.

Education

The data in Figure 3 reveals demographic characteristics of the sample of postnatal mothers, majority of the postnatal mothers belongs to the age group of 19 to 28 years (72.38%) and (62.85%) were Muslims. Majority of the postnatal mothers belongs to nuclear family (46.66%) and (40.95%) had completed high school education. Majority (83.30%) are housewives and (57.14%) having monthly income of Rs. 10,000-15,000. Majority (48.57%) have 1 child, (65.71%) had undergone normal delivery and (52.38%) had got information on neonatal hypothermia

Section II: Assessment of knowledge and practice on neonatal hypothermia among postnatal mothers

Table 1: Assessment of the knowledge level on neonatal hypothermia among postnatal mothers

n=105

Scores	Percentage of scores	Grading	Frequency	Percentage
≤9	≤50%	Poor	1	0.95
10- 14	51%-75%	Average	91	86.66
15- 19	≥75%	Good	13	12.38

Maximum score = 19

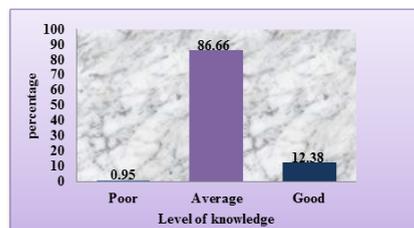


Figure 5: Bar diagram showing assessment of knowledge level of postnatal mothers according to the grading

The data presented in table 1 and figure 2 shows that, 86.66% of the postnatal mothers had average knowledge and 12.38% of them had good knowledge and 0.95% had poor knowledge on neonatal hypothermia.

Table 2: Assessment of the practice on neonatal hypothermia among postnatal mothers

Level of practice	Scores	Frequency	Percentage
Adequate practice	6-10	97	92.38
Inadequate practice	0-5	8	7.61

n= 105

Practice

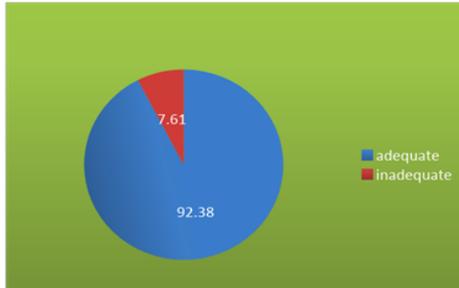


Figure 6: Pie diagram showing distribution of subject regarding their practice on neonatal hypothermia

The data presented in table 2 Fig 3 shows that 92.38% postnatal mothers had adequate practice and 7.61% of them had inadequate practice on neonatal hypothermia.

Section III: Area-wise assessment of knowledge on neonatal hypothermia among postnatal mothers.

Area wise distribution of knowledge

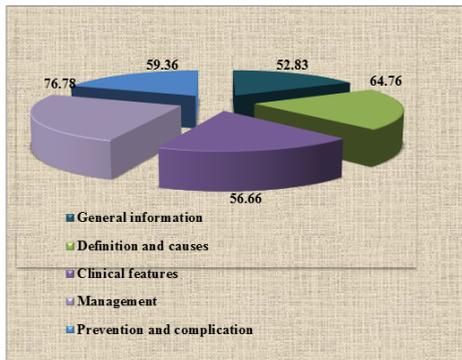


Figure 7: Pie diagram showing area wise assessment of knowledge on neonatal hypothermia among postnatal mothers

The data presented in Figure 7 shows that 76.78% had knowledge regarding the management of neonatal hypothermia, 64.76% had knowledge on definition and causes regarding neonatal hypothermia, 59.36% had knowledge on prevention and complications of neonatal hypothermia, 56.66% had knowledge on clinical features of neonatal hypothermia and 52.83% of the subjects had knowledge on the general information.

Section IV: Correlation between knowledge and practice on neonatal hypothermia among postnatal mothers.

Table 3: Correlation between knowledge and practice on neonatal hypothermia among postnatal mothers

Area	Mean±SD	r value
Knowledge	12.5429 ± 1.62332	0.203
Practice	7.5048 ± 1.31649	

n=105

There is weak positive correlation between knowledge and practice on neonatal hypothermia among postnatal mothers (r=0.203). Hence the research hypothesis was rejected and null hypothesis was accepted. So there is no significant correlation between knowledge and practice of the postnatal mothers regarding neonatal hypothermia.

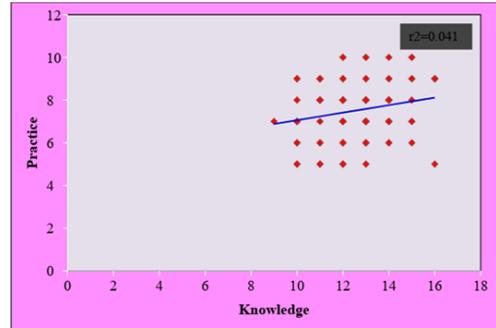


Figure 8: Scatter diagram showing the correlation of knowledge and practice on neonatal hypothermia among postnatal mothers

Section V: Association of the knowledge and practice on neonatal hypothermia among postnatal mothers with selected demographic variables

The p value computed between knowledge and practice with selected demographic variables are more than 0.05 level of significance. Hence null hypothesis is accepted and research hypothesis is rejected so there is no significant association between knowledge and practice with selected demographic variables.

DISCUSSION

The present study reveals that 86.66% (91) of postnatal mother had average knowledge, 12.38% (13) of them are had good knowledge and 0.95% (1) had poor knowledge on neonatal hypothermia.

A similar study was conducted at Rajasthan reveals that the level of knowledge of postnatal mothers showed that 4% had poor knowledge regarding prevention of hypothermia in newborn, 49% had average knowledge, 42% had good knowledge and 4% had excellent knowledge regarding prevention of hypothermia in newborn.⁶

The present study reveals that 92.38% (97) of postnatal mothers has adequate practice and 7.61% (8) has inadequate practice.

The study is supported by the study conducted at Pune reveals that 56% had good practice, 40% had average practice and 4% had poor practice regarding neonatal thermoregulation.⁷

The present study showed that there is weak positive correlation between knowledge and practice on neonatal hypothermia among postnatal mothers. Hence the research hypothesis was accepted and null hypothesis was rejected.

The present study reveals that there is no association between knowledge and practice on neonatal hypothermia with selected demographic variables are more than 0.05 level of significance. Hence null hypothesis is accepted and research hypothesis is rejected so there is no significant association between knowledge and practice on neonatal hypothermia with selected demographic variables.

The study is supported by the study conducted at Rajasthan reveals that there is a significant association between the knowledge of the postnatal mothers and selected demographic variables like age of the participants $\chi^2=16.92$, educational status, $\chi^2=18.12$, type of family $\chi^2=9.08$, number of children $\chi^2=17.92$ and previous knowledge $\chi^2=9.29$. Hence the research hypothesis is accepted at the 0.05 level of significance.

There is no significant association between knowledge level of postnatal mothers and selected demographic variables like family income $\chi^2=15.8$, occupation $\chi^2=2.62$ and religion $\chi^2=9.6$. Hence the research hypothesis is rejected at the 0.05 level of the significance.⁶

Limitations

- The study is limited to a selected setting with limited sample size hence generalization of finding is limited.
- The study was limited to postnatal mothers who are admitted in the postnatal ward of a selected hospital.
- The sample size was restricted to 105 antenatal women.
- The assessment of knowledge and practice was limited to the knowledge questionnaire and self-reported tool developed by the investigator.

Recommendations

- A similar study can be done on a large sample for generalization.
- Similar study may be conducted for different sample like postnatal mothers in urban and rural areas.
- A planned teaching program can be conducted on neonatal hypothermia for postnatal mothers

REFERENCES

1. World Health Organization. Maternal Health and Safe Motherhood Programme & Meeting of Technical Working Group on Thermal Control of the Newborn (1992: Geneva, Switzerland),(1993). Thermal control of the newborn: a practical guide. World Health Organization.
2. Edmond KM, Zandoh C, Quigley MA, Amenga-Etego S, Owusu-Agyei S, Kirkwood BR. Delayed breastfeeding initiation increases risk of neonatal mortality. *Pediatrics*. 2006 Mar 1;117(3):380-6.
3. Singh M. Care of the Newborn. Sagar Publications; 2004.
4. Mallet ML. Pathophysiology of accidental hypothermia. *QJM: An International Journal of Medicine*. 2002 Dec 1;95(12):775-85.
5. Edmond KM, Zandoh C, Quigley MA, Amenga-Etego S, Owusu-Agyei S, Kirkwood BR. Delayed breastfeeding initiation increases risk of neonatal mortality. *Pediatrics*. 2006 Mar 1;117(3):380-6.
6. Sankar MJ, Neogi SB, Sharma J, Chauhan M, Srivastava R, Prabhakar PK, Khera A, Kumar R, Zodpey S, Paul VK. State of newborn health in India. *Journal of Perinatology*. 2016 Dec 7; 36(s3):S3.
7. Shukla B, Nair A, Study to assess Knowledge regarding Prevention of Hypothermia in newborns among postnatal mothers Jaipur. *Imperial Journal of Interdisciplinary Research* 2017 October; 3(4):530-32.
8. Prasad D, Suji M, Roy Ma. Study to assess the knowledge and reported practice regarding neonatal thermoregulation among primi mothers Pune. *IOSR Journal of Nursing and Health Science* 2018 Jan-Feb;60-2.