

Research Article

A Study to Determine the Structured Teaching Programme on Prevention of Neonatal Hypothermia among Mothers at Area Hospital, Nellore District, Ap

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ABSTRACT

Introduction: A Neonate is a god's divine choice previous gift given to mother. Hence the birth of the neonate is one of the most awe inspiring and marvelous joyful events that occur in every women's life time. The cry of neonate is the only means of communication and brings a message that "I need care". This also aims at keeping the new born safe from the environmental and practical harm such as maintaining the normal body temperature. The main aim of the study was To Determine the Structured Teaching Programme on Prevention of Neonatal Hypothermia among Mothers at Area Hospital.", Nellore District, AP.

Methodology: Quantitative Approach was found to be suitable to To Determine the Structured Teaching Programme on Prevention of Neonatal Hypothermia among Mothers. The research design selected for the study was quasi experimental one group pretest and post test design. In this study research variables are knowledge of mothers regarding in management of neonatal hypothermia. A self-developed questionnaire regarding prevention of neonatal hypothermia was prepared. This gave a basis to conduct research study. Reliability structured questionnaire was 0.85.

Results: After analysis of responses of sample after the administration of structured teaching programme was the mean of the pre-test knowledge scores is 14.63 and the standard deviation 3.75. While the mean of the post-test knowledge scores is 21.67 and the standard deviation is 6.32.

Conclusion: The study concludes that post-natal mother need to know about prevention of Neonatal Hypothermia it may useful to overcome their fear, anxiety and doubt about Hypothermia and improve the knowledge about their child's health.

Keywords: Structured Teaching Programme, Neonatal Hypothermia, Mothers.

INTRODUCTION

Neonatal hypothermia is a common and preventable neonatal condition, clinically defined as an axillary body temperature below 36.5°C. Newborns are physiologically predisposed to rapid heat loss because they have a large surface-area-to-body-weight ratio, immature thermoregulatory mechanisms, thin skin, reduced subcutaneous fat, and limited ability to generate heat through shivering. The risk is higher during the first minutes and hours after birth, particularly among preterm and low-birth-weight babies. Heat loss may occur through evaporation, conduction, convection, and radiation, especially when the baby is not dried immediately, is exposed to cold surroundings, is bathed early, or is inadequately covered.^{1,2} Neonatal hypothermia is not an isolated temperature abnormality; it is closely associated with serious complications such as hypoglycaemia, respiratory distress, metabolic

acidosis, poor feeding, delayed adaptation to extra-uterine life, sepsis, coagulation problems, and increased neonatal morbidity and mortality.³ The World Health Organization has emphasized thermal protection as an essential component of essential newborn care and recommends the "warm chain" approach for prevention of hypothermia. This includes maintaining a warm delivery room, immediate drying, skin-to-skin contact, early initiation of breastfeeding, delayed bathing and weighing, appropriate clothing and head covering, rooming-in, warm transportation, warm resuscitation, and adequate training of health personnel and caregivers.¹

Globally, the neonatal period remains the most vulnerable phase of child survival. UNICEF reported that children face the highest risk of death during the first month of life, and an estimated 2.3 million newborns died globally in 2024.⁴ In India also, newborn survival continues to be a public health priority, and

thermal protection is considered a simple, low-cost, evidence-based intervention.⁵ Therefore, improving maternal knowledge regarding prevention of neonatal hypothermia is essential, because mothers are the primary caregivers during the postnatal period and play a direct role in maintaining newborn warmth.

Need of the Study

Prevention of neonatal hypothermia is a critical component of safe newborn care, particularly in institutional and community settings where mothers become the main caregivers soon after delivery. Although hypothermia can be prevented through simple measures, inadequate knowledge regarding drying, wrapping, skin-to-skin contact, delayed bathing, exclusive breastfeeding, and early identification of danger signs may increase the risk of heat loss among newborns. Postnatal mothers may follow traditional practices such as early bathing, delayed breastfeeding, poor head covering, or separation of mother and baby, which can interfere with the maintenance of the warm chain. Hence, maternal education is essential for promoting safe thermal practices.^{1,2}

The Indian Council of Medical Research recommends maintenance of the warm chain, draught-free delivery and postnatal areas, use of radiant warmers where required, rooming-in, kangaroo mother care for eligible babies, exclusive breastfeeding, and delayed bathing as important measures for prevention and management of neonatal hypothermia.⁶ These practices are simple and cost-effective, but their success depends greatly on the knowledge, attitude, and participation of mothers and family members. In hospital settings such as Area Hospital, Nellore District, Andhra Pradesh, postnatal mothers can be effectively reached through planned health education before discharge.

Structured teaching programmes are useful nursing interventions because they provide systematic, need-based, and understandable information to mothers. Previous studies have reported that planned teaching programmes significantly improve postnatal mothers' knowledge regarding prevention of neonatal hypothermia.^{7,8} Such programmes can strengthen maternal awareness regarding normal newborn temperature, methods of heat conservation, danger signs of hypothermia, and appropriate care-seeking behavior.

Therefore, the present study is needed to

assess the existing knowledge of postnatal mothers, compare pre-test and post-test knowledge scores, and evaluate the effectiveness of a structured teaching programme on prevention of neonatal hypothermia. The findings may help nurses and health-care professionals develop regular maternal education strategies to reduce preventable neonatal complications.

Objectives of the Study

- To assess the knowledge of postnatal mother regarding prevention of Neonatal Hypothermia.
- To compare pre-test and post-test knowledge regarding Neonatal Hypothermia and its affect among the post-natal mothers at area hospital Nellore district.
- To evaluate effectiveness of planned teaching programme for post-natal mother regarding prevention of Neonatal Hypothermia.
- To find out the association of post-test knowledge score and selected demographic variables.

Hypotheses

- H₁: The mean post-test knowledge scores will be higher than the mean pre-test knowledge scores at 0.5 level of significance
- H₂ : There will be statistically significant association between pre-test knowledge scores and selected demographic variables at 0.5 level of significance.

METHODOLOGY

To accomplish objectives of the present study a quantitative research approach was considered to be suitable with Quasi experimental one group pretest and post test design was more suitable". The Independent variable in the present study is structured teaching programming on the Management of Neonatal hypothermia. Dependent variable in the present study is the knowledge regarding in management of neonatal hypothermia. In this study the samples was 30 postnatal mother in government general hospital, Nellore district. The samples were slected through non-probability purposive sampling technique. Reliability was established by cronbach alpha method .the value of reliability coefficient is 0.85, which proved that the tool is reliable.

RESULTS

Table No. 1: Frequency and Percentage Distribution of Post-Natal Mothers According to the Demographic Variables

SL. No.	Socio- demographic variables	Frequency	Percentage
1.	Age in years		
	a) < 20 years	12	40%
	b) 21-25 years	10	33.33%
	c) > 26 years	8	26.67%
2.	Gender		
	a) Female	30	100%
3.	Place of residence		
	a) Rural	8	26.6%
	b) Urban	11	36.67%
	c) Semi urban	11	36.67%
4.	Educational Status		
	a) Illiterate	10	33.33%
	b) Primary	8	26.67%
	c) Graduate	12	40%
5.	Occupational Status		
	a) House wife	13	43.33%
	b) Coolie	10	33.33%
	c) Govt employee	7	23.33%
6.	Monthly Income		
	a)Below 10000 b)10000-15000 c)15000-20000	9	30%
		13	43.33%
		8	26.67%
7.	Religion a)Hindu b)Christian c)Muslim	13	43.33%
		3	10%
		14	46.67%
8.	Type of family a)Nuclear b)Joint c)Extended	14	46.67%
		7	23.33%
		9	30%
9.	Type of house a)Pucca b)Semi-pucca c)kuccha	15	50%
		6	20%
		9	30%

It is evidenced from the data presented in the table no. 1 out of 30 Post-natal Mothers, majority 12 (40%) respondents were in the age group of less than 20 years. According to gender were female 30 (100%) of respondents were female. With regards to place of residence, it reveals that majority 8 (26.6%) respondents were in Rural area. The

majority i,e:40% were graduates. The majority i,e:43% were housewife. The majority i,e:43.33% were 10001-15000. The majority i,e:43.3% were hindu. The majority i,e:46.67% were nuclear family. The majority i,e:50% were pucca house. Overall, 20 (66.7%) postnatal mothers were having previous knowledge from books.

Table No.: 2: Frequency and Percentage Distribution of Pre-Test and Post-Test Knowledge of Post-Natal Mothers

SL. No.	Level Of Knowledge	Pre-test		Post-test	

		F	%	F	%
1.	Inadequate knowledge	16	53.33%	2	6.66%
2.	Moderate knowledge	14	46.67%	14	46.67%
3.	Adequate knowledge	0	0%	14	46.67%

Table no. 2 reveals that out of 30 postnatal mothers 0 (0%) had adequate knowledge, while 14 (46.67%) had moderate knowledge and majority 16 (53.33%) had inadequate knowledge regarding prevention of Neonatal Hypothermia in the pre-test. It reveals that there is an increase the knowledge of post-

natal mothers were 14 (46.67%) had adequate knowledge, while 14 (46.67%) had moderate knowledge and 2 (6.66%) of post-natal mothers had inadequate knowledge regarding prevention of Neonatal Hypothermia in the post-test.

Table No. 3: Mean, Standard Deviation And Paired 'T' Test of Pre-Test and Post-Test Knowledge Of Postnatal Mother

SL No.	Item	Pre-test		Post-test		Paired 't' Test (P=0.05)
		Mean	SD	Mean	SD	
1.	Experimental Group	14.63	3.75	21.67	6.32	"t"=3.30 DF=29 P=

The information shows that, the mean of the pre-test knowledge scores is 14.63 and the standard deviation 3.75. while the mean of the post-test knowledge scores is 21.67 and the standard deviation is 6.32.

From the above table it is evident that the structured teaching programme was effective in improving the knowledge of the postnatal mother regarding prevention of Neonatal Hypothermia as the calculated 't' value (3.30*) is higher than the table value (2.05) at 0.05% level of significance.

DISCUSSION

The findings of the present study revealed that the structured teaching programme was effective in improving the knowledge of postnatal mothers regarding prevention of neonatal hypothermia. In the pre-test, 16 (53.33%) mothers had inadequate knowledge and 14 (46.67%) had moderate knowledge, while none had adequate knowledge. After the intervention, only 2 (6.66%) mothers remained in the inadequate category, whereas 14 (46.67%) had moderate knowledge and 14 (46.67%) achieved adequate knowledge. The mean knowledge score increased from 14.63 ± 3.75 in the pre-test to 21.67 ± 6.32 in the post-test, with a paired 't' value of 3.30 at 29 degrees of freedom, indicating statistical significance at the 0.05 level. This shows that planned health education was effective in improving maternal knowledge regarding thermal protection of newborns.

These findings are consistent with the study conducted by Yadav and Sonia, in which 30 postnatal mothers were selected by convenience sampling. Their study reported that 90% of mothers had low knowledge and 10% had average knowledge in the pre-test; after the planned teaching programme, 80% had good knowledge and 20% had average knowledge, with no mothers remaining in the low knowledge category.⁷ Similarly, Tambakad and Sumitra conducted a study among 60 postnatal mothers and reported a significant gain in knowledge following the planned teaching programme regarding prevention of neonatal hypothermia.⁸

Another similar study by Bhandari, Kharde and Raddi also concluded that a planned teaching programme was an effective strategy for improving mothers' knowledge regarding prevention of hypothermia among newborns.⁹ Alka and Kashyap also found that planned teaching improved knowledge regarding thermoregulation of neonates among nursing students, supporting the usefulness of structured educational interventions in neonatal thermal care.¹⁰ Therefore, the present study findings are supported by previous research and confirm that structured teaching programmes can be used as an effective nursing intervention to improve awareness and promote prevention of neonatal hypothermia.

CONCLUSION

The present study concluded that the structured teaching programme was effective in improving the knowledge of postnatal mothers regarding prevention of neonatal hypothermia at Area Hospital, Nellore District, Andhra Pradesh. The pre-test findings showed that most of the mothers had inadequate or moderate knowledge, and none of them had adequate knowledge before the intervention. This indicates that postnatal mothers required systematic health education regarding newborn thermal care, identification of hypothermia, and preventive measures.

After the administration of the structured teaching programme, there was a noticeable improvement in the knowledge level of mothers. The post-test results showed that only 6.66% of mothers had inadequate knowledge, while 46.67% had moderate knowledge and 46.67% had adequate knowledge. The mean knowledge score increased from 14.63 in the pre-test to 21.67 in the post-test. The calculated paired 't' value was 3.30 at 29 degrees of freedom, which was significant at the 0.05 level. Hence, the research hypothesis was accepted.

The study findings emphasize that planned teaching is an effective nursing intervention for enhancing maternal knowledge. Educating postnatal mothers regarding warm chain practices, skin-to-skin contact, early breastfeeding, delayed bathing, and proper covering of newborns can help prevent neonatal hypothermia and promote better newborn health outcomes.

Recommendations

- A similar study on large sample may help to draw more definite conclusions and make generalization.
- Similar study can be conducted in various settings.
- An experimental study can be conducted between the postnatal mother by giving video assisted health teaching on in different setting.
- A similar study can be conducted by various teaching programmes in postnatal mother.
- Comparative studies can be conducted through planned teaching programme on knowledge regarding prevention of neonatal hypothermia among postnatal mother between different population.

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