

A Study to Evaluate the Effectiveness of Planned Teaching Program on Knowledge of Mothers on Prevention of Hypothermia among Newborns in Selected Hospitals of Belgaum, Karnataka

¹Usha M Bhandari, ²Sangeeta N Kharde, ³Sudha A Raddi

¹Lecturer, School of Nursing, District Hospital, Belgaum, Karnataka, India

²Professor, Department of Obstetrics and Gynecological Nursing, KLES Institute of Nursing Sciences, KLE University Nehrunagar, Belgaum, Karnataka, India

³Professor and Head, Department of Obstetrics and Gynecological Nursing, KLES Institute of Nursing Sciences, KLE University Nehrunagar, Belgaum, Karnataka, India

Correspondence: Usha M Bhandari, Lecturer, School of Nursing, District Hospital, RC Patil, 2nd Main, 2nd Cross, Sadashiv Nagar, Belgaum, Karnataka, India, Phone: 09448527857, e-mail: ushapatil@yahoo.co.in

Abstract

A newborn baby is a god's divine precious gift given to a mother. Nurses play very crucial role in prevention of newborn hypothermia during the hospitalization of newborn in NICU. To evaluate the effectiveness of PTP on prevention of hypothermia in newborn among mothers was the main objective of the present study. One group pretest, post-test design (pre-experimental) was used. 30 postnatal mothers were selected by nonprobability sampling and pretest questionnaire was administered through structured interview schedule. After PTP 7 days after posttest was conducted on same group. Results were analysed by 't' test. The results revealed that there was statistically significant association between knowledge of mothers and age and religion, and remaining three variables there was no statistical significant association ($p < 0.05$). The PTP was the best teaching strategy as it enhance the knowledge on prevention of hypothermia.

Keywords: Planned teaching program (PTP), World Helath Organization (WHO), Neonatal Intensive Care Unit (NICU).

INTRODUCTION

A newborn baby is a god's divine precious gift given to a mother. Hence the birth of an newborn is one of the most awe inspiring and marvelous joyful event that occurs in every women's life time. The WHO stated that approximately 125 million infant born every year, 8 million die before reaching one year of life due to various complications among that about 2.5% newborns die due to hypothermia.¹

Indian mothers are not aware about newborn hypothermia due to various factors such as ignorance, low socioeconomic status, etc. nurses plays vital role in prevention of newborn hypothermia during the hospitalization of postnatal mothers. By enriching the mothers with knowledge of newborn hypothermia being a nurse we can reduce newborn mortality and morbidity.²

OBJECTIVES

1. To assess the knowledge on prevention of hypothermia in newborns among mothers.

2. To prepare and conduct planned teaching program on prevention of hypothermia in newborns among mothers.
3. To evaluate the effectiveness of planned teaching program on prevention of hypothermia in newborns among mothers.
4. To find out association between pretest knowledge score and selected demographic variables.

REVIEW OF LITERATURE

1. Knowledge and practices of health personnel's/mothers on hypothermia.

A research study conducted in Gujarath, Italy, Indonesia, Zimbabwe, Nepal, Brazil and Mosambique. The study involved 28 health settings. The study aimed to assess the knowledge and practices of health professionals about thermal control of the newborns. Total sample size was 260 health professionals (61 doctors and 199 nurses). An assessment of thermal control practices carried out in each health facility by external investigators and a questionnaire on thermoregulation administered to health professionals involved in thermal control of newborn. One day training was given regarding newborn

care. The study revealed that thermal control practice were frequently inadequate in the areas such as ensuring warm environment at the delivery, initiation of breastfeeding and contact with mother, bathing, checking the baby's temperature, thermal protection of low birth weight babies and care during transport. Knowledge on thermal control was also insufficient. The findings of the evaluation concluded that awareness of the importance of thermal control and basic knowledge on thermal regulation and thermal protection were insufficient. However, awareness of the importance of thermal control and basic knowledge on thermal regulation and thermal protection can be acquired through on going in service action programs.³

A survey conducted at department of pediatrics medicine, SMS medical college Jaipur, to evaluate the knowledge, attitude, and practices of neonatal hypothermia among medical and paramedical staffs. The study conducted during July to December 1997. The sample size was 160 (40 pediatric medicine residents, 40 obstetrics and gynecology residents, 40 private practitioners and 40 paramedical staff) working in labor room, postnatal ward and nursery. A structured questionnaire was administered to assess their pre-existing knowledge. The study revealed that among 160 subjects only 47.8% members defined hypothermia correctly. 52.2% of the interviewers considered it to be an uncommon problem. Lathery (97.5%), refusal of feed (80%) and cold to touch (77.5%) were mentioned as common symptoms of neonatal hypothermia by respondents respectively. Only 18.6% of the interviewers had good knowledge about correct method of recording the temperature in a newborn. The study revealed that there was a gross lacunae in knowledge and practices regarding various aspects of neonatal hypothermia among pediatric and obstetric residents and paramedical staff working in labor room and postnatal wards. Further study concluded that greater emphasis should be laid on this problem designing curriculum for training of undergraduate and postgraduate doctors, paramedical staff and traditional birth attendants in order to improve their knowledge, attitude and better practices towards neonatal hypothermia.⁴

A study conducted in mount Lebanon, Hospital to describe knowledge, attitude and practices of midwives regarding neonatal care. The study included 7 hospitals of mount Lebanon. The sample size was 44 midwives taking care of 204 term neonates. Questionnaire and checklists were constructed to evaluate knowledge of midwives and their practices with respective neonates regarding neonatal care. The study revealed that midwives in these Hospitals had acceptable knowledge regarding neonatal care, but the application of this knowledge in practice measures was limited. The study concluded that neonates were thus at risk of hypothermia, physical pain and psychological distress.⁵

An pre-experimental research study conducted in Manipal medical college of Nursing, Udupi, Karnataka, to evaluate the effectiveness of planned teaching program on prevention of hypothermia for mothers of Neonates. The sample size was 30 postnatal mothers. The study conducted during January 2007 to April 2007. The study revealed that majority of the mothers (90%) belonged to the age group of 20 to 25 years, (70%)

belonged to joint family, (70%) of them were prim mothers, 56% mothers had high school education. In the pretest, maximum mothers had (63.3%) average knowledge where as in the post-test (93%) of the mothers had good knowledge. The post-test mean knowledge score was (13.46) was apparently higher than pre-test mean knowledge score (7.7). The 't' test showed that the post-test knowledge score was significantly higher than the pre-test knowledge score, 't' = (29) = 13.63, P < 0.05. The study concluded that planned teaching program with appropriate AV aid was an effective strategy in imparting knowledge to postnatal mothers on prevention of hypothermia.⁶

METHODOLOGY

Postnatal mothers whose newborns admitted at NICU of KLES Dr. Prabhakar Kore Hospital and MRC and District Hospital, Belgaum were, enrolled for the study.

Study design: One group pretest, post-test design (pre-experimental).

Sample size: 30

Duration: One month, 9th Sept. 2008 to 27th Sept. 2008.

Inclusion criteria: Primi and multipara whose newborns were, admitted in NICU.

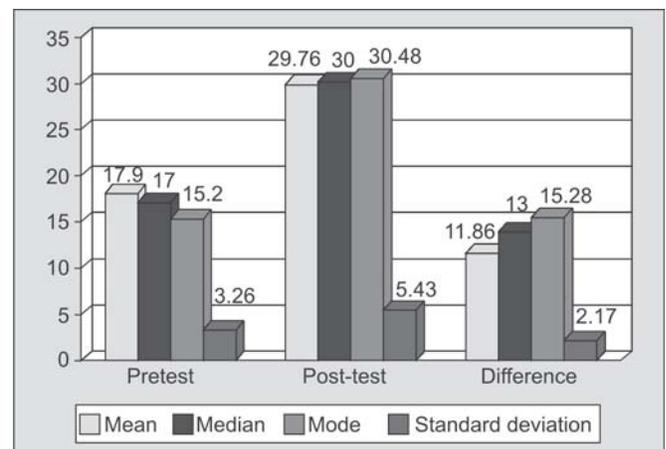
Exclusion criteria:

1. Mothers who are not willing to participate in the study.
2. Study samples were selected by nonprobability, purposive sampling method.

Table 1: Mean, mode, standard deviation and range of knowledge scores of mothers regarding prevention of newborn hypothermia n = 30

| Area of analysis | Mean | Median | Mode | Standard deviation | Range (H-L) |
|------------------|-------|--------|-------|--------------------|-------------|
| Pretest | 17.9 | 17 | 15.2 | 3.26 | 15 |
| Post-test | 29.76 | 30 | 30.48 | 5.43 | 7 |
| Difference | 11.86 | 13 | 15.28 | 2.17 | 8 |

Table 1 and Graph 1 reveals that in the pretest mean was 17.9, standard deviation 3.26, whereas, in post-test mean was 29.76 and standard deviation was 5.45.

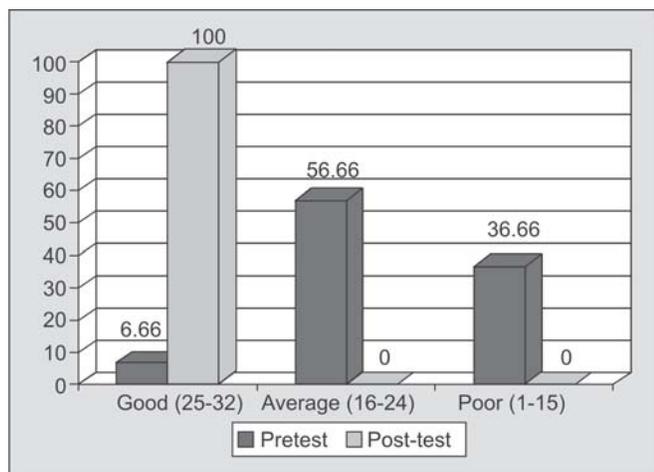


Graph 1: Mean, median, mode and standard deviation knowledge scores of mothers on prevention of hypothermia

Table 2: Frequency and percentage (%) distribution of knowledge scores of mothers in prevention of newborn hypothermia

| Scores | Pretest | | Post-test | |
|-----------------|-----------|-------|-----------|-----|
| | Frequency | % | Frequency | % |
| Good (25-32) | 2 | 6.66 | 30 | 100 |
| Average (16-24) | 17 | 56.66 | - | - |
| Poor (1-15) | 11 | 36.66 | - | - |

Table 2 and Graph 2 reveals that in pretest majority of the mothers 17(56.66) had average knowledge 2(6.66) had good knowledge, and 11(36.66) had poor knowledge, whereas in post-test 100% of mothers had good knowledge.



Graph 2: Distribution of knowledge scores of mothers

Table 3: Pretest and post-test percentage of knowledge scores of mothers in different items on prevention of hypothermia

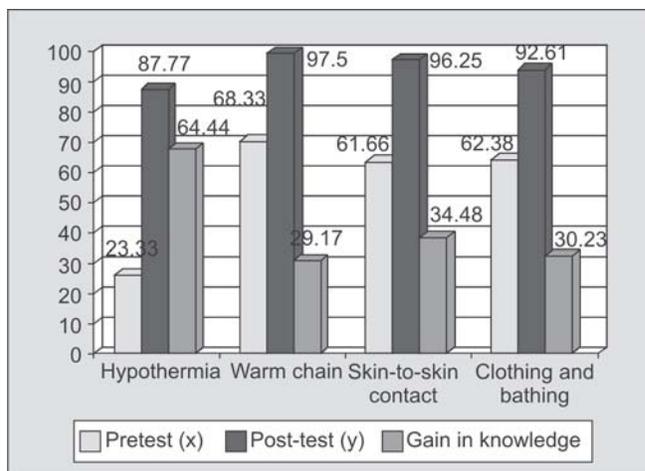
| Items on | Total score | Pretest (x) | Post-test (y) | Gain in knowledge |
|----------------------|-------------|-------------|---------------|-------------------|
| Hypothermia | 200 | 23.33 | 87.77 | 64.44 |
| Warm chain | 199 | 68.33 | 97.5 | 29.17 |
| Skin-to-skin contact | 379 | 61.66 | 96.25 | 34.48 |
| Clothing and bathing | 651 | 62.38 | 92.61 | 30.23 |

Table 3 and Graph 3 reveals that the percentage of gain in knowledge in the area of knowledge by hypothermia was 64.44 and warm chain 34.59 and clothing and bathing 30.23.

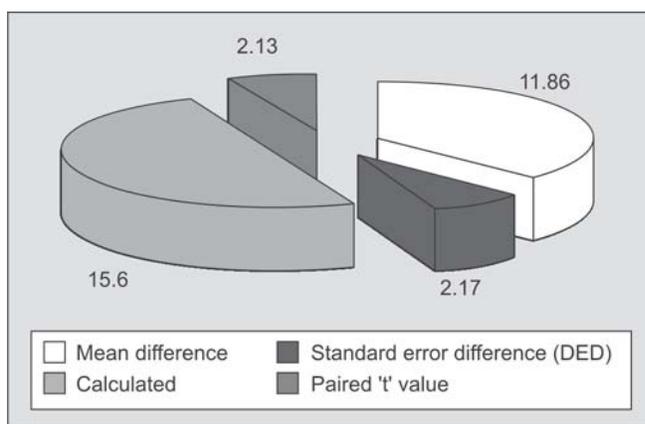
Table 4: Mean difference, standard difference (SED) and paired 't' values of knowledge score of mothers

| Mean difference | Standard error difference (SED) | Calculated paired 't' value | Tabulated 't' value |
|-----------------|---------------------------------|-----------------------------|---------------------|
| 11.86 | 2.17 | 15.6 | 2.13 |

Table 4 and Graph 4 reveals that the calculated paired 't' value (t = 15.6) is greater than tabulated 't' value (t = 2.13).



Graph 3: Pretest and post-test knowledge scores of mothers in different in items on newborn hypothermia



Graph 4: Mean difference, standard error difference and paired 't' value of knowledge scores of mothers regarding prevention of hypothermia

DISCUSSION

The present study is undertaken to evaluate the effectiveness of planned teaching program (PTP) on knowledge of mothers on prevention of hypothermia among newborn in selected hospitals of Belgaum.

Knowledge on prevention of hypothermia in newborns among mothers

In the present study the pretest knowledge scores of mothers revealed that 2 (6.66%) had good knowledge, 17(56.66%) had average knowledge and 11(36.66%) had poor knowledge.

The finding of study were similar to the findings of study conducted by Binu Margaret, noted that among 50 mothers 10(20%) had good knowledge, 23(46%) had average knowledge and 17(34%) had poor knowledge, whereas in the post-test 100% of the mothers had good knowledge in both the studies.⁷

The post-test mean knowledge score 29.7 was apparently higher than pretest mean knowledge score 17.9.

These findings are similar to the findings of Binu Margaret, where post-test mean knowledge score 23 was higher than pretest mean knowledge score 16.⁷

Effectiveness of planned teaching program on prevention of hypothermia in newborns among mothers

In the present study, overall knowledge improvement was found after planned teaching program and the paired 't' 15.6 at $p < 0.05$ level significance proved that the selected hypothesis H_1 was accepted.

A similar study conducted by Tesline, Manipal, showed that, paired 't' (13.63) at $p < 0.05$ level of significance, hence H_1 was accepted.⁸

CONCLUSION

Based on the findings of the study there was increase in all the areas of knowledge after administration of plan teaching program (PTP). Thus, it was inferred that PTP was the best teaching strategy in imparting knowledge to postnatal mothers on prevention of hypothermia which is commonly encountered in developing countries, can be prevented if mothers are educated through on going in service programs by nurses.

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