

Effectiveness of Planned Teaching Programme Regarding Thermo Regulation In Newborn on Knowledge Among Post Natal Mothers Of Selected Maternity Hospitals

Dr (Mrs) Nilima R. Bhole

Dean, Faculty of Nursing & Principal
Bharati Vidyapeeth Deemed to be
University, College of Nursing, Sangli.

Abstract- A Study to assess the Effectiveness of Planned Teaching Programme regarding Thermo regulation in newborn on knowledge among post natal mothers of selected maternity hospitals.

Background : Neonatal period is characterized transition to extra uterine life. Newborn infants are unique in their physiology and health problems that they experience. Newborns come from a warm environment to the cold and fluctuating temperatures of this world. After delivery the newborn must adapt to its relatively cool environment by production of heat metabolically as they are not able to generate heat by an adequate shivering response.

The objectives of the study were

1. To assess the existing knowledge regarding thermoregulation in new-born among postnatal mothers.
2. To evaluate the effectiveness of planned teaching programme regarding thermoregulation in new-born among PNC mothers.
3. To find out the association between pre-test knowledge score with selected demographic variables.

Methods : The quantitative approach was used. Quasi experimental one group pre-test and post-test design was used. Study population consists of post-natal mothers. The study consisted of 40 post-natal mothers in maternity units of selected hospitals. Non-probability simple random technique was used. The Knowledge questionnaire was used for collecting data. The data analysis was done using descriptive inferential statistics.

Keywords- Effect, thermoregulation, postnatal mothers, knowledge.

I. INTRODUCTION

Womb is 'a secure receptacle' indicates an important feature where the embryo completes its 9 months of development. The mother's womb provides insulation against external agents, light and sound, variations in temperature and protects the baby against shock and pressure. In the womb, the fetus is protected from internal and external pressures by a wealth of natural shields and the fetus is safe in the womb because it is well-insulated and designed as the perfect baby carrier. During intrauterine life, the fetal temperature is 0.50°C higher than the maternal temperature due to metabolic reactions that generate heat. After birth the infant is exposed to air and environment which have lower temperature. Thermoregulation in adults is achieved by muscular activity and metabolic activity during fetal life. Newborn babies have poor heat regulating mechanisms because of larger surface area of babies compared to their weight making them prone to hypothermia and its ill effects. Heat loss in a newborn occurs through 4 routes- radiation convection, conduction and evaporation. A new-born baby is a God's divine precious gift given to a mother. So survival and health of the neonate is very important. 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% newborn die due to hypothermia. The most effective management strategy for hypothermia is its prevention. The temperature range during which the basal metabolic rate of the baby is at a minimum, oxygen utilization is least and baby thrives well is known as Thermo-neutral range of temperature or Neutral Thermal Environment. Preventing hypothermia and maintaining a neutral thermal environment is important to prevent other complications. It can be done by mothers of the neonate and educating mother regarding measures of thermoregulation like kangaroo care, rooming in, mummifying

and promoting breast feeding can be attained by providing education to the mothers.

II. HYPOTHESIS FOR THE STUDY

Ho- There will be no significant difference in the knowledge score between pre-test and post-test knowledge score.

III. MATERIALS AND METHODS

The quantitative approach was used, this approach was selected because the aim was to assess the effectiveness of planned teaching programme on knowledge related to thermoregulation in new-born among PNC mothers in selected maternity hospitals. Quasi experimental one group pre-test and post-test design was used in this study. The study was conducted in selected maternity hospitals of Sangli. The study population was post-natal mothers & samples were post-natal mothers admitted in selected hospitals of Sangli. The study consisted of 40 post-natal mothers in maternity units of selected hospitals. Non-probability simple random sampling technique was used.

Sampling Criteria:

Inclusion Criteria

- A) PNC mothers who know Marathi, Hindi or English.
- B) PNC mothers who are willing to participate in this study.
- c) mothers who admitted in postnatal wards.

Exclusion Criteria

Post-natal mothers who are suffering from post-natal complication during the time of data collection.

Description of Tool

The questionnaire comprises of two sections

Section 1 consisted demographic data such as age, occupation, education, gravid & previous knowledge.

Section 2 consisted Questionnaire related to thermoregulation. Total 15 questions were included and each right answer given a score of 1. Total score was 15 and divided in to three grading that is poor 0-5, average 6-10, good 11-15.

Validity

Validity of the tool was established by 15 experts. Experts established the validity of the tool.

Reliability

The reliability of tool was determined by using test re test method.

The reliability coefficient `r` was found to be $r=0.71$, hence the tool was found to be reliable.

Pilot study

A pilot study was conducted for assessing the feasibility. The study was found to be feasible.

Procedure for data collection

A formal permission was obtained from the authorities and written consent was obtained from post-natal mothers. Pre-test was conducted and purpose of the study was explained to the mothers and confidentiality of their response was assured. After pre-test planned teaching programme was administered to the postnatal mothers and post test was conducted.

IV. RESULTS AND ANALYSIS

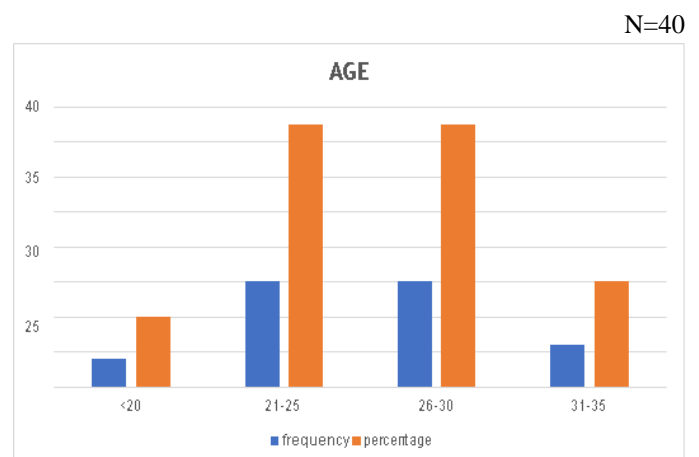
The analysis was done in 3 sections.

Section I – frequency and percentage distribution of selected demographic characteristics.

Section II- comparison between pre-test and post-test knowledge score.

Section III – association between pre-test and post-test knowledge score with demographic variables.

FREQUENCY AND PERCENTAGE DISTRIBUTION BASED ON AGE



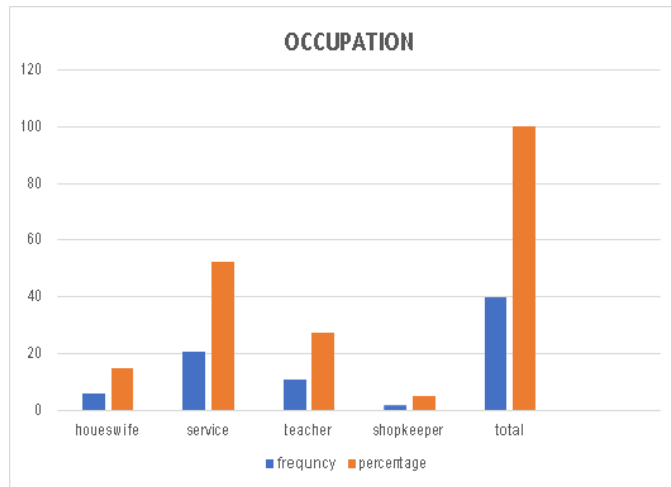
DISTRIBUTION BASED ON EDUCATION

N=40

EDUCATION	FREQUENCY	PERCENTAGE
Up to 10 th std	14	35%
10-12 th std	8	20%
Up to graduation	16	40%
Other (B.Ed,D.Ed)	2	5%

DISTRIBUTION BASED ON OCCUPATION

n=40



DISTRIBUTION BASED ON GRAVIDA

N=40

GRAVIDA	Frequency	Percent
1	17	42.5%
2	15	37.5%
3	8	20%

COMPARISON BETWEEN PRE-TEST AND POST-TEST KNOWLEDGE SCORE.

N=40

TEST	MEAN	STD.DEVIATION	STD.ERROR MEAN	't' value	'p' value
PRE-TEST SCORE	6.68	1.347	0.213	-19.446	0.000
POST-TEST SCORE	9.98	1.372	0.217		

ASSOCIATION BETWEEN PRE-TEST KNOWLEDGE SCORE WITH DEMOGRAPHIC VARIABLES

SR.NO	DEMOGRAPHIC VARIABLE	FISHER'S EXACT TEST VALUE	'p' Value	REMARK
01	Age	0.335	0.953	No significant association
02	Education	5.413	0.12	No significant association
03	Occupation	5.098	0.143	No significant association
04	Gravida	4.734	0.094	No significant association
05	Previous knowledge	4.495	0.095	No significant association

V. CONCLUSION

The finding of the study concluded that, the planned teaching developed by researcher found to be effective in enhancing the knowledge of post-natal mothers related to thermoregulation in new-born. The findings of the present study have implication for nursing practice, nursing education and nursing research. The nurses working in hospital setting, both inpatient and outpatient services, play an important role in educating the mothers about thermoregulation in new-born.

REFERENCES

- [1] Harun Yahya. The mother's womb with its secure protection.2009[cited on 23 Jan 2009] Global Publication Ltd. Co. Available at URL:<http://harunyahya.com/en/works/12376/the-mothers-womb-with-its>
- [2] Martin Green. How Protected Is a Baby in the Womb?.[cited on Mar 28, 2011]M Available at URL:<http://www.livestrong.com/article/226943-how-protected-is-a-babyin-the-womb/#ixzz2GiHkr100>
- [3] Ghai OP, Paul K Vinod, Bagga Arvind. Ghai Essential Pediatrics. Seventh edition. New Delhi: CBS Publishers and Distributors Pvt Ltd;2009. p.96 to 122
- [4] Mishra Jayanti ,PatiSanghamitra. Importance of thermoregulation in the Newborn: role of brown fat. Orissa Journal of medical biochemistry [abstract].2004;(1). Available from URL: <http://www.saihp.org.in/articles/biomerarticle2.pdf>
- [5] Basavanhappa BT. Textbook of Midwifery & Reproductive Health Nursing. New Delhi: Jaypee Brothers Medical Publishers (P) Ltd; 2006. p. 441
- [6] Wikipedia, the free encyclopedia. Adaptation to extra uterine life. (document from the internet)(Last modified on 22 November2012at15:06.)
- [7] Bhandari M Usha, Kharde N Sangeetha, Raddi A Sudha.

- 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. Journal of SAFOG.[serial online]2010[January – April 2010];(1):89-92
- [8] Neonatal Care Practice-Thermoregulation-temperature. Baby first newsletter. Available at URL:www.babyfirst.com/en/neonatacare/temperature.php
- [9] LalitaBehl,NeelamGrover,Shyam L. Kaushik. Perinatal and Neonatal Mortality- A Hospital Based Study. Indian Pediatr[serial online]. 1998; 35:683-684.
- [10] Nayeri F, Nili F. Hypothermia at Birth and its Associated Complications in Newborns: a Follow up Study. Iranian J of Publhealth[Serial online]. 2006;35(1): pp.48-52.
- [11] LalitaBehl, Neelam Grover, Shyam L. Kaushik. Perinatal and Neonatal Mortality- A Hospital Based Study. Indian Pediatr1998; (35):683-684.
- [12] LC Mullany. Neonatal hypothermia in low-resource settings.SeminPerinatol[serial online]. 2010 [December 1]; 34(6): 426–433.
- [13] Denise F. Polit, Cheryl Tatano Beck. Nursing Research: Generating and Assessing Evidence for Nursing Practice. Ninth edition. New Delhi. Wolters Kluver(India) Pvt. Ltd. 2012. Pp 732
- [14] Ndiaye O, Diouf S, Diouf NH, CisseBathilyA, CisseCT, Sylla A, Et al Efficiency of kangaroo care on thermoregulation and weight gain of a preterm newborn cohort in Dakar[abstract].2006; 51 (3): 155-60.
- [15] Tesline. Effectiveness of planned teaching programme on prevention of hypothermia for mothers of neonates in Manipal , Udipi Dist, Karnataka, India. Journal of neonatology, 2007.
- [16] Thomas KA. Infant weight and gestational age effects on thermo neutrality in the home environment [serial online].2003 [Nov-Dec2003];32(6):745-52.
- [17] S.Deepa. A study to assess the effectiveness of mummifying and rooming in to maintain thermoregulation among neonates immediately after birth in selected hospital at Hassan RGUHS 2008.