



# THE EFFECTIVENESS OF COMPETENCE BASED TEACHING ON KNOWLEDGE AND COMPETENCE AMONG STAFF NURSES IN CARE OF NEONATAL HYPOTHERMIA

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## ABSTRACT

*An infant is a God's celestial valuable blessing given to a mother. Hence the introduction of an infant is one of the most wonderment rouse and brilliant blissful occasion that happens ladies' time. The WHO expressed that roughly 125 million in born every year of due to various complications among that about 2.5% newborn die due to hypothermia. It is additionally discovered that hypothermia builds the hazard for metabolic acidosis, jaundice, respiratory trouble, hypoglycemia, a pulmonary hemorrhage and death, regardless of the newborn's weight and gestational age. Neonatal hypothermia is a common and wide spread problem even in developed Counties. WHO reported hypothermia was found as common cause of death in all the age groups. Be that as it may, the majority of the wellbeing Nurses don't know about it. There are distinctive wellbeing programs acknowledged and proliferated by various areas of Government at State and focal level by Voluntary organizations. It is a real challenge to the health personnel to improve the primary care of the newborn.*

**KEYWORDS:** *Effectiveness, Competence Based Teaching (Cbt), Staff Nurses, Neonatal Hypothermia .*

## I.INTRODUCTION

An infant is a God's celestial valuable blessing given to a mother. Hence the introduction of an infant is one of the most wonderment rouse and brilliant blissful occasion that happens Womens' time. <sup>(1)</sup> The WHO stated that approximately 125 million in born every year of due to various complications among that about 2.5% newborn die due to hypothermia.<sup>(2)</sup> Bonding or the intense attachment between the baby and his/her parents can increase a child's self esteem and sense of security. Caring for a newborn is often an experience few nurses are prepared for prevention of neonatal hypothermia <sup>(3)</sup>. Piere Budin[1900]First drew attention to the high neonatal mortality due to cold. Optimal thermal environment for neonates was identifying in mid 1960s <sup>(4)</sup>. Hypothermia is one of life's biggest challenges to care for a newborn child and can be somewhat more difficult than caring for a

great challenges to care for a newborn child and can be somewhat highly difficult than caring for an older infant. Hypothermia occurs when the newborns body temperature goes below 36.5°C (97.7°F) generally because the environment is too cold for the baby. Hypothermia is caused more by lack of knowledge than lack of equipment. The newborn with a temperature of 36.0-36.4 °C(96.8-97.5°F)is under cold stress(mild hypothermia).A baby with a temperature of 32.0-35.4°C (89.6-96.6°F)has moderate hypothermia, while a temperature below 32°C(89.6°F) is called severe hypothermia<sup>(5)</sup>.

In cases of moderate hypothermia, the clothed baby may be re warmed by the following measures:

- ❖ Under a radiant warmer.
- ❖ In an incubator, at 35-36.5°C [95-96.8°F].
- ❖ By using heated water filled mattress.



- ❖ In a warm room, the temperature of the room should be 32-34°C/89.6-93.2°F.
- ❖ In a warm cot if it is heated with a hot water bottle, should be removed before the baby is placed in.
- ❖ The re warming process should be continued until the baby's temperature reaches the normal range <sup>(6)</sup>.

In case of severe hypothermia following measures are followed in severe hypothermia studies suggest that fast re warming over a few hours is preferable to slow re warming over several days. Rapid re warming can be made by using a thermostatically controlled heated mattress set at 37-38°C (98.6-100.4°F) or an air-heated incubator <sup>(7)</sup>. Baby must be kept warm at the place of birth (home or hospital) and during transportation for special care either from home to hospital or within the hospital. Satisfactory control demands both prevention of heat loss and promotion of heat gain<sup>(8)</sup>. Neonatal period is very crucial. It is exactly to say that during the first few minutes especially when a risk situation exists prompt and adequate care should be carried out<sup>(9)</sup>.

Based on this thermoregulation is an important physiological function that is closely related to the survival of the infants<sup>(10)</sup>. An understanding of the physiological function of temperature control in neonates is essential in helping the mothers to provide an appropriate environment to promote thermal stability

## II.OBJECTIVES

- To assess and evaluate the knowledge and competence regarding neonatal hypothermia among Staff Nurses.
- To evaluate the effectiveness of competence based teaching programme on knowledge and competence regarding neonatal hypothermia among Staff Nurses.
- To associate the knowledge and competence regarding neonatal hypothermia with selected demographic variables.

## III.HYPOTHESIS

- H1: There will be significant difference between the pre-test and post-test level of knowledge and competence on neonatal hypothermia in newborn babies among Staff Nurses.

- H2: There will be a significant association between the post-test level of knowledge and Competence with selected socio demographic variables.

## IV.METHODOLOGY

Pre-Experimental research design with one group pre-test and post-test was adopted 50 samples of Staff Nurses were selected by Purposive Sampling technique in MGMC&RI Puducherry. A formal permission was obtained from the staff Nurses at Mahatma Gandhi Medical College and Research Institute. Data collection period is one week. The sample selection based on the inclusion criteria.50 staff Nurses were selected through purposive Sampling technique. Structured knowledge questionnaire and check list were used to assess the knowledge and competence of the samples respectively during pre test and Teaching and Demonstration given for staff nurses. After 7 days, again the same structured knowledge questionnaires and skill assessment check list were used to assess the knowledge and competence regarding neonatal hypothermia among staff nurses. The data collection was analyzed by using Interpretation descriptive and inferential statistics. Frequency and percentage distribution was used for demographic variables. Chi square test was used to associate knowledge neonatal hypothermia with selected demographic variables.

## V.ANALYSIS AND INTERPRETATION

Table 1(See Appendix); Depicts the pre and post test level of knowledge neonatal hypothermia among staff nurses. In pre-test out of 50 samples 21(42%) had inadequate knowledge, 24(48%) had moderate knowledge and 5(10%) of adequate knowledge. In post-test majority of the sample had only adequate knowledge and 21(42%) had moderate knowledge. Table 2(See Appendix); Depicts the pre and post test skill assessment of neonatal hypothermia among Staff Nurses. In pre-test out of 50 sample 6(12%) had inadequate skill, 37(74%) had moderate skill and 7(14%) of adequate skill. In post-test majority of the sample had only adequate skill and 49(98%) had moderate skill. Table 3(See Appendix); Shows that the effectiveness competence based teaching programme regarding neonatal hypothermia among Staff Nurses. Mean score knowledge level of neonatal hypothermia was 16.86 with the standard deviation of 4.436 whereas after implementation of competence based teaching programme, the post test knowledge level was increases about 24.48 with standard deviation 3.699.



The improvement of knowledge statistically tested by paired t-test which was founded to be statistically significant at  $p < 0.001^*$  level. It indicates that competence based teaching programme was effective in improving the knowledge on neonatal hypothermia among Staff Nurses. Hence the statistical hypothesis (H1) was accepted. Table 4(See Appendix);Shows that the effectiveness competence based teaching programme regarding neonatal hypothermia among staff nurses. Skill assessment mean score on neonatal hypothermia was 7.72 with the standard deviation of 2.15 whereas after implementation of competence based teaching programme, the post test skill assessed was increases about 13.28 with standard deviation 1.13. The improvement of skill status statistically tested by paired t-test which was founded to be statistically significant at  $p < 0.001^*$  level. It indicates that competence based teaching programme was effective in improving the skill assessment on neonatal hypothermia among staff nurses. Hence the statistical hypothesis (H1) was accepted.

Association between knowledge competences regarding neonatal hypothermia with socio demographic variables of Staff Nurses was assessed. It reveals that there is association between the selected demographic variables like Area of work, previous knowledge, Year of experience with the demographic variables of the staff nurses.

## VI.DISCUSSION

The frequency and percentage distribution of the socio demographic variables of selected samples. With regarding the age of staff nurses 20-25 year,38(76%) were in the age group 26-30 year 11 (22%) were in the age group of 31-35 years 1(2%) and there is no staff nurses in the age group of above 36. Marital Status of staff nurses is Unmarried 43(86%).Were in the Married staff nurses are 7(14%).In type of family of staff nurses is Nuclear 33(66%).In type family, majority of sample 33(66%) belongs to nuclear family. Out of 50 sampled 28(56%) rural area. Nursing experience 0-1 year 11(22%) were in the 2-3 year 28(56%) were in the 4-5 years 8(16%) were in the more than 5 years 3(6%). Regarding previous knowledge about Neonatal Hypothermia 21(42%). Area of work NICU 14(28%) were in the PICU 9(18%) were in the labour ward 7(14%) Pediatric Ward 20(40%).Regarding Nursing Studies Underwent Institution Belong to Pondicherry 34(68%) were in tamilnadu 9(18%) were in the other states 7(14%). The present finding revealed that, out of 50 samples during pre test 21(42%) had inadequate knowledge, 24(48%) had moderate knowledge, 5(10%)

had adequate knowledge. In post-test 21(42%) had moderate knowledge, 29(58%) had adequate knowledge<sup>(11)</sup>.

The effectiveness of competency based teaching programme on knowledge and care of neonatal hypothermia among staff nurses. Pre-test knowledge level was 7.72 with the standard deviation of 2.15. Where after implementing of competence based teaching programme, the post-test knowledge mean score was increased to 13.28 with standard deviation of 1.13.The improvement of knowledge and skill was statistically tested by paired t-test which was found to be statistically significant with  $p < 0.001$  level. It indicates that neonatal hypothermia competency teaching programme was effective in improving knowledge and skill regarding neonatal hypothermia among staff nurses. Here the stated hypothesis (H1) was accepted. It indicates that improving the effectiveness of competence based teaching programme on knowledge and competence regarding neonatal hypothermia among staff nurses in MGMC&RI at Puducherry<sup>(12)</sup>.

Finding shows that the association between the knowledge with selected demographic variables. Hence it is evidence there is association between the selected demographic variables like Year of experience, previous knowledge, Area of work had significant association with knowledge and competence because the p value is  $< 0.001$ .Hence the stated hypothesis (H2) was accepted.

## VII.CONCLUSION

The main aim of the study was to determine the effectiveness of competence based teaching programme on knowledge and competence regarding neonatal hypothermia among Staff Nurses in selected hospital at Puducherry. The study reveals that the competence based teaching programme improves the knowledge and practice skills of the Staff Nurses.

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**APPENDIX****TABLE 1: DISTRIBUTION OF PRE TEST AND POST TEST LEVEL OF KNOWLEDGE REGARDING NEONATAL HYPOTHERMIA.**

Knowledge level	PRE-TEST		POST-TEST	
	Frequency (n)	Percentage (%)	Frequency (n)	Percentage (%)
Inadequate	21	42	-	-
Moderate	24	48	21	42
Adequate	5	10	29	58
<b>Total</b>	50	100	50	100

**TABLE 2: DISTRIBUTION OF PRE-TEST AND POST-TEST LEVEL OF SKILL ON CARE OF NEONATAL HYPOTHERMIA AMONG STAFF NURSES.**

N=50

SKILL ASSESSMENT LEVEL	PRE-TEST		POST TEST	
	Frequency (n)	Percentage (%)	Frequency (n)	Percentage (%)
Inadequate skill	6	12	-	-
Moderate skill	37	74	1	2
Adequate skill	7	14	49	98
Total	50	100	50	100



**TABLE 3: COMPARISON OF MEAN & STANDARD DEVIATION OF KNOWLEDGE REGARDING NEONATAL HYPOTHERMIA BEFORE AND AFTER COMPETENCE BASED TEACHING PROGRAMME.**

Knowledge	Mean	Std. Deviation	t-test	p-value
Pre-test	16.86	4.436	11.869	<0.001*
Post-test	24.48	3.699		

**TABLE 4.COMPARISON OF MEAN, SD OF PRE TEST POST TEST SKILL ASSESSMENT SCORE ON CARE OF NEONATAL HYPOTHERMIA BEFORE AND AFTER COMPETENCE BASED TEACHING PROGRAM**

Knowledge score	Mean	Median	Standard Deviation	Wilcoxon Test	p-value
Pre-test	7.72	7	2.15	6.166	<0.001*
Post-test	13.28	14	1.13		