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## Effectiveness of demonstration regarding assessment of temperature of newborn in terms of their skills among nursing students

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### Abstract

Hypothermia is an important determinant of the survival of newborns, especially among low-birth weight babies. Neonatal hypothermia is widely recognized as an important contributing factor for neonatal morbidity. The present study was aimed to assess the level of skills among nursing students regarding assessment of temperature of newborn before and after demonstration. Pre-experimental research design with One group pre-test post-test 'was used. Study was conducted in NICU and Postnatal ward of MMIMS & R, Hospital, Mullana, Ambala with Purposive sampling technique for selecting 100 B.SC Nursing students. The mean post-test skills score of nursing students in terms of skills regarding assessment of clinical temperature of newborn ( $3.27 \pm 0.679$ ) was higher than the mean pre-test skills score ( $1.21 \pm 0.946$ ) as evident from the calculated 't' of 17.102 which was found to be statistically significant at 0.05 level of significance.

The mean post-test skills score regarding assessment of axillary temperature of newborn ( $6.62 \pm 1.632$ ) was significantly higher than the mean pre-test skills score ( $2.93 \pm 1.208$ ) as evident from the calculated 't' of 21.435 which was found to be statistically significant at 0.05 level of significance.

**Keywords:** Hypothermia, low-birth weight babies, neonatal mortality

### 1. Introduction

The current neonatal mortality rate in India is 39 per 1000 account for nearly 77% of all newborn. India accounts for 27% of global newborn deaths which has a newborn mortality rate of 43 per 1000 live births. Newborn mortality rate in Haryana is 32 per 1000 live births. India accounts for 27.3% of total newborn death in the world. Hypothermia in newborn is a common problem and is associated with increased morbidity and mortality. Prevention of hypothermia is therefore an essential aspect of newborn care especially in the immediate newborn period.

### 1.1 Objectives

1. To assess the level of skills regarding assessment of temperature of newborn among nursing students before and after demonstration
2. To determine the association of level of skills among nursing students regarding assessment of temperature of newborn with selected sample characteristics.

### 2. Methodology

Present study was conducted using Pre-experimental research design, One group pre-test post-test. The study was conducted on 100 B.Sc. Nursing students in NICU and Postnatal ward of MMIMS & R Hospital, Mullana, Ambala. Convenient sampling technique was used for selection of Hospital and Purposive sampling technique was used for selection of B.SC Nursing students. Formal administrative approval was taken from Principal, M.M College of Nursing, Mullana, Ambala and Medical and Nursing Superintendent of MMIMS&R Hospital, Mullana, Ambala. Observational checklist was developed to assess the skills of nursing students regarding assessment of temperature. The reliability of the tool was established by using inter-rater reliability which was found to be 0.8. The tool was validated by different experts in the field of nursing. Data was analyzed by using descriptive and inferential statistics

### 3. Results

**Table 1:** Frequency and Percentage Distribution of Nursing Students in terms of Level of Skills Regarding Assessment of Temperature of Newborn N=100

Level of Skills	Pre-Test		Post -Test 1		Post-Test 2	
	f	%	F	%	F	%
Average (≤50%)	100	100	13	13	40	40
Good (51-75%)	0	0	45	45	51	51
Very good (>75%)	0	0	42	42	09	09

Max. Score=14 Min. Score=0.

**Table 2:** Range, Mean, Median and Standard Deviation of Pre-test, Post-Test 1 and Post-test2 Skills Score of Nursing Students Regarding Assessment of Clinical Temperature and Axillary Temperature of Newborn N=100

	Range	Mean	Median	Standard Deviation
Clinical Temperature				
Pre-Test	0-3	1.21	1	.946
Post-Test 1	1-4	3.27	3	.679
Post-Test 2	1-4	2.51	2.5	.689
Axillary Temperature				
Pre-Test	1-6	2.93	3	1.208
Post-Test 1	3-10	6.62	7	1.632
Post-Test 2	1-2	5.56	5	1.513

Clinical Assessment of Temperature: Maximum Score= 4

Axillary Assessment of Temperature: Maximum Score=10

**Table 3:** Mean, Mean Difference and Standard Error of Mean Difference and ‘t’ of Pre-Test And Post-Test 1 Skills Score of Nursing Students Regarding Assessment of Clinical Temperature and Axillary Temperature of Newborn N=100

Area	Mean	MD	SD <sub>D</sub>	SE <sub>MD</sub>	‘t’
Clinical Temperature					
Pre-test	1.21	2.060	1.205	.120	17.102*
Post-test 1	3.27				
Axillary Temperature					
Pre-test	2.93	3.690	1.721	.172	21.435*
Post-test1	6.62				

‘t’(99)=1.984 (\* significant, (NS) non significant (p≤0.05)

**Table 4:** Mean, Mean Difference And Standard Error of Mean Difference and ‘t’ of Pre-Test and Post-Test 2 Skills Score of Nursing Students Regarding Assessment of Clinical Temperature and Axillary Temperature of Newborn N=100

Area	Mean	MD	SD <sub>D</sub>	SE <sub>MD</sub>	‘t’
Clinical Temperature					
Pre-test	1.21	1.30	1.219	.122	10.668*
Post-test 2	2.51				
Axillary Temperature					
Pre-test	2.93	2.630	1.745	.174	15.075*
Post-test 2	5.56				

‘t’(99)=1.984 (\* significant, (NS) non significant (p≤0.05)

### 4. Recommendations

- A study can be replicated on a larger sample of nursing students of selected colleges for wider generalization of the findings.

- A study can be undertaken to assess the impact of reinforced teaching on skills of nursing students regarding assessment of newborn.
- A study can be carried out by using other teaching strategies like information booklet, SIM, manual, computer assisted instruction, or competency based teaching.

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