

## A Study to Evaluate the Efficacy of Self Instructional Module (SIM) On Knowledge and Practice Regarding Newborn Care among Staff Nurses Working In Selected Hospitals of Delhi NCR

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**Abstract-**The study was conducted on the Staff nurses posted in maternity ward and Neonatal ward in selected hospitals of Delhi NCR in month of September/October 2014.

### **Objectives:**

1. To assess the knowledge and practice regarding newborn care among staff nurses.
2. To evaluate the efficacy of the Self Instructional Module regarding newborn care among staff nurses.
3. To associate the knowledge and practice of staff nurses on newborn care with selected demographic variables.

**Material and Methods:** Staff nurses (n=50) selected by adopting non probability convenient sampling from different hospitals of Delhi NCR. An evaluative research approach is used to evaluate the effectiveness of SIM on knowledge & practice regarding newborn care. Pre experimental single group pretest posttest research design has been adopted in the present study.

**Result:** Overall finding of the study indicate that the SIM is an effective way to improve the knowledge and improve the standard of practice of staff nurses if it delivered in effective manner. Paired 't' test indicates that the enhancement of mean knowledge and practice score was found to be significant ( $p < 0.01$ ) revealing the effectiveness of self instructional modules.

**Conclusion:** The overall finding of the study were concluded that the after administration of SIM knowledge and practice of staff nurses were enhance that reflected by enhancement of post test knowledge and practice score. There was no association of knowledge and practice with their selected demographic variables. This study will help the child health nurse to develop appropriate teaching material to improve knowledge and practice regarding newborn care.

**Keywords:** SIM (Self Instructional Module), NICU (Neonatal Intensive Care Unit), df (degree of freedom)

### **I. Introduction /Background**

A newborn is precious not only to his parents, family, community and nation, but to the world at large. Child is the foundation, of the health and the wealth of nation. The maintenance of health is not only desired but positively valued by every society and thus an improved level of health is an accepted goal of all communities.<sup>2</sup>

Newborn baby is considered to be tiny and powerless, completely dependent on others for life within one minute of birth. The normal newborn adapts from a dependent total existence to an independent one, capable of oxygenation and carrying in life processes.<sup>1</sup>

All newborn babies require immediate care after delivery. Newborn baby must initiate respirations and accommodate a circulatory system to extra uterine oxygenation within 24 hours, neurological, renal, endocrine, gastrointestinal and metabolic functions must be operating competently for life to be sustained.<sup>4</sup>

Newborn care is defined as the management of the neonate during the transition to extra uterine life and subsequent period of stabilization. (McCloskey and Buleckek, 2000).<sup>6</sup>

Improving newborn care is part of poverty reduction strategy, given the wide gap between rich and poor in neonatal outcomes. Health experts agree that the millennium development goal to reduce child mortality by two thirds between 1990 and 2015 cannot be met unless neonatal mortality is halved.<sup>3</sup>

#### **1.1 Need for the Study**

"In every child who is born, under no matter what ever circumstances and no matter whichever parents, the potentiality of the human are is born again, in him too, once more and of each of us, our terrific responsibility towards human life", (James agee 2000).<sup>6</sup>

In India 55%-60% of infant deaths occur within neonatal period. of these more than half die during the first week of birth; first 24 hours being the time of greatest risk, most of the deaths occur due to asphyxia, hypothermia and infections.<sup>5</sup>

The common cause of deaths among the newborn were sepsis, respiratory infection, aspiration, asphyxia and hypothermia (Park 2000).<sup>2</sup>

The newborn care is very important.

- ❖ Neonatal mortality accounts for more than half the infant mortality (95 per, 1,000 live births) in India and is three to four times than that in the western countries.
- ❖ Improved neonatal care can lead to better and intact survival, which will show the way for better acceptance of small family norm.(Achar 2000)

The care of the newborn involves observation of neonates, breast feeding, Thermoregulation, elimination and surveillance for neonatal problems, (Donna L. Wong 2002).<sup>8</sup>

The nurse is a primary health care provider, who has contact with the neonate during birth, and she requires the skill to identify the baby who is having a difficulty symptom to adjust with the environment; so newborn care can be instituted. Nurse is a risk taker and a care provider; she should use her skill in care of newborn to save the life of newborn.

### **1.2 Statement of the problem-**

A Study to evaluate the efficacy of self instructional module (SIM) on knowledge & practice regarding newborn care among staff nurses working in selected hospitals of Delhi NCR.

### **1.3 Objectives-**

- A. To assess the knowledge and practice regarding newborn care among staff nurses.
- B. To evaluate the efficacy of the Self Instructional Module regarding newborn care among staff nurses.
- C. To associate the knowledge and practice of staff nurses on newborn care with selected demographic variables.

### **1.4 Delimitation**

- ❖ The study is limited to only registered nurses, who are working in maternity ward and Neonatal ward in the selected hospitals.
- ❖ Data collection period is limited for 4 weeks.
- ❖ The Sample size is limited to 50 subjects.

### **1.5 Hypotheses**

**H<sub>1</sub>** – There will be a significant difference between pre and post test knowledge and practice regarding newborn care among the staff nurses.

**H<sub>2</sub>** – There will be an association between the knowledge regarding newborn care among staff nurses and selected demographic variables.

**H<sub>3</sub>** - There will be a significant association between the practice regarding newborn care among staff nurses and selected demographic variables.

## **II. Review Of Literature**

**Review of literature selected under the following titles-**

- ❖ Literature related to newborn care
- ❖ Literature related to effectiveness of Self instructional Modules

## **III. Conceptual Frame Work**

This study was based upon J.W.Kenny's (2002) open system model. According to this model, people are living open system. The main concept of this model is input, throughput, output and feedback open system which have varying degrees of interaction with environment from which they receive "input" in terms of matter, energy and information that enter into the system through its boundary. Input refers to lack of knowledge and practice identified by the investigator regarding newborn care among staff nurses.<sup>7</sup>

## **IV. Methodology**

Data was collected over a period of four week from the selected hospitals of Delhi NCR. Approval to conduct this study was obtained from the hospital on the condition not to expose the name of Institute in publications and written consent was obtained from the staff nurses.

Structured Self-administered questionnaire and Observational check listed were used to assess the knowledge and practice of staff nurses.SIM has administered to staff nurses after conducting pretest and after 7(seven) days of SIM administration posttest has conducted to evaluate effectiveness of SIM.

**4.1 Research design-** Pre Experimental single group pretest posttest research design

**4.2 Research approach** – Evaluative research approach

**4.3 Setting** – Selected hospitals of Delhi NCR

**4.4 Sample technique & Size** – Non probability convenience Sample technique used to select 50 Staff nurses working in maternity and neonatal unit.

**4.5 Description of the tool-**

The tool consists of three sections:

**Section I:** 5 items related to demographic variables.

**Section II:** 30 items related to knowledge regarding newborn care

S/N	Score	Level of knowledge
1	>50%	Inadequate knowledge
2	51 – 75%	Moderately Adequate Knowledge
3	76% and above	Adequate knowledge.

**Section III:** 36 items related to practice regarding newborn care.

S/N	Score	Level of Practice
1	>50%	Inadequate practice
2	51 – 75%	Moderately Adequate practice
3	76% and above	Adequate practice

**4.6 Self – instructional module-**

The areas covered by self instructional module are initiation of breathing, thermoregulation, breast feeding, physical assessment and prevention of infection.

**4.7 Validity and Reliability-**

The content validity of the instrument was assessed by obtaining opinion from 6 experts in field of nursing and medicine.

Internal consistency of tool was checked by using test – retest method and co-efficient of knowledge was found to be  $r = 0.89$  and practice was  $r = 0.75$  which indicates the reliability.

The data collection was done over a period of Sep/Oct.2014. The permission was obtained from concern authority respectively. The data was collected using structured questionnaire for assessing knowledge.

## V. Data Analysis and Interpretation – (Tables)

(Section –I)- Distribution of the subject

**Table-1 Frequency and Percentage distribution of sample characteristics.**

S/N	Sample characteristics	F	%
01	Age		
	Below 25 yrs.	44	88
	25-35	06	12
	Above 35	00	00
02	Marital status		
	Married	43	86
	Unmarried	07	14
	Widow	00	00
03	Religion		
	Hindu	37	74
	Muslim	00	00
	Christian	13	26
04	Education		
	GNM	48	96
	B.Sc., (N)	02	04
	P.C. B.Sc.,(N)	00	00
05	Experience		
	Below 1 year	27	54
	1-3 years	18	36
	3-5 years	05	10
	Above 5 years	00	00

**Section –II**

**Table-1 Assessment of pre test scores on knowledge and practice regarding newborn care among staff nurses.**

Variable	Inadequate		Moderate adequate		Adequate	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Knowledge	20	10	28	56	2	4
Practice	11	22	20	40	19	38

**Table 2: The Assessment of post test knowledge and practice score regarding newborn care among staff nurses**

Variable	Inadequate		Moderate adequate		Adequate	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Knowledge	0	0	20	40	30	60
Practice	0	0	4	8	46	92

**Table: 3. Area wise comparison of pre and post test knowledge regarding newborn care among staff nurses = 50**

Area	Pre-Test				Post Test			
	Max	Mean	Mean%	SD	Max	Mean	Mean%	SD
Initiation of breathing	3	1.78	33.4	12.46	3	1.84	61.3	12.88
Thermo regulation	6	3.56	59.3	24.92	6	4.04	67.3	28.28
Breast Feeding	13	8.5	65.3	59.5	13	10.82	83.2	75.74
Hygenic practice	5	2.6	52	18.2	5	4.48	89.6	31.36
Immunization	3	1.74	58	12.18	3	1.84	61.3	12.88
Over all	30	17.98	59.9	4.12	30	24.01	80.03	2.82

**Table: 4. Area wise comparison of pre and post test practice regarding newborn care among staff nurses n = 50**

Area	Pre-Test				Post Test			
	Max	Mean	Mean%	SD	Max	Mean	Mean%	SD
Receivings the Baby	10	6.16	61.6	43.12	10	8.2	80.6	57.4
Initiation of breathing	2	1.48	70	9.8	2	1.74	87	12.18
Prevention of Infection	5	2.66	53.2	18.62	5	4.18	83.2	29.26
Thermo regulation	5	2.58	51.6	48.05	5	4.01	81.2	28.7
Physical Assessment	5	2.74	54.8	19.18	5	4.46	88.4	31.22
Breast Feeding	9	5.9	65.5	41.3	9	8.14	89.3	56.98
Over all	36	21.44	59.5	3.60	36	26.72	84.66	4.31

**Table: 5. Pre and Post Test mean knowledge and practice score regarding newborn care among staff nurses n = 50**

Variable	Pre-Test		Post Test		Test Statistics
	Mean	SD	Mean	SD	
Knowledge	21.6	4.12	24.01	2.82	t = 8.682 ***
Practice	21.44	3.60	26.72	4.31	t = 4.8352 *

\* Significant at 1% level p<0.01. df = 49

**Section - III**

**Table 6: Association of Knowledge and selected demographic variables. n = 50**

Variables	Moderate	Adequate	df	$\chi^2$
Age				
Below 25 yrs.	17	27	1	ns $\chi^2=0.284$
25-35	3	3		
Above 35	-	-		
Marital status				
Married	4	3	1	ns $\chi^2=0.997$
Unmarried	16	27		
Widow	-	-		
Religion				
Hindu	15	22	1	ns $\chi^2=0.017$
Muslim	-	-		
Christian	5	8		
Education				
GNM	19	29	1	ns $\chi^2=0.087$
B.Sc., (N)	1	1		
P.B. B.Sc.,(N)	-	-		
Experience				
Below 1 year	14	13	2	ns $\chi^2=3.951$

1-3 years	4	14		
3-5 years	-	-		
Above 5 years	2	13		

ns = Not Significant,

**Table7. Association of practice score and selected demographic variables.**

Variable	Inadequate	Moderate	Adequate	df	$\chi^2$
Age					
Below 25 yrs.	5	7	32	2	ns $\chi^2=2.153$
25-35	0	0	6		
Above 35	-	-	-		
Marital status					
Married	1	0	6	2	ns $\chi^2=1.390$
Unmarried	4	7	32		
Widow	-	-	-		
Religion					
Hindu	3	4	30	2	ns $\chi^2=2.027$
Muslim	-	-	-		
Christian	2	3	8		
Education					
GNM	5	7	36	2	ns $\chi^2=0.658$
BSc(N)	0	0	2		
P.B.BSc(N)	-	-	-		
Experience					
Below 1 year	3	1	23	4	ns $\chi^2=6.177$
1-3 years	1	5	12		
3-5 years	-	-	-		
Above 5 years	1	1	3		

ns- not significant

### 5.1 Hypothesis testing

In order to determine the effectiveness of self instructional module on knowledge and practice regarding newborn care among staff nurses, three research hypotheses were formulated. In order to test the research hypothesis 't' values were computed.

**H<sub>1</sub>:** There will be a significant difference between pre and post test knowledge and practice regarding newborn care among staff nurses.

The 't' value between pre and post test computed for knowledge on newborn care and presented in table 5, indicates that there is a significant improvement in scores from pre to post test at 1% level i.e.  $p < 0.01$ . The 't' value between pre and post test computed for practice on newborn care and presented in table 5, indicates that there is a significant improvement in scores from pre and post test at 1% level. i.e.  $p < 0.01$ .

**H<sub>2</sub>:** There will be an significant association between knowledge regarding newborn care among staff nurses and selected demographic variables.

Chi square analysis used to test the association between pretest knowledge with demographic variables presented in table 6, indicates that there is no significant relationship between pretest knowledge score and selected demographic variables.

**H<sub>3</sub>:** There will be a significant association between the practice regarding newborn care among staff nurses and selected demographic variables.

Chi square analysis used to test the association between the pre test practice and selected demographic variables presented in table 7, indicate that there is no significant association between pretest practice and selected demographic variables. Hence the null hypothesis has been accepted and research hypothesis rejected.

## VI. Discussion

According to Kathuria OK, Agarval V (2000) conducted an experimental study to assess the effectiveness of self instructional module on care of the neonates among neonatal intensive care unit staff Nurses, in New Delhi. The subjects of the study shows that (90%) staff nurses had adequate knowledge on care of neonates. This study supports the investigator to evaluate the effectiveness of self instructional module.

## VII. Conclusion

The study was done to assess the knowledge and practice regarding newborn care among staff nurses in selected hospitals, Delhi NCR. The result of this study shows that the most of the staff nurses had adequate knowledge and practice after administration of self instructional module. There was no association of knowledge and practice with their selected demographic variables. This study will help the child health nurse to develop appropriate teaching material to improve knowledge and practice regarding newborn care.

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### **References**

#### **Books -**

- [1]. Adile Pillittere, Maternal and child health nursing care of the child bearing and childrearing family, (5<sup>th</sup> ed). New Delhi: published by Williams & Wilken's, 2007, 679 – 86.
- [2]. Abdellah, Faye G, Better patient care through nursing research. (2<sup>nd</sup> ed) , Newyork: published by Macmilla, 2001, 300-306.
- [3]. Achar's (1995), Text book of pediatrics (3<sup>rd</sup> ed) New Delhi: Orient Longman publisher, 1995, 500 – 510.
- [4]. Donna L. Wong, Marilyn Hockenberry, David Wilson, Marilyn L. Winkelstein, Patricia Schwartz, Wong's essentials of pediatric nursing, (6<sup>th</sup>ed), New Delhi: published by Harcour (India) private limited, 2002, 197-244.

#### **Journals paper-**

- [5]. Hugo Van Beuer, Comprehensive Child Care and Essential Newborn care, Indian Pediatrics Journal of Indian Academy of pediatrics, 2004, 41(11), 1097-1099
- [6]. Mahmood A, Fazal UR, Rehman, Salma, Chuqhtai, Farida, Department of Pathology, Afganistan (on line) Journal of Afganistan Medical Association, 2008, 58(5), (abstract from pub med).

#### **Online Access -**

- [7]. [www.importantofnewborn.com](http://www.importantofnewborn.com)
- [8]. [www.essentialinterventionsofnewborn.com](http://www.essentialinterventionsofnewborn.com)