A Study to Assess the Knowledge Regarding Newborn Danger Signs among Staff Nurses in Selected Hospital in Kanpur, Uttar Pradesh with a View to Develop an Information Booklet

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ABSTRACT

The first 28 days of life (the neonatal period) constitute the most vulnerable time for a child's survival. Newborn dangers sign related assess the knowledge among staff nurse through reduce the newborn mortality and morbidity. Overall, 2.7 million neonatal deaths were global report of neonatal mortality and they account for 45% of under-five deaths. Poor knowledge of newborn danger signs delays care seeking.[1] The aim of this study was to explore the knowledge of key newborn danger signs among staff nurse. The study was conducted to assess the level of knowledge regarding Newborn danger signs among staff nurses in selected hospitals. The main objective of study was to assess the knowledge regarding Newborn danger signs among staff nurses in selected hospitals and to associate the level of knowledge with selected demographic variables. **Methods:** A Quantitative Research Approach with Descriptive Research Design was used for this study. The sample for the study was 200 staff nurses from Rama hospital and research centre and Hallet hospital. The sample was selected by Convenience Sampling Technique and structured knowledge questionnaire was used for this study to collect the data. The result showed that 16.5% had adequate knowledge, 83,0% moderate knowledge and 0.5% hade inadequate knowledge level of staff nurses regarding neonatal danger signs and mean 19.79 and standard deviation 2.63. **Conclusion:** based on the findings of the study the conclusion was drawn that highest percentage of the moderate knowledge and 30 percent staff nurse adequate knowledge regarding Newborn danger signs among staff nurses with their selected variables. The study suggested that proper teaching and given booklet on newborn danger signs may helpful for the staff nurses to improve the knowledge.

INTRODUCTION

Early detection of neonatal illness is an important step towards improving new born survival. Toward this end there is need for the mothers to be able to identify signs in neonates that signifies severe neonatal illnesses. Early identification of new born danger signs by caregivers with prompt and appropriate referral serves as backbone of the programs aiming at reduction in neonatal mortality. Neonates are more prone to show subtle signs of illness and these can only be identified by the immediate care givers who have adequate knowledge on features to look for. Listlessness or difficulty feeding are sometimes the only signs present and illness may advance quickly.[2]

Different tools to facilitate identification of these health problems and reduce neonatal mortality have been introduced into health programs in several countries. Integrated Management of Newborn and Childhood Illness (IMNCI) developed by the World Health Organization (WHO) focuses on assessment of general danger signs in the examination of children presenting with illness at health care centres. WHO in 2013 strongly recommended specific danger signs that should be assessed during each postnatal care contact and the new born should be referred for further evaluation if any of the signs are present. The family should also be encouraged to seek health care

early if they identify any danger signs in-between postnatal care visits. The danger signs are as follows; stopped feeding well, History of convulsions, fast breathing severe chest in-drawing, no spontaneous movement, fever, low body temperature, any jaundice in first 24 h of life, or yellow palms and soles at any age. In a Multicentre study by Young Infants Clinical Signs Study Group, it was noted that assessment of danger signs resulted in a high overall sensitivity and specificity for predicting the need for hospitalization of a new born in the first week of life.[3]

Management of Neonatal and Childhood Illness (IMNCI) developed by the World Health Organization (WHO) identified the newborn danger signs of severe illness as history of difficulty feeding, movement only when stimulated, temperature below 35°C, temperature above 37.5°C, respiratory rate over 60 breaths per minute, severe chest in drawings and, history of convulsions. Assessment of these signs will result in a high overall sensitivity and specificity for predicting the need for hospitalization of a neonate in the first week of life. This time is critical to providing neonates with appropriate care at the onset of illness and delays in the decision to seek care can have significant consequences. Most newborn morbidity and mortality could be averted if mothers and newborns receive appropriate care during pregnancy, childbirth and during the postpartum period. The essential newborn cares include thermal care, exclusive breastfeeding, and clean cord and eye care. In addition, resuscitation of neonates with asphyxia and prevention and early treatment of infections can save many newborns lives. Additionally, to deliver successful neonatal health care interventions, health care facilities and providers must not only be available and accessible, but illness must first be recognized and care desired by the neonate's caregiver, often a parent or other family member. As such, understanding care-seeking practices become essential for health interventions have a positive impact. [4]

Neonatal care is highly cost effective because saving the life of a newborn baby is associated with survival and productivity for over 5 decades as opposed to intensive care of adults with cancer and the degenerative disorders which is associated with an average survival for 2-5 years. Neonatal deaths account for 64% of all infants' deaths in India optimal perinatal care with improved survival of infant is essential for effective fertility control and stabilization of population dynamic.[5]

NEED OF STUDY
Neonatal mortality and morbidity are the greatest challenges in the current health care scenario.

Majority of newborns die because mothers fail to identify danger signs of illness, and inappropriate/delayed care seeking. The most common identified newborn danger signs are fever, lethargy, inability to feed, low temperature, fast breathing, persistent vomiting, convulsions, pus draining/bleeding from umbilical area, lack of consciousness, yellow palm/sole/eye and eye discharge/redness. In particular, early symptom recognition, appropriate care-seeking, and recognition of danger signs have been identified as cornerstones in neonatal death reduction. As neonates are more prone to express subtle signs of illness. it is essential that mothers possess the knowledge needed to identify symptoms.[6] To assess household practices that can affect neonatal health, from the perspective of caregivers and health workers; to identify signs in neonates leading either to recognition of illness or health-care seeking; and to ascertain the proportion of caregivers who recognize the individual items of the integrated management of neonatal and childhood illnesses (IMNCI) programme.[7]

This early response and presentation to the hospital has been documented as an important factor in reduction of neonatal mortality in emergency situation. This reiterates the need for renewed and intensive education of mothers about these signs during pregnancy and antenatal care visits in order to minimize the delays in initial household interventions and decision to seek care. Many of these deaths are related to late recognition of neonatal illness, delays in decision to seek care at household level and subsequent late intervention at healthcare facilities. Knowledge of mothers about the danger signs in newborn is imperative to reduce these delays and preventable deaths and reduce the neonatal mortality and morbidity rate.[8]

STATEMENT OF THE PROBLEM-
A study to assess the knowledge regarding Newborn danger signs among staff nurses in selected hospitals in Kanpur, Uttar Pradesh with a view to develop an information booklet.

OBJECTIVES OF THE STUDY-
➢ To assess the level of knowledge regarding Newborn danger signs among staff nurses in selected hospital in Kanpur, Utter Pradesh.
➢ To find out association between level of the knowledge regarding Newborn danger signs with their selected demographic variables.

HYPOTHESIS-
➢ **H$_{01}$-** There is no significant association between level of knowledge regarding Newborn danger signs among staff nurses in selected hospitals in Kanpur U.P. with their demographic variables.

- **H$_{02}$:** There is no significant association between level of knowledge on newborn danger signs among staff nurse's demographic variables

- **H$_1$:** There is a inadequate knowledge on newborn danger sign warning signs among staff nurses.

- **H$_2$-**There is a significant association between knowledge score of staff nurses regarding Newborn danger signs selected hospitals in Kanpur U.P**.**

METHODOLOGY-

- **Research approach –** A Quantitative, Descriptive Approach was used by the investigator to assess the knowledge regarding Newborn danger signs among staff nurses.

- **Research design –** The Research Design is the master plan is specifying the method and procedure for collecting and analyzing the needed information in the research study. Non-Experimental Descriptive Research Design.

- **Demographic variables -**In this study the demographic variables are Age, Gender, Religion, area of resident, education qualification, marital status, monthly income, Sources of information.

SOURCE OF DATA COLLECTION-

- **Setting –** The study conducted at Rama hospital & Hallet hospital, Kanpur U.P.

- **Population -**A population is the entire aggregation of cases in which a researcher is interest. In the present study the population comprises the staff nurses in hospitals in Kanpur U.P.

- **Target population -**It is the sum of all units in which researcher is interested in the study. Target population of present study is staff nurses working in selected hospitals in Kanpur U.P.

- **Accessible population-** Accessible population of present study were staff nurses working at Rama hospital & Hallet hospital Kanpur U.P.

METHOD OF DATA COLLECTION-

- **Sample-** In this study, the sample were staff nurses fulfilled the sampling criteria.

- **Sample size-** The sample size of present study comprised of 200 nursing staff who fulfilled inclusion criteria.

- **Sampling technique -** In this research study, the sample were selected through Convenient Sampling Technique.

CRITERIA FOR SELECTION OF THE SAMPLE-
Inclusion criteria-

- Staff nurses who are willing to participate in the study.

- Staff nurses who are available at the data collection.

Exclusion criteria-

- Staff nurses who are not available during data collection.

- Staff nurses present patient bed side.

TOOL FOR DATA COLLECTION-

- To assess the knowledge Newborn dangers signs staff nurses to an information booklet.

- **Section A-** The socio demographic variable

- **Section B-** The structured knowledges questionnaire

ASSUMPTIONS -

- Staff nurses may not have adequate knowledge regarding Newborn danger signs develop an information booklet.

- Information booklet may improve the knowledge regarding Newborn danger signs among staff nurses.

- The knowledge regarding new born danger signs may have relation with demographic variable.

DATA ANALYSIS AND INTERPRETATION-
Section A: - Assessment of level of knowledge regarding newborn danger signs.

Table 1 Frequency and percentage distribution of demographic variables.

	Socio- Demographic variables	N	%
Age	20 - 25 year	147	73.5%
	26 - 30 year	51	25.5%
	31 - 35 year	2	1.0%
	36 - 40 year	0	.0%
	Total	200	100.0%

Gender	Female	145	72.5%
	Male	55	27.5%
	Total	200	100.0%
Religion	Hindu	124	62.0%
	Muslim	60	30.0%
	Christian	16	8.0%
	Other	0	.0%
	Total	200	100.0%
Area of resident	Rural	35	17.5%
	Urban	165	82.5%
	Total	200	100.0%
Educational Qualification	G.N.M	120	60.0%
	P.B.S.C Nursing	54	27.0%
	B.Sc. Nursing	26	13.0%
	M.Sc. Nursing	0	.0%
	Total	200	100.0%
Marital status	Married	55	27.5%
	Unmarried	145	72.5%
	Total	200	100.0%
Monthly income of family in rupee	Rs. 10000/- to Rs 20000	111	55.5%
	Rs. 20001/- to Rs. 30000	36	18.0%
	Rs. 30001 - to Rs. 40000/-	51	25.5%
	>Rs. 40000/-	2	1.0%
	Total	200	100.0%
Source of information	Social media	0	.0%
	Lecture & seminar	150	75.0%
	Health care worker	50	25.0%
	Newspaper/ TV	0	.0%
	Total	200	100.0%

The above table shows demographic variable frequency and parentage. Age of staff nurse's majority 147 (73.5 %) are 20-25 year and age group 26- 30year majority 50(25.5%) or 31-35 year 2(1.0%). gender of staff nurses 145 (72.5%) and 55(27.5%), religion Hindu 124(62. %) and Muslim are 60(30.0.%) or Christian 16(8.0%). Area of resident rural majority 165(82.5%) and rural 35 17.5%), educational qualification majority 120 (60.0%) was G.N.M. and 54(27,0%) P.B.S.C nursing, 26 (13.0%) B.Sc. nursing, marital status majority was unmarried 145 (72.5%) and married 55(27.5%), Monthly income of family in rupee was majority 111(55.5%) Rs.10000/- to Rs 20000, and 36(18.0%) Rs. 20001/- to Rs. 30000.or 51(25.5%) RS30001-to Rs40000/ or 2(1.0%) Rs. 20001/- to Rs. 30000. Source of information was majority Lecture & seminar 150 (75.0%) and Health care worker 50(25.0%).

Section B: Table 2. Level of knowledge regarding newborn danger signs among staff nurses.

		N	%
Knowledge Level	Inadequate knowledge	1	.5%
	Moderate knowledge	166	83.0%
	Adequate knowledge	33	16.5%
	Total	200	100.0%

The above shows that table highest moderate knowledge 166(83.0 %) and adequate knowledge 33(16.5 %) and inadequate knowledge 1(0.5%).
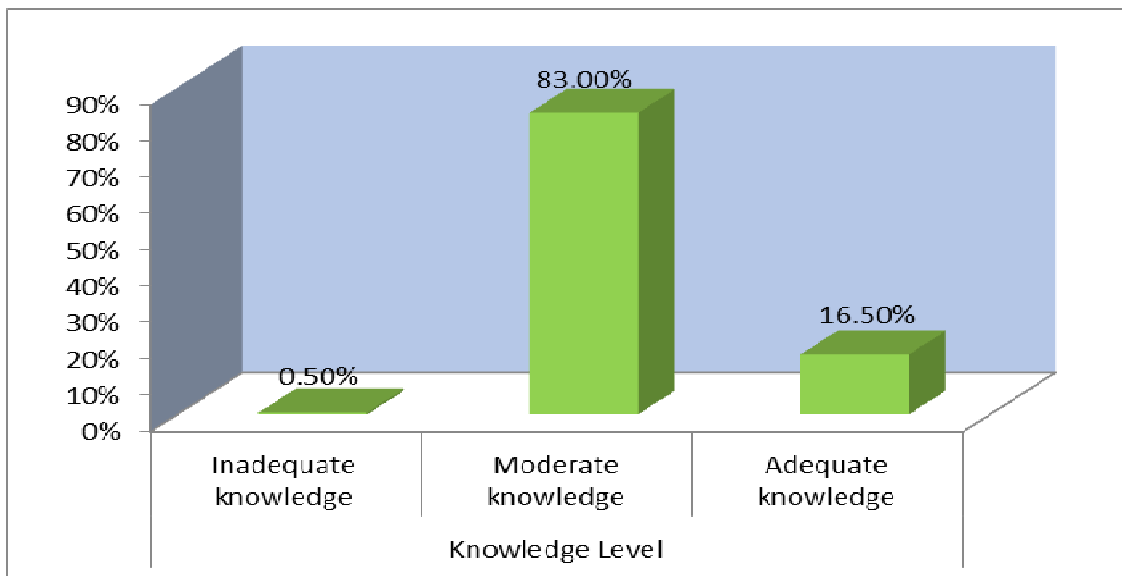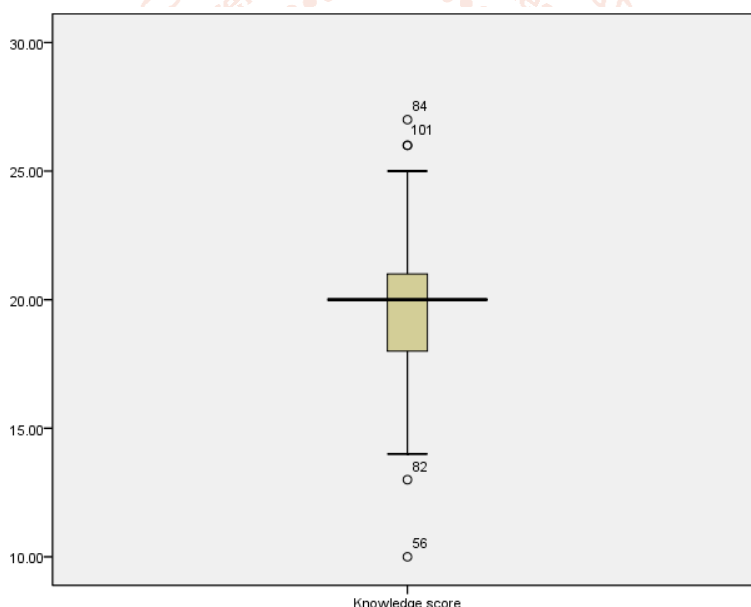
LEVEL OF KNOWLWGE-

Fig.1- The level of knowledge regarding newborn danger signs among staff nurse

In this Fig.1 it is shows that out of 200 staff nurses' percentage wise distribution of level of knowledge. The data showed inadequate knowledge 0.50%, moderate knowledge 83%, and adequate knowledge 16.50%.

	Mean	Standard Deviation
Knowledge score	19.79	2.63

Table 3 Mean and Standard deviation of knowledge level regarding newborn danger signs. Mean 19.79 and standard deviation 2.63 of knowledge score

		Knowledge Level						χ2 values (df)	p-value Inference
		Inadequate knowledge		Moderate knowledge		Adequate knowledge			
		N	%	N	%	N	%		
Age	20 - 25 year	1	100.0%	124	74.7%	22	66.7%	2.57 (4)	0.633 NS
	26 - 30 year	0	.0%	41	24.7%	10	30.3%		
	31 - 35 year	0	.0%	1	.6%	1	3.0%		
	36 - 40 year	0	.0%	0	.0%	0	.0%		

Gender	Female	0	.0%	117	70.5%	28	84.8%	5.49 (2)	0.064 NS
	Male	1	100.0%	49	29.5%	5	15.2%		
Religion	Hindu	0	.0%	103	62.0%	21	63.6%	2.49 (4)	0.647 NS
	Muslim	1	100.0%	50	30.1%	9	27.3%		
	Christian	0	.0%	13	7.8%	3	9.1%		
	Other	0	.0%	0	.0%	0	.0%		
Area of resident	Rural	0	.0%	30	18.1%	5	15.2%	0.38 (2)	0.829 NS
	Urban	1	100.0%	136	81.9%	28	84.8%		
Educational Qualification	G.N.M	1	100.0%	100	60.2%	19	57.6%	0.88 (4)	0.928 NS
	P.B.S.C NURSING	0	.0%	44	26.5%	10	30.3%		
	B.Sc. NURSING	0	.0%	22	13.3%	4	12.1%		
Marital status	Married	0	.0%	41	24.7%	14	42.4%	4.72 (2)	0.094 NS
	Unmarried	1	100.0%	125	75.3%	19	57.6%		
Monthly income of family in rupee	Rs. 10000 to Rs 20000	0	.0%	94	56.6%	17	51.5%	7.61 (6)	0.268 NS
	Rs. 20001 to Rs. 30000	1	100.0%	27	16.3%	8	24.2%		
	Rs. 30001 to Rs. 40000	0	.0%	44	26.5%	7	21.2%		
	>Rs. 40000	0	.0%	1	.6%	1	3.0%		
Source of information	Social media	0	.0%	0	.0%	0	.0%	0.43 (2)	0.806 NS
	Lecture & seminar	1	100.0%	125	75.3%	24	72.7%		
	Health care worker	0	.0%	41	24.7%	9	27.3%		
	Newspaper/ TV	0	.0%	0	.0%	0	.0%		

Table 4. Association between level of knowledge with selected demographic variable.

*NS= non-significant at the 0.05 level of significant   N= No. of samples

$\chi 2$ =Chi Square value   df= Degree of freedom

This table Shows that out of 200 Staff nurses were had (0.50 %) inadequate knowledge (83.00%) moderate knowledge and (16.50%) adequate knowledge regarding Newborn danger signs. No significant association between level of knowledge with the selected demographic variables.

RECOMMENTATION-

Keeping in view the finding of the present study the finding of the present study the following are-

1. A study can be done on large amount of sample.
2. The same study can be done with a quantitative researcher approach having a large group.

DISCUSSION-

The present study was designed to assess the knowledge regarding Newborn danger signs among staff nurses in selected hospitals in Kanpur Uttar Pradesh. This study was showed that 16.5% had adequate knowledge (83.0%) moderate knowledge and 0.5% had inadequate knowledge of staff nurses regarding neonatal danger signs and mean 19.79±2.63 standard deviation. There is no significant association between level of knowledge regarding Newborn danger signs among staff nurses in selected hospitals in Kanpur U.P. with their demographic variables and H_{02} hypothesis was accepted others H_1 and H_2 rejected. The study suggested that proper teaching and given booklet newborn danger signs will be helpful for the staff nurses to gain the knowledge.

CONCLUSION-

On the basis of this research its concluded that the level of knowledge among staff nurses about new born danger signs is moderate and less than adequate knowledge. No significant association between level of knowledge with the selected demographic variable.

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