

An Evaluation to Assess the Knowledge regarding Palliative Care in Neonatal Nursing among Staff Nurses Working in Selected Hospitals at Bangalore

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ABSTRACT

The neonatal unit frequently occupied by newborns that are marginally viable or critically unwell and could be considered as terminally ill. It is a busy, highly technical environment with advanced life saving medical equipments, at its disposal. The technology has had a profound effect on neonatal nursing practice. The escalation of technology and medical advances has been followed by an increase in later disabilities. Many devices have altered from being one of the supporting clinical practices to that of being an essential requirement in treatment delivery. Even after the use of all settings. Some newborns will die in the NICU. The mortality and morbidity rate is still high. This has given rise to many ethical issues including withdrawal of intensive care therapies. The conceptual framework for the study is based on Health Belief Model. Health Beliefs are person's knowledge, ideas and attitude, about health and illness. In this study various literature was reviewed which includes, the research design selected for the study was cross sectional. There were significant relationship between the level of knowledge and Sex and source of information.

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1. INTRODUCTION

The new life in the world is making happiness and creating colorful flowers in the world. The life of a new born is dependent on his ability to adapt to an extra uterine environment. The health is becomes optimum when there is physical, mental and social well being. The prognosis of the newborn is very critical due to some unexpected life threatening situations, like the presence of disorders from maternal or acquired factors. This involves adaptations in cardiopulmonary circulations and other physiological adjustments to replace placental function and maintain homeostasis. The modern technologies in the medical spectrum help to reduce the severity into minimum [1]. Physical settings, knowledge of the health team members, team work are some of the related factors. The Neonatal Intensive Care Unit (NICU) occupies by the newborn that are marginally viable or critically unwell and could be considered as terminally ill. It is a busy, highly technical environment with advanced medical equipments, despite the advances in the medical field some neonates will die in the NICU, here the palliative care of the dying baby and feelings towards the family is imperative [2],[3].

The palliative care barriers are *patients with advanced disease do not receive palliative care some are referred too late in the course of their disease to benefit from treatment.* The reasons for this may relate to

the physician, the patient, or to social factors. Barrier to palliative care physician, late referral poor prognostication, lacks communication skills to address end of life issues, patient believe prognosis better than what they told, unrealistic expectation of disease response. Social factors include ethnic minorities, language barriers, rural communities [4],[5].

The need of palliative care for the neonatal populations has become increasingly topical and part of lexicon contemporary neonatal practice. This study will help to analyze the barriers and how the evidenced based care model can be implemented well in the future for the best care of babies. The World Health Organization (WHO, 1998) defines Palliative care for children as: "The active total cares of the child's body, mind and spirit, and also involves giving support to the family. It begins when illness is diagnosed, and continues regardless of whether or not a child receives treatment directed at the disease. [6]-[8].

The estimated prevalence rate for children and young people likely to require palliative care services is 16 per 10,000 population age 0-19 (15 per 10,000 if neonatal deaths are excluded). In England, there were 42,400 deaths of children and young people from causes likely to have required palliative care in the period 2001-2005. The proportion of deaths likely to require palliative care is highest among children less than 1 year. There have been on average 2,109 neonatal deaths per year from causes likely to require palliative care in the period 2001-2005 (Department of Health, UK, 2007). The proportion of deaths in hospitals is lower for young adults aged 20-39 (61%) than it is for young children under one year (88%) or 1 - 4years (74%). Almost all (98%) of neonatal deaths occurred in hospitals [9].

There are variations in mortality figures among countries. The purpose of the study is to identify the obstructions and facilitators to palliative care in neonatal nursing and to develop policy recommendations to improve this area of practice. This exploratory research study is an attempt to make a study on how to develop evidenced based care model in NICU, and to draw upon these findings to develop policy recommendations to improve this field of nursing practice and to analyze the different barriers for practices [10].

2. RESEARCH METHOD

The study was conducted in ABC Hospital and XYZ Hospital, Bangalore. It is 250 bedded hospital. The rationale for selecting this setting was, staff nurses could be met here. Therefore the investigator felt that there would be rich opportunity to assess the level of knowledge of staff nurses regarding the neonatal palliative care.

The population for the study is staff nurses those who are working in ABC Hospital and XYZ Hospital, Bangalore

A sample is a small portion of a population selected for the study. It constitutes a subset of total population sample of 60 staff nurses selected from the selected hospitals at Bangalore [11].

The sample of the present study comprised of 60 staff nurses working in pediatric intensive care units in Indiragandhi Hospital and Boston Children's hospital, Bangalore.

Non probability convenient sampling technique was used to select the samples of this study. A total of 60 staff nurses working in ABC Hospital and XYZ Hospital, Bangalore were selected.

A structured questionnaire and 5 point Likert scale was prepared by the investigator to assess the knowledge of staff nurses regarding palliative care in neonatal nursing respectively. The opinion of subject experts in the field of Pediatrics, reviews/material from various sources helped in the selection of context for tool. The tool consist of

Section A-Socio-demographic data

It consist of age, gender, , professional educational qualification, Duration of experience in pediatric department, present working area, additional coaching or training attended, source of information, job status.

Section B- Knowledge Questionnaire

Knowledge questionnaire was prepared after going through an intensive review of literature including research articles and personal discussions with the experts.

It consists of 30 questions to assess the level of knowledge, the items were MCQ in nature, with 4 alternatives. The people were expected to choose the correct responses. All the correct questions had scores of 1. The incorrect answer of the question posses 0 scores. The maximum score of the scale is 30 and least score is 0. The level of knowledge of the staff nurses is assessed by comparing the score of the each people by this scale.

A blue print was made to prepare the test items of the tool. The structured questionnaire mainly concentrated on 4 aspects such as knowledge on general aspects, knowledge on pain management, knowledge on grief and bereavement and knowledge on neonatal palliative care.

Table 1: Questionnaire Distribution

S. No.	Assessment Variables	No. of Questions
1	Knowledge on general aspects of palliative care	7
2	Knowledge on pain management on palliative care	4
3	Knowledge on grieving process and Bereavement process	4
4	Knowledge on nursing care of neonate during palliative period	15
5	Overall	30

Scoring

The level of knowledge was assessed in terms of scores. The maximum score was 30. For the purpose of the study the level of knowledge were categorized as follows;

Table 2. Classification of level of knowledge among staff nurses

Score	Level of knowledge
Below 10	Inadequate level of knowledge
11-20	Moderate level of Knowledge
21-30	Adequate level Knowledge

3. RESULTS AND ANALYSIS

The data, which are necessary for the study, were collected through structured questionnaire and analyzed by using relevant descriptive and inferential statistics.

Majority of the staff nurses belongs to the age group between 23-28 years (48.33%), 35.00% of staff nurses are of 29-34 years of age, 13.33% of staff nurses are of 35-40 years of age and the least 3.34% of staff nurses belongs to the age group 41-46 years of age.

It is evident from the above figure that majority of the staff nurses are females (60%) and rest of them are males (40%).

The above figure shows that majority of the staff nurses have less than 1 years of experience, 68.33% of them have 4-6 years of experience, 11.67% of nurses have 1-3 years of experience, 1.67% of nurses have 7-9 years of experience and none of them working in that hospital having 10 years or above experience.

There were 54% of General nurses, 43% of B. Sc Nurses and 3 % of M.Sc. Nurses are participated in this study. Among the staff nurses those who are selected for this study, least of them were working in NICU and PICU (12% each) 21% of them working in other area and majority of them were working in Pediatric medical and surgical ward. Among the selected staff nurses 16.67% has got additional training in neonatal palliative care and majority of them (83.33%) did not get any additional coaching on neonatal palliative care.

Among the selected staff nurses majority (78%) were working as ward nurse, 20% working as ward in charge and 2% were working as head nurse. Among staff nurses 46.67%, 38.33%, and 15.00% were accessed health related information respectively through health personnel, media, Relatives or friends.

Level of knowledge of staff nurses regarding neonatal palliative care. In this study, majority of staff nurses (50%) were having moderate level of knowledge, 38.33% of them having adequate level of knowledge and least of them 11.67% having inadequate level of knowledge.

Aspects wise knowledge regarding the neonatal palliative care among staff nurses

Table 3. Mean, SD and Mean% of knowledge regarding the neonatal palliative care among staff nurses

Aspects wise knowledge	Max Statements	Max Score	Range	Mean	Mean%	SD
General Aspects	7	7	2--7	5.08	72.57	1.57
Pain Management	4	4	1--4	2.77	69.25	0.77
Grieving process	8	8	1--8	5.6	70.00	1.69
Nursing care	11	11	2--11	7.47	67.91	2.83
Overall	30	30	10--28	20.92	69.73	4.57

Table 3 depict that area wise level of knowledge of staff nurses regarding palliative care. In this study, aspects of knowledge are divided in to four areas such as knowledge on general aspect of neonatal palliative care, knowledge on pain management, knowledge on grieving process, and knowledge on nursing care. The level of knowledge is divided in to three, inadequate , moderate and adequate level of knowledge. In this study the overall mean, SD and mean percentage were 20.92, 4.57 and 69.73% respectively.

Association between age and knowledge of staff nurses regarding neonatal palliative care

Table 4. Association between age and knowledge of staff nurses regarding neonatal palliative care

S.No	Demographic variables	Sample		Level of knowledge						Chi square
				Inadequate		Moderate		Adequate		
		No	%	No	%	No	%	No	%	
1	Age in years									
	a. 23-28	29	48.33	4	13.8	19	65.5	6	20.7	8.94
	b. 29-34	21	35.00	3	14.3	7	33.3	11	52.4	df 6
	c. 35-40	8	13.33	0	0.0	3	37.5	5	62.5	N.S
	d. 41-46	2	3.34	0	0.0	1	50.0	1	50.0	

Table 4 explains that 48.33% and 35% of the respondents having 23-28 years and 29-34 years of age respectively in that 13.8 % of 23-28 years of age group and 14.3% of 29-34% age group have inadequate level of knowledge regarding palliative care.

Table also indicates that 65.5 % of 23-28 years of age group and 33.3% of 29-34% age group have moderate level of knowledge regarding palliative care.

62.5% of 35-40 years of age and 50.0% of 41-50 years of age the respondents possessed adequate knowledge level regarding neonatal palliative care.

The association between age of the respondents and knowledge level was found to be statistically non-significant ($\chi^2 = 8.94$ at $P < 0.05$ level).

Association between Sex and knowledge of staff nurses regarding neonatal palliative care

Table 5. Association between Sex and knowledge of staff nurses regarding neonatal palliative care

S.No	Demographic variables	Sample		Level of knowledge						Chi square
				Inadequate		Moderate		Adequate		
		No	%	No	%	No	%	No	%	
2	Sex									
	a. Male	24	40.00	5	20.8	6	25.0	13	54.2	10.5
	b. Female	36	60.00	2	5.6	24	66.7	10	27.8	df 2 S

The above table showed that 20.8% of males and 5.6 % of females have inadequate level of knowledge respectively. 25% of males have moderate level of knowledge and 66.7% of females have moderate level of knowledge and 54.2% and 27.8% of male and females have adequate level of knowledge regarding neonatal palliative care.

The data subjected for statistical test indicates that there is statistically significant association ($\chi^2 = 10.5$ at $P < 0.05$ level). It is clearly indicated that there is significant association between age and knowledge level on neonatal palliative care.

Association between duration of experience and knowledge of staff nurses regarding neonatal palliative care

Table 6. association between duration of experience and knowledge of staff nurses regarding neonatal palliative care

S.No	Demographic variables	Sample		Level of knowledge						Chi square
				Inadequate		Moderate		Adequate		
		No	%	No	%	No	%	No	%	
3	Duration of experience in pediatric department									
	a. Less than 3 year	41	68.33	3	7.3	25	61.0	13	31.7	6.8
	b. 3 year	7	11.67	2	28.6	2	28.6	3	42.9	df 4
	c. 4-6 years	11	18.33	2	18.2	3	27.3	6	54.5	N.S
	d. 7-9 years	1	1.67	0	0.0	0	0.0	1	100.0	
	e. 10 years or above	0	0.00	0	0.0	0	0.0	0	0.0	

Table 6 showed that 28.6% of staff nurses having inadequate knowledge regarding palliative care who possess 3 years of experience in pediatric department. 61% of less than 3 years experience, 28.6% of 3 years of experience and 54.5% of 4-6 years of experience possessed moderate level of knowledge and 100% of 7-9 years of experience, 54.5% of 4-6 years of experience, 42.9% of 3 years of experience and 31.7% of less than 3 years of experience are having adequate level of knowledge regarding neonatal palliative care.

The statistical test indicates that there is no statistically significant association ($\chi^2 = 6.8$ at $P < 0.05$ level). It is clearly indicated that there is no significant association between duration of experience and knowledge level on neonatal palliative care.

Association between educational qualification and knowledge of staff nurses regarding neonatal palliative care

Table 7. Association between educational qualification and knowledge of staff nurses regarding neonatal palliative care

S.No	Demographic variables	Sample		Level of knowledge						Chi square
				Inadequate		Moderate		Adequate		
		No	%	No	%	No	%	No	%	
4	Educational qualifications									
	a. GNM	32	53.33	3	9.4	19	59.4	10	31.3	5.06
	b. B.Sc nursing	26	43.33	4	15.4	11	42.3	11	42.3	df 4
	c. M.sc nursing.	2	3.34	0	0.0	0	0.0	2	100	N.S
	d. Above	0	0.00	0	0.0	0	0.0	0	0.0	

The above table showed that 15.4% of staff nurses with B.Sc. nursing qualification possessed inadequate level of knowledge. 59.4% of GNM staff nurses and 42.3% of B. Sc. Nursing staff nurses are having moderate level of knowledge and 100% of M.Sc. nurses, 42.3% of B. Sc. Nurses and 31.3% of GNM possess adequate level of knowledge regarding neonatal palliative care.

Table 7 showed that there is no significant association ($\chi^2 = 5.6$ at $P < 0.05$) level between educational qualification and knowledge level of neonatal palliative care.

Association between present working area and knowledge of staff nurses regarding neonatal palliative care

Table 8. association between present working area and knowledge of staff nurses regarding neonatal palliative care

S.No	Demographic variables	Sample		Level of knowledge						Chi square
				Inadequate		Moderate		Adequate		
		No	%	No	%	No	%	No	%	
5	Present working area.									
	a. NICU	7	11.67	1	14.3	3	42.9	3	42.9	4.72
	b. PICU	7	11.67	1	14.3	2	28.6	4	57.1	df 6
	c. Pediatric medical and surgical ward	33	55.00	3	9.1	16	48.5	14	42.4	N.S
	d. Other area	13	21.67	2	15.4	9	69.2	2	15.4	

Table 8 depicts that 69.2% of staff nurses working in other area, 48.5% of working in pediatric medical and surgical ward, 42.9% of working in NICU and 28.6% of working in PICU are possessing moderate level of knowledge and 57.1% of staff nurses working in PICU, 42.9% of working in NICU and 42.4% of staff nurses working in pediatric medical and surgical ward are having adequate level of knowledge regarding neonatal palliative care.

The chi-square value ($\chi^2 = 4.72$) that is significant at $p < 0.05$ level shows that there is no significant association between present working area and knowledge of staff nurses regarding neonatal palliative care.

Association between additional training on neonatal palliative care and knowledge of staff nurses regarding neonatal palliative care

Table 9. association between additional training on neonatal palliative care and knowledge of staff nurses regarding neonatal palliative care

S.No	Demographic variables	Sample		Level of knowledge						Chi square
				Inadequate		Moderate		Adequate		
		No	%	No	%	No	%	No	%	
6	Additional coaching or training attended on palliative care.									
	a. Yes	10	16.67	1	10.0	3	30.0	6	60.0	2.45
	b. No	50	83.33	6	12.0	27	54.0	17	34.0	df 1 N.S

16.67% of total staff nurses have got additional training on neonatal palliative care in that 10% possess inadequate level of knowledge rest of them 30% and 60% of staff nurses possess moderate and adequate level of knowledge regarding neonatal palliative care. 83.33% of total staff nurses did not get any training, in that 12.0%, 54.0% and 34.0% possess inadequate, moderate and adequate level of knowledge regarding neonatal palliative care.

The chi-square value ($\chi^2 = 2.45$) that is significant at $p < 0.05$ level shows that there is no significant association between additional training on neonatal palliative care and knowledge of staff nurses regarding neonatal palliative care.

Association between job position and knowledge of staff nurses regarding neonatal palliative care

Table 10. association between job position and knowledge of staff nurses regarding neonatal palliative care

S.No	Demographic variables	Sample		Level of knowledge						Chi square
				Inadequate		Moderate		Adequate		
		No	%	No	%	No	%	No	%	
7	Job position									
	a. Ward nurse	47	78.33	5	10.6	26	55.3	16	34.0	3.49 df 4 N.S
	b. Ward In-charge	12	20.00	2	16.7	4	33.3	6	50.0	
	c. Head Nurse	1	1.67	0	0.0	0	0.0	1	100	
	Nursing superintendant	0	0.00	0	0.0	0	0.0	0	0.0	

Table 10 shows that 100% of head nurses, 50% of ward in-charge and 34.0% of ward nurses are possessing adequate level of knowledge regarding neonatal palliative care.

The chi-square value ($\chi^2 = 3.49$) that is significant at $p < 0.05$ level shows that there is no significant association between job status and knowledge of staff nurses regarding neonatal palliative care.

Association between source of information and knowledge of staff nurses regarding neonatal palliative care

Table 11. Association between source of information and knowledge of staff nurses regarding neonatal palliative care

S.No	Demographic variables	Sample		Level of knowledge						Chi square
				Inadequate		Moderate		Adequate		
		No	%	No	%	No	%	No	%	
8	Source of information about palliative care models.									
	By Printed or mass media	23	38.33	5	21.7	14	60.9	4	17.4	12.28 df 4 S
	By Health professionals	28	46.67	0	0.0	12	42.9	16	57.1	
	Friends/ family/relative	9	15.00	2	22.2	4	44.4	3	33.3	
	No source of information	0	0.00	0	0.0	0	0.0	0	0	

The above table showed that 22.2% of respondents are inadequate level of knowledge they are getting information through friends or family. 60.9% and 44.4% of respondents are having moderate level of knowledge, they are getting information through printed or mass media and friends or family respectively. 57.1% of respondents having adequate level of knowledge they are getting information through health care professionals.

The data subjected for statistical test indicates that there is statistically significant association ($\chi^2 = 12.28$ at $P < 0.05$ level). It is clearly indicated that there is significant association between source of information and knowledge level on neonatal palliative care.

DISCUSSION

The aim of this study was to assess the knowledge on neonatal palliative care among staff nurses working in ABC Hospital and XYZ Hospital Bangalore.

I. Level of knowledge on selected aspects on neonatal palliative care among staff nurses.

In this study, level of knowledge of staff nurses regarding neonatal palliative care. In this study, majority of staff nurses (50%) were having moderate level of knowledge, 38.33% of them having adequate level of knowledge and least of them 11.67% having inadequate level of knowledge. The finding of the study is supported by the findings of the following studies. Senthil P Kumar, 2009 conducted a study to assess knowledge and beliefs among staff nurses regarding neonatal palliative care. The objective of this study was to assess the changes in knowledge and beliefs among staff nurses regarding neonatal palliative care.. Fifty-two staff nurses of either gender (12 male, 40 female) of age (20.51 ± 1.78 years) were participated in this study. The structured questionnaire has used to elicit their knowledge regarding palliative care. This study concluded that staff nurses have moderate level of knowledge regarding palliative care. The findings of the present study as well as previous studies showed that staff nurses had only moderate level of knowledge

regarding neonatal palliative care. So there is a need for teaching programme to improve their knowledge in the same aspect.

II. Association between knowledge of staff nurses regarding neonatal palliative care with their demographic variables

The chi-square computed level of knowledge and selected variables showed that there were significant relationship between the level of knowledge and Sex and source of information.

4. CONCLUSION

The Major findings of the study were:

- a. Majority of the staff nurses belongs to the age group between 23-28 years (48.33%), 35.00% of staff nurses are of 29-34 years of age, 13.33% of staff nurses are of 35-40 years of age and the least 3.34% of staff nurses belongs to the age group 41-46 years of age.
- b. Majority of the staff nurses are females (60%) and rest of them are males (40%).
- c. Majority of the staff nurses have less than 1 years of experience, 68.33% of them have 4-6 years of experience, 11.67% of nurses have 1-3 years of experience, 1.67% of nurses have 7-9 years of experience and none of them working in that hospital having 10 years or above experience.
- d. 54% of General nurses, 43% of B. Sc. Nurses and 3 % of M.Sc. Nurses are participated in this study.
- e. Among the staff nurses those who are selected for this study, least of them were working in NICU and PICU (12% each) 21% of them working in other area and majority of them were working in Paediatric medical and surgical ward.
- f. Among the selected staff nurses 16.67% has got additional training in neonatal palliative care and majority of them (83.33%) did not get any additional coaching on neonatal palliative care.
- g. Among the selected staff nurses majority (78%) were working as ward nurse, 20% working as ward in charge and 2% were working as head nurse.
- h. Among staff nurses 46.67%, 38.33%, and 15.00% were accessed health related information respectively through health personnel, media, Relatives or friends.

IMPLICATIONS OF THE STUDY

The finding of the study has implications for nursing education, nursing practice, nursing research and nursing administration.

Nursing education

1. To enhance the awareness of importance of neonatal palliative care among staff nurses, the primary task of nursing education would be to conduct educational programme on important aspects of neonatal palliative care technique in children hospitals.
2. Nursing curriculum should in co-operate progressive neonatal palliative care as health education to improve the nursing care of the staff nurses.
3. Seminar, symposium and workshops can be organized regarding the important aspects of neonatal palliative care to improve the level of knowledge among staff nurses.
4. In-service education should be conducted to improve the knowledge and attitude of health care professionals to provide high quality palliative care to the dying babies.

Nursing Practice

The teaching programme is one of the important aspects in the health delivery system. Health teaching improves the staff nurse's knowledge on neonatal palliative care. So the staff nurses can give high quality palliative care to the dying babies.

Nursing research

Research should be continued on newer practices and method of neonatal palliative care. The study will serve as a valuable reference material for future investigations. Further research studies can be conducted on the basis of this study.

Nursing administration

1. Nursing administrators should implement in-service programme and seminars to make staff nurses awareness about neonatal palliative care.

2. In-service education for all the care givers regarding neonatal palliative care in order to impart knowledge for involving palliative care of their baby.

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