

Assessment of Knowledge Regarding Care of Newborns Undergoing Phototherapy among Staff Nurses, Thrissur

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Abstract

The aim of the study to assess the knowledge regarding care of newborns undergoing phototherapy among staff nurses by using a non experimental descriptive survey design with the help of a self structured questionnaire which contains 30 items of questions. Non Probability purposive sampling technique was used in this study. The results showed that, out of 30 samples, 70% have moderate knowledge, 30% have inadequate level of knowledge and unfortunately, no one has adequate knowledge regarding phototherapy and there is no significant association with level of knowledge and selected demographic variables like age, educational qualification, professional experience and so on ($p > 0.05$). In conclusion, Nurses has to acquire more knowledge on care of newborns undergoing phototherapy in order to prevent the ill effects from faulty practices of delivering phototherapy.

Keywords: Phototherapy; Knowledge; Newborns; Staff Nurses; Neonatal Jaundice or Hyperbilirubenemia.

Background and Need for the Study

Neonatal Jaundice is a common problem affecting over half of all full term and most of the preterm babies. Signs of neonatal jaundice are seen within the first three days of birth in 80% of preterm babies and 60% in term babies. Asian male babies are reported to be most affected by neonatal jaundice [2]. The overall incidence of neonatal jaundice varies from 54.6% to 77% [3]. Jaundice is noticed during the first week of life after birth and best treatment for jaundice is phototherapy. Photo therapy is the gold standard treatment in neonates with unconjugated hyperbilirubenemia and is most widespread therapy of any kind used among newborns. So, health care professionals need to be familiar with the diagnosis and management to prevent further damage causing by jaundice. However, lots of health care

professionals have lack of proper information about light therapy and its proper use.

A KAP (Knowledge, Attitude and Practice) survey to evaluate knowledge, attitude and practice of phototherapy among nursing professionals from two teaching hospitals at the city of Recife, Brazil, through semi-structured questionnaire applied to 111 professionals showed that the results of the study highlight the need to implement activities that will allow a balance among knowledge, attitude and practice of nursing professionals about phototherapy [4].

By reviewing various research studies, the researchers came to a conclusion that the nurses play a key role in the management of neonates with hyperbilirubenemia. And there is an increasing demand for the nurses to acquire more knowledge regarding care of neonates undergoing phototherapy.

Objectives of the Study

The objectives of the study are to.

1. assess the knowledge level of staff nurses regarding the care of newborns undergoing phototherapy.
2. associate the level of knowledge of staff nurses regarding care of newborns undergoing phototherapy with their selected demographic variables.
3. prepare a nursing protocol for the care of newborns undergoing phototherapy.

Methods

The research approach of the study was non experimental descriptive research approach. Non experimental descriptive research design is adopted for this study. The study was conducted in a reputed hospital, which is a 350 bedded super specialty hospital with 10 bedded NICU, at Thrissur. The population comprises all the staff nurses who were working in the Neonatal Intensive Care Unit (NICU), pediatric wards and postnatal wards. Target population of the study was staff nurses. Accessible population of the study was pediatric and neonatal staff nurses. The sample size was taken as 30. Non probability purposive sampling technique was adopted for the selection of sample in this study. The Inclusion criteria of the study are Staff nurses who are working in NICU, pediatric wards and post natal wards and staff nurses who are willing to participate in the study The Exclusion criteria is Staff nurses who are having less than one year experience. The instrument used to collect the data is the self administered questionnaire. The tool consists of two sections: section A and B

- ❖ Section A consists of Socio-Demographic variables like age, educational qualification and so on.
- ❖ Section B contains a self structured questionnaire to assess the knowledge. It consists of 30 items. The subjects have to read the questions and express their opinions by darkening the bubbles against the appropriate answers. All the questions were given 4 options in the answer with one right answer and 3 wrong answers. All correct responses were scored as 1 mark and wrong answers carry zero mark and no negative marks. The maximum attainable mark is 30.

Table 1: Scoring key

Score/marks	Level of knowledge
16-24	Adequate knowledge
8-16	Moderate knowledge
<8	Inadequate knowledge

Scoring procedure: Level of knowledge among staff nurses are categorized based on the total score obtained by them. The results were interpreted as:

Ethical consideration: Approvals were obtained from the Research Committee of the hospital. Informed consent was obtained from the samples.

Procedure for data collection: Data collection was done for one week. A formal permission was obtained from the medical superintendent of the respective hospital prior to the data collection. A structured questionnaire was used for data collection. Oral consent was obtained from the subjects prior to the data collection. The data was collected from 30 samples by distributing structured questionnaire. The duration for completing the questionnaire is 20minutes.

Results

Section A: Socio demographic data

- ❖ The mean age of the adolescents is 25 with the range between 21 to 35 years.
- ❖ Out of 30 samples, 97% of the samples were females and only 3% were males. Regarding the educational qualification, 15 samples were GNM, 15 samples were BSc. Almost 11 samples had a professional experience of 3-4years and remaining were belongs to a category of 1-2years.

Distribution of working experience of staff nurses in various clinical areas

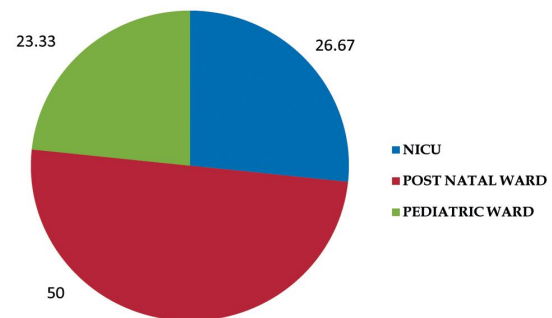


Fig. 1: Percentage distribution of working experience of staff nurses in various clinical areas

Section B

The above table depicts that majority of the staffnurses, 21(70%) had moderate amount of knowledge, 9(30%) had inadequate knowledge and sadly, none of them have adequate knowledge.

Table 2: Knowledge level among staff nurses n=30

SI. No	Level of Knowledge	Frequency (f)	Percentage (%)
1	Adequate knowledge	0	0
2	Moderate knowledge	21	70
3	Inadequate knowledge	9	30

Section C

There is no significant association with level of knowledge and selected demographic variables like

age, educational qualification, and professional experience ($p > 0.05$).

Table 3: Association between the level of knowledge and socio demographic variables n=30

Sl. No.	Socio-demographic variables	χ^2	df	Significance level
1	Age	0.29	1	Non significant
2	Educational status	0.156	1	Non significant
3	Professional experience	0.003	1	Non significant
4	Experience of dealing with phototherapy	1.589	1	Non significant
5	Area of working	0.112	2	Non significant

Discussion

The result of the study showed that the majority of the staff nurses had inadequate knowledge regarding the phototherapy and its care. So, at the end of this study, a standard protocol with a checklist prepared with the help of experts and provided for upgrading the knowledge level of staff nurses regarding the care of newborns undergoing phototherapy. The research study also revealed that this study has various implications in the field of nursing education, practice, administration and research. The limitation of this study was small sample size and data collection period was limited.

References

1. Nelson. Text Book of Pediatrics. 17th ed. Philadelphia: Elsevier. 2006.

2. Article on Neonatal jaundice incidence. Source: med-india. www.medindia.net.

3. Kulkarni S.K, Dolas A L, Doibale. Risk factors of neonate with indirect hyperbilirubenemia in a tertiary hospital. International journal of basic and applied medical science. Jan-April 2014; 4(1): 395-399.

4. Machado SP1, Samico IC, Braga TD. Knowledge, attitude and practice about phototherapy among nursing professionals of teaching hospitals. Rev Bras Enferm. Jan-Feb 2012; 65 (1): 34-41.

5. Deepak K Leuhna. Practical newborn critical care nursing. Jaypee publications. 2006; 5th ed; 810-823.

6. Suraj Gupta. Textbook of paediatrics. Jaypee publications. 10th edition, ne delhi. 2004; 593-601.

7. Ghai O.P. Essential Paediatrics. Churchwill Livingston publications. 7th ed. New Delhi; 170-182.

8. Meherban Singh. Care of Newborn. Sagar publication. 7th ed. New Delhi. 2010; 1034-1057.