



KNOWLEDGE AND PRACTICE REGARDING PHOTOTHERAPY MANAGEMENT AMONG NURSES WORKING IN PEDIATRIC AND MATERNITY WARDS IN SELECTED HOSPITALS

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ABSTRACT Neonatal hyperbilirubinemia is the most common cause for hospital re-admission in the first weeks of life. Bilirubin induced complication can be prevented by instituting a neonatal jaundice protocol to identify infants at risk for significant hyperbilirubinemia. Phototherapy is relatively common therapy that lowers the serum bilirubin level by transforming bilirubin into water soluble isomers that can be eliminated without conjugation of the liver. The present study aimed to assess the knowledge and practice regarding phototherapy management among nurses.

Methods: A quantitative approach with descriptive design was used. Forty samples were collected as per inclusion criteria

Results: The mean pretest knowledge score was 10.65 and mean percentage was 89.37%. There was a weak positive correlation between knowledge and practice scores.

Conclusion: The study concluded that there was a possible gap in the integration of knowledge into practice

KEYWORDS : Knowledge; Practice; Phototherapy management.

INTRODUCTION

Neonatal jaundice is a foremost cause of hospitalization in the first week of life worldwide. If not properly managed, it may result in significant bilirubin-induced morbidity and mortality. High neonatal mortality is a reflection of very poor neonatal care. Hence a specialist should be able to take up leadership role in neonatal care to prevent high mortality and morbidity rate. The study was carried out to determine the knowledge and practice regarding phototherapy management among nurses.

STATEMENT OF THE PROBLEM

A descriptive study to assess the knowledge and practice regarding phototherapy management among nurses working in pediatric and maternity wards in selected hospitals at Kerala

OBJECTIVES

Objectives of the study are to,

- assess the knowledge and practice of nurses working in pediatric and maternity wards regarding phototherapy management
- find the correlation between knowledge and practice score regarding phototherapy management

ASSUMPTIONS

- Nurses working in pediatric and maternity ward deals with newborn receiving photo therapy and may have some knowledge about phototherapy management.
- Participants will provide truthful information.
- Study can be completed within the prescribed time period

OPERATIONAL DEFINITION

Knowledge

Ability of nurses to recall and give correct response to items regarding phototherapy as measured by structured knowledge questionnaire.

Practice

Nurses skill in managing babies under phototherapy admitted in pediatric and maternity wards measured by Observational checklist.

Nurse

Those who completed either ANM, GNM, B. Sc nursing and working in pediatric or maternity wards in EMC or Samaritan hospital Pazhanganadu.

Phototherapy Management

Phototherapy involves exposure of naked baby to blue, cool white or green light of wave length 450-460 nm. The light waves convert bilirubin to water soluble nontoxic forms which are excreted.

RESEARCH METHODOLOGY

A quantitative descriptive approach was adopted for the study. The study was conducted at Ernakulum Medical Centre (EMC) hospital,

Ernakulum. The Neonatal Intensive Care Unit (NICU) in EMC well equipped 30 bed Level III referral unit. The study population consists of all nurses working in pediatric and maternity wards. Forty nurses were selected by non-probability convenient sampling technique.

The tool used in the present study consist of Socio demographic data, Structured Knowledge Questionnaire, Observational checklist. The socio demographic data of nurses consisted of 6 items such as age, gender, educational status, total years of working experience, total years of working experience in NICU, attended any program related to phototherapy management within the past 6months. A structured knowledge questionnaire with 40 items was constructed. The various aspect included knowledge regarding Blood, Bilirubin, Phototherapy management. The Observational checklist consisted of 16 items and scores were assigned as 1 or 0 for practice of yes or no respectively.

Content validity was obtained from one pediatrician and four experts from the field of nursing. There was 100% agreement on all items. No items were deleted or replace. The reliability of the Structured Knowledge Questionnaire was done by split half method which was $r=0.8$, indicating the tool was reliable. The reliability of the Observational Checklist was established by inter-rater method which was 0.9, indicating that the tool was reliable.

The study was conducted after obtaining the formal permission from the authorities. The purpose of the study was explained and informed consent was obtained. Confidentiality was assured to all the samples. Pretest was conducted to assess the knowledge and practice of nurses regarding phototherapy management by using Structured Knowledge Questionnaire and observational checklist respectively. The investigator didn't have any problem during the data collection process.

RESULTS

The collected data was analyzed using descriptive statistics and the study findings are organized under following sections

Section 1 : Description of demographic variables of staff nurses.

Table 1- Frequency and percentage distribution of samples

(n=40)

Demographic characteristics	f	%
1. Age (in years)	34	85.0
a. 22-27	3	7.5
b. 28-33	3	7.5
c. >34		
2. Gender	0	0
a. Male	40	100
b. Female		

3. Educational status	4	10
a.ANM	22	55
b.GNM	14	35
c.B.Sc Nursing	4	10
	32	80
	4	10
4. Total years of working experience		
a. <1 year		
b. 1-5 years		
c. >5 years		
5.Years of working experience in NICU	4	10
a. <1 year	32	80
b. 1-5years	4	10
c. >5 years		
6.Previous exposure regarding phototherapy management	5	12.5
a.Yes	35	87.5
b.No		

The table 1 shows that majority of the samples 34 (85%) were in the age group of 22 – 27yrs, 40(100%) of the sample were females. 22(55%) of sample belonged to GNM and 32(80%) of them are having experience between 1 -5 years and 32(80%) of them having experience between 1 -5 years in NICU and 35(87.5%) of them did not attend any programme on phototherapy management within 6 months

Section 2: Knowledge and practice of staff nurses regarding phototherapy management

Table 2: Mean and mean percentage of knowledge and practice of sample regarding phototherapy management

(n=40)

Knowledge score	Mean	Mean percentage
	19.1	47.75
Practice score	10.65	66.56

The table 2 shows that the mean pretest knowledge score was 19.1 and mean percentage was 47.75 and the mean practice score was 10.65 and mean percentage was 66.56.

Section 3: Correlation between knowledge and practice score of staff nurses regarding phototherapy management

Table3 : Correlation between knowledge and practice score

(n=40)

Knowledge and practice	Correlation co-efficient	df	p value
	0.24	39	.234

The table 3 shows that there was a weak positive correlation between knowledge and practice scores

Summary

Pediatric nurses have challenging role in providing nursing care. The nurses get limited time to upgrade their knowledge and practice and this result in possible gap in integration of knowledge into practice. The study findings revealed that there was a weak positive correlation between knowledge and practice and this finding is supported by following descriptive study to assess the knowledge practice gap of pediatric nurses working at a tertiary care hospital in Karachi, Pakistan. The gaps between knowledge and practice, as perceived by the participants, were categorized into five major categories: medication (34%), skills (28.3%), knowledge (13.36%), handling of code blue and intubations (12.6%), and operating medical devices (11.58%). The study concluded that there were gaps related to psychomotor skills, clinical knowledge that nurses perform in pediatric settings including the skills

CONCLUSION

The study concluded that

- Highest percentage 34 (85%) of the samples were in the age group of 22 – 27yrs, 40(100%) of the sample were females. 22(55%) of

sample belonged to GNM and 32(80%) of them are having experience between 1 -5 years and 32(80%) of them having experience between 1 -5 years in NICU and 35(87.5%) of them did not attend any programme on phototherapy management within 6 months

- There was a weak positive correlation between knowledge and practice scores.

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