

A study to assess the knowledge, attitude and practice towards phototherapy among nursing professionals at selected teaching hospital in Lucknow

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Abstract

The objective of the study was to assess the knowledge, attitude and practice towards phototherapy among nursing professionals working at selected settings in Lucknow. A descriptive research design was chosen to assess the knowledge, attitude and practice towards phototherapy among nursing professionals. The review of literature provided the base and indepth knowledge for the development of the tool. The content validity of the tool was obtained from the experts and pilot study was conducted. The study was conducted in CIMS Hospital, Lucknow by obtaining prior permission from the head of the institution. The study was conducted among nursing professionals who fulfilled the inclusion criteria from the selected settings. A total of hundred samples were selected by using convenient sampling technique. Self-administered questionnaire, likert scale and checklist was used to collect the data. The questionnaire and likert scale was administered and practice was observed by checklist. Conclusion However, the nurses play a vital role in phototherapy. Nurses had adequate knowledge, favorable attitude and good practice towards phototherapy. This study proved a significant, positive, moderate correlation between knowledge, attitude and practice of nursing professional. There was a statistically significant association between knowledge, attitude and practice of nursing professionals towards phototherapy with age, educational status and total years of experience. It seems that education and experience serves to increase nurse confidence towards phototherapy.

Keywords: knowledge, attitude, practice, phototherapy

Introduction

A child is the gift of god or greatest treasure of mankind. Child's health, wellbeing, safety and future are in the hands of parents from birth to death. The first year of child life is crucial laying the foundation to good health. At this time certain specific care and precautions are essential to ensure the survival of health of child to a future adult.

Among these problems of neonates hyperbilirubinemia is the commonest problem among infants in neonatal period. High levels of bilirubin can occur in the blood called hyperbilirubinemia. In most cases, the etiology of this disorder is multifactorial. First, it is important that the obstetric history of the mother and delivery be analyzed to allow identification of the factors that may be contributing to the occurrence of hyperbilirubinemia, such as drugs taken by the mother (diazepam, oxytocin's), type of delivery (forceps, pelvic, cesarean section), delay in umbilical cord clamping, blood type, Rh factor, and maternal Coombs' test.

Neonates have to face many life-threatening problems such as asphyxia, hypothermia, hyperthermia, infections and hyperbilirubinemia etc. So, the assessment and care of newborn is very essential. Among these problems of neonate's hyperbilirubinemia is the commonest problem among infants in neonatal period. It is in two forms, namely physiological and pathological jaundice. Physiological jaundice is normal physiologic occurrence between the second and third days of life, appearing in about 60% of all neonates. Neonatal jaundice is a common physiological occurrence in newborns with resulting from high serum levels of bilirubin.

Need for study

WHO reveals the source of incidence of hyperbilirubinemia is 50 to 60,000 neonates reported. 2% has total serum bilirubin level over 20 mg/dl; the total serum bilirubin level in normal range is 0.3 to 1 mg/dl. 0.15% had levels over 25mg/dl & 0.01% had over 30mg/dl. Each year in India over 1 million newborn dies before they complete their first month of life, accounting for 30% of the world's neonatal death. Phototherapy is used to prevent the concentration of unconjugated bilirubin in the blood from reaching the levels where neuro-toxicity may occur. High intensity light photochemically converts fat soluble unconjugated bilirubin in to water soluble bilirubin that can be excreted in bile and urine. Accurate charting is another important nursing responsibility it includes times that phototherapy is started and stopped, proper shielding of the eyes, types of fluorescent lamps, distance between surface of lamps and infant, use of phototherapy in combination with incubator or open bassinet, photometer measurement of light intensity, occurrence of side-effect.

Statement of the problem

A study to assess the knowledge, attitude and practice towards phototherapy among nursing professionals at selected teaching hospital in Lucknow.

Objectives

1. To assess the knowledge, attitude and practice of the Nursing professionals towards phototherapy
2. To compare knowledge, attitude and practice of Nursing professionals towards phototherapy
3. To correlate the knowledge, attitude and practice of

- Nursing professionals towards phototherapy
- To associate knowledge, attitude and practice of nursing professionals towards phototherapy with demographic variables of nursing professionals.

Research methodology

Research approach: The research approach was evaluative in nature.

Research design: A descriptive design was used for this study.

Major variables of the study: The major variables in the study were knowledge, attitude and practice of nursing professionals towards phototherapy in children.

Research setting: The study was conducted in CIMS Hospital, Lucknow.

Population: The population for this study included all Nursing professionals working at CIMS Hospital in Lucknow.

Sample: The Nursing professionals who fulfilled the inclusion criteria were selected as samples for this study.

Criteria for selection of sample

Inclusion criteria

- Nursing professionals both male and female who were willing to participate in the study
- Nursing professionals who were available during data collection period.
- Nursing professionals who had completed B.Sc (N), P.B.B. Sc (N) and M.Sc. (N) working at CIMS Hospital, Lucknow.

Exclusion criteria

- Nursing professionals who were on induction cum training period.
- Nursing professionals who were working in operation theatre.
- Samples of pilot study.

Sample size: From population, samples of 100 Nursing professionals were selected based on inclusion criteria.

Sampling technique: A non-probability convenient sampling technique was used.

Tool for data collection: A structured questionnaire was used as a tool for data collection.

Description of the data collection tool

The tool was prepared based on the information gathered from the review of literature and objectives of the study. It consisted of four parts:

Part I – Demographic Variables

It consisted of items to assess the demographic variables like age, gender, education, total years of experience, experience in pediatric unit etc.

Part II – Assessment of knowledge

It consisted of 20 structured multiple choice items to assess the knowledge towards phototherapy in children. The item covered the various aspects of phototherapy which are as follows:-

Table 1

S. No	Aspects	Question no	Total
1.	Meaning	1,9,12,19	4
2.	Causes	2,7,8,11,13,15,16,17	8
3.	Management	5,6,10,14,18	5
4.	Indications	2,4,3	3

Each item consisted of one right answer or key and three distractors.

Part III- Assessment of attitude

Five point likert scale (agree, strongly agree, uncertain, disagree, strongly disagree) was used to assess the attitude towards phototherapy in children. It consisted of sixteen items including equal number of both positive (8) and negative (8) statements.

Part IV-Assessment of practice

Checklist was used to observe the practice toward phototherapy in children. It consisted of thirty statements and each statement with two options such as “Yes” and “No”.

Scoring and interpretation of the data

Part II- Assessment of knowledge

The percentage was calculated as follows

$$\text{Percentage} = \frac{\text{Obtained core s}}{\text{Total Score}} \times 100$$

Based on the percentage, the samples knowledge was grades as follows

Knowledge was assessed using 20 multiple choice items. Each right answer was given a score of one and the total score was calculated. The total score was 20.

Table 2

Percentage	Grade
> 75%	Adequate knowledge
50-75%	Moderately adequate knowledge
< 50%	Inadequate knowledge

Part III– Assessment of attitude

Five point likert scale was used to assess the attitude, which consisted of 16 items. Each positive item was given score like strongly agree-5, agree-4, uncertain-3, disagree-2 and strongly disagree-1. Each negative item was given score like strongly disagree-5, disagree-4, uncertain-3, agree-2, strongly agree-1. The total score was 80.

Table 3

Percentage	Grade
> 75%	Favorable attitude
0-75%	Moderate attitude
<50%	Unfavorable attitude

Part IV- Assessment of practice

Checklist was used to observe the practice, which consisted of 30 items. Each appropriate practice (Yes) carried one mark and inappropriate practice (No) carried zero mark. The total score was 30

Table 4

Percentage	Grade
> 75%	Good practice
50-75%	Moderate practice
< 50%	Poor practice

Content validity of the tool

The tool was validated by the experts in the field of Paediatric Medicine and Paediatric Nursing.

Reliability

The reliability of the knowledge and practice tool was checked using Test-retest method and attitude tool was checked using split half method. The reliability value for knowledge, attitude and practice tool was 0.83, 0.82 and 0.78 respectively.

The findings of the study as per objectives are

To assess the knowledge, attitude and practice of the Nursing professionals towards phototherapy

The study showed that majority 53% of the Nursing professionals had moderately adequate knowledge and 47% of the Nursing professionals had adequate knowledge towards phototherapy. The study result showed that the overall mean knowledge score was 77.2%. And majority (62%) of the Nursing professionals had favorable attitude and 38% of the Nursing professionals had moderate attitude towards phototherapy in children.

The attitude that matters a lot, even though all nurses agreed that updating of knowledge on phototherapy is important. Thus the nurses should have a favourable and positive attitude towards phototherapy. Majority (69%) of the Nursing professionals had good practice and 31% of the Nursing professionals had moderate practice towards phototherapy. The study result showed the overall mean practice score was 85.2%.

From the study findings, it shows that the knowledge, attitude and practice towards phototherapy varies among nursing professionals. Hence, the assumption stated that the knowledge, attitude and practice towards phototherapy is supported by this study findings.

To compare knowledge, attitude and practice of nursing professionals towards phototherapy.

The study showed that the Nursing professionals mean knowledge score was 77.2 with the standard deviation of 1.76. The mean attitude score was 81.0 with the standard deviation of 4.43 and the mean practice score was 85.2 with the standard deviation of 2.33. The Nursing professionals had high mean practice score of 85.2 with the standard deviation of 2.33 when compared with knowledge (Mean-77.2; SD-1.76) and attitude (Mean-81; SD-4.43).

There was a statistically significant difference between knowledge, attitude and practice of nursing professionals towards phototherapy in children at 0.05% level of significance. Hence, the hypothesis stated that, there is no significant difference between knowledge, attitude and practice of nursing professionals towards phototherapy is

rejected.

To correlate the knowledge, attitude and practice of nursing professionals towards phototherapy.

The study showed that there was a correlation between knowledge Vs practice ($r=0.58$), attitudes practice ($r=0.48$) and knowledge Vs attitude ($r=0.56$). There was a positive, significant and moderate correlation between knowledge, attitude and practice of the Nursing professionals towards phototherapy in children at 1% level of significance. Therefore from the above discussion, we can infer that there is a significant correlation between knowledge, attitude and practice of nursing professionals. One can influence the other.

To associate knowledge, attitude and practice of nursing professionals towards phototherapy with demographic variables of nursing professionals.

The study showed that there was a statistically significant association between level of knowledge towards phototherapy in children and demographic variables such as age and total years of experience as staff nurse at 5% level of significance.

There was a statistically significant association between level of knowledge towards phototherapy in children and total years of experience in paediatric unit/ward at 5% level of significance.

Hence, the hypothesis stated that there is no association between the experience of Nursing professionals and knowledge, attitude and practice of nursing professionals towards phototherapy in children is rejected.

Major findings

- There was a significant difference between knowledge, attitude and practice of nursing professionals regarding phototherapy at 0.05% level of significance.
- There was a positive, significant and moderate correlation between knowledge Vs attitude ($r=0.56$), knowledge Vs practice ($r=0.58$) and attitude Vs practice ($r=0.48$) of Nursing professionals towards phototherapy at 1% level of significance.
- There was a significant association between level of knowledge and demographic variables such as age, total years of experience as staff nurse and total years of experience in paediatric unit/ward at 5% level of significance.
- There was a significant association between level of attitude and demographic variables such as age, educational status and total years of experience as nursing professionals at 5% level of significance.
- There was a significant association between level of practice and demographic variables such as educational status and total years of experience as nursing professionals at 5% level of significance.

Implication

The finding of the study had varied implication in different areas of Nursing administration, Nursing Education and Nursing Research

Nursing Education

Nursing Education should prepare nurse with the potential for imparting health education effectively to everyone. Nursing students should be aware of their role in promoting

educational programmes regarding phototherapy.

Nursing Administration

Nurse as an administrator has a special role in planning the policies for imparting health information to the targeted population. Instructors in the Nursing field are in a better position to take initiative in imparting health information through different effective teaching methods.

Nursing Research

Research is a systematic attempt to obtain answers to meaningful questions about phenomenon or events through the application of scientific procedures. The findings of the present study can be utilized by nurse researcher in the future to conduct extensive studies to identify or assess the knowledge of undergraduate students. Present study would help the nurse to understand the level of knowledge of undergraduate students on phototherapy.

Conclusion

Nurses had adequate knowledge, favorable attitude and good practice towards phototherapy. This study proved a significant, positive, moderate correlation between knowledge, attitude and practice of nursing professional. There was a statistically significant association between knowledge, attitude and practice of nursing professionals towards phototherapy with age, educational status and total years of experience. It seems that education and experience serves to increase nurse confidence towards phototherapy.

Recommendations

1. The study can be conducted on a large sample of nursing professionals to confirm and to generalize the study findings.
2. A study can be conducted to assess the factors influencing the knowledge, attitude and practice of nursing professionals towards phototherapy.

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