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KNOWLEDGE REGARDING SURFACTANT THERAPY AMONG STUDENT NURSES

Joyce Joseph*

AIIMS Jodhpur, Nursing tutor /clinical instructor, Jodhpur, Rajasthan 342005

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ABSTRACT

Prematurity accounts for the largest number of admissions to an NICU. The immaturity not only places infants at risk for neonatal complications like respiratory distress syndrome, which is highest in the preterm infant, but may also predispose the infant to problems that persist into adulthood such as learning disabilities, growth deficiencies and asthma. The administration of exogenous surfactant to preterm neonates with RDS has become an accepted and common therapy in most neonatal centers worldwide. Nursing care of an infant with RDS is demanding, meticulous attention must be given to subtle changes in the infants oxygenation status. So a study was conducted to assess the effectiveness of structured teaching programme on knowledge of student nurses regarding surfactant therapy in selected nursing colleges in Mangalore. A quantitative pre experimental study approach with one group pre-test post-test design was used. Data analysis will be done by using both descriptive and inferential statistics. The findings of the study proved that the nursing students lacked knowledge regarding surfactant therapy. In the post-test, most (98.3%) of the nursing students had adequate knowledge and only one sample (1.7%) had moderately adequate knowledge on surfactant therapy, whereas in pre-test, majority (61.7%) of students had moderately adequate knowledge and 38.3% had inadequate knowledge on surfactant therapy. The findings of the study thus proved that the STP is effective strategy in improving the knowledge of the nursing students.

INTRODUCTION

Premature newborn forms a Pediatric priority because they have less chance of survival than term babies. Neonatal Respiratory Distress Syndrome (RDS) is a common complication seen in premature infants. Chest radiographs of infants with RDS predictably demonstrated decreased pulmonary expansion, symmetric generalized Reticulo-granular lung opacities and air Broncho-grams. The primary cause of RDS is pulmonary surfactant deficiencies in preterm. Surfactant therapy is instillation

Corresponding Author

Joyce Joseph Email:-joycejoseph7886@gmail.com

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of surfactant into the trachea of a new born at the risk of developing or already having developed RDS.Surfactant therapy has become available universally, so neonatal survival improved more in newborn with very low birth weights and associated problems [1-4].

The practical nurse has a unique opportunity of closely observing and providing care for the newborn infant after delivery. Nurses play an important role in caring for infants who receive surfactant therapy in the NICU. The care of the infants before, during and after surfactant administration is unique to this treatment modality. It is important for nurses to have a working knowledge of the specific care needs of infants treated with surfactant. Today's nursing students are tomorrow's



nurses. Knowledge of surfactant therapy during student period will help them in future when working in neonatal ICU [5]. There is no doubt that education brings in desired change in behavior. Structured teaching programme is an important aspect to impart knowledge in order to prevent the morbidity due to respiratory distress [6].

Title

Effectiveness of Structured Teaching Programme on Knowledge of Student Nurses Regarding Surfactant Therapy in Selected Nursing Colleges in Mangalore"

Objectives

1. To determine the knowledge regarding surfactant therapy among student nurses using structured knowledge questionnaire.

2. To determine the effectiveness of structured teaching programme on surfactant therapy among student nurses [7].

Method

A quantitative pre experimental study approach with one group pre-test post-test design was used. The study was conducted in urban setting Mangalore. The target population is nursing student and accessible population in B.SC Nursing students from selected nursing colleges in Mangalore. Under simple random sampling technique lottery method was used to draw 60 nursing students from the population. The tool was prepared after reviewing so many literatures and. Tools contains two sections, section I is demographic variables and section II is questioner regarding surfactant therapy. After pilot study the main study was conducted administering structured questionnaire on surfactant therapy. After collecting data, structured teaching programme was administered to the subjects and on 7th day post-test was conducted using the same questionnaire. The collected data was compiled, tabulated and analyzed by using descriptive and inferential statistics [8-10].

RESULTS

All the nursing students were in the age group of 20-22 years and majority (95%) of them were females.

In the post-test, most (98.3%) of the nursing students had adequate knowledge and only one sample (1.7%) had moderately adequate knowledge on surfactant therapy, whereas in pre-test, majority (61.7%) of students had moderately adequate knowledge and 38.3% had inadequate knowledge on surfactant therapy. The

investigator found that the post-test knowledge score was in the range of 17-28 with a mean of 25.5 ± 2.11 whereas the pre-test knowledge score ranged from 5-20 with a mean of 11.9±3.4.

The area-wise mean post-test percentage knowledge score was more than 80% in all the areas except in the area 'complications' where the mean posttest percentage knowledge score was 67%. The mean pretest percentage knowledge score was minimum in the area 'types of surfactant' (12.67%), 'complications (15%) and administration (25%). In all the other areas the mean pretest percentage knowledge score was between 37% and 59%. There was significant difference in area-wise mean pre-test and post-test knowledge score as the calculated 't' value in all the areas were greater than the table 't' value $(t_{59}=2.001; p < 0.05)$. A significant difference in knowledge scores of student nurses was also seen after the structured teaching programme ($t_{59}=10.77$; p<0.05).

The findings of the study proved that the nursing students lacked knowledge regarding surfactant therapy. The structured teaching programme conducted by the investigator helped the nursing students to improve their knowledge in the area. The effectiveness of STP was tested in terms of gain in knowledge and the findings showed that it was statistically significant at 0.05 level. The findings of the study proved that the STP is effective strategy in improving the knowledge of the nursing students. All the subjects had a gain in knowledge compared to their pre-test knowledge scores.

Recommendation's

Based on the study findings, the following recommendations are stated:

A similar study can be collected with a larger sample to generalize the findings

Replication of the study can be done among staff nurses in the hospitals

A descriptive survey can be conducted to assess the practice of surfactant therapy

Comparative study can be conducted with a control group

Correlative study can be conducted to assess the knowledge and practice regarding surfactant therapy among nurses.

Comparative study can be conducted to find out the effectiveness between various teaching methodologies.







CONCLUSION

A premature newborn baby needs more care compared to the term baby; surfactant therapy takes essential part in the care of RDS babies. It is very essential to give adequate classes to the student nurses about the surfactant therapy and care of the child with Respiratory Distress Syndrome.

The pre-test findings show that student nurses have poor knowledge on surfactant therapy. Whereas following the structured teaching programme, post-test shows an increase in knowledge scores. The findings of the study proved that the structured teaching programme is an effective measure to enhancethe knowledge of nursing students regarding surfactant therapy.

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CONFLICT OF INTEREST

The authors declare that they have no conflict of interest.

STATEMENT OF HUMAN AND ANIMAL RIGHTS

All procedures performed in human participants were in accordance with the ethical standards of the institutional research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. This article does not contain any studies with animals performed by any of the authors.

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