AMERICAN JOURNAL OF ADVANCES IN NURSING RESEARCH
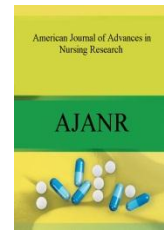
AJANR

EFFECTIVENESS OF SELECTED NURSING INTERVENTIONS ON RESPIRATORY DISTRESS AMONG THE CHILDREN WITH ARDS ADMITTED IN NILOUFER HOSPITAL, HYDERABAD.

Siva Lakshmi Thulasi E*, Haseena Begum SM, Anusha G, V.Sujatha, R.Shalini

Sri Venkateswara College of Nursing, RVS Nagar, Chittoor, Andhra Pradesh, India.

ABSTRACT

Objective of the study was to analyze the effectiveness of selected nursing interventions on respiratory distress among the children with ARDS. A pre experimental study with one group before and After intervention assessment Design was selected. Thirty children between 1-3 years of age with ARDS were selected using purposive sampling technique. Data collection was done for 15 days. Before intervention assessment was done with standard assessment tool and assessed health status of children with respiratory distress and categorized as mild, moderate and severe, later provided selected nursing interventions which include provision of Semi fowler's position, Oxygen administration, Nebulization, and Hydration were carried out for 3 days. After intervention assessment scores were also obtained using the standard assessment tool. The study findings showed that nursing care with appropriate selected nursing interventions would control the level of respiratory distress in the child with ARDS.

INTRODUCTION

Breathing is the greatest pleasure in life. Acute Respiratory Distress Syndrome is one of the major conditions which cause discomfort in breathing among children. Acute respiratory distress syndrome is characterized by the development of sudden breathlessness with in the hours to days of an inciting event[1]. Pediatric acute respiratory distress syndrome (ARDS) remains an important challenge for the intensive care clinician. ARDS, which can result from either direct lung injury or from a "downstream" inflammatory process, which is manifested by profound hypoxemia and respiratory failure[2,3]. Respiratory Distress Syndrome is life threatening and one of the most common lung disorders. According to the American Lung Association,

Infant Respiratory Distress Syndrome was the seventh leading cause of death in infants under one year of age in the United States, accounting for 3.2 percent of all infant deaths[4]. In 2008, respiratory distress due to pneumonia occurred in approximately 156 million children (151 million in the developing world and 5 million in the developed world). In 2010, it resulted in 1.3 million deaths, or 18% of all deaths in those under five years, of which 95% occurred in the developing world[5]. The children with ARDS are greater risk for multiple organ dysfunction syndromes and brain is one of the most frequent organs involved in this process[6,7]. In order to prevent and control these problems the researcher has adopted standard nursing interventions based on evidence based practice. Prevention and control of respiratory distress for children with ARDS is the important task of a pediatric nurse. Through the appropriate application of research knowledge, the practice of semi fowler's

Corresponding Author

Siva Lakshmi Thulasi
Email:- thulasisvcon@gmail.com

Research Article

position, oxygen administration, nebulisation, provision of hydration can provide comfort and prevent complications that occur due to ARDS.

Objectives
➤ Assess the respiratory distress among the children with ARDS by Assessment checklist.
➤ Plan and implement Selected Nursing Interventions for respiratory distress among the children with ARDS.
➤ Analyse the effectiveness of Selected Nursing Interventions on respiratory distress among the children with ARDS.
➤ Associate between Selected Nursing Interventions and selected demographic variables of children with ARDS.

METHODOLOGY
Research Design: The design adopted for the study is pre experimental study with "one group before and after intervention assessment Design". In present study the identified independent variable is Selected Nursing Interventions and dependent variable is respiratory distress.

Sampling Technique
Purposive sampling is used to select the sample.

Sample and sample size:-
The sample for the present study is 30 children with in the age group of 1-3years with ARDS admitted in Niloufer Hospital, Hyderabad, A.P.

Development and Description of Tool
The tool was divided in to 3 parts:
Part I: Consists of demographic data of the children which include age of toddler, Gender, Religion, Education of the parents, Family income,Ventilation of the house, Passive smoking to the child, Previous history of hospitalization of the child with the respiratory disorders and the cause of ARDS
Part II: Consists of assessment check list for respiratory distress before and after providing the interventions.
Scores were given based on specific assessment findings on checklist.
Part III: Deals with documentation of Nursinginterventions like semi fowlers position, oxygen administration, nebulization, hydration
Scoring procedure :Totally there were 17 questions in assessment checklist . each one is graded into normal, mild, moderate , severe and was given scores like
Normal -0
Mild -1
Moderate -2

Severe -3
And the total assessment score was interpreted as follows:
1- 17 - Normal
18 -28 - Mild
29-39 -Moderate
40-51 - Severe

Main Study: Main study was conducted in the Emergency services room of Niloufer Hospital, Hyderabad. Purposive sampling was used to select 30 children between 1-3 years of age with ARDS. Demographic variables of children with ARDS were collected based on the structured questionnaire by interview method. Before interventions, the assessment was done by using the assessment check list and selected nursing interventions were provided for the sample for three days and later assessment was done .Data were edited, organized, analysed, and interpreted. Analysis and interpretations was done with the help of descriptive and inferential statistics to examine the objectives and test the hypothesis of the study. The level of respiratory distress before interventions and after interventions were assessed by using descriptive measures (mean, standard deviation) and inferential measures ('t' test values).Association between effectiveness of selected nursing interventions and selected demographic variables was analysed by using inferential measures (chi-square).

RESULTS
Level of Respiratory distress:- The level of respiratory distress before providing interventions the sample with severe respiratory distress is 40% and after providing nursing interventions, it was reduced to 3.3%. The children with moderate respiratory distress before interventions is 60% and after interventions it was reduced to 13.3% and from severe and moderate respiratory distress it was reduced to mild respiratory distress(83.3%).

The above table indicates that the obtained $\chi^{2=}$ 43.217 which is higher than the table value ($\chi^{2 =}$ *5.991)* at df=2,the table value of at the level *0.05,*which shows the significant difference between pre and post test scores. The t value = 26.210 which is higher than the table value 2.04 at df=29 which shows positive relationship between before and after intervention assessment scores at the level 0.05. In Association between effectiveness of selected nursing interventions and cause of ARDS, the computed after interventions chi square valueχ^2 9.610 is higher than the table value 9.49 at 0.05 level of significance .It shows that there is significant association between effectiveness of selected nursing interventions and cause of ARDS.

Table 1. Level of Respiratory distress

Level of Respiratory distress	Before interventions Assessment scores		After interventions Assessment scores	
	f	**%**	**f**	**%**
Normal (1- 17)	-	-	-	-
Mild (18 -28)	-	-	25	83.3
Moderate (29-39)	18	60.0	04	13.3
Severe (40-51)	12	40.0	01	3.3
Total	30	100	30	100

Table 2. Effectiveness of selected nursing interventions on respiratory distress:

	Mean Std. Error	Std. Deviation
Before interventions	36.60	0.909
After interventions	22.4333	0.92932

$\chi^2 = 43.217$ df =2 r= 0.839   t value = 26.210   p=0.05.

DISCUSSION

After obtaining permission from the HOD of pediatric Medicine, a quasi experimental study was conducted. Purposive sampling was used to select 30 children between 1-3 years of age with ARDS. Demographic variables of children with ARDS were collected based on the structured questionnaire by interview method. Before interventions, the assessment was done by using the assessment check list and selected nursing interventions were provided for the sample for three days and later assessment was done .Data were edited, organized, analysed, and interpreted. Analysis and interpretations was done with the help of descriptive and inferential statistics to examine the objectives and test the hypothesis of the study. The level of respiratory distress before interventions and after interventions were assessed by using descriptive measures (mean, standard deviation) and inferential measures ('t' test values). Association between effectiveness of selected nursing interventions and selected demographic variables was analysed by using inferential measures (chi-square). χ^2= 43.217 which is higher than the table value ($\chi^2 = 5.991$) at df=2, the table value of at the level 0.05,which shows the significant difference between pre and post test scores. It is clear from the findings of the study, that there was significant difference between before and after interventions assessment scores which indicates that selected nursing interventions on respiratory distress were effective.

CONCLUSION

The study concluded that By early implementation of these selected nursing interventions among the children with ARDS the risk for multiple organ dysfunction syndromes can be prevented and mortality rate can be reduced.

REFERENCES

1. Achar's Text book of paediatrics (2005). 3[rd]edn, Orient Longman publishers, New Delhi pg.no. 600-630
2. Ghai OP. (2005). Essentials of Pediatrics, (6[th]edn,) New delhi: CBS publishers, Lippincott company, pg. No. 576-596
3. Terry kyle. (2010). Essentials of paediatric nursing", published by wolterkluwer (India) Pvt. Ltd. New Delhi. Pg. no.583-584.
4. Prathiba Swamy. (2010). Nightingale Nursing Times, Vol 6, No 9.
5. Madhuri S.Shelke. (2012). Indian Journal of Holistic Nursing.
6. Sara B. (2008). Prime Nursing Practice, Vol 3.
7. Dorothy R.Marlow (2010). Text Book of paediatric Nursing, sixth Edition, Elsevier publications, India, page no 404 to 409.