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EVALUATE THE EFFECTIVENESS OF PLANNED TEACHING PROGRAMME (PTP) ON KNOWLEDGE REGARDING CARE OF CHILDREN ON VENTILATOR AMONG THE NURSING STAFFS

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ABSTRACT

A study was conducted to evaluate the effectiveness of planned teaching programmme on knowledge regarding care of children on ventilator among the nursing staffs working in Neonatal Intensive Care Unit (NICU) and Pediatric Intensive Care Unit (PICU) in selected hospitals of Sangli," The objective of the study was to evaluate the effectiveness of PTP on knowledge regarding care of children on ventilator among the nursing staffs. A quantitative research approach using Pre-experimental–one group pre-test post-test design was used for this study. 50 nursing staffs were included in the study with purposive sampling technique. Structured knowledge questionnaire were used to collect the data. The validity of tool was done by 18 experts. Reliability was drawn by using split half method and coefficient of correlation and Browmans prophency. The reliability r 'was 0.94. The study results showed that the calculated 't' value 81.2 was higher than 't' table value 2 at 0.001 level of significance (LOS). The study concluded that PTP was found effective.

KEYWORDS: PTP, care of children on ventilator, NICU's and PICU's nursing staffs.

BACKGROUND OF STUDY

Mechanical Ventilators deliver a gas mixture (air and oxygen) to the lungs by means of positive pressure; that is, they operate by blowing gas into the lungs.[1]

From 1920s to early 1950s, epidemics of acute poliomyelitis necessitated the use of assisted ventilation for polio victims.[2] In 1996, a one-day point prevalence study was carried out with 4,153 patients admitted in 412 ICUs from 8 countries, showing that 39% of patients

required mechanical ventilation.[3] Many deaths were occurring in Pediatric ICU's due to ventilator associated complications. The common complications are ventilator associated pneumonia, accidental ex-tubing, & septicemia etc.[4]

Need for study

Indian Academy of Pediatrics (IAP) and Indian Society of Critical Care Medicine (ISCCM) Pediatric section stresses the need for developing education programmes and training for nursing staffs working in PICU because in India incidence of ventilator associated complication are higher as compared to the Developed Countries.[5] Care of the patient on mechanical ventilation is an everyday assignment in the critical care unit. Therefore, it is essential that the nursing staffs have to apply knowledge and skills in order to provide effective care to the patients on ventilator.

Statement of the problem

A study to evaluate the effectiveness of PTP on knowledge regarding care of children on ventilator among the nursing staffs working in NICU's and PICU's in selected hospitals of Sangli.

Objectives

1. To assess the existing knowledge regarding care of children on ventilator among the nursing staffs. 2. To evaluate the effectiveness of planned teaching programme on knowledge regarding care of children on ventilator among the nursing staffs.

Hypothesis

H_0- There is no significant difference between the pre and post test knowledge score of staff nurses regarding care of children on ventilator at 0.05 level of significance (LOS).

Literature review

Total journal literature reviews 10 were included out of those 4 were national and 6 were international journals. They are described under 3 heading, literature related to 1. Ventilator associated pneumonia, 2 oral hygiene practices for intensive care patients receiving mechanical ventilation and 3. Knowledge regarding nursing care of patient on mechanical ventilator.

Research methodology

In the present study, quantitative research approach was used. Pre-experimental one group, pre-test Post-test design was used for the study. The independent variable was PTP on knowledge regarding care of children on ventilator. The dependent variable was knowledge regarding care of children on ventilator.

Five tertiary care hospitals from Sangli city were selected as setting of study. In this study the population consists of nursing staff working in hospitals. Samples the selected staff nurses those are working in NICU's and PICU. Nursing Staffs who's work experience less than 1 year in NICU or PICU were excluded. 50 samples were selected by using non-probability purposive sampling method.

The tool was divided into two sections. Section I included demographic data of nursing staff. Section II contains 20 multiple choice questions with four options for assessing the knowledge. The correct answer scored with 1 mark and wrong answer score was 0.

The validity of tool was done by 18 experts. Reliability was drawn by using split half method and coefficient of correlation and Chronbach alpha. The reliability r 'was 0.94.

Pilot study was conducted from 27 September 2017 to 4 October 2017, to assess the feasibility of the study.

The frequency, percentage, mean and standard deviation and student t statistical tests were used data analysis and interpretation.

DATA ANALYSIS AND DISCUSSION

It has 3 parts, 1.distribution of demographic data, 2. comparison of pre and post category of knowledge score and 3. t test result.

Table No. 1: Frequency and percentage distribution of selected demographic variables of staff nurses. **N=50**

S.N.	Demographic variable		Frequ-ency	Perce-tage
1	**Age**			
	a.	**21-30 years**	**36**	**72%**
	b.	31-40 years	11	22%
	c.	41-50 years	03	06%
2	**Qualification**			
	a.	**ANM**	**24**	**48%**
	b.	**GNM**	**20**	**40%**
	c.	B.Sc.(N)/P.B.B.Sc.(N)	06	12%
3	**Work Experience in NICU/PICU**			
	a.	**1-5 year**	**28**	**56%**
	b.	6-10 years	16	32%
	c.	11-15 years	06	12%
4	**Participated in any training programme**			
	a.	Participated	41	82%
	b.	Not-participated	9	18%

Above Table showed that 36(72%) nursing staffs were belongs from the age group of 21-30 years of age. Based on qualitication on nursing staff 24(48 %) ANM, 20(40%) GNM and remaining 6(12%) were B.Sc. (N) and P.B.B. Sc.(N). 28(56%) nursing staff had working experience 1-5 years. 41(82%) nursing staffs were participated in training programmes.

A review article published (Verma M and Podder L) on nursing care of a baby on ventilator and they included nursing staffs' knowledge and skills regarding it.

Table no. 2. Frequency and percentage comparison of categorized knowledge score of nursing staff in pre-test and post test. **N=52**

Category (based on knowledge score)	Pre test		Post test	
	F	P	F	P
Poor (0-5)	01	2%	0	0%
Average (6-10)	14	28%	01	02%
Good (11-15)	26	52%	12	24%
Excellent (16-20)	09	18%	37	74%

- Poor (0-5), average (6-10), good (11-15) and excellent (16-20)

Above table showed that 14(28%) had average knowledge, and 26(52%) had good knowledge to nursing staff in pre-test, whereas 12(24%) had good and 37(74%) had excellent knowledge score in post test.

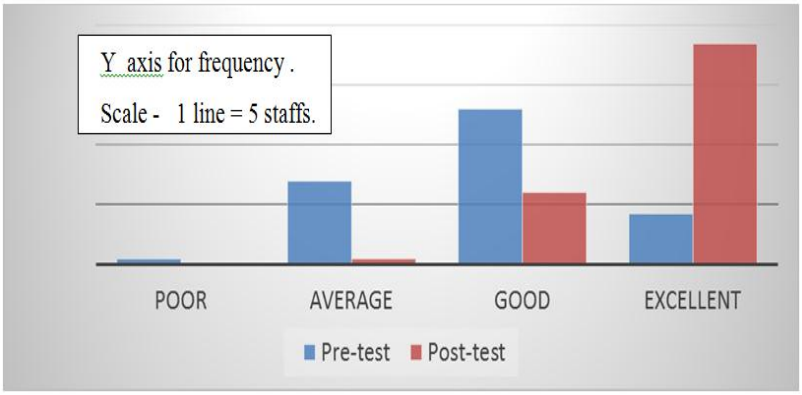

Figure no. 1: Bar graph showed Frequency comparison of categorized knowledge score of nursing staff in pre-test and post test.

Table No. 3: Mean, S.D, t test value and p value.

Test			t-value	P-value
Pre-test	12.04	1.7	81.2	0.001
Post-test	16.1	2.2		

Above table showed that t calculated value was 81.2 which is greater than t table value -2 at LOS 0.001. Hence PTP on knowledge regarding care of children on ventilator among the nursing staffs was effective.

Similar result i.e. increase mean and decrease S.D of knowledge score in post test than pre-test found in a study conducted (Saji V) on effectiveness of SIM on knowledge regarding prevention of ventilator associated pneumonia among B.Sc. N interns.

This study result supported by a study conducted (Kulkarni S and Kulkarni M) on effect of PTP on knowledge regarding complementary feeding among mothers of under –fives Calculated 't' value (76.9) was much greater than 't' table value (2) at $p<0.05$ level of significance. Therefore PTP on complementary feeding was effective.

CONCLUSION

PTP on knowledge and skills of care of children on ventilator is essential for nursing staffs those are working in any intensive care unit (ICU).

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