



“A study to assess the effectiveness of video assisted teaching Program On Knowledge Regarding ECMO [Extracorporeal Membrane Oxygenation] Among the B.Sc Nursing 3rd Year Students In Selected College Of Nursing Jabalpur, [M.P.]”

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ABSTRACT: ECMO is a life sustaining therapy that provides both cardiac and respiratory support to patient with severe organ failure this highly specialized treatment uses a machine to take over the work of the lungs and heart, oxygenating the blood and pumping it throughout the body. ECMO issued in critically ill patients with condition such as acute respiratory distress syndrome (ARDS), cardiac arrest, and post craniotomy shock among others, by providing a temporary bridge to recovery ECMO has revolutionized the treatment of these complex patient and improved outcomes in many cases. One group pre-test post-test research design was adopted for the study, 60 BSc. Nursing students were selected as sample by non probability convenience sampling technique. The present study assess the effectiveness of video assisted teaching programmed. The study findings ,that there was a significant improvement in the level of knowledge after providing video assisted teaching program.

Keywords:- Assess, Effectiveness ,Video assisted teaching program, ECMO

INTRODUCTION

Extracorporeal Membrane Oxygenation (ECMO) is a life-sustaining therapy that provides both cardiac and respiratory support to patients with severe organ failure. This highly specialized treatment uses a machine to take over the work of the lungs and heart, oxygenating the blood and pumping it throughout the body. ECMO is commonly used in critically ill patients with conditions such as Acute Respiratory Distress Syndrome (ARDS), cardiac arrest, and post-cardiotomy shock, among others. By providing a temporary bridge to recovery, ECMO has revolutionized the treatment of these complex patients and has improved outcomes in many cases.

OBJECTIVES

1. Assess pretest knowledge regarding ECMO before video assisted teaching programme among the B.Sc. nursing 3rd year students at selected college of Nursing Jabalpur.
2. Assess the posttest knowledge regarding ECMO after video assisted teaching programme among the B.Sc. nursing 3rd year students at selected collage of Nursing Jabalpur.
3. Find out the effectiveness of video assisted teaching regarding ECMO among the B.Sc.



nursing 3rd year students at selected college of Nursing Jabalpur.

4. Find out the association between knowledge regarding ECMO among the B.Sc. nursing 3rd year students in a selected collage of Nursing Jabalpur with their selected demographic variables.

HYPOTHESIS

H1-There will be significant difference between pre-test knowledge score and post-test knowledge score regarding ECMO (Extracorporeal Membrane Oxygenation) among the B.Sc. nursing 3rd year students in a selected college of nursing at Jabalpur at 0.05 level of significance.

H2- There will be significant association between the pre-test knowledge score regarding ECMO (Extracorporeal Membrane Oxygenation) among the B.Sc. nursing 3rd year students in a selected college of nursing at Jabalpur with their selected demographic variables at 0.05 level of significance.

REVIEW OF LITERATURE

Marzoq Ali Ahmed Odhah [2021] The study aims to assess the effect of educational guidelines on nurses' performance regarding caring for patients on extracorporeal membrane oxygenation (ECMO) and patient outcomes. A quasi-experimental (one-group pretest/post-test) design was utilized in this study. A convenience sample of all available nurses (50 nurses) and a convenience sample of 40 patients were included to assess patient outcomes. The study was conducted at a critical care unit affiliated with Sohag University Hospitals, Egypt. Three tools were used to perform the study: a Nurse Knowledge Assessment Questionnaire, a Nurse Observational Checklist, and a Patient Outcomes Questionnaire. Results showed that 96% of the studied nurses had a satisfactory level of knowledge and 98% of nurses had an adequate level of practice regarding ECMO post-implementation of intervention guidelines. Regarding patient outcomes, 37.5% of the studied patients had acute respiratory failure as a medical diagnosis. Concerning ECMO modalities, 77% were put on VV mode and 75% were put on central ECMO cannulation. The mean number of days in ICU was 15.76 ± 4.33 , the mean number of days on ECMO was 7.43 ± 3.16 , and the mean number of days on mechanical ventilation was 10.98 ± 5.74 . Regarding ECMO complications, 15% of patients developed renal and pulmonary complications. Based on the results of the present study, it can be concluded that the implementation of educational guidelines had a statistically significant positive effect on total knowledge and practice levels in the pre- and immediate post-test. There was a highly statistically significant difference regarding nurses' total level of knowledge and practice, as well as ECMO complication rates, which supported the research hypothesis.

MATERIALS AND METHOD

Quantitative research approach using Pre experimental (One group pre-test post-test) research design was adopted for the study. This study was conducted in selected Yogmani Institute of Nursing Sciences and Research and Jabalpur Public College of Nursing, Jabalpur. Demographic data, structured knowledge questionnaire and Video assisted teaching program were implemented for data collection procedure. Data were collected from nursing colleges after getting permission from the college authority. For this study the researcher selected 60



samples by using convenience sampling technique after getting written consent from the subject. Analysis and interpretation was done according to the objectives of the study

DESCRIPTION OF THE TOOL

After the review of literature and discussion with the expert the tool used in this study was constructed by the investigator. It consists of two sections Section A: Consist of socio demographic variables which consists of 4 items: Age, Gender, do you have seen demonstration on ECMO, do you have attended seminar/workshop/CNE on ECMO. Section B: Consist of self-structured questionnaire regarding ECMO. Self-structured questionnaire has 30 questions for assessing the knowledge of B.Sc. nursing 3rd year regarding ECMO. Section C: Consist of video assisted teaching programme regarding ECMO.

SCORING CRITERIA Scoring for the questionnaire was established based on the correct answers provided for each question. Each correct answer is fetched 1 mark and each incorrect or unanswered question fetched 0 mark. After participants complete the questionnaire, their scores were calculated by summing the marks earned answer. Knowledge score- a score of 0-10 poor knowledge, a score of 11-20 average knowledge, a score 21-30 good knowledge.

MAJOR FINDINGS

TABLE: GRADE WISE DISTRIBUTION OF FREQUENCY, PERCENTAGE, MEAN AND STANDARD DEVIATION OF PRE-TEST KNOWLEDGE OF B.SC NURSING 3RD YEAR STUDENTS.

[N=60]

S.No	Criteria	Frequency	Percentage	Mean	SD
1.	Poor	10	16.6%		
2.	Average	49	81.6%	13.91	4.22
3.	Good	1	1.6%		

Table1: depicts that grade wise distribution of pre-test knowledge score of B.Sc. Nursing 3rd year student. In pre-test 49(81.6%) students have average knowledge, 10 (16.6%) have poor knowledge and 1(1.6%) have good knowledge. The mean knowledge score of pre-test of B.Sc. nursing 3rd year students is 13.91 with standard deviation 4.22.

GRADE WISE DISTRIBUTION OF FREQUENCY, PERCENTAGE, MEAN AND STANDARD DEVIATION OF POST-TEST KNOWLEDGE SCORE OF B.Sc. NURSING 3RD YEAR STUDENTS.

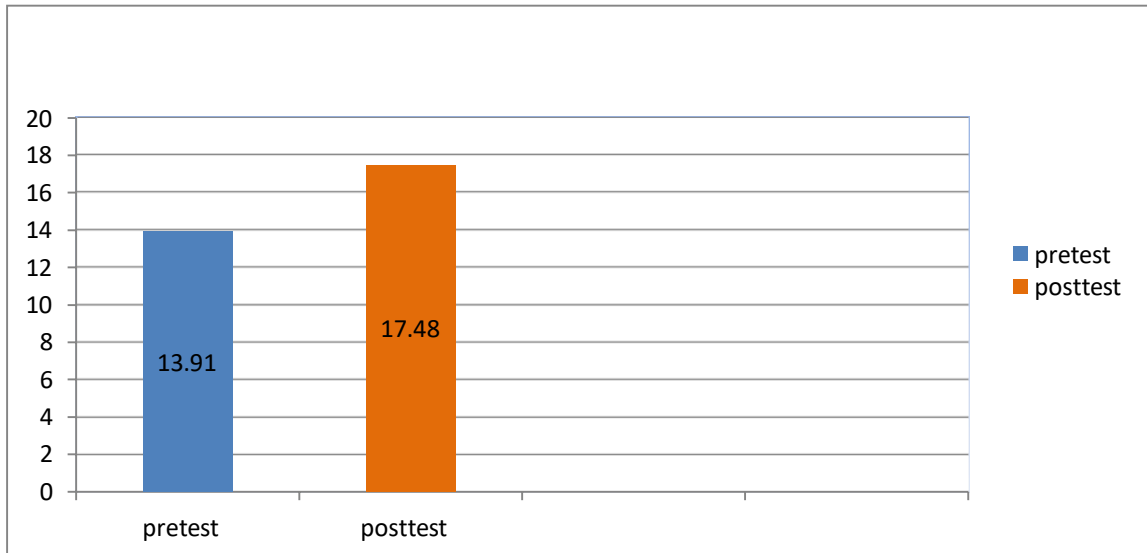
N=60

S.No	Criteria	Frequency	Percentage	Mean	SD
1.	Poor	0	0%		
2.	Average	47	78.33%	17.66	4.15
3.	Good	13	21.66%		

Table2:depicts that grade wise distribution of post-test knowledge score of B.Sc.nursing3rdyear students. In post-test 47 (78.33%) students have average knowledge, 13 (21.66%) have good knowledge and 0 (0%) have poor knowledge. The mean knowledge score of post- test of B.Sc. nursing 3rd year students is17.66 with standard deviation 4.15

ANALYSIS OF EFFECTIVNESS OF VIDEO ASSISTED TEACHING PROGRAMME ON KNOWLEDGE REGARDING ECMO AMONG B.SC NURSING 3RD YEAR STUDENTS SIGNIFICANCE DIFFERENCE BETWEEN PRE AND POSTTEST KNOWLEDGE SCORE OF B.SC.NURSING 3RDYEARSTUDENTS BY USING 'T' TEST.[N=60]

S.No	Description	Mean	Mean difference	SD	T-value
1.	Pre-test	13.91		4.22	
2.	Post-test	17.48	3.57	4.15	6.26



It depicts that mean knowledge score of 13.91 and the mean knowledge score of post-test is 17.66, mean difference of pre-test and post-test is 3.57 with standard deviation of pre-test in 4.22, standard deviation post-test is 4.15, and the calculated 'T' value was 6.26 and table value at 0.05 level is 2.00, calculated value was more than table value, ($6.26 > 2.00$) at significant level (0.05).

Hence H_1 is accepted.

ASSOCIATION OF PRETEST KNOWLEDGE SCORE OF B.SC. NURSING 3RD YEAR STUDENTS WITH SELECTED DEMOGRAPHIC VARIABLES.

Association of pre-test knowledge score of B.Sc. Nursing 3rd year students regarding ECMO with their socio demographic variables was done by using the 'chi-square' test. Demographic variables like Age, gender, who have seen demonstration on ECMO, do you have attended seminar/ workshop/CNE on ECMO were found not significant. Hence research hypothesis H_2 is rejected.

LIMITATIONS

1. The study is limited to samples available during the period of data collection.
2. The study is limited time period of data collection.
3. The study is limited to small sample size to generalize findings to a larger population.

CONCLUSION

This study attempted to assess the knowledge of B.Sc. Nursing 3rd year students on ECMO. This would help to the



students to gain knowledge on ECMO. Video assisted teaching programme is an effective method in improving the knowledge and will help in the improving health of cardiac and respiratory failure patient. The overall experiences of conduction of this study was satisfying and enriching and the participant were happy and satisfied with their experience.

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