Effectiveness Of Video Assisted Teaching Module Regarding Tracheostomy Care On Knowledge Among Staff Nurses At Selected Hospitals Of Gwalior City.

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ABSTRACT:

Introduction: Tracheostomy in the intensive care unit (ICU) is increasingly used as a means to speed weaning from mechanical ventilation and to provide a safe airway.⁵ Tracheostomy allows earlier discharge of patients from the ICU, thus allowing better management of limited ICU resources,⁶ and may be associated with reduced mortality.⁷

Material & Method : A pre experimental one group pre test & post test study with aim to assess the effectiveness of video assisted teaching module regarding tracheostomy care on knowledge of staff nurses at selected hospitals of Gwalior city was conducted and samples were selected by convenient sampling. Data were collected with help of structured knowledge questionnaire (SKQ). Results: Highly significant difference was found between the area wise and overall pre-test and post-test knowledge scores mean difference (14.16), but no significant association was found between the post-test knowledge scores when compared with the demographic variables of nurses ($P>0.05$).

Conclusion: Tracheostomy care and management is more and more necessary in both the intensive care setting and the general ward. It is therefore ever more important that trained nurses are equipped with the appropriate skills, knowledge and support to meet the unique needs of each patient safely and competently.

Key words: Video Assisted Teaching, tracheostomy care, knowledge.

INTRODUCTION:

Illness or conditions that affect ventilation or oxygen transport cause alteration in respiratory functioning. The goal of ventilation is to produce a normal arterial carbon dioxide tension (PaO₂) between 35-45 mmhg and maintain a normal arterial oxygen tension (PaO₂) between 95-100 mmhg.¹

Over a period of 5000 years, dramatic changes have occurred in airway management, tracheotomy procedure terminology, indications, techniques, instruments, settings where procedures are performed, tube design and patient outcomes. Specialized knowledge and skills necessary to safely care for tracheostomy patients and to provide effective respiratory resuscitation are reviewed.²

Tracheostomy is an operation by which a stoma or window is made in the tracheal wall for the purpose of respiration.³ A life threatening obstruction of upper reparatory tract that cannot be by passed with an

endotracheal tube should have a cricothyroidotomy, tracheostomy be a useful mean of rapidly securing the airway in an emergency.⁴

Tracheostomy in the intensive care unit (ICU) is increasingly used as a means to speed weaning from mechanical ventilation and to provide a safe airway.⁵ Tracheostomy allows earlier discharge of patients from the ICU, thus allowing better management of limited ICU resources,⁶ and may be associated with reduced mortality.⁷

OBJECTIVES:

1. To assess the effectiveness of video assisted teaching module regarding tracheotomy care after implementation of video assisted teaching module.
2. To find out the association between the post test knowledge score with demographic variables related to staff nurses.

MATERIAL & METHODS :

A quantitative approach with pre-experimental design was adopted to assess the effectiveness of a video assisted teaching module regarding tracheotomy care staff nurses. The study was conducted at C.H.R.I. Hospital & B.I.M.R. Hospital Gwalior. The study was approved by the Research and Ethics Committee of College of Nursing Science & Research, Gwalior (MP) and permission was obtained from Principal College of Nursing Science & Research, Gwalior. Administrative permission was obtained from authorities of C.H.R.I. Hospital & B.I.M.R. Hospital Gwalior. Sixty Seven staff nurses were selected by non-probability convenient sampling technique. The study tool Structured Knowledge Questionnaire (SKQ) & Video Assisted Teaching Module (VATM) regarding tracheostomy care were given to nine experts from various disciplines of nursing and medicine for establishing content validity. Reliability of SKQ was calculated by Split half method ($r=0.82$) and indicated a high reliability of tool.

After obtaining a written informed consent, on the day one of the study, the demographic data of staff nurses were collected. On the same day a pre-test SKQ was administered to the staff nurses to assess knowledge regarding tracheotomy care. Later, intervention (Video assisted teaching module regarding tracheotomy care) was administered. On 8th day post-test was conducted.

RESULT:-

Table-1 Description of samples according to their demographic characteristics (N=67)

Table no 1 depicts that Most (76.12%) of nurses in study were females, 79.1% of nurses were in the age group of 21-30 years, 68.66% of them were Hindus, Higher percentage (58.21%) of them from urban area, Highest percentage (59.7%) of them acquired their previous information regarding tracheostomy care from Academic Education, Most (83.58%) of the nurses were GNM's, Majority (49.25%) of the nurses were working in general ward, Majority (82.09%) of the nurses had less than 5 years experience, Majority (35.82%) of the nurses reported that they never attended tracheostomy patients in their wards

Demographic Characterist	Frequency (%)
Gender	
Male	23.88%
Female	76.12%
Age in years	
21-30	79.1%
31-40	14.94%
41-50	02.98%
Above 50	02.98%
Religion	
Hindu	68.66%
Christian	31.34%
Residential Area	
Rural	41.79%
Urban	58.21%
Previous Information Acquired	
Academic Education	59.70%
Experience	40.30%
Professional Qualification	
GNM	16.42%
B.Sc. (N)	83.58%
Area of Work	
General Ward	49.25%
ICU	25.37%
ENT	14.93%
Post.Op.	10.45%
Years of Experience	
0-5	82.09%
6-10	11.94%
11-15	01.49%
Above 15	04.48%
Frequency of Tracheostomy in Ward	
Almost Never	35.82%
Every 3 Month	26.87%
Every 6 Month	19.40%
Almost Never	17.91%

Table -2 Comparison of pre test and post-test knowledge score of nurses. (N=67).

Knowledge score	Mean Standard Deviation	Mean Difference	't' value	'p' value
Pre test	17.57+4.14	14.16	33.83	0.001
Post Test	31.73+4.29

Table - 2 & graph shown above, mean plotted on the graph that during pre-test mean score was 17.57 which 43.93% of the maximum score. However during the post-test mean score was 31.22 which 78.05% of the maximum score. Thus, it is revealing the effectiveness of video assisted teaching module regarding tracheostomy care for staff nurses working in hospital.

Table- 3 Association between the post-test knowledge scores and demographic variables of nurses

Variables	df	Table value	χ^2 Value (Calculated)	Level of significance
Gender	2	5.99	0.82	NS
Age	6	12.59	4.35	NS
Religion	2	5.99	0.62	NS
Residence	2	5.99	3.2	NS
Previous information	2	5.99	1.04	NS
Education	2	5.99	2.86	NS
Area of working	6	12.59	0.95	NS
Experience	6	12.59	4.05	NS
Frequency	6	12.59	5.44	NS

($P > 0.05$, Not significant)

Table No. 3 shows the chi square was calculated to find out the association between the post test knowledge scores and the demographic variables of the nurses. There was no significant association between knowledge scores of nurses in post test when compared with gender, age, religion, residence, previous information regarding tracheostomy care, education, Area of working, experience, frequency of tracheostomy care in ward. ($P > 0.05$). Hence, it can be interpreted that the difference in mean score related to the demographic variables were only by chance and not

true and the null hypothesis was accepted.

Discussion & Conclusion:-

From the findings, it can be concluded that majority of the nurses were females, in the age group of 21-30 years and were Hindus, most of them were from urban area and acquired their previous information regarding tracheostomy care from Academic Education. Most of the nurses were G.N.M. and were working in general ward. Highest percentage of nurses had less than 5 years experience or reported that they never attended tracheostomy patients in their wards.

Prior to implementation of video assisted teaching module the nurses had poor knowledge whereas, after implementation of video assisted teaching module the nurses had good knowledge with the difference of 35.4% of mean percentage.

Highly significant difference was found between the area wise and overall pre-test and post-test knowledge scores ($P < 0.01$) but no significant association was found between the post-test knowledge scores when compared with the demographic variables of nurses ($P > 0.05$).

Tracheostomy care is a nursing procedure, the importance of which is sometimes overlooked and cleansing of the tracheostomy site should be performed as needed. Tracheostomy care and management is more and more necessary in both the intensive care setting and the general ward. It is therefore ever more important that trained nurses are equipped with the appropriate skills, knowledge and support to meet the unique needs of each patient safely and competently.

Nurses with expertise in tracheostomy care must share their knowledge with newly qualified staff, and ensure that their practice is based on the evidence available. New staff members should have their tracheostomy care practice assessed by senior members of staff that has the necessary skills before being permitted to carry out the procedure independently.

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