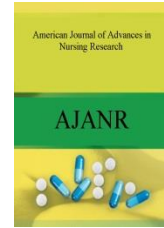




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A QUASI EXPERIMENTAL STUDY TO ASSESS THE EFFECTIVENESS OF PLANNED TEACHING PROGRAMME ON KNOWLEDGE REGARDING TRACHEOSTOMY CARE AMONG STAFF NURSES WORKING IN PRIVATE HOSPITAL JODHPUR

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ABSTRACT

INTRODUCTION: A tracheostomy is a surgically created opening in the trachea. A tracheostomy tube is placed in the incision to secure an airway and to prevent it from closing. Tracheostomy care is generally done every eight hours and involves cleaning around the incision, as well as replacing the inner cannula of the tracheostomy tube. After the site heals, the entire tracheostomy tube is replaced once or twice per week, depending on the physician's order. The goals of tracheostomy care are to maintain the patency of the airway, prevent breakdown of the skin surrounding the site, and prevent infection. Sterile technique should be used during the procedure. **AIM OF THE STUDY:** Assess knowledge regarding tracheostomy care among staff nurses. **MATERIAL AND METHOD:** A Quasi-experimental one group pre-test post-test study was used in order to evaluate effectiveness of planned teaching programme (the Independent variable) on knowledge regarding tracheostomy care (the dependent variable) among staff nurse of selected by purposive sampling technique school of Jodhpur. Each participant was informed about the study and that they could withdraw at any time and a written consent was also obtained. **RESULT:** The findings of the study reveals that in the pre-test, 36.70% in the experimental group and 40% in the control group were having below average knowledge and 46.70% in the experimental group and 26.70% in the control group were having above average knowledge. After implementation of PTP in the post-test in experimental group, none of them was below average knowledge 66.70% samples were above average knowledge, but in control group 43.30% were below average knowledge 26.70% samples were above average knowledge score. There was significant association of knowledge regarding tracheostomy care among staff nurses It is found that the majority of the demographic variables such as Age, Gender, Professional qualification, Working Department, Working Experience, and Any Educational Programme were found significant association with the level of knowledge regarding tracheostomy care among staff nurses except Religion. **CONCLUSION:** It can be concluded that there was a significant improvement on the post-test level of knowledge after implementing PTP. This indicates that PTP was effective in increasing the knowledge of staff nurse.



INTRODUCTION

A tracheostomy is the formation of an opening into the trachea usually between the second and third rings of cartilage. Tracheostomy is indicated to facilitate weaning from mechanical ventilation by decreasing anatomical dead space, prevention / treatment of retained tracheo-bronchial secretions, chronic upper airway obstruction and bypass acute upper airway obstruction.

A tracheostomy is a surgically created opening in the trachea. [1] A tracheostomy tube is placed in the incision to secure an airway and to prevent it from closing. Tracheostomy care is generally done every eight hours and involves cleaning around the incision, as well as replacing the inner cannula of the tracheostomy tube. After the site heals, the entire tracheostomy tube is replaced once or twice per week, depending on the physician's order. The goals of tracheostomy care are to maintain the patency of the airway, prevent breakdown of the skin surrounding the site, and prevent infection. Sterile technique should be used during the procedure.

The nurse has the primary role in tracheostomy care, as he or she is responsible for doing it in the acute care setting. The respiratory therapist may assist the nurse during the procedure and during respiratory assessment. Some patients may be sent home with a tracheostomy. In this case, the nurse and respiratory therapist are both responsible for teaching the patient and the family how to perform site care at home.

The education should always begin from the basic level. Planned teaching helps staff nurses to improve their knowledge on patient care and management of tracheotomies and helps in increasing their competencies in future. [2] A constant exchange of oxygen and carbon dioxide between the living organism and its environment is essential for survival. Respiration is the process which performs this function. Primary respiratory diseases are responsible for a major burden of mortality and morbidity.

The investigator while working as staff nurse had multiple experiences that are related to lack of knowledge regarding tracheostomy among staff nurses. It was also found nurses having limited knowledge in various areas of tracheostomy care. The investigator analyzed various body of research and clinical practice changes and timely research projects on tracheostomy care and decided to conduct a study to assess the effectiveness of planned teaching program on knowledge regarding tracheostomy care in terms of knowledge among of staff nurse. [3]

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OBJECTIVES OF THE STUDY

- To assess the pre-test knowledge regarding tracheostomy care among staff nurses in experimental and control groups.
- To assess the post-test knowledge regarding tracheostomy care among staff nurses in experimental and control groups.
- To compare the pre-test and post-test knowledge level of tracheostomy care among staff nurses in experimental and control groups.
- To find out the association between post-test knowledge score regarding tracheostomy care among staff nurses and social demographic variables in experimental group.

HYPOTHESIS OF THE STUDY

- **H₁:** The post-test knowledge score of staff nurses will be significantly higher than the pre-test knowledge score in experimental group.
- **H₂:** There will be a significant association between post test knowledge score regarding tracheostomy care and selected socio demographic variables among staff nurses in experimental group.

ASSUMPTION

- The staff nurses have limited knowledge regarding tracheostomy care.
- Planned teaching programme is one of the best teaching strategies in implementing the knowledge on tracheostomy care.

DELIMITATION

- The study is limited to a staff nurses.
- The study is limited to a selected private hospital.

RESEARCH METHODOLOGY

RESEARCH APPROACH

A quasi-experimental approach was used in the study to evaluate the effectiveness of planned teaching programme on knowledge regarding tracheostomy care among staff nurse.

RESEARCH DESIGN

A quasi-experimental research design was used to observe the effectiveness of planned Teaching program among staff nurse, regarding tracheostomy care. The non-randomized control group design adopted for the present study is represented in Figure.

RESEARCH VARIABLE

- **Independent variable:** planned teaching programme on tracheostomy care.
- **Dependent variable:** knowledge of staff nurse are the



dependent variables.

- **Demographic variable:** the demographic variables are Age, Gender, Religion, Professional Qualification, Working Department, Working Experience, Any Educational programme.

POPULATION

In this study target population was staff nurse working in private hospital, Jodhpur

SAMPLING SIZE

- In the study, the sample comprised of 60 staff nurse from Medipulse Hospital, Jodhpur fulfilling the sample criteria, than equally divide into 30 sample in experimental group, 30 samples in control group.

SAMPLING TECHNIQUE

- The sampling technique used in this study was Non-probability Purposive sampling technique was used to select the sample because of the limited amount of time and availability of the subjects according to the sampling criteria.

RELIABILITY OF THE TOOL

- The tool was tested for reliability on 12 respondent's i.e. staff nurse working Raj hospital, Jodhpur under pilot study.
- The data collected during Pilot Study was used to establish the reliability. It was found that Spearman-Brown Coefficient reliability estimates for the structured knowledge Questionnaire was good ($r = 0.765$).

The reliability coefficient of structured knowledge questionnaire was 0.765, which showed that the tool was reliable.

Table 1 Depicted that the student participated in the study, age in the experimental group majority (50%) of the samples were 15 years old while in the Control group majority (43%) of the samples were 13 years old. [5] Gender in the experimental group majority (83.30%) of the samples were 25 Male, while in the Control group majority (73.30%) of the samples were 22 Male. Religion, in the experimental group majority (80%) of the samples were 24 Hindu, while in the Control group majority (86.70%) of the samples were 26 Hindu. Professional qualification, in the experimental group majority (50%) of the samples had B.Sc. Nursing, while in the Control group

majority (46.70%) of the samples had B.Sc. Nursing. Working Department in the experimental group majority (50%) of the samples had ICU B.Sc. Nursing, while in the Control group majority (43.30%) of the samples Ward. Working Experience (in Yrs.) in the experimental group majority (50%) of the samples had 6-10yr, while in the Control group majority (43.30%) of the samples 6-10yr.

Table No. 2 shows the level of knowledge regarding tracheostomy care. [6] In the experimental group, during the pre-test majority 46.70% of the samples had above- average knowledge, followed by 36.70% had below average and the remaining 16.70% with average knowledge, whereas in post-test majority 66.70% of the samples had above-average knowledge, followed by 33.30% had average and no one had below average knowledge, While in the control group, during the pre-test majority 40% of the samples in the control group had been below average, followed by 33.30% had average and rest 26.70% had above average knowledge, similarly, in post-test majority 43.30% of the samples had below average knowledge, followed by 30% had average and rest 26.70% had above average knowledge.

Table No. 3 shows the level of knowledge regarding tracheostomy care, during the pre-test or before implementation of PTP, experimental and control groups sample were having the almost same knowledge score about tracheostomy care. [7] The calculated t-test statistics shows that there is no significant difference of between knowledge score in experimental and control groups, whereas in post-test or after implementation of PTP, the knowledge score of the experimental group is higher than the control group samples with the mean difference 7.07. The calculated t-test statistics shows that there is a highly significant difference in knowledge score of experimental and control groups. [8]

Further, we compare the knowledge score before and after implementation of PTP, in experiment group, samples were gained knowledge with the mean difference 5.8. The calculated t-test statistics shows that the post- test knowledge score was significantly higher than the mean pre-test knowledge score of staff nurses, whereas in control group samples were having the almost same knowledge score about tracheostomy care with the mean difference -0.80. The calculated statistics shows that the mean post-test knowledge score was not significantly higher than the mean pre-test knowledge score of staff nurses.[9]

Table 1: Frequency and percentage distribution of staff nurse according to socio demographic variables. (N=60)

Demographicvariables	Group				Chi- square	df	p- Value
	Experimental(N=30)		Control(N=30)				
	n	%	n	%			
Age (in Yrs.)							
21 to 30	10	33.30%	13	43.30%	1.098	2	0.578
31 to 40	15	50.00%	11	36.70%			NS



41 to 50	5	16.70%	6	20.00%			
50 & above	0	0.00%	0	0.00%			
Gender							
Male	25	83.30%	22	73.30%	0.884	1	0.347
Female	5	16.70%	8	26.70%			NS
Religion							
Hindu	24	80.00%	26	86.70%	2.08	2	0.353
Muslim	6	20.00%	3	10.00%			NS
Christian	0	0.00%	1	3.30%			
Other	0	0.00%	0	0.00%			
Professional qualification							
G.N.M	9	30.00%	13	43.30%	1.762	2	0.414
Basic B.Sc. Nursing	15	50.00%	14	46.70%			NS
Post Basic B.Sc. Nursing	6	20.00%	3	10.00%			
M.Sc. Nursing	0	0.00%	0	0.00%			
Working Department							
Ward	7	23.30%	13	43.30%	3.3	2	0.192
ICU	15	50.00%	9	30.00%			NS
Post-operative ward	8	26.70%	8	26.70%			
Working Experience (in Yrs.)							
Below 5	10	33.30%	13	43.30%	1.098	2	0.578
6 to 10	15	50.00%	11	36.70%			NS
11 to 15	5	16.70%	6	20.00%			
Above 15	0	0.00%	0	0.00%			
Any Educational Programme							
Yes	10	33.30%	6	20.00%	1.364	1	0.243
No	20	66.70%	24	80.00%			NS

Table 2: Frequency and percentage distribution of levels of knowledge of samples regarding tracheostomy care during pre and post-test in experimental and control group. N=60

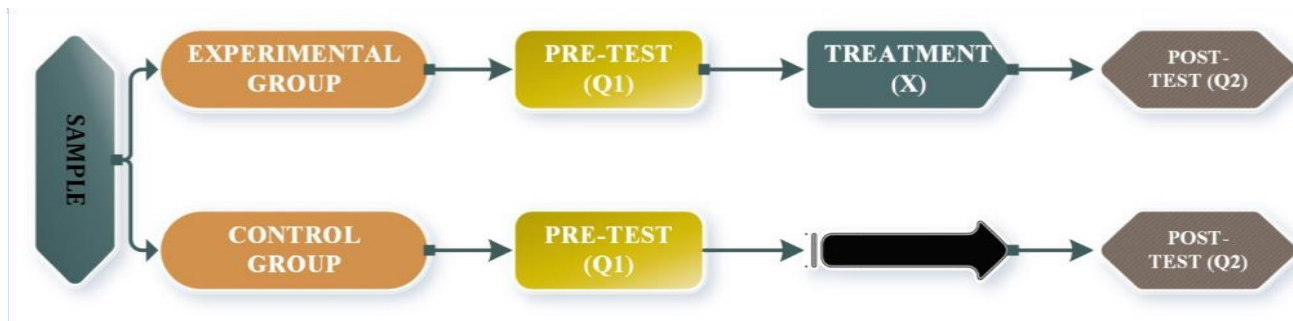
Level of Knowledge	Experimental Group				Control Group			
	Pre-test		Post- test		Pre-test		Post- test	
	n	%	N	%	n	%	n	%
Below Average	11	36.70%	00	0.00%	12	40.00%	13	43.30%
Average	05	16.70%	10	33.30%	10	33.30%	09	30.00%
Above Average	14	46.70%	20	66.70%	08	26.70%	08	26.70%

Table 3: Comparison of knowledge score in experimental and control group N=60

Test	N	Experimental Group (N=30)		Control Group (N=30)		Mean Difference	t-test
		Mean	SD	Mean	SD		
Pre-Test	30	17.8	7.4	17.3	5.9	0.50	t= 0.289; df=58; p = 0.774, NS*
Post-test	30	23.6	4.7	16.5	6.0	7.07	t= 5.093; df=58; p = <0.001, S*
Mean Difference		5.8		-0.80			
t-test		t = 5.723; df=29; p = <0.001, S*		t= -3.026; df=29; p = 0.9975, NS*			

S* -Significant at P \leq 0.001 NS* – Not Significant





DISCUSSION

The finding of the study reveals that in the pre-test, 36.70% in the experimental group and 40% in the control group were having below average knowledge and 46.70% in the experimental group and 26.70% in the control group were having above average knowledge. [10-12] After implementation of PTP in the post-test in experimental group, none of them was above average knowledge 66.70% samples were above average knowledge, but in control group 43.30% were below average knowledge 30% samples were above average knowledge.[13-14] The overall mean knowledge score of the experimental group was 23.06 with the SD of ± 4.7 and in the control group was 17.3 with the SD of ± 5.9 .

CONCLUSION

The finding of the study reveals that level of knowledge regarding tracheostomy care is average with

mean knowledge. It was found that mean post-test knowledge score was higher than mean pre-test knowledge score. The t-test for knowledge score was highly significant suggesting that the PTP was effective in increasing the knowledge of staff nurses regarding tracheostomy care.

The two hypothesis were made in this study. The first one was —The post-test knowledge score of staff nurses will be significantly higher than the pre-test knowledge score in experimental group the finding of the study reveals that after implementation of PTP post-test knowledge score of staff nurse will be significantly higher than the pre-test knowledge score. The second was -There will be a significant association between post-test knowledge score regarding tracheostomy care and selected socio demographic variables among staff nurses in experimental group.

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