

Effectiveness of Structured Teaching Programme on knowledge and practices regarding Endotracheal Suctioning among Staff Nurses working in Intensive Care Units of Selected Hospitals of Jalandhar, Punjab, 2021

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ABSTRACT

A Quasi experimental design was used in the study. Sample size was 100 registered staff nurses with 50 in control group and 50 in experimental group working in intensive care units of selected hospitals of Jalandhar, Punjab. For sample collection, Convenience sampling technique was used. Descriptive and inferential statistics was used for data analysed. The result revealed that in experimental group there was significant difference between pre test and post test mean knowledge score & SD (10.72 ± 3.252) and (18.22 ± 3.893) respectively, whereas in control group there was no significant difference between pre test and post test mean knowledge score & SD (10.34 ± 2.344) and (10.44 ± 2.459) respectively regarding endotracheal suctioning among staff nurses. Furthermore, It was found that in experimental group there was a significant difference between pre test and post test mean practices score & SD (21.66 ± 2.677) and (28.50 ± 3.581) respectively, whereas in control group there was no significant difference between pre test and post test mean practices score & SD (21.30 ± 3.518) and (21.18 ± 3.433) respectively regarding endotracheal suctioning among staff nurses. Thus it was concluded that the structured teaching programme was effective in improving knowledge and practices regarding endotracheal suctioning among staff nurses in experimental group.

Keywords: Knowledge, Practices, Structured Teaching Programme, Endotracheal Suctioning.

INTRODUCTION

Endotracheal intubation involves passing an endotracheal tube through the mouth or nose into the trachea and Endotracheal intubation is a means of providing an airway for patients who cannot maintain an adequate airway on their spontaneous effort (e.g., comatose patients, patients with

upper airway obstruction), for patients needing mechanical ventilation, and for suctioning secretions from the pulmonary tree.¹ When the patient is having respiratory distress that cannot be treated with simpler methods and is the method of choice in emergency care, intubation provides a patent airway.

For maintaining a patent airway in those who are unconscious or unable to maintain their airway for other reasons, Endotracheal intubation is the placement of a tube into the trachea. Compared to the use of pharyngeal airways (oropharyngeal or nasopharyngeal), benefits of an endotracheal airway include: Protection against aspiration and gastric insufflation, more effective ventilation and oxygenation, facilitation of suctioning, delivery of anaesthetic, and other drugs via the endotracheal tube (ETT).²

Endotracheal suctioning (ETS) is the removal of secretions from the tracheobronchial tree through an endotracheal tube with the help of mechanical suction device. It is a component of bronchial hygiene therapy and mechanical ventilation that involves the mechanical aspiration of pulmonary secretions from a patient's artificial airway to prevent its obstruction, the procedure includes patient preparation, the suctioning event, post procedure care.³

An obstructed airway leads to the deprivation of oxygen in the body or blood. Deprived ventilation leads to the death of brain within few minutes. So, the purpose of artificial airway is to provide continuous oxygen to the brain. When the patient gets intubated or critically ill, he/she requires an artificial airway. There are many types of artificial airways are used like endotracheal tube, tracheostomy tube, oropharyngeal tube, nasopharyngeal tube, etc. which can be used for protecting and maintaining the airway, facilitating the artificial ventilation and removal of secretions from the lungs.⁴

Hence, there was a need felt by the researcher to review the existing practices and knowledge of nurses related to ETS practices and thus recommending guidelines related to effective and safe practice. These guidelines and focused practice-based education would further have a positive impact on improving patient's outcomes, reduce healthcare costs, and promote safe patient care.

Statement of Problem

A Quasi Experimental study to Assess the Effectiveness of Structured Teaching Programme on knowledge and practices regarding Endotracheal Suctioning among Staff Nurses working in Intensive Care Units of Selected Hospitals of Jalandhar, Punjab, 2021.

OBJECTIVE

1. To assess the pre test knowledge and practices regarding Endotracheal Suctioning among staff nurses in control group and experimental group.
2. To assess the post test knowledge and practices regarding Endotracheal Suctioning among staff nurses in control group and experimental group.
3. To compare the pre test and post test knowledge and practices regarding Endotracheal Suctioning among staff nurses in control group and experimental group.
4. To find out the association between post test knowledge and practices regarding Endotracheal Suctioning among staff nurses with their selected socio demographic variables.

Hypothesis

- H_0 : There is no significant difference in the mean pre- test and post- test level of knowledge regarding Endotracheal suctioning among staff nurses in experimental group than control group.
- H_1 : There is significant difference in the mean pre- test and post- test level of knowledge regarding Endotracheal suctioning among staff nurses in experimental group than control group.
- H_{02} : There is no significant difference in the mean pre- test and post- test level of practices regarding Endotracheal suctioning among staff nurses in experimental group than control group.
- H_2 : There is significant difference in the mean pre- test and post- test level

of practices regarding Endotracheal suctioning among staff nurses in experimental group than control group.

RESEARCH METHODOLOGY

Research Approach: Quantitative research approach was used for the study.

Research Design: A quasi experimental (Non-randomized control group design) selected for the study.

Research Setting: The study was conducted in the selected hospitals of Jalandhar, Punjab.

- Joshi hospital and Oxford hospital, Jalandhar as experimental group.
- S.G.L. Charitable hospital and Johal multispeciality hospital, Jalandhar as control group.

Population: Population included registered staff nurses working in hospitals of Jalandhar, Punjab.

Sample: It comprised of 100 registered staff nurses working in selected hospitals of Jalandhar, Punjab.

Sampling technique: Staff nurses who were available and willing to participate selected as a sample.

Sample size: Sample comprised 100 registered staff nurse i.e. 50 in control group and 50 in experimental group.

Development of Tool

The tool was developed consisting of following sections:-

Part 1- Selected socio-demographic variables of registered staff nurses.

Part 2- Structured knowledge questionnaire.

Part 3- Structured observational check list.

Part 4- Structured Teaching Programme regarding Endotracheal Suctioning.

Description of Tool

Criterion measures used in this study were as follows.

Assessment of knowledge: There were total 30 items to assess the Knowledge regarding Endotracheal Suctioning. The maximum score was 30 and minimum score was 00.

Assessment of Practices: There were total 20 items to assess the Practices regarding Endotracheal Suctioning. The maximum score was 40 and minimum score was 00.

Method of Data Collection

Convenience sampling technique was used for sample collection. After checking validity and reliability of tool, knowledge was assessed by self structured questionnaire and practices by using observational checklist and structured teaching programme and demonstration was given to experimental group. Descriptive and inferential statistics was used for data analysed.

RESULTS

1. Based on the objective 1, the study revealed that in pre test knowledge of experimental group out of 50 staff nurses majority of 28(56%) staff nurses had poor knowledge score followed by 22(44%) staff nurses had average knowledge score and no one had good knowledge score. In comparison to control group majority of staff nurses 31(50%) staff nurses had poor knowledge score followed by 19(38%) staff nurses had average knowledge score and no one had good knowledge score.

In pre test practices of experimental group, out of 50 staff nurses majority of 36(72%) staff nurses had good practices score followed by 14(28%) staff nurses had average practices score and no one had excellent and poor practices score. In comparison to control group 25(50%) staff nurses had good and average practices score whereas no one had excellent and poor practices score.

2. Based on the objective 2 of the study, it was found the study revealed that in post test knowledge of experimental group out of 50 staff nurses majority of 30(60%)

staff nurses had average knowledge score followed by 20(40%) staff nurses had good knowledge score and no one had poor knowledge score. In comparison to control group majority of staff nurses 28(56%) had poor knowledge score followed by 22(44%) staff nurses had average knowledge score and no one had good knowledge score.

In post-test practices of experimental group out of 50 staff nurses majority of 33(66%) staff nurses had good practices score followed by 17(34%) staff nurses had excellent practices score and no one had average and poor practices score. In comparison to control group majority of staff nurses 25(50%) had average practices score, 24(48%) staff nurses had good practices score, 1(2%) staff nurses had excellent practices score, and 0(00%) had poor practices score.

3. Based on the objective 3, In comparison of pre-test and post-test knowledge of staff nurses of experimental and control group. Result revealed that in experimental group there was significant ('t' test value 15.434) difference between pre test (10.72±3.252) and post test (18.22±3.893) knowledge regarding endotracheal suctioning among staff nurses. Whereas in control group there was no significant ('t' test value 1.300) difference between pre test (10.34±2.344) and post test (10.44±2.459) knowledge regarding endotracheal suctioning among staff nurses. Hence, research hypothesis (H₁) was accepted and null hypothesis (H₀) was rejected. Thus it was concluded that the structured teaching programme was effective in providing knowledge regarding endotracheal suctioning among staff nurses in experimental group.

In comparison of pre-test and post-test practices of staff nurses of experimental and control group. Result revealed that in experimental group there was significant ('t' test value 10.386) difference between pre test (21.66±2.677) and post test (28.50±3.581) practices regarding endotracheal suctioning among staff

nurses. Whereas in control group there was no significant ('t' test value 0.785) difference between pre test (21.30±3.518) and post test (21.18±3.433) practices regarding endotracheal suctioning among staff nurses. Hence, research hypothesis (H₂) was accepted and null hypothesis (H₀₂) was rejected. Thus it was concluded that the structured teaching programme was effective to improve practices regarding endotracheal suctioning among staff nurses in experimental group.

4. Based on the objective 4, the findings of the study concluded that association between the post test level of knowledge and practices among staff nurses with their selected socio-demographic variables group i.e. Age, gender, professional qualification, total experience (in ICU), in service attended education programme in experimental group and control group. There was no significant association between knowledge and practices score regarding Endotracheal Suctioning among staff nurses with their selected demographic variables. Thus it was interpreted that level of knowledge and practices were not dependent on demographic variables.

CONCLUSION

1. Pre test taken with the help of structured questionnaire and observational check list regarding endotracheal suctioning in experimental group and control group.
2. Finding showed staff nurses had inadequate knowledge and practices regarding endotracheal suctioning.
3. Structured teaching programme was provided to the staff nurses regarding endotracheal suctioning in experimental group.
4. Post test taken with the help of structured questionnaire and observational check list regarding endotracheal suctioning in experimental group and control group. Results showed that Structured teaching

programme was effective to improve the level of knowledge and practices regarding endotracheal suctioning among staff nurses in experimental group.

5. There was no significant relationship between demographic variables of staff nurses with their level of knowledge and practices related to endotracheal suctioning.

IMPLICATIONS

Nursing Implication

The findings of the study have implications for nursing service, nursing education, nursing administration, and nursing research. The findings of study have several implications which are discussed as follows:

Nursing Practices

1. Nursing personnel can be encouraged to attend workshops/conferences related to endotracheal suctioning.
2. Nursing personnel should take an active part in endotracheal suctioning.
3. Nursing personnel must appraise on the basis of practices related to endotracheal suctioning.

Nursing Education

1. Nursing curriculum needs to be updated to identify the aspects of nursing care that are lacking to provide supportive education on endotracheal suctioning.
2. The findings will help the nursing students to understand the needs of those equipped with adequate knowledge.
3. Nursing teachers can be conducted a planned teaching programme on endotracheal suctioning in nursing institutes.
4. Refresher courses or education programme can be conducted regularly in nursing institutes for student nurses and staffs.

Nursing Administration

1. Nurse as an administrator can plan for in-service, continuing education programme on ET intubation for fresher nurses.

2. Nurse administrator should arrange regular training programmes on endotracheal suctioning.
3. Nurse administrator should organize in service education programmes regarding endotracheal suctioning.

Nursing Research

1. The findings can be utilized for conducting research on effectiveness of structured teaching programme on various aspects of nursing.
2. Disseminate the findings through conferences, seminars, and publications in professional, national, and international journals.
3. The findings of the study can help to expand the scientific body of professional knowledge upon which further research can be conducted.
4. The generalization of study result can be made by further replication of study.

Conflict Interest: None

Source of Fund: Self

Ethical Clearance

1. Written permission was taken from the Principal of S.G.L. Nursing College, Semi, Jalandhar, Punjab.
2. Ethical clearance was obtained from the Ethical clearance committee of S.G.L. Nursing College, Semi, Jalandhar, Punjab.
3. Written permission was taken from Medical Superintendent of Oxford, Joshi, Johal multispeciality and S.G.L. Charitable hospitals, Jalandhar, Punjab.
4. An informed written consent was taken from each study sample.
5. Confidentiality and anonymity of study samples were maintained throughout the study.

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