

A Study to Assess the Level of Knowledge Regarding Airway Management Modalities among Nursing Student at Selected Nursing, College Kanpur

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ABSTRACT

INTRODUCTION- Airway management includes a set of maneuvers and medical procedures performed to prevent and relieve airway obstruction. Due to obstruction in the airway the life of the individual is in danger so use of airway management modalities will help to save the individual's life. These modalities ensures an open pathway which provide breath to the lungs through the atmospheric air and mechanical support to secure life. The study was conducted to assess the level of knowledge on airway management among Nursing student. The main objectives of study were to assess the knowledge on airway management modalities and to associate the level of knowledge with selected demographic variables. A Quantitative research approach with Descriptive research design was used to evaluate the knowledge regarding airway management modalities. A sample of 60 nursing students were selected by convenient sampling technique. structured questionnaire was used to obtain data from the sample. Data analysis was done by using descriptive and inferential statistics on the basis of objective of the study

RESULT :- The result of the study shows that out of 60 samples 13(21.66%) having good knowledge 45(75.3%) having average knowledge and 2(3.33%) having poor knowledge regarding airway management modalities. with regard to mean & standard deviation of knowledge shows 17.3 and 3.92 respectively.

CONCLUSION :- The study concludes that, the knowledge level of students regarding airway management modalities associated airway management is average, the study suggest that proper teaching and adequate training on airway management will be helpful for the students to gain knowledge.

KEYWORDS: ET- Tube- Endotracheal tube, OPA-Oropharyngeal airway, NPA- Nasopharyngeal airway

INTRODUCTION

The term 'airway' in its day-to-day usage refers to the upper airway which may be defined as the extrapulmonary air passage, consisting of the nasal and oral cavities, pharynx, larynx, trachea and large bronchi. Difficult airway' is one in which there is a problem in establishing or maintaining gas exchange via a mask, an artificial airway or both. Recognizing before anaesthesia, the potential for a difficult airway (DA) in designated 'Difficult airway clinics' allows

time for optimal preparation, proper selection of equipment and technique and participation of personnel experienced in DA management.

Successful airway management requires a range of knowledge and skill sets—specifically, the ability to predict difficulty with airway management, to formulate an airway management plan, and to have the skills necessary to execute that plan using the wide array of available airway devices. ⁽¹⁾

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Expertise in airway management is essential in every medical speciality. Maintaining a patent airway is essential for adequate oxygenation and ventilation and failure to do so, even for a brief period of time, can be life threatening. Respiratory events are the most common anaesthetic related injuries, following dental damage. The three main causes of respiratory related injuries are inadequate ventilation, oesophageal intubation and difficult tracheal intubation. Difficult tracheal intubation accounts for 17% of the respiratory related injuries and results in significant morbidity and mortality. In fact up to 28% of all anaesthesia related deaths are secondary to the inability to mask ventilate or intubate.⁽²⁾

It is an alternative method of opening the airway is the “Jaw Thrust maneuvers” (using both hands to push the angle of mandible forward bilaterally). Studies have been shown that both techniques cause less movement of the cervical spine than head tilt and have been demonstrated to be superior method for opening of obstructed airway.⁽³⁾

While maintaining the airway and oxygenation of trauma patient care must be taken to avoid movement of the cervical spine, which runs the risk of producing a spinal cord injury.⁽⁴⁾

Tracheostomy care and tracheal suctioning are high-risk procedures. Tracheostomy patients aren't seen only in intensive care units. As patients with more complex conditions are admitted to hospitals, an increasing number are being housed on general nursing units.

An oropharyngeal airway (also known as an oral airway, OPA or Guedel pattern airway) is a medical device called an airway adjunct used to maintain or open a patient's airway. It does this by preventing the tongue from covering the epiglottis, which could prevent the person from breathing. When a person becomes unconscious, the muscles in their jaw relax and allow the tongue to obstruct the airway.⁽⁵⁾

Prior to intubation, the patient is typically sedated or not conscious due to illness or injury, which allows the mouth and airway to relax. The patient is typically flat on their back and the person inserting the tube is standing at the head of the bed, looking at the patient's feet. The patient's mouth is gently opened and using a lighted instrument to keep the tongue out of the way and to light the throat, the tube is gently guided into the throat and advanced into the airway. There is a small balloon around the tube that is inflated to hold the tube in place and to keep air from escaping. Once this balloon is inflated, the tube is securely positioned in the airway and it is tied or taped in place at the mouth. Successful placement is

checked first by listening to the lungs with a stethoscope and often verified with a chest X-ray. In the field or the operating room, a device that measures carbon dioxide—which would only be present if the tube was in the lungs, rather than in the oesophagus is used to confirm that it was placed correctly.⁽⁶⁾

OBJECTIVE

- To assess the level of knowledge regarding airway management modalities among nursing student.
- To associate the level of knowledge with selected demographical variable.

HYPOTHESIS:

- **H0₁:** - There is a significant level of knowledge regarding airway modalities among Nursing students.

METHODS & MATERIALS: -

Quantitative research approach was the best approach to assess level of knowledge regarding airway management modalities among sample. A descriptive research design was adopted in this study. The study was under taken in Rama Faculty of Nursing. Target population for study includes Nursing student. The sample for the study was Nursing students. The sample size for the study were 60 student selected by convenient sampling technique.

METHODS OF DATA COLLECTION:-

The data collection was done in two week at Rama Faculty of Nursing. Data was collected from 60 samples that fulfilled inclusion criteria. The written consent of the participants was obtained before data collection and assurance was given to study participants the confidentiality of data will be collected from samples. The data was analysed on the basis of objectives of the study by using descriptive and inferential statistics.

- Master data sheet was organized.
- Demographic variable variables were analyzed in terms of frequencies and percentages.
- Knowledge of Nursing students was presented in form of mean, median and standard deviation.
- A planned questionnaire was ready in such a way it consist of two parts.

Tools-

DEMOGRAPHIC DATA:-

It contains five items for obtaining information regarding, Age, Gender, Religion, Education, Previous knowledge related airway management modalities.

KNOWLEDGE LEVEL:-

The Structured Multiple choice questionnaire regarding airway management modalities was need it

consists of 30 multiple choice question. Each question has four response with one correct answer, score 1 for each correct response in a single question and score 0 was given for wrong answers.

DATA ANALYSIS AND INTERPRETATION:-

Section-1 Level of knowledge regarding airway management modalities among nursing students.

Section-2

Association between level of knowledge with the selected demographic variables.

Section- 1

Table:-1 level of knowledge regarding airway management Modalities among B.Sc. Nursing 4th year students.

Knowledge	Frequency	%
Poor	2	3.33%
Average	45	75.3%
Good	13	21.66%

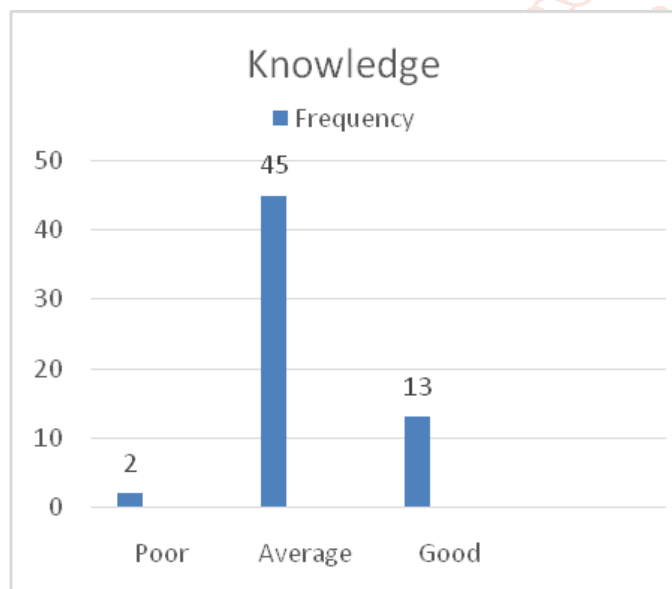


Fig:-1 Shows of knowledge regarding airway management modalities among nursing student.

(Table :-1 fig:-1) shows that out of 60 nursing student 13(21.66%) are having Good knowledge 45(75.3%) are having Average knowledge 2(3.33%) are having Poor knowledge .regarding airway management modalities.

Table -2 Mean and standard Deviation of knowledge level regarding airway management modalities.

nursing student	Mean	SD
Knowledge	17.3	3.92

The above table is explains that, the knowledge levels of student mean in 17.3 and SD- of knowledge level score having 3.92 it show the stated hypothesis is accepted.

Section:-2

The Association between level of knowledge with the selected demographic show no significance

MAJOR FINDING OF STUDY:-

- According to nursing student age, as age 36 (60%) were 17-20 year of age, 19 (31.66%) were 21-24 year age 5 (8.33%) were 25 to above year of age.
- Nursing student according to gender 2 (3%) were males and 58(96%) were females
- Majority of nursing student to previous knowledge on airway management modalities 60(100%) yes and 0 (0%) are No.

DISCUSSION:-

The present study was designed to assess the among nursing student on knowledge regarding airway management modalities at selected Rama Faculty of Nursing, Kanpur. The sample was collected by the convenient sampling technique., The structured questionnaire was used to collect data and analysis was computed by using descriptive and inferential statistics the finding were discussed in relation to the objective and hypothesis.

CONCLUSION:-

This study concludes that, most of the Nursing students having average level of knowledge regarding airway management and having no significance between level of knowledge with selected demographic variables.

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