RESEARCH ARTICLE

A STUDY TO ASSESS THE LEVEL OF KNOWLEDGE REGARDING PREVENTION OF VENTILATOR ASSOCIATED PNEUMONIA AMONG NURSING STUDENTS IN SELECTED NURSING COLLEGES, KANPUR.

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ABSTRACT

Ventilator associated pneumonia is a type of hospital acquired infection. It occurs when the patient undergone the ventilator. It develops 48 hrs or longer after mechanical ventilation, by means of an endotracheal tube or tracheostomy. The study was conducted to assess the level of knowledge on prevention of ventilator associated pneumonia among nursing students. The main objectives of study were to assess the knowledge on prevention of ventilator associated pneumonia and to associate the level of knowledge with selected demographic variables. A quantitative research approach with Descriptive research design was used for this study. The target population for the study was GNM students who are studying in selected Nursing Colleges, Kanpur. Sample size was 50 students, were selected by convenience sampling technique and structured questionnaire was used for this study to collect the data. Data analysis was done by using descriptive and inferential statistics on the basis of objectives of the study. The result shows that 20 (40%) having Good knowledge level, 26 (52%) having Average knowledge level and 4 (8%) having Poor knowledge level of students regarding prevention of ventilator associated pneumonia. The maximum mean knowledge score was 12.06, and the Standard Deviation was 5.15. With respect to association between the level of knowledge with the selected demographic variables shows no significance. The study concludes that, the knowledge level of students regarding prevention on ventilator associated pneumonia is average, the study suggest that proper teaching and adequate training regarding prevention on ventilator associated pneumonia will be helpful for the students to gain knowledge.

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INTRODUCTION

An infection occurs when another organism enters in the body and causes disease. The organisms that cause infections are very diverse and can include things like viruses, bacteria, fungi, and parasites[1]. A nosocomial infection (NI) is contracted because of an infection or toxin that exists in a certain location, such as a hospital. People now use nosocomial infections interchangeably with the terms health-care associated infections (HAIs) and hospital-acquired infections. For a HAI, the infection must not be present before someone has been under medical care[2]. Ventilator-Associated Pneumonia (VAP) is one of the most common healthcare-related infections observed in patients provided with mechanical ventilation (MV) support in intensive care units (ICUs)[3]. Ventilator-associated pneumonia (VAP) is pneumonia that develops 48 hours or longer after mechanical ventilation is given by means of an endotracheal tube or tracheostomy[4].

Ventilator-associated pneumonia (VAP) results from the invasion of the lower respiratory tract and lung parenchyma by microorganisms. Intubation compromises the integrity of the oropharynx and trachea and allows oral and gastric secretions to enter the lower airways[4]. Hospital-acquired pneumonia (HAP) is pneumonia that develops 48 hours or longer after admission to a hospital. HAP is the second most common nosocomial infection[6]. Implantation of evidence-based guidelines (EBGs) in clinical practice is an effective measure for prevention of prevalent disease. Development and implementation of EBGs is an important and complex process and need to abundant time and cost. Although the countries and healthcare systems are spending billions of dollars annually for translation of EBGs into clinical practice, these costly efforts have not yielded brilliant results [7]. Prevention of ventilator associated pneumonia (VAP) by the way of implementation of EBGs, is one of the most common examples of these hard labors.

The leading rationale of importance of controlling VAP is because of its high prevalence, increased morbidity and mortality, prolonged ICU and hospital stay, and excessive costs. Although the abundant time and energy which spend for prevention of VAP, this nosocomial infection is still remains a challenging problem in intensive care units (ICUs), especially for pediatric populations [8].

STATEMENT OF THE PROBLEM

A study to assess the level of knowledge regarding prevention of ventilator associated pneumonia among Nursing students in Selected Nursing colleges at Kanpur.

OBJECTIVES OF THE STUDY

) To assess the level of knowledge regarding prevention of ventilator associated pneumonia among Nursing students.

) To associate the level of knowledge with selected demographic variable

HYPOTHESIS

) H1:- There is a significant level of knowledge regarding prevention of ventilator associated pneumonia among Nursing students.

METHODS AND MATERIALS

Quantitative research approach was considered the best approach to assess level of knowledge on prevention of ventilator associated pneumonia among Nursing students. A Descriptive research design was adopted for the study. The study was undertaken in Rama College of Nursing, due to geographical feasibility and availability of samples. The sample for the study was G.N.M. 3rd year students who are willing to participate. The sample size for the study was 50 students selected by convenience sampling technique was used to select the sample.

Methods of data collection: The data collection was done for 2 weeks in Rama College of Nursing Kanpur. Data was collected from 50 samples that who 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 maintained. The data was analyzed on the basis of objectives of the study by using descriptive and inferential statistics.

) Master data sheet was organized.
) Demographic 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 consists of two parts.

Tools

Demographic Data: It contains seven items for obtaining information regarding Age, Locality, Previous knowledge and Source of knowledge related prevention of ventilator associated pneumonia.

Knowledge: The structured multiple choice questionnaire regarding prevention of ventilator associated pneumonia was need. It consist of 20 multiple choice questions. 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

The data was analyzed under following section:-

Section-A: Level of the knowledge regarding prevention of ventilator associated pneumonia among Nursing students.

Section-B: Association between levels of knowledge with selected demographic variables.

Table 1. Level of knowledge regarding prevention of ventilator associated pneumonia among Nursing

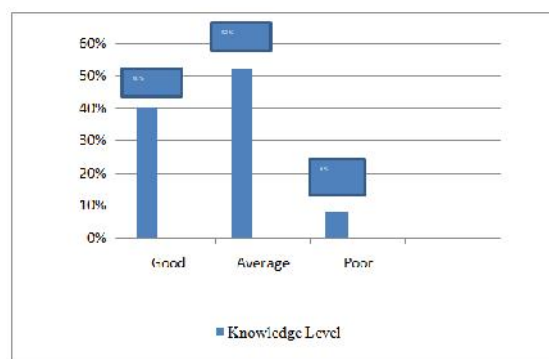| Knowledge level		
Knowledge	Frequency	%
Good	20	40%
Average	26	52%
Poor	4	8%

Fig. 1. The level of knowledge regarding prevention of ventilator associated pneumonia among Nursing students

Table 2. Mean and Standard deviation of knowledge level regarding prevention of ventilator associated pneumonia

Knowledge levels of Nursing students	Mean	SD
Knowledge level	12.06	5.15

Section-A: (Table-1, Fig-1) shows that out of 50 G.N.M 3rd year students 20 (40%) are having to Good knowledge, 26 (52%) are having to Average knowledge 4 (8%) are having Poor knowledge regarding prevention of ventilator associated pneumonia. The Mean was 12.06 and Standard deviation was 5.15 of knowledge level, hence it shows the stated hypothesis is accepted

Section: B: The association between the levels of knowledge with the selected demographic variables shows no significance.

Major findings of the study

) With the respect to age as, 18 (36%) were 17-20 years of age, 29 (58%) were 21-24 year age, 3 (6%) were 25 to above year of age.

) According to Locality 19 (38%) were Hostler and 31 (62%) were Day scholar.

⟩ With regard the Nursing students as Previous knowledge about ventilator associated pneumonia as 48 (100%) were yes and 2 (4%) are No.

⟩ With respect Nursing students as Source of knowledge related to ventilator associated pneumonia 46 (92%) were Classroom, 1 (2%) were Workshop, 1 (2%) were Seminar and none were 2 (4%).

Around 26 (52%) of Nursing students having Average level of knowledge. There is no significance between levels of knowledge with selected demographic variables

DISCUSSION

The present study was designed to assess the effectiveness of self instructional module among GNM 3rd year students on knowledge regarding prevention of ventilator associated pneumonia at selected Rama College of Nursing, Kanpur. The sample was selected from Rama College of Nursing, Kanpur. A self structured questionnaire was used to collect the data and analysis was computed by using descriptive and inferential statistics the finding were discussed in relation to the objectives and hypothesis.

CONCLUSION

This study concludes that, most of the GNM 3rd year students having average level of knowledge regarding prevention of ventilator associated pneumonia and No significance between level of knowledge with selected demographic variables.

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