

A Study to Assess the Knowledge of Nursing Staff Towards Infection Control Measures in Tertiary Care Hospital of Selected Area

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Abstract: Background: Hospital acquired infection (HAI) is a major health problem today. In spite of progress in medical cares, hospital infections among patients are not uncommon. Although it is difficult to assess the exact incidence of hospital acquired infections in our hospitals, ample evidences exist to indicate the related problems. Most common it is observed that the patient comes to the hospital for treatment of particular ailment but has acquires other infection sometimes leading to septicemia, multi system organ failure and death. With the advancement and increase in knowledge of microbiology, the behavior of different microorganism is well understood and there has been invention of various instruments, equipments and chemicals for making such pathogenic organisms ineffective. While using such aids, it is important that proper protocol is maintained for the effective results. At the same time, one must have proper knowledge of handling and maintaining them in proper condition. "A study to assess the knowledge of nursing staff towards infection control measures in tertiary Care hospital of selected area". For the study, the setting of study was ACE Heart and Vascular Institute, Shivalik Hospital Premises, Mohali. ACE Heart and Vascular Institute is Tertiary care health care facility located in Mohali, the heart of Punjab, in North India. Objectives: The study was with an objective to assess knowledge of nursing staff regarding infection control measures and to bring awareness regarding infection control measures. Methodology: A descriptive approach was considered an appropriate for the present study the sample size consists of 50 nursing Staffs non probability convenient sampling technique is used for selection of sample. Results: Study findings showed that 14% staff have good knowledge 62% having average knowledge and 24% having poor knowledge. The finding of the study was concluded that maximum nursing staff belongs to age group of 25 to 30 years, Majority of staff are female, Maximum number of staff had done B.Sc. Nursing, Most of staff are unmarried Maximum number of staff had one to five years of total experience also present unit experience. More number of Staffs was working in the critical area and maximum working in the same area from starting. Conclusion: The infection control knowledge among the nurses is average knowledge; however there is a wide scope of improvement with regular educational programs trainings or courses.

Keywords: Infection Control, Nursing staff, Knowledge

1. Introduction

"Whoever refuses to remember the inhumanity is prone to new risks of infection.

Richard Won Weizsaecker

Astonishing scientific and technological advancements are being made in 21st century; subsequently prevalence and incidence of hospital acquired infections are also increased due to lack of knowledge and poor practice of healthcare workers. In developed countries, about five to 10 percent of patients admitted 2 acute care hospitals acquire an infection which was not present or incubating on admission. Hospital acquired infections can be arrested or prevented only when the nursing Staffs have adequate knowledge regarding infection control protocols.¹ Infection is a painful fact of life and the chief Cause of death. Even though the major infectious diseases are controlled still infections are the main cause for disability and mortality.²

The common sites of Nosocomial infection in clients are the urinary tract, low respiratory tract, surgical wounds and blood stream.³ According to the statistics from **World Health Organization (WHO)**, at any time 1,40,000 people suffer from complications related to hospital acquired infection (HAI) in developing countries, the rate of preventable hospital acquired infection due to medical care is estimated to be about 40% or above.⁴ One of the main problem and challenge in intensive care unit (ICU) are hospital acquired

infections as patient admitted to ICU more than other patient are at risk for nosocomial infection due to some risk factors such as multiple trauma, low levels of awareness and lack of preventive mechanisms.^{5,6}

HAI is a major health problem in all societies. According to the WHO 7.1 million cases of hai occur every year. One out of every 20 people suffer from hospital infection This leads to 99,000 cases of death every year and imposes an estimated cost of 32 million to society. (Cardo et al., 2010). It has been estimated that the risk of health care associated infections is 2-20 times higher in developing countries compared to developed countries and 5 to 10% of patient admitted to hospital in developed countries acquire hospital infections (WHO, 2008).

A descriptive study was conducted to evaluate Nurses knowledge regarding nosocomial infections in Neurosurgery unit in Istanbul University, Turkey Questionnaire used as a tool for collecting the data Total sample size was 200 ICU staff nurses. It was found that 60% of nurses are having inadequate knowledge regarding the nosocomial infections in neurosurgery unit. Study suggest that infection control measures are to be viewed as a priority and have to be integrated fully into the continuous process of improvement of quality of care.⁷

Many studies proved that nursing Staffs are not having adequate knowledge regarding infection control protocols so

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this current study is taken for assessing the knowledge of nursing staff and helping them in improving their knowledge regarding infection control protocols in order to reduce further incidence of hospital acquired infection.

Research problem statement: “A Study to Assess the Knowledge of Nursing Staff Towards Infection Control Measures in Tertiary Care Hospital of Selected Area.”

Objectives of the study: To assess the knowledge of nursing staff regarding infection control measures in clinical practices.

2. Methodology

In this study descriptive study design Was selected. Non probability Convenient sampling technique was used to select sample of 50 nursing staff. And structured questionnaire used to collect data. Tool consists of 2 sections A. had questions related to demographical variables that include age, sex, educational status, Marital status, year of experience, Area of work, continuity of work, attending training or courses. While section B consist of 35 questions to assess the level of knowledge of staff nurses related to infection control measures. The setting of study was ACE Heart and Vascular Institute Shivalik Hospital premises, Mohali. Variables of the study; Structured questionnaire is independent variable and knowledge level of nursing staff regarding nosocomial infection control measures is dependent variable. Target population consists of all the nursing staff working ACE Heart and Vascular Institute Shivalik Hospital. Pilot study was conducted with 10 nurses and pilot subjects were asked to comment on the applicability and appropriateness. Content validity of the questionnaire ensured by medical and nursing experts. All the questions were answered no clarity of questions was required. It was determined that it would take 30 minutes to complete the questionnaire.

Ethical approval was sought from the concerned authorities of ACE Heart and Vascular Institute. An informed consent was obtained from participants nursing Staffs before administering the tool confidentiality and privacy of the collected data was maintained. The data was collected from nursing staff and was analyzed by descriptive statistics and present Presented in form of tables, bar and pie diagram.

3. Result

The demographic analysis revealed that 50% of nurses were aged between 26-30 years, 92% participants were female, 44% participants had B.Sc. nursing qualification, 62% were unmarried, 52% were having 1 to 5 year of work experience & total experience in present unit, 72% worked in critical care area, 54% participant working in the same area from starting, 84% participant were attending training or courses. **Knowledge assessment showed** 14% participants were having good knowledge, 62% having average knowledge, 24 having poor knowledge. The mean knowledge of staff is 23.8% and standard deviation is 5.27.

Table 1: Distribution of subject’s knowledge with mean knowledge and standard deviation.

Knowledge level	No.	%age	Mean Knowledge	Standard Deviation
Good Knowledge	7	14	23.8	5.27
Average Knowledge	31	62		
Poor Knowledge	12	24		

4. Discussion

In the present study an attempt is made to understand the knowledge and awareness regarding infection control amongst the 50 staff nurses of selected hospital. A closed ended questionnaire of 35 subject related questions was prepared and the staff nurses were asked to answer the questions. It was found that 62% of participants were having average knowledge who have 21 to 30 correct answers out of 35 questions, 24% had poor knowledge who gave less than 20 correct answers and only 14 per cent have good knowledge and gave more than 30 correct answers out of 35 questions being asked.

5. Conclusion

The study demonstrates that nursing staff possess predominantly moderate knowledge regarding infection control practices, indicating persistent educational gaps. Strengthening structured training programs, institutional infection prevention policies, and continuous competency assessment is essential to reduce hospital acquired infection risks and improve patient safety outcomes.

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