INTERNATIONAL JOURNAL OF NOVEL RESEARCH AND DEVELOPMENT (IJNRD)
© 2026 IJNRD | Volume 11, Issue 8, August 2026 | ISSN: 2456-4184 | IJNRD.ORG

A DESCRIPTIVE STUDY TO ASSESS THE LEVEL OF KNOWLEDGE ON NOSOCOMIAL INFECTION AMONG STAFF NURSES AT SREE MOOKAMBIKA MEDICAL COLLEGE HOSPITAL, KULASEKHARAM, KANYAKUMARI DISTRICT

[1]Abisha. J, [2]Rennya. R, [3]Jisha D.U, [4]Dr. Ajitha Retnam. C,

[1]2nd Year MSc Nursing, [2]2nd Year MSc Nursing, [3]2nd Year MSc Nursing, [4]Principal,
Associate Professor, Sree Mookambika College of Nursing, Kanya Kumari District-629161
[1]Medical Surgical Nursing
[1]Sree Mookambika College of Nursing, Kanyakumari District, Tamil Nadu, India-629161

Abstract: Nosocomial infection is a hospital-acquired infection that develops in patients after admission to a healthcare facility. It is a major health problem because it increases illness, death, hospital stay, and treatment cost. Staff nurses play an important role in preventing these infections through proper hand hygiene, aseptic techniques, use of personal protective equipment, and infection control practices. Therefore, this study was conducted to assess the level of knowledge regarding nosocomial infection among staff nurses and to find the association between knowledge and selected demographic variables such as age, professional education, and working area. A quantitative research approach with a non-experimental descriptive design was used for the study. The study was conducted at Sree Mookambika Medical College Hospital, Kulasekharam. A total of 30 staff nurses were selected by convenience sampling. Data were collected using a demographic questionnaire and a structured knowledge questionnaire. The data were analyzed using descriptive and inferential statistics. The findings showed that 52% of the staff nurses had above-average knowledge, 24% had average knowledge, and 24% had below-average knowledge regarding nosocomial infection. The study also found that there was no significant association between the level of knowledge and the selected demographic variables.

Keywords: Nosocomial infection, Staff nurses, Knowledge, Infection control, Hospital-acquired infection.

INTRODUCTION:

The term hospital environment includes hospital buildings and healthcare settings with all indoor components that differentiate them: occupying people (sick people, visitors and hospital staff), indoor air, surfaces, medical equipment, drugs, medical devices, food and wastes. All these components may potentially support survival and growth of biological agents. How microbial communities persist and change in indoor environments is of great concern to public health. In fact, recent studies demonstrated that when humans occupy a space, human being there alters the microbiota of that space. Hospital buildings may be considered as dynamic environments affected by several factors that actively contribute to define the infective risk for patients. Aspects that have to be considered are represented by the number of occupants, their effective state of health, hygienic habits and activity occurring at any time in the hospital. Microclimatic conditions and accidental events can support microbial and fungal growth causing harmful indoor conditions. Outdoor microbial load and seasonal climatic characteristics also affect the microbiological quality of the hospital indoor air. The commonest of all nosocomial infection are urinary tract infection, surgical wound infection, respiratory tract infection and blood stream infections. The main pathogens Implicated are E. coli, Pseudomonas, Staphylococus aureus and Enterococcus. New technological advancement and latest. Surgical and medical diagnostic methods and treatment procedures have increased the members of invasive technique leading to higher changes of hospital acquired infection.

The terms hospital infection, hospital acquired infection or nosocomial infection are applied to infection developing in hospitalized patients, not present or in incubation at the time of their admission. Such infections may become evident during their stay in hospital (or) sometimes, only after their discharge. Hospital infection are typically exogenous, the such being any part of the hospital ecosystem including people, objects, food, water and air in the hospital such infection may be iatrogenic in that they may be induced by some diagnostic or therapeutic intervention in the hospital. They may be opportunities is that microorganism of law virulence may cause discase in hospitalized patients. Staff nurses play a vital role in preventing and controlling nosocomial infections because they are in continuous contact with patients and healthcare environments. Adequate knowledge regarding infection prevention practices such as hand hygiene, use of personal protective equipment, biomedical waste management, and aseptic techniques is essential for ensuring patient safety and reducing infection transmission. Assessment of knowledge among staff nurses

regarding nosocomial infection is important to identify gaps in understanding and to improve infection control practices through education and training programs. Enhancing nurses' knowledge can significantly contribute to reducing hospital-acquired infections and improving the quality of patient care.

METHODOLOGY:

Research approach: In this study is quantitative research approach was adopted.

RESEARCH DESIGN:

In this study, Non-experimental descriptive research design was adopted.

SETTING OF THE STUDY:

The setting was chosen on the basis of availability of samples and the cooperation extended by the management and the health team. This study was conducted in Sree Mookambika medical College Hospital, Kulasekharam, it is 950 bedded NABH affiliated hospital. Convenient sampling technique was used for the selection of the samples. The total sample of the study is 30 staff nurses. Level of knowledge was assessed using knowledge assessment questionnaire that was prepared by the researcher. The data were analysed and interpreted in terms of the objectives set for the study. Descriptive and inferential statistics was used for analysis and interpretation of data.

SAMPLE SIZE:

Sample size consists of 30 staff nurses.

SAMPLING TECHNIQUE:

In this study, the sampling technique as purposive sampling.

CRITERIA FOR SAMPLE SELECTION:

Sampling criteria involves selecting cases that meet some pre-determined criteria of importance. The criteria for sample selection are mainly depicted under two heading which includes the inclusion and exclusion criteria.

Inclusion Criteria:

- Staff Nurses who are working in Sree Mookambika Institute of Medical Science, Kulasekharam.
- Staff Nurses who are present on the time of data collection.
- Staff Nurses who are willing to participate in this study.

Exclusion Criteria:

- Staff Nurses those who are absent at the day of data collection.
- Staff Nurses who are not willing to participate in this study.

DESCRIPTION OF TOOL:

The tool consists of two parts.

Section A: This section consists of demographic variable such as age, professional education and working area.

Section B: This section consists of 20 structured Questionnaire to assess the level of knowledge regarding nosocomial infection. In this section each correct answer carries '1' mark and wrong answer '0' mark was given.

Score interpretation:

- Below average: 0-40 mark
- Average: 41-70 mark
- Above average: 71-100 mark

DATA COLLECTION PROCEDURE:

After obtaining the permission from the authorities of Sree Mookambika Institute of Medical Sciences, the study was conducted. The purpose of the study was explained to the subjects by a purposive sampling technique. The knowledge was assessed by the structured knowledge assessment questionnaire.

SECTION-A

Table 1: Frequency and percentage distribution of study subject according to their age.

Demographic variables	Frequency	Percentage (%)
Age		
21-30 years	22	73.3%
31-40 years	5	16.7%
Above 40 years	3	10%

The above table shows that 73.3% of subjects belongs to the age group of 21-30 years. 16.7% belongs to the age group 31-40 years and 10% belongs to above 40 years.

SECTION-B

Table-II: Frequency and percentage distribution of study subject according to their education

Demographic variables	Frequency	Percentage (%)
Education		
ANM	5	16.7%
GNM	12	40%
BSC(N)	13	43.3%

The above table shows that 16.7% subjects belong to the ANM, 40% of subjects to the GNM and 43.3% belongs to BSc(N).

SECTION-C

Table – III: Frequency and percentage distribution of study according to the working area.

Demographic variables	Frequency	Percentage
Working Area		
Ward	10	33.3%
OT	7	23.3%
ICU	8	26.7%
Labour Room	5	16.7%

The above table shows that 33.3% of subject have the working in ward, 23.3% subject have the working in OT, 26.7% subject have the working in ICU, 16.7% subject have the working in labour room.

SECTION-D

Table – IV: Distribution of subject according to their level of knowledge.

Demographic variables	Frequency	Percentage
Above average	16	Above 52%
Average	7	24%
Below average	7	Below24%

The above table shows that 24% subject has average knowledge, 24% subject has below average knowledge and 52% has above average knowledge.

SECTION-E

Table – V: Association between one level of knowledge and their selected demographic variables.

Sl. No	Demographic variables	Knowledge			X^2	Table value
		Above average	Average	Below average		
1	**AGE**					
	21-30 yrs	6	2	2		
	31-40yrs	2	1	2	1.697	2.78
	Above 40 yrs	5	3	2		
2	**EDUCATION**					
	ANM	4	3	3		
	GNM	4	3	1	0.599	2.78
	BSC(N)	2	2	3		
3	**WORKING AREA**					
	Ward	3	2	1		
	OT	3	1	2		
	ICU	2	3	1	0.67	2.45

	Labour Room	2	2	3		

In age x^2 1.697 which in less than table value (2.78) so there no association between age and knowledge regarding nosocomial infection. In education x^2 0.599 which is less than table value (2.78) so there is no association between the education and knowledge regarding nosocomial infection. In working area x^2 0.67, which is less than table value (2.45) so there is no association between the working area and knowledge regarding nosocomial infection.

LIMITATION:

- The study is limited to Staff Nurse those who are present at the time of data collection.
- 30 samples only.

IMPLICATIONS:

The research has derived the following implications from the study results, which are concerning to the field of nursing practice, nursing education, nursing administration and nursing research regarding knowledge on nosocomial infection among staff nurses.

Nursing practice:

- The present study will help the staff nurses to identify the level of knowledge regarding nosocomial infection.
- The staff nurses can provide effective infection control practices to prevent hospital-acquired infections among patients.
- The study findings will help staff nurses to improve their knowledge regarding hand hygiene, aseptic techniques and standard precautions.
- The staff nurses can follow proper sterilization and biomedical waste management practices to reduce nosocomial infections.

Nursing education:

- Nursing education prepares staff nurses to gain adequate knowledge regarding nosocomial infection and its prevention.
- The curriculum can encourage staff nurses to create awareness regarding infection prevention and control practices in hospitals.
- Nursing educators can organize workshops, seminars and in-service education programmes to improve the knowledge of staff nurses regarding nosocomial infections.
- The study can motivate staff nurses to practice evidence-based infection control measures during patient care.

Nursing administration:

- The findings of the study would motivate nurse administrators to organize continuing nursing education programmes on nosocomial infection prevention for staff nurses.
- Hospital administration can implement infection control policies and protocols for staff nurses.
- The study would help nursing administrators to supervise and monitor infection control practices among staff nurses.
- The administration can arrange regular training programmes regarding hand hygiene, use of personal protective equipment and biomedical waste management for staff nurses.

Nursing research:

- The findings of the study will help to expand the scientific body of knowledge regarding nosocomial infection among staff nurses.
- Comparative studies can be conducted to assess the effectiveness of educational interventions on knowledge regarding nosocomial infection among staff nurses.
- Further research can be conducted on a larger sample to evaluate factors influencing infection control practices among staff nurses.
- Experimental studies can be undertaken to determine the effectiveness of infection prevention programmes among staff nurses.

RECOMMENDATION:

- Study can be explicated with large number of samples for better generation.
- Similar study can be conducted.
- Similar study can be conducted with Nosocomial Infection.

FINDINGS OF THE STUDY:

The study of Knowledge 24% of subjects has below average knowledge 24% of subjects have average knowledge and 52% of them have above average knowledge.

CONCLUSION:

The study findings shows that majority of Staff Nurse have average knowledge regarding Nosocomial Infection.

BIBLIOGRAPHY

Text Book:

1. Ananthan Narayanan C.K.J. Panikar 2000, Text book of "Microbiology" 6th edition, Orient Longman Limited, Page no: 586-587, 583-585.
2. Basvanthappa.B. T B.T. [1999], Nursing Research in Education, Edition, India prenture hall publication, Page no: 333-375.
3. Denise F. Polit, Bernadette. P. Hungler, [1995] Nursing Research Principles and Method" 5th edition, Philadelphia, JH. B Lippincott Williams Publication, Page no: 503-504.
4. Dichner Judith R. Harkness Gail, [1997] "Medical Surgical Nursing" 9th edition, New Delhi Mosby publishers, Page no: 300.
5. Greenwood David, Slack Richard, C.B. Peutherer, (1997) Medical Microbiology ELST Publishers, Page no: 648.
6. Kothari, C.R. (2000) "Research Methodology Methods and Techniques" 2nd edition, New Delhi, Wishwa Prakashan Publisher's, Page no: 120-146.
7. Nancy Burns, Susan K. Grave, (1992) "Fundamentals of Nursing" 3rd edition, USA, Moshy Publishers PageNo: 406-407, 748-749.
8. Sundar Rao, (1996) "An Introduction to Bio Statistics" 3rd edition, New Delhi prentice Hall publisher's Page No: 22-37.
9. VivenA. Stucke, (2000) "Microbiology for Nurses" 7th edition, London, ELBS Publishers, Page No: 313-327.
10. Angelillo IF et al (1999) Nurses and Hospital Infection Control, Volume 42, Number 2, Page no: 105-112.
11. Cisse CT, et al, (2000) Prevention of Infection in a Surgical Environment, Volume 10, Number -3, Page no: 189-194.
12. Gume Z.J. et al (1995) European Journal of Clinical Microbial Infections Disease, volume -14, Number -3, Page no:176-181.
13. Jones B.L. et al, (2000) Journal of Hospital Infection, volume -44, Number -1, page no: 53-57.
14. Lemmen SW, et al, (2001) American Journal of Infection Control, volume 29, Number -2, Page no: 89-93.
15. Leon M. et al, (2001) Prevention of Nosocomial Urinary Tract Infection in ICU, volume 120, Number -1, Page no: 10-12
16. Rasiker Govikar, (1999) The Nursing Journal of India, Volume no: 50, Number-1, Page no: 105-120.
17. Usha Ukanele et al, Indian Journal of Nursing and Midwifery, Volume -2, Number-1, Page No: 15-19.