

Knowledge, Attitude and Practice of Hospital Infection Control and Prevention among Nursing Faculty Attached to Medical College Hospitals of Central Karnataka

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Abstract

Infections in health care settings and hospital settings around the world are major public problems which is a major health risk that leads to increase in mortality and morbidity. The Hospital acquired infections spreads through contaminated hands of the health care givers like doctors, Nurses, other staffs, relatives and friends of the Patients. The nurse is the member of the healthcare team who participates in prevention and protection of patient from infection. Some of the most basic strategies resulting in positive patient outcomes include the practice and promotion of hand hygiene, consistent use of aseptic technique, cleaning and disinfection practices, use of standard precautions. A quantitative study was used to assess the Knowledge, attitude and practice of nursing faculty on infection control and its prevention in medical college attached hospitals of central Karnataka. 100 staff nurses were selected by simple random sampling technique from selected medical college attached hospital of central Karnataka. Structured Knowledge questionnaire, attitude scale and checklist to assess the practice were used to collect the data from sample. Result revealed that Majority of the samples i.e 76% had average knowledge, 96% had favorable attitude and 75% had average practice on hospital Infection control and prevention. There was no association between knowledge, attitude and practice with selected socio demographic at 0.05 level of significance. There was negative relationship between the level of knowledge and attitude, Positive relationship between the level of attitude and practice at 0.01 level of significance. Study concluded that staff nurses should be educated to improve the knowledge regarding infection control and its prevention in hospital and to be trained effectively to have a good infection control practice in hospital setup to control and prevent hospital acquired infection or nosocomial infection to the patient.

Keywords: HCAI's (Health Care Associated Infection); Nosocomial Infection; Knowledge; Attitude and Practice; Staff Nurses.

Introduction

Infection is defined as the lodgment and multiplication of organism in the tissue of host [4].

Infections in health care settings and hospital settings and hospitals around the world are major

public problems which is a major health risk that leads to increase in mortality and morbidity. It is estimated that more than 1.4 million people worldwide are suffering from hospital acquired Infections [1].

Nosocomial infection also commonly known by the terms health care associated and hospital acquired Infection (HCAIs). Nosocomial Infections (NIs) are Infections which results from the exposure of deliberated patients to the drugs, altered environment of the hospital. Nosocomial infections occur secondary to the patient's original condition [5].

Infections are considered nosocomial if they appear first 48 hours or more after hospital admission or after discharge [3]. The most common type of Nosocomial infections are surgical wound Infections, Respiratory Infections, Genitourinary and Gastrointestinal Infections [1].

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Health care associated Infections (HCAIs) are widely prevalent across the world. The prevalence of HAIs in Developing countries can be as high as 30 to 50%. Many of these pathogens Implicated in HCAIs are multi drug resistant's and are able to survive in the Environment. The HCAIs spreads through contaminated hands of the health care givers like doctors, Nurses, other staffs, relatives and friends of the Patients [5].

A study to assess the Knowledge and Practice regarding hospital Infections control practices was performed in G.B. Pant hospital, New Delhi among 400 health care personnel. A structured Knowledge questionnaire was used to collect information from 329 Nurses and 71 Doctors. The result revealed that Knowledge regarding the transmission of blood borne pathogens and their approximate risk was suboptimal (31.85%). There was significantly less awareness for nurses (24.8%) as compared with doctors (64%). Nurses used less barrier precautions (54.3%) when compared to doctors (75.2%). Before CVC approximately (82.75%) of sisters were aware of correct cleaning protocol while only (61.4%) of the doctors were aware regarding it.

The study concluded that Lack of knowledge and practices regarding basic infection control protocol should be improved by way of educational intervention in the form of formal training of the doctors and Nurses and reinforces the same [7].

A study to assess the level of Knowledge, attitude and Practices regarding disinfection procedures among Nurses in Italian hospitals was conducted by department of experimental medicine, second University Naples, Italy. A face to face Interview was used to collect the information from nurses. The results revealed that only 29% acknowledge that urinary and Respiratory tract Infections were the two most common Hospital acquired Infections and this was significantly higher in those with higher level of education.

Attitude towards the utility of Guidelines for disinfection procedure showed a mean score of 9%. Female Nurses had more positive attitude. Nurses with higher educational level and with a higher perception of risk of transmitting an Infectious disease while working were likely to perform appropriate antiseptics of the surgical wound and hand washing before and after medications [8].

The nurse is the member of the healthcare team who prevents and protects the patient from infection. The researcher felt that nurses play a major role in control and prevention of Nosocomial infection. So, the researcher felt to assess the staff nurses level of

knowledge, their attitude and practices that they follow in the hospital to control and prevent the spread of Nosocomial Infection.

Methodology

Research Approach

Descriptive Research Approach.

Research Design

Descriptive Research design.

Sampling technique

Simple Random sampling technique is used to select the Hospital and samples (Staff nurses) for the study

Sample size: 100

Setting of study

Selected hospitals attached to Medical colleges of Central Karnataka (Davangere)

Tool used

Four tools were used in the present study

Tool 1 consists of the Items of Socio demographic variables

Tool 2 Consists of the structured knowledge questionnaire on infection control in hospital. It include General aspect of Infection, Hand Hygiene, Biomedical waste management, Isolation Precautions, Disinfection and Sterlization.

Tool 3 consists of attitude statements- A modified 5 point Lickert scale regarding infection control in hospital

Tool 4 Consists of Practice checklist on Infection control in hospital.

Procedure of data collection

The formal permission was obtained from the Medical Superintendent of selected Medical college attached hospitals in Davangere. The written consent was obtained by the subjects. Semi structured Knowledge questionnaire, Self Prepared Attitude Scale and observational check list adopted for the study was administered to the nurses. Data collected was then tabulated and analyzed.

Results

The major findings of the study are as follows:

1. *Findings Related to Socioeconomic Status of Staff Nurses*
 - Majority of staff nurses were in between the age group of 20-30 Years that is 57 (57%).
 - Majority of Staff nurses were female that is 79 (79%).
 - Majority of Staff nurses qualification was GNM 92 (92%).
 - Majority of Staff nurses got Information regarding Infection control and its prevention from CNE/ Workshop that is 54 (54%).
 - Majority of Staff nurses had a clinical experience above 10 Years 26 (26%).
 - Majority of Staff nurses monthly salary is above 1101 that is 62 (62%).
 - Majority of Staff nurses participated in Infection control training 69 (69%).
2. *Findings related to Knowledge of staff nurses regarding Hospital Infection control and its prevention.*
 - Majority of Staff Nurses i.e 76 (76%) had average knowledge, 16 (16%) Good knowledge and 8 (8%) had Poor knowledge Hospital Infection control and it's Prevention. (Figure 1)

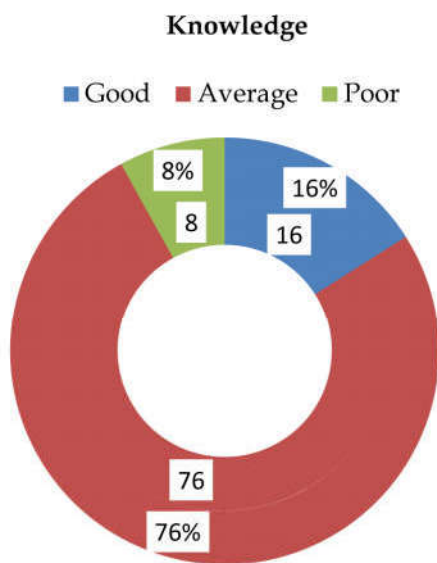


Fig. 1: Pie diagram showing distribution of samples based on their knowledge on Hospital Infection Control and its Prevention

3. *Findings related to Attitude of staff nurses regarding Hospital Infection control and its prevention.*
 - Majority of staff nurses i.e 96 (96%) had favorable attitude and 4 (4%) had Unfavorable attitude toward Hospital Infection control and it's Prevention (Figure 2).

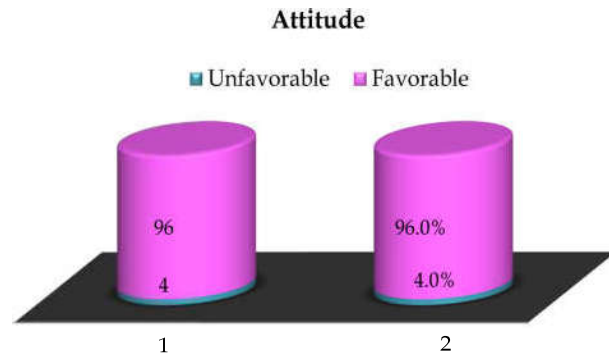


Fig. 2: Cylindrical diagram showing distribution of samples based on their Attitude on Hospital Infection control and its Prevention

4. *Findings related to Practice of staff nurses regarding Hospital Infection control and its prevention.*
 - Majority of staff nurses i.e 75 (75%) had good practice and i.e 25 (25%) Average practice on Hospital Infection control and it's Prevention. (Figure 3).

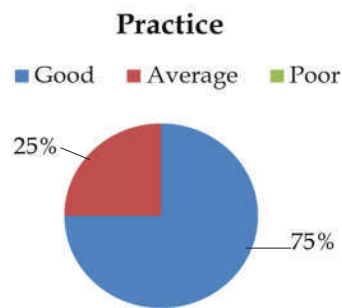


Fig. 3: Pie diagram showing distribution of Samples based on their Practice on Hospital Infection control and its Prevention

5. *Findings related to Association between knowledge of staff nurses regarding Hospital Infection control and its prevention with selected demographic variables.*

The Table 1 shows that there is no association between knowledge and Age, gender, qualification, source of information, Year of clinical experience, monthly salary, Participation in Infection control training.

Table 1: Association between knowledge of staff nurses regarding hospital Infection control and its prevention with selected demographic variables **N=100**

Variables	Chi-square Value(χ^2)	DF	Level of Significance
Age of Participants	6.209	4	.148
20-30 Years			p>0.05
31-40 Years			NS
41 Years and above			
Gender	0.305	2	.859
Male			p>0.05
Female			NS
Qualification	2.398	6	0.880
ANM			p>0.05
GNM			NS
PBBSc Nursing			
BSc Nursing			
Source of Information	8.846	6	0.182
Mass media			p>0.05
Self reading			NS
Health Personnel			
Conference/workshop/CNE			
Year of clinical experience	5.785	6	0.488
1-3 Years			p>0.05
4-6 Years			NS
7-9 Years			
Above 10 Years			
Monthly Salary	1.967	6	0.923
2000 to 5000			p>0.05
5001 to 8000			NS
8001 to 11000			
More than 11001			
Participation in Infection control training	7.683	2	0.21
Yes			p>0.05
No			NS

Table 2: Association between Attitude of staff nurses regarding hospital Infection control and its prevention with selected demographic variables **N=100**

Variables	Chi-square value(χ^2)	DF	Level of Significance
Age of Participants	1.660	2	0.436
20-30 Years			p>0.05
31-40 Years			NS
41 Years and above			
Gender	1.108	1	0.293
Male			p>0.05
Female			NS
Qualification	0.362	3	0.948
ANM			p>0.05
GNM			NS
PBBSc Nursing			
BSc Nursing			
Source of Information	2.344	3	0.504
Mass media			p>0.05
Self reading			NS
Health Personnel			
Conference/workshop/CNE			

Year of clinical experience	4.006	3	0.261
1-3 Years			p>0.05
4-6 Years			NS
7-9 Years			
Above 10 Years			
Monthly Salary	0.557	3	0.906
2000 to 5000			p>0.05
5001 to 8000			NS
8001 to 11000			
More than 11001			
Participation in Infection control training	0.703	1	0.402
Yes			p>0.05
No			NS

Table 3: Association between Practice of staff nurses regarding hospital Infection control and its prevention with selected demographic variables N=100

Variables	Chi-square Value(χ^2)	DF	Level of Significance
Age of Participants	0.882	2	0.663
20-30 Years			p>0.05
31-40 Years			NS
41 Years and above			
Gender	0.020	1	0.887
Male			p>0.05
Female			NS
Qualification	3.614	3	0.306
ANM			p>0.05
GNM			NS
PBBSc Nursing			
BSc Nursing			
Source of Information	3.751	3	0.290
Mass media			p>0.05
Self reading			NS
Health Personnel			
Conference/workshop/CNE			
Year of clinical experience	2.567	3	0.463
1-3 Years			p>0.05
4-6 Years			NS
7-9 Years			
Above 10 Years			
Monthly Salary	7.487	3	0.058
2000 to 5000			p>0.05
5001 to 8000			NS
8001 to 11000			
More than 11001			
Participation in Infection control training	0.390	1	0.533
Yes			p>0.05
No			NS

6. Findings related to Association between Attitude of Staff nurses regarding Hospital Infection control and its prevention with selected demographic variables.

The table 2 shows that there is no association between Attitude and Age, gender, qualification, source of information, Year of clinical experience, monthly salary, Participation in Infection control training.

7. Findings related to Association between Practice of staff nurses regarding Hospital Infection control and its prevention with selected demographic variables.

The table 3 shows that there is no association between Practice and Age, gender, qualification, source of information, Year of clinical experience, monthly salary, Participation in Infection control training.

Table 4: Correlation between knowledge and attitude of staff nurses on Hospital Infection control and prevention

Selected Variables	Coefficient of Correlation	L.O.S
Knowledge & Attitude	-0.081	p>0.01 NS

Table 5: Correlation between Attitude and Practice of staff nurses on Hospital Infection control and prevention

Selected Variables	Coefficient of Correlation	L.O.S
Attitude & Practice	0.305	p>0.015

S = Not significant

8. *Findings related to Correlation between knowledge and attitude of staff nurses regarding Hospital Infection control and its prevention with selected demographic variables.*

As one of the objectives of the study was to find out the relationship between level of knowledge and attitude, following hypothesis was formulated.

In Table 4 shows that the coefficient of correlation shows that there was negative relationship between the level of knowledge and attitude of subjects. Since the calculated P value was -0.081, p>0.01 was less than the table value.

9. *Findings related to Correlation between attitude and Practice of staff nurses regarding Hospital Infection control and its prevention with selected demographic variables.*

The table 5 shows that the coefficient of correlation shows that there was Positive relationship between the level of knowledge and attitude of subjects. Since the calculated P value 0.305, p>0.01 was greater than the table value.

Recommendation

1. A comparative study can be conducted between government hospital and private hospital staff nurses.
2. A structured teaching programme on Knowledge and practice regarding hospital infection control and its Prevention among staff nurse in hospitals can be conducted.

Conclusion

The study concluded that Majority of the Nursing faculty had average knowledge on hospital infection control and its prevention. Most of them had favorable attitude and most of them had average practice on

Controlling hospital infection and its prevention. Study also proved that there was no association between knowledge with selected sociodemographic variables, no association between attitude with selected sociodemographic variables, no association between Practice with Selected sociodemographic variables.

There was negative correlation between knowledge and attitude but positive correlation between attitude and practice. Nursing faculty has to be given enough information regarding hospital infection control and its prevention to enhance knowledge and to be trained to improve the skills in infection control and prevention in hospital setup.

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