

## **“ A Study to Assess The Effectiveness of Structure Teaching Program Regarding Nosocomial Infection Among Nursing Officers in Selected Hospital, Hyderabad, T.S.”**

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**Abstract:** A nosocomial infection also called “hospital acquired infection” can be defined as: An infection acquired in hospital by a patient who was admitted for a reason other than that infection. An infection occurring in a patient in a hospital or other health care facility in whom the infection was not present or incubating at the time of admission. The present study was conducted to assess knowledge regarding nosocomial infection among nursing officers in selected hospital, Hyderabad. Method: the research approach for this study is evaluative approach with quasi experimental research design, one group pre-test and post-test design adopted. Sample: The target population was 60 nursing officers and sampling technique was non probability purposive sampling. Tool: structured questionnaire with 25 items was prepared and validated. Data was collected by administering tool. Results: level of knowledge in Pre-Test 20% nursing officers inadequate, 65% moderate, 15% adequate and in post-test 18.3% nursing officers inadequate, 60% moderate, 21.7% adequate. There was a statistical significant relationship between knowledge scores and demographic variables like religion and diet at  $P < 0.05$  level. It is concluded that: many of the nursing officers was increased their knowledge on nosocomial infection by successful implementation of structure teaching program.

**Keywords:** Assess; effectiveness; Structured teaching program; knowledge; Nosocomial Infection, Infection Control.

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### **I. Introduction**

Nosocomial infections also termed hospital-acquired infections, which develop within hospitals and are produced by microorganisms acquired during hospitalization. It is an infection whose development is favored by a hospital environment, such as one acquired by a patient during a hospital visit or one developing among hospital staff. All infections in newborns delivered in the hospital need to be considered acquired except those caused by organisms reaching the baby from the mother or before the time of birth<sup>(1)</sup>.

Patient care is provided in facilities which range from highly equipped clinics and technologically advanced university hospitals to front-line units with only basic facilities. Despite progress in public health and hospital care, infections continue to develop in hospitalized patients, and may also affect hospital staff. Many factors promote infection among hospitalized patients: decreased immunity among patients; the increasing variety of medical procedures and invasive techniques creating potential routes of infection; and the transmission of drug-resistant bacteria among crowded hospital populations, where poor infection control practices may facilitate transmission<sup>(2)</sup>. Nosocomial infections typically effect patients who are immune compromised because of age, underlying diseases, or medical or surgical treatments. According to Weinstein(1998) the high infection rates are usually among intensive care unit patients with nosocomial infections rates in adult and pediatric ICU's being three times higher than anywhere else in the hospital. Some of the key factors that have led to increasing nosocomial infection rates in American hospitals includes

- Low hand washing rates by staff between patient contacts
- Sicker and more immune-compromised patients in hospitals
- Infrastructure repairs and renovations to aging hospitals and new constructions on existing campuses risk of airborne fungal diseases caused by dust and spores released during denotation and construction<sup>(3)</sup>.

### **Need For Study**

In 19<sup>th</sup> century Louis Pasteur found the sciences of bacteriology and Joseph Lister overcome surgical infections with phenol sprays. The concepts of asepsis and its application in hospital practice reduced the incidence of infection, but hospital infection still cause considerable mortality and morbidity<sup>(4)</sup>.

Nosocomial infections are the infections acquired during hospital stay. These infections concern 5-15% (estimated 2 million cases annually) of hospitalized patients and can lead to complications in 25-33% of those admitted in ICU. These are an important cause of (80,000 annually) and economic cost are considerable which include cost of additional stay in hospital, drugs, delayed discharge etc <sup>(5)</sup>. Hospital Acquired Infection(HAI), also called a nosocomial infection, is an infection that first appears between 48 hours and four days after a patient is admitted to a hospital or other health-care facility.<sup>1</sup> Over 1.4 million people worldwide are suffering from HAIs. In the United States, it has been estimated that as many as one hospital patient in ten acquires a nosocomial infection, or 2 million patients a year. Estimates of the annual cost range from \$4.5 billion to \$11 billion and up. Nosocomial infections contributed to 88,000 deaths in the US in 1995. In France, prevalence was 6.87% in 2001 and 7.5% in 2006, some patients were infected twice. In Italy, in the 2000s, about 6.7% of hospitalized patients were infected, i.e., between 450,000 and 700,000 patients, which caused between 4,500 and 7,000 deaths. In Switzerland, extrapolations assume about 70,000 hospitalized patients are affected by nosocomial infections; between 2 and 14% of hospitalized patients <sup>(6)</sup>. In India, 30 to 35 percent of persons admitted to hospitals develop HAIs. Among hospital-acquired infections 30 to 40% are urinary tract infections, 15 to 20% surgical wound infections, 15 to 20% lower respiratory tract infections and 5 to 15% blood stream infections. The incidence of HAI in Karnataka has been recorded 6.5 % <sup>(7)</sup>.

### **Objectives Of The Study**

- ❖ To assess the knowledge regarding nosocomial infection among nursing officers.
- ❖ To find out the association between knowledge regarding nosocomial infection among nursing officers and their demographic variables.

### **Methodology**

Research approach:

The research approach for this study is evaluative approach was adopted

Research design:

Quasi experimental research design, one group pre-test and post-test design

Research setting:

Shadan Hospital, Kalimandir, Hyderabad.

Population:

60 Nursing officers from Shadan Hospital

Sampling Technique:

Non Probability purposive sampling Technique

The study was conducted from October 2016 to November 2016. The questionnaire was validated by experts; reliability of the tool was 0.93 which was assessed by using split half method. The questionnaire was distributed to nursing officers; planned teaching program was given to nursing officers on the same day after pre-test. Post test was conducted after 7 days and collect data. Tool consist of two sections.

Section I: Demographic Variables

Section II: 25 structured questionnaire to assess the knowledge on nosocomial infection

### **Plan for data analysis:**

Analysis of data was done by using descriptive and inferential statistics.

### **Descriptive statistics were used to find out:**

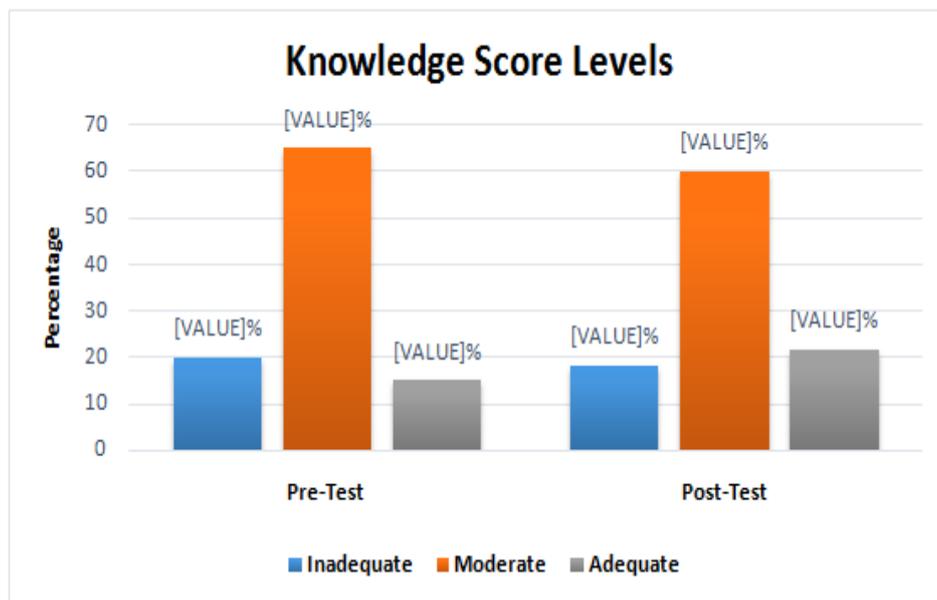
- Frequency, Percentage, Mean, Standard Deviation

Inferential statistics were used to find out:

- Chi-square, t test.

## II. Results

Figure-1: Shows level of knowledge on Nosocomial Infection among nursing officers



**Table 1:** Comparison of mean, standard deviation and ‘t’ value scores of knowledge on nosocomial infection among nursing officers.

Variables	Mean	Sd	“T”	P Value
Pre-Test	10.43	3.514	23.902	0.000
Post-Test	20.55	2.50		

**Table 2:** Relationship Between Knowledge Level Of Nursing Officers And Their Selected Demographical Variables.

Sl.No	Variables	Chi-Square	DF	P
1	Age	0.694	4	0.952 NS
2	Religion	12.865	6	0.045 S
3	Type of Family	4.253	4	0.373 NS
4	Educational Status	4.319	6	0.634 NS
5	Monthly Income	8.943	6	0.177 NS
6	Diet	6.601	2	0.037 S
7	Hobbies	6.284	6	0.392 NS
8	Previous Knowledge	1.600	2	0.449 NS

S = Significant, NS = Not Significant

## III. Discussion

Pre-test 20% nursing officers had inadequate, 65% had moderate and 15% had adequate knowledge. Post-test 18.3% nursing officers had inadequate, 60% had moderate and 21.7% had adequate knowledge. Pre-test mean & SD scores were 10.43 & 3.514 and the post-test means & SD scores were 20.55 & 2.50. The obtained ‘t’ value was 23.902, it says that significance between pre and post-test knowledge level, so teaching programme become successful. The chi square were calculated to find out the association between knowledge of nursing officers according to age ( $x^2=0.694$ ), religion ( $x^2=12.865$ ), type of family ( $x^2=4.253$ ), education ( $x^2=4.319$ ), income ( $x^2=8.943$ ), diet ( $x^2=6.601$ ), hobbies ( $x^2=6.284$ ), and previous knowledge ( $x^2=1.600$ ). Statistical Significant association was found between knowledge scores of nursing officers regarding nosocomial infections with their religion, and diet. Thus it can be interpreted that the difference in the mean score related to knowledge more true difference and the research hypothesis was accepted.

## IV. Conclusion

In the present study, we can clearly see that many of the nursing officers doesn’t have proper knowledge on nosocomial infection, but whereas after giving proper structured teaching program on nosocomial infection there is a sudden increase in the knowledge levels among nursing officers. In the post test there was a statistical significance between scores and demographic variables, it reveals that the study was true.

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