

# **A STUDY TO ASSESS THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME REGARDING COMMON INFECTIONS IN ICU, ITS CONTROL AND PREVENTIVE STRATEGIES AMONG NEWLY APPOINTED STAFF NURSES IN SELECTED HOSPITAL AT BANGALORE**

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**Abstract:** The term ICU acquired infection refers to an infection that was not present during admission to the ICU, and that may occur after discharge from ICU. It is estimated that 10-25% of persons are affected by nosocomial infection in India each year. The nurses can play a major role in preventing the hospital acquired infections thorough knowledge regarding modes of spreading and control measures. The research approach adopted for the study was evaluative approach and the research design was Quasi-experimental one group pre-test /post-test design. The sample of the study was newly appointed staff nurses working in K.C.G Hospital, Bangalore. The sample size was 60, selected by non-probability purposive sampling. The researcher conducted pretest for the first day by using self administered questionnaire and structured teaching programme was administered on the 8th day followed by the post-test. Then collected data were analyzed by the one of descriptive and inferential statistics. Findings shows that majority of newly appointed staff nurse were graduates (55%). Most of them had annual income of rs 4000 -5000 (81.6%) and 56.7% of them got information from health professionals. The overall mean score percentage in pretest knowledge score was 41.55% and the mean posttest knowledge score was found to be 78.98% which proves that STP is effective and there is significant association between knowledge score and demographic variable like educational status at 0.05 levels.

**key word:** structured teaching programme, common infections in icu, control and preventive strategies in ICU

## **Introduction**

Hospital acquired infections are preventable the nurses can play a major role in preventing the hospital acquired infection by following the preventive measures to spread disease through knowledge regarding modes of spreading and control measures are needed to reduce the rate of hospital acquired infection<sup>1</sup>. Hospital infection is one of the socio-medicine and Economic problems in developing countries causing prevalence of infectious diseases, Length of hospitalization and death of patients in some medical texts. The places in which patients supposed to get treatment, hospitals, should not be a center for making deficiencies or diseases<sup>2</sup>. Staff nurses play an important role in hospitals; they are the pillar of the health system so they must be aware of those infections and infection prevention strategies. Implementation of the infection control guidelines, ward's cleaning and sterilization, Injuries bandages and patient's isolation process are most important among staff nurse activities<sup>3</sup>. So, not paying enough attention to their situations it leads to hospital acquired infection. In India nearly 10-25% of persons are affected by nosocomial infection every year. In Mumbai nearly 16-20% of hospitalized person had nosocomial infection per day<sup>4</sup>. In Delhi nearly 32% of persons are affected by nosocomial infection. Invasive procedures and

altered immune defense are main factors contributing to infection<sup>5</sup>. At present prevalence of nosocomial infection has become one of the crucial problems. The nurse should have adequate knowledge regarding prevention of common ICU infection, So that the morbidity and mortality rate can be reduced among the hospitalized patients. Lack of knowledge among newly appointed staff nurses in ICU leads to serious, detorious and certain irreversible ill effects to the patients which even lead of the client death of the client<sup>6</sup>. Structured teaching program helps the staff nurses to update their current knowledge into practice which is very essential in today's health care setting<sup>7</sup>.

## **Objectives of the study**

1. To assess the pre test level of knowledge regarding common infections in ICU, its control and preventive strategies among the newly appointed staff nurses.
2. To assess the post testlevel of knowledge regarding common infections in ICU, its control and preventive strategies among the newly appointed staff nurses.
3. To assess the effectiveness of structured teaching program by comparing pre and post test knowledge scores.
4. To find out the association between pre test knowledge level among the newly appointed

staff nurses with selected demographic variables.

### Hypothesis:

**H<sub>1</sub>:** The mean post test knowledge score will be significant higher than the mean pre test knowledge score regarding common infections in ICU, its control and preventive strategies among the newly appointed staff nurses.

**H<sub>2</sub>:** There will be significant association between pre test knowledge score regarding common infections in ICU, its control and preventive strategies among the newly appointed staff nurses with selected demographic variables (age, gender, educational status, work experience, monthly income, any in service education, source of information).

### Material and Methods used:

**Research design:** Quasi-experimental one group pre-test /post-test design was used

**Research approach:** Evaluative approach was adopted for the present study.

**Setting of the study:** The study was conducted in K.C.G Hospital, Bangalore.

**Population:** Population for the present study was all the newly appointed staff nurses.

**Sampling and sample size:** Non-probability purposive sampling technique was used to select 60 newly appointed staff nurses in K.C.G hospital who fulfilled the sampling criteria for the present study.

### Variables:

**Research variable:** In this present study structured Teaching programme on selected aspects of common infection in ICU, its control and preventive strategies was the independent variables.

**Demographic variable:** Age, Gender, educational status, monthly income, work experience, source of information.

### Sampling criteria

#### Inclusion criteria

- Who are willing to participate in this study
- Who are able to read or speak English
- Who are successfully completed either diploma in Nursing, B.Sc (N), Post B.Sc (N), M.Sc(N)

#### Exclusion criteria

- Who are not available during the study
- Staff nurses are working at other hospitals in Bangalore

### Development and description of tools used in the study

*Structured knowledge questionnaire used for data collection. The tool consists of two sections:*

Section-A Socio-Demographic variables of the newly appointed staff nurses. Such as Age, Gender, educational status, monthly income, work experience, source of information.

Section B It consists of 30 multiple choice questions for assessing the knowledge level of the newly appointed staff nurses.

### Data Collection Procedure

Data collection has started from October 1st to November 1st. The investigator established good rapport with newly appointed staff nurses who are attending and took consent from each nurse to participate in this study, and collected the demographic data, the self administered questionnaire was given, each sample had taken 30 minutes to fill the questionnaire, and structured teaching programme was conducted soon after pre-test. The subjects were eager to know and took active participation in asking question and seeking clarification. Pre-test was done during break time. The post-test was done after 7 days of teaching programme as like pre-test.

### Plan for Data Analysis

The data was entered in master data sheet for tabulation and statistical processing. The obtained data were analyzed, organized and presented under the following headings;

1. Description of demographic variable of samples.
2. Total percentage distributions of samples by their pretest knowledge level regarding common infections in ICU, its control and preventive strategies among newly appointed staff nurses
3. Total percentage distribution of samples by their posttest knowledge level regarding common infections in ICU, its control and preventive strategies among newly appointed staff nurses
4. Mean, SD, and mean score, percentage of pre-test knowledge score, mean difference, paired 't' value of knowledge score regarding common infections in ICU, its control and preventive strategies among newly appointed staff nurses.
5. Mean, SD, mean score, percentage of post-test knowledge score, mean difference, paired't' value of knowledge score regarding commoninfections in ICU, its control and preventive strategies among newly appointed staff nurses.
6. Association between the mean post-test knowledge score regarding common infections in ICU, its control and preventive strategies among newly

appointed staff nurses and their selected demographic variables (age, gender, educational status, work experience, income, any in service education, source of information)

**Data Analysis and Major Findings**

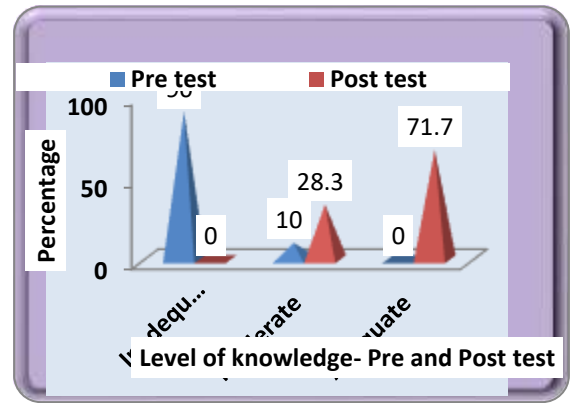
1. 75 % of the nurses belong to the age group of 21-25 Years, 21.7 % of them belong to the age group of 26-30 Years and 3.3% of them belong to 31-35 years, 21.7% of them are male and 78.3 % of them are female.
2. According to their educational status, 55 % of the nurses were B.Sc (N), 28.33% of them are general nursing and 13.33% of them are post b.sc (N), 3.33% are M.sc (N). regarding work experience
3. 66.67% has 0-2 years, 16.67% has 3-5 years, 13.3% has 6-8 years, 3,33% has above 8 years work experience.
4. According to their monthly income 81.67% of them have monthly income of Rs 4000-5000, 16.67% have Rs 6000 and above, 1.67% has Rs 3,000-4,000.
5. According to their source of information 56.7% of them got information from health professionals, 30% of them from magazine, and 13.3% of them from neighbors

**Table 1 Comparison of Pretest and Post Test Knowledge**

**N=60**

Level of knowledge	Pre test		Post test	
	Frequency	Percentage	Frequency	Percentage
Adequate (>75%)	0	0	43	71.7
Moderate (50-75%)	6	10	17	28.3
Inadequate (<50%)	54	90	0	0

The above table shows the comparison of knowledge level between pretest and post test among staff nurses. In pre test 54 (90%) of nurses have inadequate knowledge and 6 (10%) have moderately adequate knowledge and none of them had adequate knowledge. In posttest 43 (71.7%) have adequate knowledge, 17 (28.3%) have moderate knowledge and none of them had inadequate knowledge.



**Fig 1 Cone diagram showing comparison of newly appointed staff nurses on the basis of pre and post test level of knowledge**

**Table 2: Effectiveness of structured teaching programme regarding common infections in ICU, its control and preventive strategies among newly appointed staff Nurses**

Effectiveness	Mean	Paired t test
Pre test	41.55	t = 38.81*
Post test	78.98	

The overall mean score percentage in pretest knowledge score was 41.55% and the mean posttest knowledge score was found to be 78.98%. The paired 't' value (t= 38.81) which showed was significant at p<0.05 level. The chi square value of the mean posttest knowledge regarding common infection in ICU, its control and preventive strategies among the newly appointed staff nurses and their educational status was found to be significant (18.710 table value 7.821 at p<0.05 level)

**Recommendations**

- On the basis of finding, it was recommended that,
1. The study can be replicated on large sample and their findings can be generalized to a large group.
  2. Similar study conducted in assessing the nurses Knowledge in various aspects on common infections in ICU, its control and preventive strategies.
  3. Comparative study on knowledge and practice of newly appointed staff nurses regarding common infections in ICU, its control and preventive strategies.

4. A true experimental study can be conducted among newly appointed staff nurses.

### CONCLUSION

The study shows that majority of newly appointed staff nurse were graduates (55%). Most of them had annual income of rs 4000 -5000 (81.6%) and 56.7% of them got information from health professionals. The overall mean score percentage in pretest knowledge score was 41.55% and the mean posttest knowledge score was found to be 78.98% which proves that STP is effective and there is significant association between knowledge score and demographic variable like educational status at 0.05 levels.

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