“A study to assess the effectiveness of Planned Teaching Program (PTP) on knowledge regarding prevention of Nosocomial Infection among the Staff Nurses working in selected areas of Indira Gandhi Medical College and Hospital, Shimla- Himachal Pradesh”.

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Abstract: “A study to assess the effectiveness of Planned Teaching Program (PTP) on knowledge regarding prevention of Nosocomial Infection among the Staff Nurses working in selected areas of Indira Gandhi Medical College and Hospital, Shimla- Himachal Pradesh”. The aim of the study was to assess the effectiveness of Planned Teaching Program regarding prevention of Nosocomial Infection. Quantitative research approach and a pre-experimental research design was adapted for the study. 50 Staff Nurses were selected by using convenient sampling technique. The findings of the study showed that mean post-test knowledge score (37.30) was higher than the pre-test knowledge score (32.32). Hence the Planned Teaching Program given to the Staff Nurses was effective. Calculated t-value was 5.61 and table value was 2.01 at 0.05 level of significance. It showed that the calculated t-value was greater than tabulated value. So the study done to assess the effectiveness of Planned Teaching Programme regarding prevention of Nosocomial Infection among Staff Nurses was significant. On the basis of the study, the recommendations offered for the further researches that, this study can be replicated on a large number of samples of Staff Nurses from different State and District hospitals for wider generalization of the findings. A follow up study on the same sample may be conducted to assess the retention of knowledge of Staff Nurses regarding prevention of Nosocomial Infection. A comparative study can be conducted to evaluate the effectiveness of Planned Teaching Program regarding prevention of Nosocomial Infection among the Staff Nurses of Government and Private hospital.

Key words: Assess, Effectiveness, Planned Teaching Programme, Knowledge, Nosocomial Infection, Staff Nurses, Selected Areas.

I. Introduction:

Nosocomial Infection is also called a Hospital Acquired Infection. This 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. Nosocomial Infections can be caused by bacteria, viruses, fungi, or parasites. These microorganisms may already be present in the patient’s body or may come from the environment, contaminated hospital equipment, health care workers, or other patients.

Depending on the causal agents involved, an infection may start in any part of the body. A localized infection is limited to a specific part of the body and has local symptoms. A generalized infection enters the bloodstream and causes systemic symptoms such as fever, chills, low blood pressure, or mental confusion. This can lead to sepsis, a serious, rapidly progressive multi-organ infection, that results in death. The most common types of Nosocomial Infections are urinary tract infections (UTIs), ventilator-associated pneumonia, and surgical wound infections. The University of Michigan Health System report that the most common sources of infection in their hospital were urinary catheters, central venous (in the vein) catheters, endotracheal tubes and the Ryles tube.

There are multiple ways of acquiring infection due to different microorganisms. The organisms can be transferred from one patient to another (cross-infection). They can be part of a patient’s own flora (endogenous infection). They can be transferred from an inanimate object or from a substance recently contaminated by another human source (environmental transfer). The organisms that cause most Nosocomial Infection are common in the general population, in which setting they are relatively harmless. They may cause no disease or a milder form of disease than in hospitalized patients. This group includes Staphylococcus aureus, coagulase-negative staphylococci, enterococci, and Enterobacteria. Factors that increase a patient’s susceptibility to nosocomial infections include young or old age, decreased immune resistance, underlying disease, and therapeutic and diagnostic interventions.
II. Review of literature

Nosocomial Infection.(2004) Nosocomial Infections occur worldwide, both in the developed and developing world. They are a significant burden to patients and public health. They are a major cause of death and increased morbidity in hospitalized patients. They may cause increased functional disability and emotional stress and may lead to conditions that reduce quality of life. Not only do they affect the general health of patients, but they cause a huge burden financially. The greatest contributors to these costs are the increased stays that patients with nosocomial infections.

Snow M. white GL Jret.Lal(2006) A quasi experimental study was conducted on mentors hand hygiene practices influence midwife students hand hygiene in America (2006). Sample taken was 60 students enrolled in a certified Nursing program were selected to participate in the study. The mentor’s practice of hand hygiene was the strongest predictor of the student’s rate of hand hygiene for both observational periods P<(0.01). Students prior without medical experience had a significant increased hand hygiene rates when comparing observational period 1 to observational period-2.Students reported strongly positive attitude toward hand hygiene is very low.

Humaunkabirshickder(2010) A descriptive, correlational design was used to examine the nurses knowledge and practice regarding provision of surgical site infection and to examine the relationship between their knowledge and practice. The study was conducted from Nov. 2009 to Jan. 2010 at Shere-E-Bangla Medical College and Hospital (SBMCH). The instrument of data collection was questionnaire which composed of three parts: demographic characteristics of the subject, knowledge regarding prevention of surgical site infection questionnaire, practice regarding prevention of surgical site infection. This study revealed that nurses reported a low level of knowledge and high level of practice regarding prevention of surgical site infection.13

Mrs. MeenakshiGizare(2010) A quasi experimental study consisting of one group pre testpost test design was done on 150 staff nurses to evaluate effectiveness of teaching on infection control practices among health care professionals in Pune. It can be concluded that the knowledge has significant impact on practice of the nurses but there is no correlation between knowledge and practice. Training gives rise to change in the practice for a novice professional. The requirement of ongoing in service education is again emphasized through this study.15

Hospital acquired infection.(2011) Nosocomial Infections are most frequently occurring infections of the urinary tract, surgical wounds, and the lower respiratory tract. A WHO prevalence study and other studies have shown that these infections most commonly occur in intensive care units and in acute surgical and orthopedic wards. Infection rates are also higher in patients with increased susceptibility due to old age, underlying disease, or chemotherapy.3

Nosocomial Infection .(2012) In the United States, the Centre For Disease Control And Prevention estimates that roughly 1.7 million hospital-associated infections, from all types of bacteria combined, cause or contribute to 99,000 deaths each year. In Europe, where hospital surveys have been conducted, the category of Gram-negative infections are estimated to account for two-thirds of the 25,000 deaths each year. Nosocomial Infections can cause severe pneumonia and infections of the urinary tract, bloodstream and other parts of the body. Many types are difficult to attack with antibiotics, and antibiotic resistance is spreading to Gram-negative bacteria that can infect people outside the hospital too.6

Statement Of The Problem

“A study to assess the effectiveness of Planned Teaching Program (PTP) on knowledge regarding prevention of Nosocomial Infection among the Staff Nurses working in selected areas of Indira Gandhi Medical College and Hospital, Shimla- Himachal Pradesh”.

Objectives Of The Study

1. Assess the knowledge of Staff Nurses.
2. Elicit the effectiveness of Planned Teaching Program (PTP).
3. Associate of level of knowledge with selected demographic variables.

III. Methodology

A. Research Design

The research design chosen for this study was one group pre-test post-test research design.

B. Setting Of The Study

The study was conducted in Indira Gandhi Medical College and Hospital, Shimla i.e. Intensive Care Unit, Cardiac Care Unit and Operation Theatres.

C. Population

The population of present study comprised of Staff Nurses working in Indira Gandhi Medical College and Hospital, Shimla.
D. Sample And Sample Size
Fifty Staff Nurses who fall under the inclusion criteria within the study period were the sample working in selected areas of Indira Gandhi Medical College and Hospital, Shimla.

E. Sampling Technique
Convenient sampling technique was used to select the sample of 50 Staff Nurses for who were working in selected areas and were present at the time of study and interested to participate in study.

F. Data Collection Procedure
Formal administrative permission was obtained from Principal SNGNC and Principal I.G.M.C. Shimla. Data collection was done from July 16 to July 27, 2014. Knowledge of Staff Nurses was assessed by using Structured Knowledge Questionnaire. The average time taken by the subjects to complete the Structured Knowledge Questionnaire was 45-50 minutes. Planned Teaching Program (PTP) was conducted for the selected group on July 20, 2014. On day eighth post-test was conducted to evaluate the effectiveness of Planned Teaching Program (PTP).

IV. Result And Findings
Majority (64%) of the study subjects were 20-30 years old in the group.
Most (92%) of the study subjects were having qualification G.N.M.
Majority (76%) of the study subjects were having experience 1-10 years.
All the subjects (100%) received information regarding Nosocomial Infection.
In pre-test 2% of study subjects were having very good level of knowledge where as in post-test 24% of Staff Nurses were having very good level of knowledge.
Most (94%) of study subjects were having greater than average level of knowledge i.e. good and very good.
The mean post–test knowledge score (37.30) of study subject was significantly higher than their pre-test knowledge score (32.32).
Calculated t-value was 5.612 and table value at 0.05 level of significance was 2.01. It showed that the calculated t-value was greater than tabulated value. Hence Planned Teaching Program was effective.

Findings:
There is statistically significant effectiveness of PTP on knowledge of staff nurses regarding prevention of nosocomial infection.

Figure I: Showing Percentage Distribution of Staff Nurses According to Level of Knowledge Regarding Prevention of Nosocomial Infection.
V. Discussion

- Many research studies have been conducted in National and International arena to determine the level of knowledge among Staff Nurses regarding prevention of Nosocomial Infection. The discussion have been presented here in context of objectives and findings of this study and in context of findings revealed by the other researchers.
- In the present study, findings suggests that majority (70%) of nurses had good level of knowledge regarding prevention of Nosocomial Infection as similar to the findings of research conducted by N.K. Govindamma (2005). The study showed that out of 50 Staff Nurses 29 (58%) had good level of knowledge and 21 (42%) had excellent level of knowledge. Therefore this study is consistent to the present study.
- In the present study, findings suggest that post-test mean knowledge score of the Staff Nurses was 37.30 (74.60%) which is higher than pre-test mean knowledge score 32.32 (64.64%) regarding prevention of Nosocomial Infection as similar to the findings of study conducted by Purbia Vijay, VyashHimanshu, Kumar Sharma et.al.(2014) which concluded that post-test mean knowledge score of Staff Nurses was 21.53 (71.76%) which is apparently higher than the pre-test mean knowledge score 13.51 (41.03%) , therefore this study is consistent to present study.
- Results of present study clearly indicate that majority (70%) of Staff Nurses had good level of knowledge regarding prevention of Nosocomial Infection, unlike the study conducted by EskanderHanyGirgis, Mohammed MorsyWarda Youssf, ElfekyHanaa Ali Ahmed (2013) which showed that majority (75%) of Staff Nurses had unsatisfactory level of knowledge. Hence this study is not consistent to the present study.
- In the present study Planned Teaching Program was effective in enhancing the level of knowledge regarding prevention of Nosocomial Infection among Staff Nurses. These findings are consistent with finding of study conducted by Suchitra JB, Devi N Lakshmi(2007) which concluded that the education has a positive impact on retention of knowledge of Staff Nurses regarding prevention of Nosocomial Infection.

Implication Of The Study
The findings of the study have the following implications in nursing practice, nursing research, nursing administration and nursing education.

Nursing practice
- Nurses are the back bone of the health care set up of any country.
- Increasing rate of Nosocomial Infection needs more attention.
- The expanded role of professional nurse emphasizes the activities, which includes promotive, preventive, curative and rehabilitative aspects.
- Nurses play an important role in prevention of disease and promotion of health.
In-service education program should be organized to encourage Staff Nurses regarding prevention of Nosocomial Infection.

Health information and knowledge on prevention of Nosocomial Infection can be imparted through various methods like mass media, lecture and Planned Teaching Programme.

**Nursing Research**
- Large scale studies can be conducted.
- The study creates awareness for further study about Nosocomial Infection.

**Nursing Administration**
- Nursing personnel should accept the responsibility of creating awareness among other health personnel regarding prevention of Nosocomial Infection.
- Nursing personnel should take the initiative to organize in-service education programme on prevention of Nosocomial Infection.
- Administrators should encourage the Staff Nurses to participate in conferences, workshops, symposium and seminars regarding prevention of Nosocomial Infection.
- Administrator must ensure that nursing personnel are adapting the ways which can help to prevent spread of Nosocomial Infection.
- Guidelines related to prevention of Nosocomial Infection should be displayed in all the units of the hospitals.

**Nursing Education**
- Nurse educator should educate the nursing students and other health care personnel about transmission causes and prevention of Nosocomial Infection.
- One of leading functions of nursing is to impart education with newer knowledge regarding prevention of Nosocomial Infection.
- Nurse educators can make use of teaching programme, to orient their new recruits.

**VI. Recommendations**

On the basis of the findings of the study, it is recommended that,

- This similar study can be conducted in other areas of Indira Gandhi Medical College and Hospital, Shimla on a large group.
- A comparative study can be conducted on the Staff Nurses working in State Hospital and District Hospital.
- Similar study can be conducted with the help of video assisted devices.
- STUDY can be conducted using various design.

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