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"A STUDY TO ASSESS THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON KNOWLEDGE AND PRACTICE REGARDING INFECTION CONTROL AMONG THE STAFF NURSES AT SELECTED HOSPITAL, SURAT."

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Abstract: Infection control is the discipline concerned with preventing nosocomial or health care-associated infection. Infection control address factors related to the spread of infections within the health care - setting, including prevention, monitoring/ investigation of demonstrated or suspected spread of infection within a particular health-care setting, and management. It is a challenging Nursing responsibility to prevent the nosocomial Infection. The approach used for this study was evaluative one. Pre experimental study one group pre test and post test design is used to collect the data. The independent variable of the study structured Teaching Programme on Infection control and dependent variable is knowledge and Practice of staff nurses regarding Infection control. The tool used to collect data was structured knowledge questionnaire. The study was conducted among 40 subjects; the subject was selected by Non Probability – convenient sampling technique and data was analyzed and interpreted using descriptive and inferential statistics. The overall knowledge scores of respondents were found to be 42.57% with standard deviation 3.008 in pre test, and in post test the overall knowledge scores of respondents were found to be 78.75% with standard deviation 2.49. The obtained "t" value is 24.595 is greater than the table value at 0.01(2.704) level of significance. The overall Practice scores of respondents were found to be 64% with standard deviation 1.865 in pre test, and in post test the overall Practice scores of respondents were found to be 86.5 % with standard deviation 1.252. The obtained "t" value is 6.252 is greater than the table value at 0.01(2.704) level of significance. Therefore, "t" value is found to be significant. It means there is gain in knowledge and Practice level of staff nurses. This supports that Structured teaching Programme on Infection control is effective in increasing the knowledge level of staff nurses.

Index Terms – Nosocomial infections/HAI/Structured Teaching Programme

I. INTRODUCTION

Infection is a major problem encountered in health care delivery services worldwide. It constitutes one of the most important causes of morbidity and mortality associated with clinical, diagnostic and therapeutic procedures. Hospital-acquired infections otherwise known as nosocomial infections are infections acquired in the hospital or other health-care facilities that were not present or incubating at the time of the client's admission. It includes those infections that become symptomatic after the client is discharged as well as infections among medical personnel. Most nosocomial infections are transmitted by health-care personnel who fail to put into practice standard infection prevention measures such as hand-washing procedures or change of gloves between client contacts. Nosocomial infections are a major problem in health-care facilities, resulting in extended duration of care, substantial morbidity and mortality, and excess costs. Standard precautions are recommended to prevent transmission of infection in hospitals. However, their implementation is dependent on the knowledge and attitudes of HCWs. The nurse, as a front-line caregiver should provide for the client's safety, on the basis of her own understanding of the factors which contribute to such harm.

II. OBJECTIVES OF THE STUDY:

- To assess the level of knowledge regarding infection control among the staff nurses before the administration of structured teaching programme.
- To assess the level of practice regarding infection control among the staff nurses
- To evaluate the effectiveness of Structured teaching programme on knowledge regarding infection control among the staff nurses.
- To find out the correlation between the knowledge scores and practice score regarding infection control among staff nurses.
- To determine the association between the knowledge scores of staff nurses regarding infection control with their selected demographic variables.
- To determine the association between the practice scores of staff nurses regarding infection control with their selected demographic variables.

III. ASSUMPTIONS:

- Staff nurses will have some knowledge regarding infection control
- Staff nurses may have deficit practice on infection control
- Structured Teaching Programme will enhance the knowledge of staff nurses regarding infection control

IV. METHODS:

The Conceptual Frame Work of the study was based on Staffle Beams theory. The approach used for this study was Quantitative (evaluative) one. Pre experimental study one group pretest and posttest design is used to attain the objectives of the present study. The independent variable of the study was Structured Teaching Programme on Infection control and dependent variable is knowledge and Practice of staff nurses regarding Infection control. The demographic variables selected for the study were Age, Gender, Education, Department of working, Marital status, Monthly income, Religion, Total years of clinical experience, previous knowledge, and Source of information regarding Infection control.

Population & Sample:

The target population of the present study comprises of Staff nurses from selected hospital at Surat. The pilot study was conducted to find the feasibility of the study among 10 staff nurses. The main study was conducted among 40 subjects. Non probability –convenient sampling technique was adopted to select the samples for the present study based on inclusion criteria

Sampling Criteria:

The samples were selected with the following predetermined set of criteria.

Inclusion criteria:

- Staff Nurses who are willing to participate in the study.
- Staff Nurses who are available at the time of study.

Exclusion criteria:

- Staff Nurses who are not willing to participate in study
- Staff Nurses who are not available at the time of study.

Description of the Tool:

The tool used to collect data was structured knowledge questionnaire observational practice check list. Structured questionnaire consists of 2 parts i.e., Part I and Part II

Part I: Demographic Variables like age, gender, education, department of working, Marital status, Monthly income, Religion, Total years of clinical experience, previous knowledge, and Source of information regarding Infection control.

Part II: Structured knowledge Questionnaire on Infection control consisted of general concept, infection control- define, objectives, functions, standard precautions and its components.

Data Collection:

After obtaining formal permission from Medical superintendent of the hospital, main study was conducted among 40 subjects selected by Non probability –convenient sampling technique. The investigator explained the purpose of the study and subject's willingness to participate in the study was ascertained. The subjects are assured anonymity and confidentiality of the information provided by them and written informed consent was obtained. The pre-test was conducted on by administering the structured questionnaire and also observational practice check list was assessed followed by structured Teaching programme on infection control and on the 8th day, post test was conducted by using the same tool.

Data Analysis:

The data obtained were analyzed in terms of the objectives of the study using Descriptive and Inferential statistics. A master data sheet was prepared with responses given by the participants. The plan of data analysis was as follows.

- The responses of the item in part – I Demographic profile was planned to be summarized in frequency and percentage.
- Pre and post-test knowledge scores of the participants were planned to be summarized in mean, standard deviation and mean percentage.
- Pre and post-test practice scores of the participants were planned to be summarized in mean, standard deviation and mean percentage.
- The paired't' value was planned to test hypothesis for the purpose of the effectiveness of structured teaching programme.

- The chi square value was planned to be computed in order to test hypothesis to find out the relationship between knowledge level and practice level with their selected demographic variables.

V. MAJOR FINDINGS OF THE STUDY

The findings of the study are discussed under following headings.
Section–I : Demographic profile of staff nurses.
Section–II : Knowledge and practice of staff nurses regarding infection control.
Section–III : Comparison of pretest and post-test knowledge and practice scores of staff nurses regarding infection control.
Section- IV : Correlation between knowledge and practice of staff nurses regarding infection control.
Section–V : Association of the knowledge and practice scores of staff nurses with the selected demographic variables.

Section I: Demographic profile of staff nurses.

- Age: Majority of staff 37.5% belongs to age group >35-40yrs and 27.5% of them belong to 21-25yrs and 15% of them belong to >30-35 and only 10% of them belong to >25-30 and >;40yrs respectively.
- Gender: Majority of staff nurses 82.5 % were females and only 17.5 % were males
- Education: Most of the staff nurses55% have completed GNM and only 20% have done BSC.
- Department of working: The result shows that majority of staff nurses 37.5 % are working in casuality and only 20.0 % are in OPD.
- Marital status: In relation to marital status 52.5 % of staff nurses are unmarried and only 47.5 % are married.
- Monthly income: With regard to monthly income 42.5 % of staff nurses monthly income was Rs.15000-Rs.20000 and only 10% of staff nurses monthly income was > 20000.
- Religion: In relation to religion 52.5% are Hindu and only 47.5 % of staff nurses are Christians.
- Total years of clinical experience: 32.5% have the clinical experience of 1-5 yrs and >10-15yrs respectively only >10 % of staff nurses have the clinical experience of >15yrs.
- Previous knowledge regarding – Infection control: In relation to Previous knowledge regarding infection control the result shows that 100% of staff nurses had previous knowledge on infection control.
- Source of information regarding infection control: With regard to source of information regarding infection control 72.5% of staff nurses had received information from persons and only 10% received information from print media.

Section II: : Assessment of Pre test and post test knowledge and practice of staff nurses regarding infection control:

Findings of the present study showed that the overall knowledge scores of respondents on infection control was found to be 42.57 % with standard deviation 3.008 in pre test and 78.75% with standard deviation 2.49 in post test. The overall practice scores of respondents on infection control was found to be 64% with standard deviation 1.865 in pre test and 86.5% with standard deviation 1.252 in post test.

Section III: Comparison of pre test and post test knowledge regarding infection control among staff nurses:

The present study reveals that overall mean knowledge score obtained by the participants was 42.57 % in the pre-test where as the overall knowledge obtained by the participants was 78.75% in the post-test. The overall mean practice score obtained by the participants was 64 % in the pre-test where as the overall practice obtained by the participants was 86.5% in the post-test.

The obtained “t” value 24.595 is greater than the table value (2.704) at 0.01 level of significance. Therefore, “t” value is found to be significant. It means there is gain in knowledge level of staff nurses. The obtained “t” value 6.525 is greater than the table value (2.704) at 0.01 level of significance. Therefore, “t” value is found to be significant. It means there is gain in practice level of staff nurses. It evidenced that developed Structured teaching programme was effective in improving the knowledge of staff nurses regarding infection control.

Section IV: Association between the pre test and post test knowledge and practice scores of staff nurses with their selected demographic variables:

It is evident that the selected demographic variable was not significantly associated with pre and post test knowledge scores of staff nurses. It is also evident that the obtained chi square value is less than the table value of selected demographic variable of staff nurses was not significantly associated with practice scores of staff nurses, except for department of working where it is significantly associated.

VI. NURSING IMPLICATIONS:

The findings of the study have implications in the field of Nursing practice, Nursing Education, Nursing administration and Nursing Research.

Nursing practice:

- It helps the health care professionals to gain knowledge regarding infection control.
- Nursing professionals can conduct educational sessions to other health care workers including junior health assistants, health inspectors, village health guides, local dais etc. to prevent health care associated infections.
- It helps the health care professionals to gain knowledge regarding prevention of occupational exposure and take immediate action towards post exposure prophylaxis
- Nursing professionals can motivate the significant others regarding infection control to develop safe practice.

Nursing education:

- As a nurse educator, there are abundant opportunities for nursing professionals to educate the students regarding infection control.
- The study can be extended for educating health workers so that health care associated infections can be prevented
- This study stresses the need for in-service education for the nursing personnel in order to teach regarding infection control.

Nursing Administration:

- The nursing administrator can take part in developing protocols, standing orders in teaching infection control.
- The nursing administrator can appoint nursing professionals those who have trained in infection control.
- The nursing administrators should explore and encourage innovative ideas in the preparation of an appropriate teaching material. She should organize sufficient manpower, money and material for disseminating information regarding infection control

Nursing research:

- This study helps nurse researches to conduct researches on other aspects like hand hygiene, personal protective equipments, sterilization and disinfection, biomedical waste management, prevention of needle stick injuries and post exposure prophylaxis.

VII. RECOMMENDATIONS:

- On the basis of the findings of the study following recommendations have been made:
- A similar study can be replicated on a large sample to generalize the findings.
- A similar study can be conducted in other groups like students and other health practitioners.
- An experimental study can be undertaken with a control group of effective comparison of the result.
- A study can be carried out to evaluate the effectiveness of structured teaching programme on Infection control.

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