



A study to assess the effect of structured teaching programme (STP) on knowledge regarding prevention of surgical site infection (SSI) among staff nurses working in selected hospital of Vidharbha Region, Maharashtra

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Abstract

Introduction: A surgical site infection (SSI) occurs after surgery, where the surgery took place, an infection develops in about 1 to 3 out of every 100 patients who have surgery². WHO reported that the prevalence of health-care-associated infections in low-income and middle-income countries was 2 to 20 times higher than in high-income countries, affecting and 66% patients who had surgery¹ Surgical site infections are among the most preventable health-care-associated infections and are a substantial burden to health-care systems and service payers worldwide in terms of patient morbidity, mortality, and additional costs.

Material and Methods: An experimental study was used to assess the effectiveness of Structured teaching programme on knowledge regarding prevention of surgical site infection among 100 staff nurses working in selected hospital at Vidharbha region, Maharashtra. The sample was selected by using convenient sampling technique. The self-administered questionnaire was used to assess the knowledge of staff nurses regarding prevention of SSI. After content validity of the tool, the reliability of tool was established by using test re test method. The pilot study was conducted among 10 staff nurses working in selected hospital (other than study area) to find out the feasibility of major study. The investigator has obtained formal permission from Researcher Committee, Institutional Ethical committee and informed consent from each staff nurses for data collection. The investigator has fixed the data and time and data collected from investigator himself.

Results: The study finding reveals that the majority of staff nurses were found average knowledge Before intervention, had mean knowledge score of 10.6 ± 3.3 is average and After intervention, had mean knowledge score is excellent and very good 15.6 ± 4.87 .

Effectiveness of STP on prevention of SSI among staff nurses The Student's paired 't' test shows significant difference (17.3) at 0.05% level There is no significance association between knowledge scores in to age in years, gender, job experience (years) & source of information of staff nurses working in selected hospital at Vidharbha region, Maharashtra.

Keywords: Surgical site infection (SSI), prevention of SSI, structured teaching programme (STP), staff nurses, knowledge assessment, infection control, postoperative care

Introduction

Health care-associated infections are frequent and represent a high burden among patients and hospitals in terms of morbidity, mortality, prolonged length of hospital stay and additional cost. Health care associated infections are avoidable infections that affects hundreds of millions of people each year worldwide^[1].

A surgical site infection (SSI) occurs after surgery, where the surgery took place, an infection develops in about 1 to 3 out of every 100 patients who have surgery. Some of the common symptoms of a surgical site infection identified as redness and pain around the area where of surgery, drainage of cloudy fluid from the surgical wound and fever^[2].

The aseptic surgery in 1876 Robert Koch discovered that infection was caused by an identifiable living microorganism. Until the late 19th century very little was understood about infection control most surgical wound becomes infected and 70-80% of cases with extensive infection resulted in death. The chain of infection observer that Wilson, pathogenic microorganisms are transmitted via the infection agent's reservoir, means of transmission, susceptible host, portal of entry and portal of exit^[3].

Patient safety is an important concern for all health care professionals including nurses are considered as the "heart and soul" of every hospital. Nurse's knowledge and practices play a significant role to control infections which ultimately enhances quality care of patients^[4].

Objectives

The objectives of study are;

Primary objective

To assess the effect of STP on knowledge regarding prevention of surgical site infection SSI among Staff Nurses.

Secondary objective

To assess the knowledge of Staff Nurses regarding prevention of surgical site infection before intervention.

To find out the effect of STP on prevention of surgical site infection SSI among staff nurses after intervention.

To find out the association between post test knowledge score of staff nurses and their demographical variables.

Materials and Methods

Data shall be collected by the research scholar herself. Pretest shall be conducted by using STP on prevention of surgical site infection SSI among Staff Nurses. Before intervention. However, the data will be collected by the investigator. Intervention on the same day of pretest, a STP early signs and immediate management of myocardial infarction shall be used to ANM students of selected nursing school at Amravati. Post test after one week of intervention, post test shall be conducted by using same tool that was used for pre-test.

Statistical Analysis

The data was analyzed by descriptive and inferential statistics. Demographic data was analyzed using frequency and percentage, data from the questionnaire before and after planned teaching program administered was also analyzed using frequency, percentage and ‘t’ test. The association between knowledge findings and demographic variables was found by using t test and chi square.

Results

Section 1: Distribution of staff nurses according to their Demographic variables.

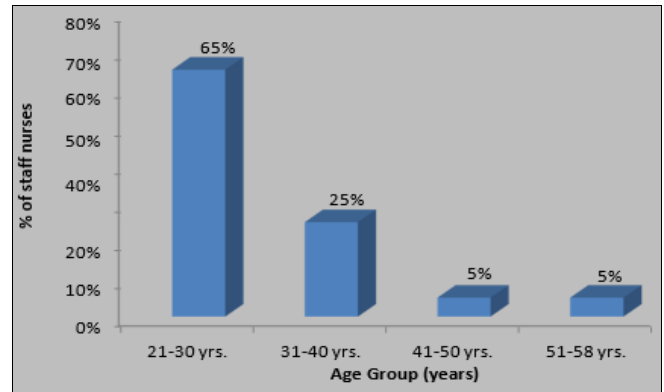


Table 4.5: Frequency and percentage wise distribution of staff nurses with regards after intervention level of knowledge regarding prevention of surgical site infection n=100

Level of knowledge score	Score Range	Percentage score	Level of after intervention Knowledge Score	
			No of staff nurses	Percentage
Poor	1-6	0-20%	4	4%
Average	7-12	21-40%	24	24%
Good	13-18	41-60%	52	52%
Very Good	19-24	61-80%	12	12%
Excellent	25-30	81-100%	8	8%
Mean ± SD			15.60 ± 4.87	
Mean %			52 ± 16.24	
Range			5 to 27	

The frequency and percentage wise distribution of staff nurses from selected hospital at Vidarbha region, Maharashtra according to after intervention level of knowledge regarding prevention of surgical site infection. The levels of knowledge were seen into 5 categories, poor, average, good,

very good and excellent. 4% of staff nurses in post test had poor level of knowledge score, 24% had average, 52% had well, 12% had very well and only 8% had excellent level of knowledge score. Mean knowledge score of the staff nurses in after intervention was 15.60 ± 4.87 (Table - 4.5).

Table 1: Area of knowledge score of staff nurses according to mean, standard deviation, mean percentages on prevention of SSI after intervention n=100.

Knowledge area	Maximum obtain score	Mean	SD	Mean%
Various Factors influencing SSI	4	2.87	0.77	71.75%
Preventive measures of SSI	6	3.19	1.27	53.16%
Preoperative of SSI	5	2.20	1.03	44%
Intra operative of SSI	4	1.62	1.06	40.50%
Post-operative of SSI	11	5.71	2.11	51.90%
Overall	30	15.60	4.87	52%

Area wise knowledge score after intervention regarding prevention of SSI among staff nurses. The knowledge score was categorized in headings like Various Factors influencing SSI, Preventive measures of SSI, Preoperative of SSI, Intra operative of SSI and Post-operative of SSI. In After intervention knowledge score regarding Various Factors influencing SSI is 2.87 (71.75%), Preventive measures of SSI is 3.19 (53.16%), Preoperative of SSI is 2.20 (44%), Intraoperative of SSI is 1.62 (40.50%) and in area of Post-operative of SSI knowledge 5.71(51.90%) and over all knowledge level score was 15.6 (52%).

Mean difference of knowledge between pre-test and post test knowledge score of staff nurses with regards to prevention of SSI revealed that mean on pre- test of the knowledge score to the staff nurses was 10.6 and mean of post-test is raised to 15.60. Which indicates that mean post knowledge score was higher i.e. 15.6 ± 4.8 as compared with mean pre-test knowledge score which was 10.6 ± 3.3 (Table - 4.7). The Student’s paired t test implies that the difference in the pre-test and post test knowledge among staff nurses from selected hospital was 17.3 which are statistically highly significant at 0.0001% level of significance.

Table 2: Mean difference of knowledge score regarding prevention of SSI among staff nurses before and after intervention n=100

Overall	Mean	SD	Mean difference	t- value	p- value
Pre-test	10.6	3.30	4.91±2.82	17.37	0.0001, S
Post test	15.6	4.87			

(Df = 99) (t value = 2) (p =0.0001)

Discussion

An experimental approach was used to assess the knowledge of staff nurses working in selected hospital, according to STP was prepared followed by preparation of blue print. The prepared tool was validation by various experts and reliability by Test re test methods was used to assess the reliability of tool. Further the pilot study was

conducted among 10% of sample by using validated tool among staff nurses working in other than study setting.

The result of hypothesis revealed that there is significant difference in knowledge score of pre-test and post test knowledge among staff nurse on prevention of SSI was effective.

Nursing Implication of the Study

The nurse's role may be essentially unchanged or it may entail different duties by possessing and practicing competencies making nurses better prepared to handle all type of emergencies.

The investigator has drawn the following implications from the study which is of vital concern to the field of Nursing Service, Nursing Education, Nursing Administration and Nursing Research.

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