



Review Article

A STUDY TO ASSESS THE EFFECTIVENESS OF SELF-INSTRUCTIONAL MODULE (SIM) ON KNOWLEDGE REGARDING PREVENTION OF CARDIOTHORACIC POST-OPERATIVE COMPLICATIONS AMONG STAFF NURSES WORKING IN SELECTED HOSPITAL AT TUMKUR, KARNATAKA, INDIA

Ramu K^{1*}, Deelip S. Natekar², Dr. Bharati³ and Roopa GB⁴

¹Principal, R.R. College of Nursing, Bangalore, Karnataka, India

²Principal, BVVS Sajjalashree Institute of Nursing Sciences, Navanagar, Bagalkot, Karnataka, India

³Principal, Karnataka College of Nursing, Bangalore, Karnataka, India

⁴Shridevi College of Nursing, Tumkur, Karnataka, India

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ABSTRACT

Background: Self-instructional module (SIM) on knowledge among staff nurses serves in order to prevent cardiothoracic post-operative complications. **Objectives:** To assess the Effectiveness of self-instructional module (SIM) on knowledge regarding prevention of cardiothoracic post-operative complications among staff nurses working in selected hospital at Tumkur, Karnataka, India. **Methods:** The sample were divided in to group with pre-test and post-test pre experimental research design and all the relevant data were entered in a preformed format. **Statistics:** Percentage calculation was done to know the self-instructional module (SIM) on knowledge regarding prevention of cardiothoracic post-operative complications among staff nurses. In order to establish reliability, Test- Retest method and Karl Pearson's correlation coefficient was computed from the scores and the obtained 'r' value was obtained. **Results:** In our study 90% belonged to age group of 20-24 years and 10% to 25-30 years and none belongs to the age group of 36 years of age and above. Males were 90% and females were 10 %. In our study, 48% were general nurse and 52% were BSc nurses. Nurses serving in cardiothoracic intensive care unit were 58%, 32% were serving in surgical care unit, 10% were serving in intensive coronary care unit and none were serving in respiratory intensive care units. Clinical experiences constituted 84% having less than 3 years of experience, 12% had 3 - 6 years of experience and 4% had greater than 9 years of experience. Among the sample, 83% had exposure to training programme and 13% had exposure to television and 3% had exposure to newspaper. Knowledge level of the sample was 90% had below average knowledge, 10% had average knowledge, no one had above average knowledge on prevention of cardiothoracic post-operative complication in pre-test but in post-test no one had below average, 10% had average knowledge and 90% had above average knowledge on prevention of post-operative cardiothoracic complications. **Conclusion:** This shows that there is very high significance difference between the Knowledge levels of pre-test & post-test. By means of that we can conclude that the administered SIM on prevention of cardiothoracic post-operative complications was very effective. The implementation of self-instructional module improved the overall knowledge of Nurses regarding the prevention of cardiothoracic post-operative complications. Furthermore, knowledge has to improve in the areas like screening and prevention of post-operative cardiothoracic complications and there must be constant reinforcement to the staff nurses by conducting various continuing educational programmes.

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INTRODUCTION

Certain rules or standards are needed for all practicing professional¹. An integral part of health care system in nursing as they direct their dutiful endeavor for the promotion, maintenance and restoration of health. They also have legal

responsibilities as they deal with health care of consumers. Nursing practice require understanding of the law and they should be vigilant about it². Continued nursing education needs a collective activity that increase the knowledge and also improve their performance to complete their own task and jobs activity³. For human progress, continuing education plays an important role as they get special knowledge during the work.

*Corresponding author: **Ramu K**

Principal, R.R. College of Nursing, Bangalore, Karnataka, India

New technology has given the special importance to knowledge, attitude and behavior of workers that has changes over a period of time. Hence updating the knowledge leads to better public health. Disadvantages is the lack of proper knowledge regarding current knowledge and hence participating in continuing education programs is the most common criterion that the specialized medical and nursing centers used to reconfirm the people's medical records⁴.

The study is based on Betty Neuman theory which states that the homeostatic process is the process by which an organism maintains its equilibrium and consequently maintains its health under varying conditions. The objective of this study was to find the following

- To assess the knowledge regarding prevention of cardiothoracic post-operative complications among staff nurses before administering self-instructional module (SIM)
- To administer SIM on knowledge regarding prevention of cardiothoracic post-operative complications among staff nurses.
- To evaluate the effectiveness of self-instructional module on knowledge regarding prevention of cardiothoracic post-operative complications, among staff nurses in terms of gain in knowledge by comparing pre-test and post test scores.
- To find out the association between the post-test knowledge score with selected demographic variables.

METHODOLOGY

One group with pre-test and posttest pre experimental research design, was selected for the present study

Hypothesis

H₁: The post-test knowledge scores of staff nurses will be significantly higher than the pre- test knowledge scores after administration of self-instructional module on prevention of cardiothoracic post-operative complications.

Variables under study

In the present study, the independent variable was self-instructional module, the dependent variable was knowledge of staff nurses and attribute variables included were age, gender, educational status, years of clinical experience, area of clinical experience and source of previous exposure of information.

Setting of the study

The study was conducted at Tumkur hospitals, Tumkur, Karnataka.

Population

Population selected for the study were registered staff nurse working in Tumkur hospital, Karnataka, India.

Sample & Sampling technique

Samples were 30 Staff Nurses working in Tumkur Hospital, Karnataka. Non probability convenient sampling technique was used to conduct the present study and who were available at the time of data collection sample size was 30. Sample was selected by convenient sampling technique.

Development and description of SIM

The self-instructional module was developed based on the objectives, review of related research and opinion of experts. The self-instructional module was titled as "Prevention of cardiothoracic post-operative complications" The self-instructional module was developed based on the objective of this study to enhance the knowledge of staff nurses regarding prevention of cardiothoracic post-operative complications. It consists of following subheadings: introduction, definition, incidence of cardiothoracic post-operative complications, types of cardiac and thoracic complications, etiological, clinical manifestations, diagnostic studies, management and preventive measures of cardiothoracic post-operative complications.

Description of Tool

The tool was organized under two sections.

Section I consist of 6 items of demographic data of subjects which included age, gender, educational status, years of clinical experience, area of previous clinical experience, previous exposure to the information on prevention of cardiothoracic post-operative complications.

Section II consists of 32 and it was divided into three parts. Part A consisted of items on general information regarding cardiothoracic post-operative complications, Part B consisted of items on prevention and management of post-operative cardiac complications and Part C consisted of items on prevention and management of post-operative thoracic complications. Each item was given the scores 1 for right answer and 0 for wrong answer. According to the expert's suggestion two questions were added in part A and the tool was finalized with 32 questions.

The scores were classified into the following categories as Below average (< 50%) with range score of 1 – 16, Above average (51 – 74%) with range score of 17 – 23 and Above average (> 75%) with range score of 24 – 32.

Content Validity

Content validity of the tool was done by the experts, comprising of cardiothoracic surgeon, statistician, nursing experts from medical surgical nursing department. The experts were requested to give their opinion and suggestion regarding the relevance of the tool for modification and to improve the consistency of the items. Modifications were done by the experts and ensured the clarity and validity of the tool.

Reliability of the tool

In order to establish reliability, Test- Retest method and Karl Pearson's correlation coefficient was computed from the scores and the obtained 'r' value was 0.91, hence the tool was found highly reliable for conducting the final study.

RESULTS

In our study 90% belonged to age group of 20- 24 years and 10% to 25-30 years and none belongs to the age group of 36 years of age and above. Males were 90% and females were 10 %. In our study, 48% were general nurse and 52% were BSc nurses. Nurses serving in cardiothoracic intensive care unit were 58%, 32% were serving in surgical care unit, 10% were serving in intensive coronary care unit and none were serving in respiratory intensive care units. Clinical experiences constituted 84% having less than 3 years of experience, 12% had 3 - 6 years of experience and 4% had greater than 9 years

of experience. Among the sample, 83% had exposure to training programme and 13% had exposure to television and 3% had exposure to newspaper. Knowledge level of the sample was 90% had below average knowledge, 10% had average knowledge, no one had above average knowledge on prevention of cardiothoracic post-operative complication in pre-test but in post-test no one had below average, 10% had average knowledge and 90% had above average knowledge on prevention of post-operative cardiothoracic complications.

DISCUSSION AND CONCLUSION

Nursing Education

Nursing education aims at preparing nurses who will be able to plan and provide comprehensive care to individuals and families after the completion of educational programme. The nurse educator can help the nursing students to gain in depth knowledge on prevention of cardiothoracic post-operative complications by explaining them in detail regarding cardiothoracic post-operative complications, adequate opportunities to be provided for the student nurses to work in various post-operative settings like surgical intensive care unit, coronary intensive care unit, Respiratory Intensive Care Unit to achieve effective skills related to care of client undergoing cardiothoracic surgeries. Nurse educators can motivate nursing students to participate in seminars, attending conferences and workshops related to prevention of cardiothoracic post-operative complications to gain additional knowledge which will help them to know in detail regarding post-operative cardiothoracic complications.

Nursing Practice

The nurse must possess highly specialized skills and necessary knowledge essential for professional nursing practice. Nurses have to follow the instructions during caring the clients undergoing cardiothoracic surgeries, instruct the nurses about their role in prevention and management of cardiothoracic post-operative complications. Nurses must improve their knowledge regarding various procedures like providing chest physiotherapy, spirometry exercises, providing postural drainage and educating the clients regarding importance of diet, exercise, care during post-operative period by participating in clinical teaching programmes, in-service education programmes and continuing education programmes related to prevention of cardiothoracic post-operative complications.

Nursing Administration

Nurse administrator ensures professional practice and research based practice, which is clinically effective. Nurse administrator can organize the staff development programmes like inservice education programmes and continuing education programmes for nurses to update their knowledge and improve their skills and attitudes regarding prevention and management of cardiothoracic post-operative complications and in providing comprehensive care to a client's undergoing cardiothoracic surgeries. Nurse administrator can carry out continuing nursing education programmes for health care providers to develop efficient nurse practitioners. Nurse administrators can develop instructions for caring the clients undergoing cardiothoracic surgeries for prevention and management of cardiothoracic post-operative complications.

Nursing Research

Nursing research can be done in many aspects of cardiothoracic post-operative complications, which could be helpful in improving the knowledge levels of Nurses regarding cardiothoracic post-operative complications to decrease the incidence and mortality and morbidity rates. Research can be conducted among staff nurses and BSc nursing students regarding prevention and management of post-operative cardiothoracic complications.

CONCLUSION

The study has showed that there was an overall improvement of knowledge of staff nurses after implementation of SIM. Furthermore, knowledge has to improve in the areas like screening and prevention of post-operative cardiothoracic complications and there must be constant reinforcement to the staff nurses by conducting various continuing educational programmes.

Recommendation

Based on the findings the following recommendations are proposed for future researchers.

- A similar study can be carried out in various settings among Nurses.
- A similar study can be replicated with experimental and control group.
- A similar study can be conducted on a large sample.
- A comparative study can be conducted to evaluate the effectiveness of two different preventive measures.
- A comparative study can be conducted to evaluate the effectiveness of two different teaching methods.
- A descriptive study can be conducted among the nursing personnel.
- A longitudinal study can be conducted to assess change in the attitude after the awareness program.

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