

EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON POST OPERATIVE EXERCISES: KNOWLEDGE AND PRACTICE AMONG PATIENTS UNDERGONE MAJOR ABDOMINAL SURGERY

A. Amuthu* & S.S. Sharmila Jansi Rani**

*Professor, P.S. College of Nursing, Kanyakumari, Tamilnadu, India.

**Professor, Christian College of Nursing, Neyyoor, Kanyakumari, Tamilnadu, India.

ABSTRACT:

Postoperative pulmonary complications contribute significantly to the overall perioperative morbidity and mortality. Post operative exercises are the part of post operative care, as they are essential for speedy recovery, proper breathing and also for the prevention of respiratory complications such as atelectasis and pneumonia, circulatory complications such as deep vein thrombosis and wound dehiscence. Preoperative teaching of post operative exercise prepares the client physically and emotionally for the impending surgery. This study evaluates the effectiveness of structured teaching programme on post operative exercises in terms of knowledge and practice among patients undergoing major abdominal surgeries in selected hospital, in Trichy, with a view to teach the post operative exercises to enhance the knowledge and practice of major abdominal surgery patients. Knowledge questionnaire to assess the knowledge regarding post operative exercises and observation checklist to assess the practice show there is a positive correlation between knowledge and practice among the post operative patients. It is concluded that the patients who have undergone major abdominal surgery and received structured teaching programme had improved knowledge and practice about post operative exercises. There is a significant association between practice and education, previous history of surgery. Nursing education has to help the nursing student to understand the advantages and importance of post operative exercises and to provide better quality of life.

Key words: Post-operative complications, Major abdominal surgeries, Post operative exercises, Structured teaching programme, Knowledge, Practice.

ABOUT THE AUTHOR:



The author Mrs. Amuthu is a Professor in PS College of Nursing, Kanyakumari in Tamilnadu, India. She has published articles in Indian journals and presented papers in various national conferences.

INTRODUCTION

According to National Health Care Quality Report, four among every ten Indians suffer from post operative complications after abdominal surgery. It was found that deep vein thrombosis and its complications including pulmonary embolism are major health problems resulting in more than 2,60,000 hospital admission and 1,00,000 deaths in every year. It has been estimated that the incidence of post-operative complications is 26.78 percent among men, while it is 27.65 percent among women. Surgical procedures can disrupt the patient's personal, professional, economic life and the physical body. There are varieties of post-operative exercises which can be taught to the client during the pre operative period itself, if the surgery is planned ahead. Preoperative teaching is a vital part of nursing care studies and it had shown that preoperative teaching reduces both the client's anxiety and postoperative

complications as well, by increasing their satisfaction with the surgical experience. Nursing profession has been moved from the cure model to care model. The prevention and health promotion are recognised as important functions of the contemporary nurse. The patient's education regarding post operative exercise is the best way to prevent and to enhance the good health status.

CONCEPTUAL FRAMEWORK

In the present study conceptual framework is based on the modified Rosenstoch's Health Belief Model (1974). Conceptual framework for the study is developed from the existing theory which helps in defining the concepts of interest by proposing the relationship among them. This model explains a decision to take health action which is based on patient's perceived knowledge on post operative exercises. The model also includes cues to action which are internal or external stimuli to particular health behaviour.

ASSUMPTION

Post operative complication is a threat to individual's life. Prevention of post operative complication contributes to better quality of life.

METHODS AND MATERIALS

Research approach/ design

For the present study evaluative approach and pre experimental design with one group pre-test and post-test design was considered appropriate as it aimed to evaluate the effectiveness of structured teaching programme on post operative exercises in terms of knowledge and practice among patients undergoing major abdominal surgeries.

Research setting

The study was conducted in Dr. G. V. N. Institute of Medical Sciences and Society, Singarathoppe, Trichy.

The population of the present study was the patients undergoing major abdominal surgery. The total sample size was 30 patients undergoing major abdominal surgery. Non-probability convenient sampling technique was used to select the sample. The tool used for the research study was Knowledge Questionnaire and Observation Checklist. Part – I includes Demographic Proforma such as sample number, age, sex, education, weight of the patient and previous history of surgery. Part – II consists of knowledge assessment tool to assess the knowledge related to post operative exercises with 20 items. Part – III includes observation checklist on practice of post operative exercises with 32 items. Structured teaching programme was given based on post operative exercises including turning exercise, leg exercises, breathing exercise, coughing exercise, and early ambulation. Lecture and demonstration were the teaching methods.

Criterion Measure

Knowledge Assessment Tool

Max. Knowledge score = 100%, Min. knowledge score = 0%

Adequate knowledge score (76 – 100%), moderately adequate knowledge score (51 – 75%),

Inadequate knowledge score (0 – 50%)

Each question contains four options. For correct option the investigator placed one mark and for the wrong options no mark was awarded.

Observation Checklist on Practice

Max. Practice score = 100%, Min. practice score = 0%

Good practice score (76 – 100%), Average practice score (51–75%),

Poor practice score (0 – 50%)

Each observation contained three options. If the patient practised correct technique, the investigator placed two marks, if not, the investigator placed zero mark and if they practised partially, the investigator placed one mark.

Data Collection Procedure

Prior to data collection procedure the formal permission was obtained from the dissertation committee and from the departmental heads of Surgery and Nursing. The investigator explained to the patients the purpose of gathering

information after giving self introduction. A good rapport was established with the subjects. They were assured that their responses would be kept confidential and information would be used only for research purpose. Verbal consent was obtained from all the participants of the study. Pre-test was conducted for participants regarding knowledge and practice on postoperative exercise, then the structured teaching programme was given to the major abdominal surgery patients, and on the post operative days three observations were made by using observational checklist for practice. The knowledge was assessed by using knowledge questionnaire during post-test.

RESULTS

Table – 1 Distribution of samples according to demographic characteristics

Sl. No.	Demographic Characteristics	N	%
1.	Age of the Patient		
	20 – 35 years	2	6.7
	36 – 50 years	11	36.7
	51 – 65 years	17	56.7
2.	Sex (Gender)		
	Male	6	20.0
	Female	24	80.0
3.	Education		
	High School	25	83.3
	Graduates	5	16.7
4.	Weight of the Patient		
	35 – 45kg	2	6.7
	46 – 55kg	16	53.3
	56 – 70kg	12	40.0
5.	Previous History of Surgery		
	No	27	90.0
	Yes	3	10.0

The above table shows the distribution of subjects according to demographic variables.

Table – 2 Percentage distribution of knowledge score of patients regarding postoperative exercise during pre-test and post-test

Study Group n = 30

KNOWLEDGE	PRE-TEST		POST-TEST	
	N	%	N	%
Inadequate	26	86.7	3	10.0
Moderate	4	13.3	17	56.7
Adequate	Nil	Nil	10	33.3

From table-2, the following inference could be made:

In the post-test, the knowledge score has improved among the subjects, and so the structured teaching programme was found to be effective.

Table – 3

Percentage distribution of practice score of patients regarding postoperative exercise during pre-test and post-test

Study Group n = 30

PRACTICE	PRE-TEST		POST-TEST	
	N	%	N	%
Poor	26	86.7	Nil	Nil
Average	4	13.3	21	70.0
Good	Nil	Nil	9	30.0

From table – 3 the following inferences could be made:

In the post test, the practice score has improved among the subjects. Hence the structured teaching programme was found to be effective

Table – 4

Comparison of pre-test and post-test knowledge and practice scores after structured teaching programme

Study Group n = 30

Knowledge and Practice	Pre-test	Post-test	Difference		Paired 't' test
	M	M	M	SD	
Knowledge	30.67	67.83	37.167	12.012	16.948***
Practice	15.10	66.35	51.250	16.010	17.533***

*** Significant at 0.001 Level

From table – 4, the following inferences could be made:

In order to find out the differences, paired "t" test was carried out to test the significance of difference between two sample means such as pre-test and post-test knowledge and practice score. The calculated "t" value for knowledge was 16.948 and that for practice was 17.533 > than the table value, which was significant at 0.001 level.

Table -5

Correlation between knowledge and practice scores of pre-test and post-test

(n = 30)

Group N = 30	Correlation Coefficient between knowledge and practice	
	Pre-test (r)	Post-test (r)
Study Subjects	0.646 **	0.711 **

Significant at 0.01 Level

From table 5, it is clear that there is a positive correlation between knowledge and practice at <0.01 level. Hence, it shows when the knowledge was high, practice was also found to be good.

Association between demographic variables and knowledge among postoperative patients

In order to find out the association between demographic variables and knowledge, the chi-square value was calculated. The calculated value was > than the table value in education and previous history of surgery which was significant at $p < 0.01$, $p < 0.05$ level. The other variables such as age, sex, and weight show no significant association.

Association between demographic variables and practice among postoperative patients

In order to find out the association between demographic variables and practice, the chi-square value was calculated. The calculated value is > than the table value in education and previous history of surgery which was significant at $p < 0.001$, $p < 0.01$ level. The other variables such as age, sex, and weight show no significant association.

DISCUSSION

In the present study, majority of the subjects (86.7%) had inadequate knowledge in the pre-test regarding postoperative exercises. In the post-test (56.7%) had moderate knowledge. Regarding practice, majority of the subjects had poor level of practice. In the pre-test and in the post-test (70%) had average level of practice. In the comparison of pre-test and post-test knowledge and practice scores, the calculated "t" value for knowledge was 16.948 and that of practice was 17.533 > than the table value, which was significant at 0.001 level.

The above findings were supported by the study conducted by Selvin Jose (2002) to find the effectiveness of structured teaching programme. The findings revealed that the knowledge and practice scores of the subjects in the experimental group had improved. Regarding correlation between knowledge and practice it was found that there was a positive correlation at $P < 0.01$ level. Hence, it shows that when the knowledge is good the practice is also found to be good.

Association between knowledge and practice with demographic variables, showed that there was a significant association between knowledge and selected demographic variables such as education, significant at $P < 0.01$ level and previous history of surgery significant at $P < 0.05$ level and there was a significant association between practice and selected demographic variables such as education, significant at $P < 0.001$ level and previous history of surgery at $P < 0.01$ level. The findings were supported by Shuldhham (1997) who concluded that the structured teaching on postoperative exercise was effective in enhancing knowledge and practice.

CONCLUSION

It is concluded that the patients who had undergone major abdominal surgery and who received structured teaching programme had improved knowledge and practice about postoperative exercises. Nursing education has to help the nursing students to understand the advantages and importance of postoperative exercises and to provide better quality of life.

REFERENCES

1. Clement [2005]. Early Ambulation and Postoperative Recovery, *Nightingale Nursing Times*, Vol. 4 [5], 26-28.
2. Gibbs, N.H. [2003]. Venous Thrombosis of the Lower Limbs with Particular Reference to Bed Rest, *The Nursing Journal of India*, Vol.84 [7], 26-29.
3. Hall, J.L. & Kathlecn, J. [2004]. Exercise and Human Need Therapeutic Exercise Foundations & techniques, *British Medical Journal of Nursing*, Vol.26, 73-75.
4. Ajayi, O.O & Pandolfino, R.O. [2004]. Abdominal Wound Dehiscence, *African Journal of Nursing & Medical Science*, Vol. 17[4], 133 -140.
5. Indian Express [2004]. Risk Factors for Postoperative Complications, Sep-22.
6. Patricia, A. Potter. [2007]. Basic Skills and Procedures, Missouri, Elsevier India Private Limited.
7. Rajalakshmi [2006]. The Effectiveness of Preoperative Teaching on Postoperative Exercises in Preventing Selected Postoperative Complications of Patients Subjected to Abdominal Surgeries.
8. Suzanne, C. Smeltzer [2004]. Medical Surgical Nursing, Philadelphia, Lippincott Williams & Wilkins.
9. Selvin, Jose [2002]. A Study to Assess the Effectiveness of Structured Preoperative Teaching Regarding Complications in Patients undergoing Major abdominal Surgeries.
10. Bio Med Central publications [2012]. Preoperative Inspiratory Muscle Training in Patients undergoing Open Abdominal Surgery. <http://www.systematicreviewsjournal.com/content/1/1/63>.