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A study to evaluate the effectiveness of schedule ambulation on quality of life among patient who had undergone abdominal surgery in selected hospital at Chennai

Vincy Selvan and Dr. S Indira

Abstract

Background: Ambulation is the ability to do things independently with or without assistive devices. Early ambulation is one of the most crucial things patient can do after surgery to prevent post-operative complications like hemostatic pneumonia, post-operative fever, wound infection, venous stasis, constipation. Post-surgical ambulation provides large benefits for all patients such as promotes blood flow, stimulates circulation, quicker wound healing, increases muscle tone and strength and improves patient feeling of independence, mood and self-esteem.

Objectives: To evaluate the effectiveness of scheduled ambulation on quality of life among patient who had undergone abdominal surgery in the study group and control group.

Materials and Methods: A quantitative research approach was adopted to assess the effectiveness of scheduled ambulation on quality of life among patient who had undergone abdominal surgery. A pre-experimental pretest, posttest research method was adopted to determine the effectiveness of scheduled ambulation on quality of life among patient who had undergone abdominal surgery. The samples were selected by using Computer assisted sampling technique was used to assign the patients randomly 75 patients were assigned to study group and 75 patients were assigned to control group. The setting of study in Sir Ivan Stedford Hospital and GJ Multispecialty hospital, Chennai.

Result: The result reveals that effectiveness of scheduled ambulation on quality of life among patient who had undergone abdominal surgery was related to the hypothesis of the study.

Keywords: Quality of life and abdominal surgery

Introduction

Abdominal surgery is a common term applicable for surgeries conducted in any region in abdomen such as large intestine, small intestine, gallbladder, stomach, liver, appendix, pancreas, esophagus and spleen. Though there may be various reasons to conduct such surgical procedures which might include tumors, obstruction, infection or inflammatory bowel diseases, these are collectively called as abdominal surgery.

Ambulation is a chief postoperative care component after abdominal surgery. Its advantages were noticed initially in 1940's, when early ambulation was noted to hasten recovery and decrease the postoperative pulmonary complications incidence. It involves an upright position seems to be of huge advantages in the period of early postoperative with evidence of enhancement in pulmonary function (Nielsen *et al.*, 2017). The ambulation intervention is actually supported by the structure protocols or physicians orders. Early ambulation as a standard optimal practice is randomly executed in the postoperative patients on the community hospitals' health unit. Early ambulation supports the client in attaining the results of capability to move every joints individually by overall extent of movement and mass strength of muscles. Early ambulation occurs from the fact that the recovery of tissue and also return of regular everyday function might rely upon the movement which occurs during the post-operative recovery phase. According to (Lewis *et al.*, 2015), early ambulation is the major common nursing measure for preventing the postoperative complexities. (Kalisch *et al.* 2012) specified that the ambulation activities is related to the raised muscle tone, accelerating circulation causing prevention of venous thromboembolism (VTE) and venous

stasis, improved genitourinary and gastrointestinal function, sustaining respiratory function and increased major capacity.

After abdominal surgery the patient freedom of movement is limited or restricted due to intravenous infusion. Various tubes and drains. Amongst the adverse effect of lengthy bed rest such as slowing of the basal metabolic rate, decrease in muscle strength, increased vulnerability to pulmonary and urinary infection. Circulatory problems such as thrombosis and embolism. Psychological problems such as stress, sleeplessness, loss of appetite, mood swing, fatigue and restlessness. In order to reduce all the above complications early ambulation helps the patient to develop self-confidence, reduce anxiety and ensure a sense of participation in care.

Mai-Brih Tolstrup *et al.* (2019) conducted a study on chronic pain, functional impairment and quality of life among emergency abdominal surgery patients. The purpose of the study is to evaluate the gastrointestinal Quality of life and the risk factors for CPSP after emergency abdominal surgery. 435 patient undergoing emergency abdominal surgery were included in the study pain related functional impairment and quality of life were measured using the activity assessment scale and gastrointestinal Quality of life questionnaire. The result shows that 73% median age was 69 years (18- 95) 56.4% female who experienced CPSP and had low gastrointestinal Quality of life the researcher identified 95%CI (2.4-10.5), $p < 0.01$ and age < 60 , 95% CI (1.2-3.8) $p = 0.01$ as independent risk for CPSP. 45% of all patient experienced low Quality of life. Thus the researcher concluded that CSPS and low GIQOL were common after abdominal surgery.

Problem Statement

A Study to evaluate the effectiveness of schedule ambulation on quality of life among patient who had undergone abdominal surgery in selected hospital at Chennai.

Objectives

1. To evaluate the effectiveness of scheduled ambulation on quality of life among patient who had undergone abdominal surgery in the study group and control group.

Materials and Methods

Research Approach: Quantitative research approach was adopted for the study to assess the effectiveness of scheduled ambulation on quality of life among patient who had undergone abdominal surgery.

Research Design: A pre- experimental pretest, posttest research method was adopted to determine the effectiveness of scheduled ambulation on quality of life among patient who had undergone abdominal surgery.

Setting of the Study: The study was conducted in three Hospitals at Chennai i.e., Sir Ivan Stedford Hospital, GJ Multispecialty hospital and Grace Multispecialty Hospital.

Sampling technique: Computer assisted sampling technique was used to assign the patients randomly 75 patients were assigned to study group and 75 patients were assigned to control group.

Sample size: A total of 150 patients were selected, out of which 75 were adopted for study group and 75 were adopted for control group respectively. The below sample size formula was applied to select the sample.

$$\text{Sample size} = \frac{\frac{z^2 \times p(1-p)}{e^2}}{1 + \left(\frac{z^2 \times p(1-p)}{e^2 N}\right)}$$

Result and Conclusion

Table 1: Comparison of pre test and post test on scheduled ambulation on quality of life in study group and control group

Domain	Study group		Control group		z-value	p-value
	Mean	SD	Mean	SD		
Pretest	1.10	0.25	1.11	0.25	CV=0.24 TV=1.96	P=0.8065(NS)
Posttest	2.89	0.14	2.81	0.12	CV=3.76 TV=1.96	P=0.0002(S)

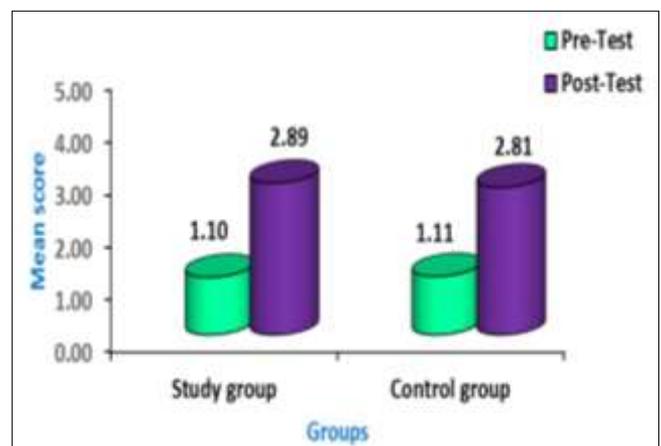


Fig 1: Comparison of pre test and posttest on scheduled ambulation on quality of life in study group and control group

The above figure shows Mean score, SD, and 'z' value in the pre test and posttest were compared between the study group and control group regarding quality of life. In the study group the pre test mean and SD was 1.10(0.25) and posttest mean and SD was 2.89(0.14). In the control group, the pre test mean and SD was 1.11(0.25) and post test mean and SD was 2.81(0.12). The obtained z-value in pre test was (cv=0.24, tv=1.96) p-value (0.8065) nonsignificant. The obtained z-value in post test was (cv=3.76, tv=1.96) p-value (0.0002) significant.

Limitation of The Study

The patients in the study group were selected using simple randomization sampling technique, where lottery method was applied to select the samples. The patients in the study group alone received intervention on ambulation whereas the patients in the control group did not received any intervention except getting informed consent and routine care from nursing Personnel. The study population was limited to certain areas alone. The study findings were limited only to the study group who had undergone abdominal surgeries. Intervention on scheduled ambulation was little harder during 8 am and 8 pm since it will be

disturbing normal routine activities of the patients and nurses in the ward.

Major findings of the study

1. Findings on the effectiveness of modified early ambulation and quality of life of patient's undergone abdominal surgery in the study group and control group. The observed SD scores of the experimental and control group are 4.1874 and 6.2358 and t-value is 43.597 and 17.536 respectively. The overall p-value of the experiment is 0. The mean score of the experimental study is higher than the control group.

Recommendation for Future Studies

1. The same study can be conducted in other post-operative surgical patients such as cardiac thoracic surgeries.
2. The similar study can be compared between government set up hospitals and private set up hospitals.
3. The similar study can be conducted using different alternative variables.

Conclusion

The study concluded that there is a major variation in the quality of life amongst the patients who have gone through abdominal surgery have made use of the intervention than who has not. It may be concluded that the variation disclosed in the posttest quality of life gains among the control group and study group in association with the altered early ambulation intervention. Therefore, hypothesis 2 is approved.

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