



EFFECT OF NURSE-LED INTERVENTION ON POSTOPERATIVE RECOVERY AMONG PATIENTS UNDERGOING ABDOMINAL SURGERY

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ABSTRACT

An experimental study was conducted to find out effect of nurse-led intervention on post-operative recovery and to find out the association between post-operative recovery and sociodemographic variables. Quantitative approach with two group post test only design was used. Sixty subjects were selected by purposive sampling technique from general wards and private rooms. The modified t test value of restoration of functional activity was -4.231 and psychological wellbeing was -9.221 which is significant at $p < 0.001$. Mann Whitney test was used to find the association between post-operative recovery and socio-demographic variables. The findings of the study revealed that the nurse-led intervention is effective on post-operative recovery among patients undergoing abdominal surgery.

KEYWORDS : effect, nurse led intervention, post-operative recovery, patient, abdominal surgery.

INTRODUCTION

Operation is a form of treatment; it significantly affects patient's functional activity, activities of daily living and psychological wellbeing. It is believed that abdominal surgery seems to be the most painful procedure among all types of operation. According to the literature review; researchers have widely asserted that patients who had undergone abdominal operations develop many unpleasant symptoms after surgery such as pain, nausea, vomiting, anxiety, fatigue, etc. These are the symptoms that follows after abdominal surgery seems to be problematic than other types of surgery. Post-operative symptoms occur as the consequences of tissue damage, peri-operative manipulations, and post-surgery treatments. Studies reported a wide variance in the prevalence of symptoms following operation, such as pain (70%), nausea and vomiting (20%-30%), fatigue/tiredness (20%-93%), sleep disturbance (89%), dizziness (16%-21%), and drowsiness (21%-36%). Other recognized symptoms are lack of appetite, dry mouth, and problems with elimination, anxiety, and depression.

Pre-operative teaching is important to ensure a positive surgical experience for the client. Numerous studies had been found that the incidence of post-operative complications among patients undergoing major surgery in developing countries is very high. But the incidence of the same in Western countries account for only a very small percentage. The clients undergoing abdominal surgeries are found to be at risk for developing post-operative complications. Knowledge deficit regarding postoperative exercises among the client is noticed. Post-operative pulmonary complication and contribute equally to morbidity, mortality and length of hospital stay.

Hall book et al concluded that early mobilization and breathing exercises were as effective as other prophylactic treatment against pulmonary complications in those patients undergoing gallbladder surgery with or without bronchodilators as evidenced by absence of any changes in pulmonary status and ABG analysis and pulmonary x-ray which does not show any difference between two groups.

Ofilio [1989] invented that 31 Nigerians with uncomplicated acute appendicitis, who were discharged within 48 hrs of operation no patient returned to hospital with any complications before removal of sutures and was no re-admissions. So early ambulation and discharge were safe and have socio-economic benefits and should be more readily practiced in the developing countries.

Nancy.L.N, studied the prevention of pulmonary complication associated with prolonged bed rest during post-operative

include a decreased functional activity, increased airway closure in the supine position, dependent leg edema, a predisposition to thrombosis formation. Preventive strategies include frequent turning, passive exercises and early ambulation. So early ambulation is one of the most important factors in preventing the complications of immobility.

After abdominal surgery the patients will be subjected to get pleural effusion, paralytic ileus, atelectasis and neuromuscular complications due to prolonged bed rest. Therefore the investigator felt that early ambulation plays an important role in the prevention of such post-operative complications after abdominal surgery and improves the physical, physiological and psychological wellbeing of the clients.

MATERIALS AND METHODS

An experimental study among patients undergoing abdominal surgeries in SGMCH&RF, Thiruvananthapuram who met inclusion criteria were selected as subjects. Socio-demographic proforma was used to collect data on age, gender, place of residence, education, exercise, source of knowledge regarding disease condition and presence of comorbidities. Second file is the observation schedule on restoration of functional activity which includes ambulation, normal respiratory sounds, presence of bowel sounds, withdrawal of IV fluids, withdrawal of NG tubes, withdrawal of Foleys catheter, starting of oral fluids, and termination of painkiller administration. It will be measured at different time intervals with different scores.

Formal permission was obtained from Institutional research committee and from Institutional ethical committee. Based on experts advise 60 samples were selected from selected setting. Data collection period was from 16/01/17 to 24/02/17. A formal consent was obtained from the participants after giving adequate explanation. Nurse-led intervention was given to the experimental group with the help of information pamphlet and demonstration. Return demonstration was done by them. The participants were advised to start exercises after six hours of surgery. The control group receives regular post-operative care. Daily follow up was done and the post-operative recovery was assessed by observational schedule on restoration of functional activity and interview guide on psychological wellbeing at the interval of 12 hours for 3 days post-operatively. The scores were obtained and analyzed using descriptive and inferential statistics.

RESULTS

Socio personal variables

In the control group, 13% of subjects belongs to the age group 18-40 years, 77% belongs to 41-60 years and 10% belongs to >60 years of age group, where in the experimental group, 23% belongs to 18-40 years, 67% belongs to 41-60 years and 10% belongs to >60 years of age group

More than half (60%) of the subjects were females both from control and experimental group.

Majority of the subjects from control (83%) and experimental group (80%) were residing in rural area.

Majority (67% experimental & 43% control group) of subjects had high school education, 10% experimental & 37% control group had primary education, 13% experimental & 10% control group had higher secondary education, 7% experimental & 10% control groups were graduates and least 3% of subjects in the experimental group were professionals.

Majority (90% experimental group & 57% control group) of subjects did not have regular practice of exercise and 10% experimental group & 43% control group had regular practice of exercise.

In control group, majority of subjects (50%) did not have any co-morbidities but in experimental group 27% had no co-morbidities. Patients with DM were 7% in experimental and 3% in control group. 17% of subjects were hypertensive in experimental & 4% in control group. 13% of experimental & 10% of control group had both DM & hypertension. 33% of experimental & 30% of control group had multiple conditions.

Effect of nurse-led intervention on functional activity

Median and standard deviation of experimental and control group were different. The difference in median value was statistically significant ($p < 0.001$). The t value obtained (4.231) from modified t test (because of skewed distribution of subjects) which is significant at $p < 0.001$. Hence it can be interpreted that nurse-led intervention has a significant effect on restoration of functional activity after abdominal surgery.

Effect of nurse-led intervention on psychological wellbeing

Median and standard deviation of experimental and control group were different. The difference in median value was statistically significant ($p < 0.001$). The t value obtained (-9.221) from modified t test (because of skewed distribution of subjects) which is significant at $p < 0.001$. Hence it can be interpreted that nurse-led intervention has a significant effect on psychological wellbeing of subjects after abdominal surgery.

Association between post-operative recovery and socio-demographic variables

The association of socio-demographic variables on functional activity and psychological wellbeing in the experimental group. It is evident that there is no significant association between socio-demographic variables on functional activity and psychological wellbeing in the experimental group except the variable gender ($p < 0.001$). Males had better post-operative recovery than females within a particular time frame.

DISCUSSION

The findings of the present study revealed that that median and standard deviation of experimental and control group were different. The difference in median value was statistically significant ($p < 0.001$). The t value obtained from modified t test (because of skewed distribution of subjects) which is significant at $p < 0.001$. Hence it can be interpreted that nurse led intervention has a significant effect on restoration of functional activity and psychological wellbeing of subjects after abdominal surgery.

The findings of the present study are supported by the findings of the study conducted by Kaur Nirmal to assess the effectiveness of planned pre-operative teaching on early ambulation for patients undergoing abdominal surgery. A checklist with 40 items was used to assess the level of performance. The researcher found that there was no significant difference of pretest scores between two groups ($p > 0.05$) before the implementation of intervention. After the intervention they found a significant difference ($p < 0.001$) in the posttest scores of experimental and control group. In conclusion, the patient who received pre-operative teaching had less pain, early wound healing and recovery than the patients who did not receive.

It is also supported by another study conducted by Zafiroopoulos B & McCarren B a study on Physiological responses to the early mobilization of the intubated, ventilated abdominal surgery patient. The aim of this study was to investigate the effects of mobilization on respiratory and hemodynamic variables in the incubated, ventilated abdominal surgical patient. Mobilization was defined as the progression of activity from supine, to sitting over the edge of the bed, standing, walking on the spot for one minute, sitting out of bed initially, and sitting out of bed for 20 minutes. Seventeen patients with age (mean \pm SD) 71.4 ± 7.1 years satisfied inclusion criteria. Respiratory and hemodynamic parameters were measured in each of the above positions and compared with supine. In the 15 subjects who completed the protocol, standing resulted in significant increases in minute ventilation.

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