

Effectiveness of a Nurse-Led Early Mobilization Program on Recovery Outcomes among Postoperative Abdominal Surgery Patients

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Abstract

Background: Early mobilization after abdominal surgery is an important nursing intervention that promotes recovery, reduces postoperative complications, and improves patient outcomes. However, mobilization is often delayed due to pain, fear, and lack of structured nursing guidance.

Objective: To evaluate the effectiveness of a nurse-led early mobilization program on recovery outcomes among postoperative abdominal surgery patients.

Methods: A quasi-experimental study with a control group design was conducted among 100 postoperative abdominal surgery patients admitted to the surgical ward of a tertiary care hospital. Patients were divided into an experimental group (n=50) receiving a nurse-led early mobilization program and a control group (n=50) receiving routine postoperative care. Recovery outcomes assessed included postoperative pain, time to first ambulation, length of hospital stay, and postoperative complications. Data were analyzed using descriptive and inferential statistics.

Results: The experimental group showed significantly improved recovery outcomes compared to the control group. The mean postoperative pain score in the experimental group decreased from 7.2 ± 1.1 on day 1 to 3.1 ± 0.9 on day 3, while the control group showed a decrease from 7.1 ± 1.2 to 5.4 ± 1.0 . The mean length of hospital stay was shorter in the experimental group (5.2 ± 1.3 days) compared to the control group (7.4 ± 1.5 days) ($p < 0.05$). The incidence of postoperative complications was also lower in the experimental group (10%) than in the control group (28%).

Conclusion: The nurse-led early mobilization program significantly improved recovery outcomes among postoperative abdominal surgery patients. Implementation of structured early mobilization protocols by nurses can enhance postoperative recovery and reduce hospital stay.

Keywords: Early mobilization, postoperative recovery, abdominal surgery, nurse-led intervention, postoperative care.

INTRODUCTION

Postoperative recovery is a crucial component of surgical care, and nurses play a central role in facilitating optimal recovery outcomes. Early mobilization refers to initiating physical activity such as sitting, standing, and walking within the first 24 hours after surgery. Evidence suggests that early mobilization improves pulmonary function, enhances circulation, prevents deep vein thrombosis, and accelerates recovery.

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Patients undergoing abdominal surgery often experience delayed mobilization due to pain, fatigue, and fear of wound complications. Lack of structured nursing protocols may further contribute to prolonged immobilization, increasing the risk of complications such as pneumonia, pressure ulcers, and delayed bowel function.

Nurse-led interventions are increasingly recognized as effective strategies to improve patient outcomes. Structured early mobilization programs implemented by nurses can encourage patients to participate actively in recovery, thereby reducing complications and hospital stay.

Despite the benefits, early mobilization is not consistently practiced in many surgical wards. Therefore, this study aimed to evaluate the effectiveness of a nurse-led early mobilization program on recovery outcomes among postoperative abdominal surgery patients.

OBJECTIVES

1. To assess recovery outcomes among postoperative abdominal surgery patients in the control group.
2. To evaluate the effectiveness of a nurse-led early mobilization program on recovery outcomes.
3. To compare recovery outcomes between experimental and control groups.

HYPOTHESIS

H1: There will be a significant difference in recovery outcomes between patients receiving a nurse-led early mobilization program and those receiving routine care.

METHODOLOGY

Research Design

Quasi-experimental research design with experimental and control groups.

Setting

Surgical ward of a tertiary care hospital.

Sample

100 postoperative abdominal surgery patients.

Group	Sample Size
Experimental	50
Control	50
Total	100

Sampling Technique

Purposive sampling.

Inclusion Criteria

- Patients undergoing abdominal surgery

- Age between 18–65 years
- Hemodynamically stable

Exclusion Criteria

- ICU patients
- Patients with mobility restrictions

Intervention: Nurse-Led Early Mobilization Program

The intervention included:

Day 1

- Sitting on bed edge
- Deep breathing exercises

Day 2

- Standing with assistance
- Walking 5–10 meters

Day 3

- Independent walking in corridor

Data Collection Tools

1. Demographic data sheet
2. Numeric Pain Rating Scale
3. Recovery outcome assessment checklist

RESULTS

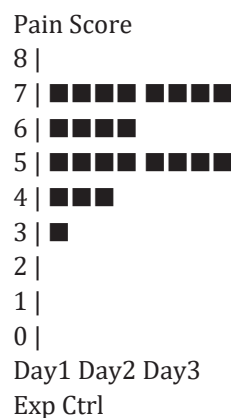
Table 1. Demographic Characteristics of Participants

Variable	Experimental (n=50)	Control (n=50)
Mean Age	46.2 ± 10.3	45.8 ± 9.7
Male	28 (56%)	30 (60%)
Female	22 (44%)	20 (40%)
Elective Surgery	34 (68%)	36 (72%)
Emergency Surgery	16 (32%)	14 (28%)

Table 2. Comparison of Mean Pain Scores

Postoperative Day	Experimental	Control
Day 1	7.2 ± 1.1	7.1 ± 1.2
Day 2	4.8 ± 1.0	6.3 ± 1.1
Day 3	3.1 ± 0.9	5.4 ± 1.0

Graph 1. Reduction in Pain Scores



The graph shows **faster pain reduction in the experimental group.**

Table 3. Comparison of Recovery Outcomes

Outcome	Experimental	Control
Time to First Ambulation	18 hours	36 hours
Mean Hospital Stay	5.2 ± 1.3 days	7.4 ± 1.5 days
Postoperative Complications	5 (10%)	14 (28%)

Graph 2. Length of Hospital Stay

Days

Experimental | ■■■■■■ (5.2)

Control | ■■■■■■■■ (7.4)

This indicates **reduced hospital stay in the experimental group.**

DISCUSSION

The findings of the study demonstrate that the nurse-led early mobilization program significantly improved recovery outcomes among postoperative abdominal surgery patients. Patients in the experimental group experienced faster reduction in pain scores and earlier ambulation compared to the control group.

Early mobilization promotes circulation and prevents complications associated with prolonged bed rest. The results of the present study are consistent with previous studies that reported improved recovery and reduced hospital stay among patients who participated in structured mobilization programs.

Nurses play a crucial role in motivating patients and monitoring mobilization activities. The implementation of standardized mobilization protocols can enhance patient safety and improve postoperative outcomes.

NURSING IMPLICATIONS

Clinical Practice

- Early mobilization protocols should be integrated into postoperative care.

Nursing Education

- Training programs should emphasize early mobilization techniques.

Nursing Administration

- Hospitals should develop standardized postoperative mobilization guidelines.

Limitations

- Single hospital setting
- Small sample size

CONCLUSION

The nurse-led early mobilization program was effective in improving recovery outcomes among postoperative abdominal surgery patients. Patients who received the intervention demonstrated reduced pain, earlier ambulation, fewer complications, and shorter hospital stays. Incorporating structured early mobilization protocols into routine postoperative care can significantly enhance recovery outcomes.

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