

Pre- Operative Education for Patients Undergoing Open Abdominal Surgery

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ABSTRACT

Objective: To summarize the major findings from research on pre- operative education for patients undergoing open abdominal surgery

Methods: A narrative literature review of relevant papers in this context known to the author was conducted

Results: Pre-operative education provides the surgical patient with essential information about the surgical treatment and also the anticipated patient behaviours and probable outcomes after open abdominal surgery

Conclusion: Pre- operative education offers therapeutic communication that's reassuring for the patient and promotes good physical and mental state. Individually tailored educational material that is best suited to the patient according to his needs and background is proved to be the most beneficial for patients

Key Words: pre- operative, education, open abdominal surgery, patient experiences, patient satisfaction.

I. INTRODUCTION

The pre-operative education of patients regarding open abdominal surgery and optimum post- operative outcomes is essential and challenging¹ task for the nursing personnel. Hospitalization for surgery causes a lot of anxiety among patients due to anaesthesia, post-operative pain, loss of functioning, alteration in body image and dependency on others. Anxious patients² require higher intra and post-operative analgesic drugs. Patients receive pre- medication before surgery to scale back anxiety as anxiety is liable to induce stress and resultant sympathetic stimulation. This article is classified into the following sections:

- II. Nature of Pre- Operative Education
- III. Inclusion of Family in Patient Education
- IV. Tool for Patient Experiences
- V. Patient Expectation
- VI. Positive outcomes of Patient Education

II. Nature of Pre- Operative Education

Pre-operative education³ provides the surgical patient with essential information about the surgical treatment and also the anticipated patient behaviours and probable outcomes after open abdominal surgery. It also offers therapeutic communication that's reassuring for the patient and promotes good physical and mental state. It's been observed that it's difficult for nurses to ascertain and accomplish a proper pre-operative teaching protocol for surgical patients. It is determined through research that teaching program is effective when administered before the patient goes for surgery. Individually tailored educational material that is best suited to the patient according to his needs and background is proved to be the most beneficial for patients. Lain Deborah stated⁴ that the mind and body are interconnected and one's thoughts and cognition affect the healing process. Positive Thinking helps boost immunity, resilience and pain tolerance as well as decreases blood pressure.

III. Inclusion of Family in Patient Education

It is agreed that providing education⁵ to patients and their families is one amongst the foremost important aspects of nursing care. Both patient undergoing surgery and also the family members should be given appropriate information about the surgery and patient care. It gives the patient a sense of control and allays fear and anxiety. Written information helps in the retention of information and must include pre- operative preparation, post-operative self- care activities and exercises as well as pain management. Written materials should be employed in patient education additionally to oral information sessions, and patients should be provided with opportunities for discussion. Pre-operative teaching should be continuous while the patient is hospitalized and not just on the day of surgery. The patient should be given the chance to ask questions and may be guided well in self- care.

IV. Tool for Patient Experiences

A Good Perioperative Nursing Scale⁶ which is a self- administered questionnaire had been prepared and was found to be valid for measuring patient experiences with peri- operative care. The 34-question, seven-factor questionnaire was validated on surgical patients in a formal cross- sectional survey on 361 patients within the orthopedic department of public hospital. Factor loadings ranged from 0.65 to 0.97, apart from Technical Skills (0.38-0.63) and Nursing Process (0.28). The Cronbach's alpha value for the full scale score was 0.92 and subfactors ranged from 0.72 to 0.87. This tool was found to be valid and a practical tool for evaluating surgical patients' experiences with peri- operative care provided by nurses.

V. Patient Expectation

It was identified in a descriptive, cross-sectional study⁷ conducted within the surgical department of a hospital in Turkey to work out what quantity of information was required by peri-operative patients and their relations, the extent to which this information was given, and therefore the nurse's major role in this respect. 394 patients and their relations (i.e. 197 patients and 197 family members) and 30 nurses were taken for the study using 3 questionnaires i.e. one each designed for patients, members of the family and nurses. It was discovered that the patients expected more information about the pre- operative preparation and also the surgery while their care givers wanted more information about the post-operative period.

VI. Positive outcomes of Patient Education

A cluster⁸ randomized run of 377 older patients (≥ 65 years of age) undergoing gastrectomy, pancreaticoduodenectomy, and colectomy at a 2000-bed urban care centre in Taipei, Taiwan between 2009 - 2012 was initiated. The intervention group received 3 protocols administered daily: communication, nutritional assistance, early mobilization additionally to usual care of the hospital from pre-operative period till discharge post- surgery. 65.3% subjects were enrolled and randomly assigned to the intervention i.e. mHELP (n = 197; mean [SD] age, 74.3 [5.8] years; 111 [56.4%] male) or control (n = 180; mean [SD] age, 74.8 [6.0] years; 103 [57.2%] male) group. Post-operative delirium occurred in 13 of 196 (6.6%) mHELP participants vs 27 of 179 (15.1%) control individuals, showing a relative risk of 0.44 within the mHELP group (95% CI, 0.23-0.83; P = .008). Intervention group participants had a shorter median length of stay (12.0 days) than control participants (14.0 days) (P = .04). It therefore was concluded that educating patients and use of protocols is of utmost value in improving the post- operative outcomes of surgical patients.

A mixed methods analysis using randomized control trial⁹ was carried out on 29 patients undergoing open abdominal surgery in a tertiary care hospital in Australia. Pre- operative education was given to control group with the aid of Information Booklet on early ambulation and breathing exercises. The intervention group was given an extra face- to - face half- hour physiotherapy education and training on ambulation, breathing exercises and prevention of respiratory problems. It was noticed that subjects of experimental group were six-times more likely to recollect the breathing exercises (95%CI 1.7 to 22) and 11-times more likely (95%CI 1.6 to 70) to report exercise demonstration of a memorable value pre- operatively. Some participants reported preference of demonstration over reading the booklet.

Data on patient satisfaction¹⁰ after open abdominal surgery which included emphasis on patient demographics, operation details and 30-day clinical outcome data of consecutive patients was collected. Validated Patient Reported Experience Measures (PREMs) questionnaires were used. Categorical data were tested using Mann Whitney U test. Multivariable regression was done to determine independent factors related to satisfaction. Multivariable analysis ($R^2 = 0.71$) showed variables significantly related with a higher overall satisfaction score which included “sufficient information given about treatment” ($\beta = 0.86$, 95% CI 0.01–1.70, $p = 0.047$), “sufficient explanation of risks and benefits of surgery” ($\beta = 1.26$, 95% CI 0.18–2.34, $p = 0.020$), “absence of night-time noise” ($\beta = 1.35$, 95% CI 0.56–2.14, $p = 0.001$) and “confidence and trust in nurses” ($\beta = 1.51$, 95% CI 0.54–2.49, $p = 0.003$). It was thus concluded that overall patient satisfaction was strongly associated with perceptions of good methodology of communication and information received by the patient. Confidence and trust on the clinical team was found to be a vital determinant of patient satisfaction. An ambient ward environment with low noise also contributed to patient satisfaction.

It was concluded¹¹ that pre- operation patient education¹¹ was essential for surgical patients and also helped in improvement of nursing care. In a study on adult patients posted for major visceral surgery subjects were divided into intervention group (n= 138) and control group (n= 106) using cluster randomization method. Intervention group subjects attended a pre- operative education seminar and routine instructions were given to subjects of control group. In the intervention and control groups respectively, pneumonia occurred in 7.4% versus 8.3% ($p = 0.807$), pulmonary embolism in 1.6% versus 1.0% ($p = 0.707$), burst abdomen in 4.2% versus 1.0% ($p = 0.165$), and in-hospital falls in 0.0% versus 4.2% of patients ($p = 0.024$). Mortality (1.4% versus 1.9%, $p = 0.790$) and length of stay (14.2 (+/- 12.0) days versus 16.1 (+/- 15.0) days, $p = 0.285$) were also similar within the intervention and control groups.

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