The Healing Power of Preoperative Education In Patients Undergoing Cardiac Surgery

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Abstract

Preoperative education has been used to improve patients’ experiences by providing health care relevant information, coping skills, and psychosocial support before surgery. It has proven beneficial in decreasing postoperative complications and length of stay as well as positively influencing recovery. Patients who are well prepared with detailed preoperative instruction deal more effectively with their surgery and are better prepared to manage their pain and engage in appropriate self-care activities. It is important to minimize postoperative complications, increase patient compliance, and decrease patient anxiety. Many research studies have investigated whether preoperative education interventions were successful in improving postoperative outcomes and increasing physical and psychological recovery after cardiac surgery. There is a growing attention in knowing the significance of preoperative education after cardiac surgery. The objective of this review was to assess the effect of preoperative education on postoperative outcomes among patients undergoing cardiac surgery.

Keywords:
Cardiac Surgical Procedures; Patient Education; Nursing; Preoperative Period; Recovery.

INTRODUCTION:

Cardiovascular diseases (CVDs) are the number one cause of death globally: more people die annually from CVDs than from any other cause. An estimated 17.7 million people died from CVDs every year, representing 31% of all global deaths. Over three quarters of CVDs deaths take place in low- and middle-income countries. Each year approximately one million patients worldwide undergo cardiac surgery such as CABG, valve repair or replacement, aneurysm repairs, and arrhythmia surgery. Patients awaiting cardiac surgery may experience high levels of anxiety and significant symptoms of depression due to fears, worries and uncertainties about surgery these can exacerbate symptoms of existing cardiovascular disease, adversely affect physiological parameters before and during anesthesia, and can result in prolonged recovery (3). The major nursing activity to ensure that the client is prepared for surgery is preoperative education (PE).

The Global Burden of Cardiovascular Disease CVDs are a global public health issue that causes a severe economic burden at the societal level, affecting physical and psychosocial functioning, health-related quality of life and symptom management of the individuals. According to the World Health Organization (WHO), approximately reported that the anxiety level of the patients with more PE needs is higher. In a qualitative study conducted with twenty male cardiac surgery patients, it was indicated that the symptoms of preoperative anxiety and depression increased when patients’ concerns were not adequately addressed by health care providers.

Health care providers play an important role in helping patients prepare for surgery by determining possible solutions for identifying, preventing, or reducing the causes of anxiety and monitoring patients’ concerns. However, some studies on the subject have showed that PE is not adequately implemented by health professionals.

Importance of Preoperative Education

In addition to providing information and explanation about surgical procedures, expected patient behavior and anticipated sensations, PE is regarded as an interactive process providing appropriate assurance and psychosocial support to the patient who is going to be operated. PE positively affect patient to know what will happen in each stage of the surgery, feel better physically and mentally, improve the outcome of the surgery as well as helping them understand the role and responsibilities of own individual care and correcting misconceptions. PE is very important for anxious patients waiting for surgery. Because PE can reduce anxiety by making the unknown known. Although the PE needs of patients vary, most of the surgical patients prefer to receive comprehensive information about own health during preoperative period.

Components and Methods of Preoperative Education

Traditionally, information is given to patients to understand the experiences that they will encounter during surgery, and this information is divided into three categories: procedural, sensory, and coping information. Procedural information is associated with explaining medical events such as causes and consequences of the surgery, specific surgical procedures, instructions given in the postoperative period, and discharge. Sensory information deals with feelings that patients experience during or after the operation, such as pain and discomfort. Coping information includes exercises such as deep breathing and coughing exercises to minimize complications and improve postoperative function. PE is applied in a variety of approaches and formats, such
as written materials, audio-visual presentations, and oral
information in the form of individual counseling or group
discussion, or combinations of some or all of these. Each
approach has both advantages and limitations. In cases
where educational resources are inadequate, nurses
give patients the information with an only way of verbal
explanations; however it is stated that this method may
be misunderstood by patients and their relatives and
may easily be forgotten. In addition, it has been shown
that the information given in written form without the oral
explanation is perceived as complicated and difficult to
understand by the patients. For this reason, it was reported
that the provision of written materials, together with the
oral information, is more effective in PE. In addition, the
use of information brochures in emergency care services
is strongly recommended to increase patient satisfaction.

It is necessary to provide the appropriate amount of
information for the patients undergoing surgery. However,
it is very important that the information is given to
the patient in an adequate manner with an appropriate
method, according to the individual requirement that the
patient feels comfortable.

Role of the Nurses in Preoperative Education Nurses who
have roles in the diagnosis, treatment and care of the
patients and who are in constant communication with them
play an active role in patient education. Nurses need to identify and meet the preoperative education needs of patients. The study of Gürlek and Yavuz (2013) that examined preoperative patient education practices of nurses working in surgical clinics has reported that nurses often include preoperative patient education in their practices but there are some deficiencies in
realization of education process. PE is one of the most
important nursing interventions and an indispensable
part of preoperative patient care. Meeting the education
needs of patients is also an indication of quality patient
care outcomes.

In the preoperative period, informing the patient and his/
her relatives, educating and counseling is one of the most
important responsibilities of a nurse. The nurse can help
the patient cope with the difficulties encountered after
the intervention by identifying the needs of the patient.
Success of the education is directly related to education
process with the individualized care, and to the evaluation
of the patient’s response and compliance (40). For this
reason, patient’s sharing of fear of surgical intervention
and whether his/her expectations are met should be
questioned.

The patient to be operated and the relatives of the patient
have concerns and fears about anesthesia, surgical
intervention, and the applications to be performed. It is stated that the patient and his/her family need to
be informed in order to cope with these difficulties.
The surgical nurse who has deep and comprehensive
knowledge to coordinate the care of the surgical patient
should inform the patient and the family about the
applications and possibilities to be performed before,
during and after the surgery.

The topics that patients and their relatives are required
to be informed before surgery can be listed as diagnosis;
preoperative diagnostic procedures; preparations;
treatment; duration of operation; materials; frequency
of visit; time that can be spent with patient; those who
will give care to the patient after surgery; where they can
wait during surgery; ways of communicating with the
operation room and receiving information; tubes, drains,
medications, possible complications that may occur
after surgery; cardiac rehabilitation exercises (exercises
that should be done; walking, breathing, coughing, etc.),
and restrictions. Studies show that PE reduces patients’
anxiety and analgesic need, increases satisfaction,
shortens hospital stay time, and improves mental and
physical healing by increasing quality of life.

Some Literature Research on the Effectiveness of
Preoperative Education

The randomized controlled trial on effects of PE initiative
consisting of verbal advice and information brochure for
Chinese cardiac patients on reducing anxiety and
enhancement of healing reported that anxiety (p<0.001)
and depressions scores of participants who had received
education before operations decreased more (p<0.001)
compared to those who had not received education, they
also spent less time in intensive care unit (p=0.05), and
it was also stated that they had pain while sleeping, and
there was no significant difference between participants
in terms duration of hospital stay.

In the study which examined the effectiveness of planned
PE on care activities of patients who had a cardiac surgery,
it was reported that 52% of the study group (those who
get PE) and 82% of the control group had insufficient
knowledge in pre-test period while 84% of the study group
and 4% of the control group had sufficient knowledge for
the post-test. In addition, PE has been associated with
increase in the level of performance in the care activities
of patients, early extubation, less analgesic requirement
for coping with pain, shorter postoperative period, short
duration of intensive care and less complication.

The effects of nurse assisted PE on anxiety and
postoperative complications of cardiac surgical patients,
it was found that education given by nurses before surgery
significantly decreased the anxiety of the experimental
group (p<0.001), experimental group had less chest
infection, however PE was shown to be ineffective in
reducing the length of stay in the hospital and in reducing
readmissions.

CONCLUSION

Many studies have investigated whether PE interventions
are successful in improving postoperative outcomes and
whether physical and psychological healing is improved
after cardiac surgery. In addition, the effectiveness of
PE on postoperative outcomes in patients undergoing
cardiac surgery has not been clearly identified. For the
patients undergoing cardiac surgery, it was observed
that higher quality randomized studies are needed to
provide stronger evidence for PE interventions to improve
the postoperative outcomes. Although the PE is not at
the required level to increase the health status, it can be
concluded that the written and oral PE applied by a nurse
has important contribution to the patient outcomes.