

**An-Najah National University
Faculty of Graduate Studies**

**The Impact of Preoperative Education on the
Psychological and Physiological Aspects of
Patients Undergoing Abdominal Surgery**

**By
Salah Fathi Alhj Taher**

**Supervisor
Dr. Jamal Qaddumi**

**This Thesis is Submitted in Partial Fulfillment of the
Requirements for the Degree of Master of Community Mental
Health for Nurses, Faculty of Graduate Studies, An-Najah
National University, Nablus, Palestine.**

2017

The Impact of Preoperative Education on the Psychological and Physiological Aspects of Patients Undergoing Abdominal Surgery

**By
Salah Fathi Alhj Taher**

This thesis was defended successfully on 18/9/2017 and approved by

Defense Committee Member

Signatures

1. Dr. Jamal Qaddumi \ Supervisor

.....

2. Dr. Wael Abu-Hassan\ External Examiner

.....

3. Dr. Adnan Sarhan\ Internal Examiner

.....

الإهداء

لأصحاب القلوب البيضاء لم يتوانوا لحظة في مشاركتي حزني قبل فرحي همي قبل
سعادتي لأولئك اللذين سألني معهم و بهم أنفست بالحياة
إلى النبيوع الذي لا يمل العطاء، إلى من حانت سعادتي بخيوط منسوجة من قلبها ...
حفظك الله لي ومنعك بالصحة والعافية . . . ودمت لي

(والدي العزيزة)

إلى من جرع الكأس فارخا ليسقيني قطره حب، إلى من حصد الأشواق من دمي ليمهد
لي طريق العلم، إلى القلب الكبير

(والدي العزيز)

إلى رايحك حياتي، أنتم سندي وانتم من دعمني لإصلك إلى هنا، شكرا لكم خالتي
العزيزات .

إلى من أشرفت شمسك في سماء حياتي .

(زوجتي العزيزة)

إلى من أصبحت الحياة جميلة بوجودهم معي فيها . . بابتسامتهم التي ترسم علي
محياتهم الجميل . (ابنائي)

أعمامي عماتي .. والدة و والد زوجتي العزيزين..

إخوتي اللذين لم تلههم أمي .. نضال .. نميم .. رياض و عماد.

أصدقائي و أساتذتي لكم مني كل احترام و تقدير

الشكر والتقدير

أتقدم بالشكر الجزيل لكل من ساندني لإخراج هذه الرسالة من فكرة الى واقع
واخص بالدكتور المشرف الرئيسي للرسالة د. جمال قرومي أستاذ مساعد في جامعة
النجاح الوطنية.

د. سابرنا روسو منسقة برنامج تمريض الصحة النفسية والمجتمعية في جامعة
النجاح الوطنية... د. عائده القيسي رئيسة كلية التمريض في جامعة النجاح الوطنية
ولا انسى بهذا الشكر كل من الدكتور عدنان سرخان والدكتور محمود خريشة
لجهودهم المباركة

صديقي الذي ما توانى لحظه عن مشاركتي اجمل و اصعب لحظات حياتي فريد
أبو ليك ولا انسى الصديق الصدوق الأخ مالك مناصره ابيه خليل الرحمه
اسأل الله بمنه و فضله ان يتقبل ما تم إنجازه بهذا العمل احتسابا لوجهه
الكريم.

الإقرار

أنا الموقع أدناه مقدم الرسالة التي تحمل العنوان:

The Impact of Preoperative Education on the Psychological and Physiological Aspects of Patients Undergoing Abdominal Surgery

أثر التوضيح قبل الجراحي على الجوانب الجسدية

والنفسية لمرضى جراحة البطن

أقر بأن ما اشتملت عليه هذه الرسالة إنما هو نتاج جهدي الخاص، باستثناء ما تمت الإشارة إليه حيث أن هذه الرسالة كاملة، أو أي جزء منها لم يقدم من قبل لنيل أي درجة أو لقب علمي أو بحث لدى أي مؤسسة تعليمية أو بحثية أخرى.

Declaration

The work provided in this thesis, unless otherwise referenced, is the researcher's own work, and has not been submitted elsewhere for any other degree or qualification.

Student's name:

اسم الطالب:

Signature:

التوقيع:

Date:

التاريخ:

List of Abbreviations

ANOVA	Analysis of Variance
BP	Blood Pressure
CABG	Coronary Artery Bypass Grafting
DVT	Deep Vein Thrombosis
DBP	Diastolic Blood Pressure
N	Sample Size
OP	Operation
SAI	State Anxiety Inventory
SBP	Systolic Blood Pressure
SD	Standard Deviation
SICU	Surgical Intensive Care
SPSS	Statistical Package for Social Science
VAS	Visual Analog Scale

Table of Contents

No.	Subject	Page
	الإهداء	iii
	الشكر والتقدير	iv
	Declaration	v
	List of Abbreviations	vi
	Table of Contents	vii
	List of Tables	ix
	List of Appendicies	x
	Abstract	xi
	Chapter One: Introduction	1
1.1	Background of the Study	2
1.2	Statement of the Problem	6
1.3	Significance of the Study	8
1.4	Aim of the Study	11
1.5	Research Questions	11
1.6	The Hypothesis of the Research	12
1.7	Research Variables under Study	12
1.8	Assumptions	13
1.9	Conceptual Framework	13
1.10	Conceptual Definition of Variables	14
1.11	Operational Definition of Variables	14
1.12	Conceptual Model	15
	Chapter Two: Literature Review	19
2.1	Studies on the Need for Preoperative Education	20
2.2	Studies on Effectiveness of the Preoperative Education on Anxiety and Pain	25
2.3	Effectiveness of the Preoperative Education on Anxiety	35
	Chapter Three: Research Methods	39
3.1	Study Design	40
3.2	Study Population	41
3.3	Sampling of the Study	41
3.4	Inclusion Criteria	42
3.5	Exceclusion Criteria	42
3.6	Instruments	42
3.7	Educational Program	45
3.8	Pilot Study	47
3.9	Data Collection Procedure	47
3.10	Study Setting	48

No.	Subject	Page
3.11	Study Steps	49
3.12	Statistical Analysis	49
3.13	Ethical Consideration	50
	Chapter Four: Result	52
4.1	Demographic Data	53
4.2	Participant Vital Signs	54
4.3	Preoperative State Anxiety Inventory among Experiment and Control groups	55
4.4	Visual Analog Scale (VAS)	58
4.5	Relationship Between Demographic Variables and Anxiety Level and Pain	59
	Chapter Five: Discussion	62
5.1	Demographic Characteristics	63
5.2	Level of Anxiety	64
5.3	Postoperative Outcome Related to Pain	66
5.4	Relationship Between Anxiety and Pain	67
5.5	Relationship Between Demographic Variables and Anxiety Level	68
	Conclusions, Implications and Recommendation	69
	References	73
	Appendicies	88
	الملخص	ب

List of Tables

No.	Table	Page
Table (1)	Demographic variables with Means, Standard Deviation and P-values of the Mann Whitney Test of Differences in all Demographic Variables of Participants According to the Group Type (control group and experiment group)	53
Table (2)	Effectiveness of Preoperative Teaching on Anxiety among Patients Undergoing Abdominal Surgery in Terms of Vital Signs	54
Table (3)	Comparison of Post-test Pulse and Respiration among Three Different Surgeries between Experimental and Control Group	55
Table (4)	Effectiveness of Preoperative Teaching on Anxiety among Patients Undergoing Abdominal Surgery in Terms of State Scale Anxiety scores	56
Table (5)	Frequency, Percentage and Distribution of Subjects According to State Scale Anxiety Scores in Experimental and Control Groups Cross Tabulation	57
Table (6)	Comparison of Experiment and Control Group in State Scale Anxiety Scores between four Different Surgeries among the Experimental Group	57
Table (7)	Effectiveness of Preoperative Teaching on Postoperative Pain among Patients Undergoing Abdominal Surgery in Terms of Visual Analog Scale (VAS).	58
Table (8)	Relationship between Level of Preoperative Anxiety and Postoperative Level of Pain at 6 hours postoperative, cross tabulation.	59
Table (9)	Relationship Between Demographic Variables and Anxiety Level	60
Table (10)	Relationship Between Demographic Variables and Pain According to the VAS Scale	61

List of Appendices

No.	Appendix	Page
Appendix (A)	Consent Form and State Anxiety Inventory	89
Appendix (B)	Educational Program	92
Appendix (C)	Visual Analog Scale	107
Appendix (D)	Facilitate Student Task	108
Appendix (E)	Approval of Title	109
Appendix (F)	IRB permission	110

The Impact of Preoperative Education on the Psychological and Physiological Aspects of Patients Undergoing Abdominal Surgery

By

Salah Fathi Alhj Taher

Supervisor

Dr. Jamal Qaddumi

Abstract

Anxiety can be defined as an emotion distinguished by an unpleasant state of inner disorders and can be accompanied by subjective feelings of worry, nervousness, tension, and activation of the nervous system. Psychological and physical stress can be a result of pain. Anxiety can elevate the heart rate, blood pressure and cardiac output because of the activation of the sympathetic, nervous, hypothalamic, and pituitary systems as well as the adrenal axis.

Aim of the study:

This study aims to assess the impact of preoperative education on the anxiety level of patients undergoing abdominal surgery and their postoperative pain.

Methods

The study was prospective, randomized, and controlled. Adult patients were randomly allocated to receive preoperative education. The patients were assessed for preoperative anxiety level and postoperative pain. The study population consisted of adult men and women over 18 years old undergoing any type of elective abdominal surgery in

governmental hospitals in the Nablus district. One hundred patients scheduled for elective abdominal surgery were included in the study.

Result

At baseline, patients' demographics and clinical characteristics were similar in both the experiment and control care groups, there were significant relationships between receiving an educational program and patient level of anxiety; this was evident due to the fact that moderate, severe, and extreme anxiety levels were higher in the control group than the treatment group.

There was not a statistical significant relationship between the patient level of pain and participation in the educational program, this was evident in the pain scores being lower in the experimental group than control group in at each testing time. There was a significant relationship between the preoperative level of anxiety and the postoperative level of pain (at 6 hours postoperative, at significant level 0.05, with P-value 0.001.) Also, it was evident that pain level decreased when anxiety level was lower.

There was a statistically significant relationship between pain and gender; as well as between anxiety and education level. But there was not a statistical significant relationship between anxiety level and other demographic variables. There was a significant reduction in the preoperative level of anxiety and postoperative level of pain among the

patients who received the structured education program. There was a significant association between the preoperative level of anxiety and the postoperative level of pain.

Conclusion

In this study, preoperative education was effective in reducing preoperative anxiety among patients undergoing abdominal surgery, reducing postoperative pain, and improving vital signs. This study recommends that preoperative health education is included in routine care in preoperative preparations for surgical patients.

Chapter One

Introduction

Chapter One

Introduction

1.1 Background of the Study

Surgical intervention is the science and art of treating problems, deformities, and injuries via incision or manipulation, especially with instruments. Surgery includes interaction between the client, the nurse, and the surgeon. Surgical interventions are considered important worldwide, with an expected 234 million surgeries performed each year (Debas, et al., 2006).

Abdominal surgery is the most common surgical intervention; including a wide range of both elective and emergency operational procedures. In general, the rate of abdominal surgery is estimated to be 43.8% among those who are above the age of 60 (Nunoo-Mensah, et al, 2009). It has been estimated that the number of abdominal surgeries is expected to change significantly, from around 7,436,000 surgeries in 2010 to 8,109,000 surgeries in 2020. Abdominal surgery includes gastrointestinal, biliary and liver operations, splenectomy, herniorrhaphy, appendectomy and surgery on great vessels of the trunk (Karakhuen, 2003).

The third most common cause for abdominal surgery is appendicitis. In middle age, the mortality rate is about <1%, whereas among adults it ranges from 4-8%. The risk of developing acute appendicitis is 8.6% for males and 6.7% for females. The risk for appendectomy is about 12% for males and 23% for females. Appendectomy rate is about 10/10,000 per year in the United States of America (Flum & Koepsell, 2002).

Being in hospital admissions and waiting for surgery is one of the important and powerful factors in provoking anxiety and it results in behavioral, cognitive reactions and effects recovery (Kiecolt-Glaser, et al., 1998). Surgeries can results in a high level of anxiety for patients whether it is a minor or major operation (Taskin 2008).

Anxiety can occur in preoperative patients. It can be a result of uncertainty about the upcoming events or procedure, any past experience with anesthesia or surgery, and sometimes by family and friend's opinions or comments (Jawaid, et al., 2007). Anxiety can be defined as an emotion distinguished by an unpleasant state of inner disorders, and can be accompanied by subjective feelings of worry, nervousness, tension, and activation of the nervous system. Psychological and physical stress can be a result of anxiety. It can elevate the heart rate, blood pressure and cardiac output due to the activation of the sympathetic, nervous, hypothalamic, and pituitary systems as well as the adrenal axis (Bally, et al., 2003).

Anxiety level depends on sex, age, type of surgery and any previous surgical interventions. However, anxiety in preoperative patients is affected by the strange environment, waiting for surgery, potential for postoperative pain, fear for life, and fear of the unknown during surgery (Masood, et al., 2009).

The time before surgery is a very traumatic period for patients. About 60% to 80% of adults experience intense stress and fear of possible complications, which includes thinking about death (Guo, et al., 2012).

Preoperative anxiety leads to postoperative pain, and it may result in an increased intake of pain medications, and a delay in discharge and recovery.

Anxiety may affect the induction of anesthesia and recovery thus decreasing intended patient outcomes. The time between when the patient learns of the surgical treatment and when it is scheduled can result in anxiety and fear, which increases as the operation appointment gets closer. These feelings mostly disappear after the operation (Agrawaln, et al., 2005).

Most studies see connections between anxiety and pain, with patients with less anxiety experiencing less pain (Sullivan, et al., 2004). A study was conducted in order to evaluate the relationship between giving preoperative education and the level of a patient's anxiety, who was admitted to elective minor surgery. It showed that 70.3% of surgical patients had anxiety related to pain. Emotion and distress related to pain can differ from person to person (Munafo & Stevenson, 2001).

From all abdominal surgeries done each year, 10 to 15% of them showed postoperative pain. After cholecystectomy surgery, 30-72% of patients experienced pain while 5-12% experienced pain after inguinal surgery. About 63% of patients reported chronic postoperative pain after inguinal hernia repair (Sommer, et al., 2008).

In poor postoperative outcomes, anxiety has been found to be the biggest risk factor of mortality and morbidity. It is still unclear whether

preoperative anxiety has a negative relationship with pain, fatigue and discomfort, nausea, sleep disturbances, tiredness, immobility, quality of life, the need for bed rest, length of stay, recovery, and medications in during anaesthesia (Kagan & Bar-Tal, 2008).

Postoperative recovery is the time for physical, psychological, social and habitual functions to improve: and can result with the patient going back to preoperative activities of daily life and an increased level of psychological wellness (Zalon, 2004). Additionally, throughout the recovery period, basic needs are cared for at the hospital such as: bowel function, urination, intake of fluid and food, regaining muscle power and managing activities (Allvin, et al., 2008).

Postoperative recovery is affected by fatigue, pain and depression after abdominal surgery and it is very important for the patient to return to normal routine activities of daily life (Piscatella, 2010). Pain and fatigue are the most common problems and symptoms during postoperative recovery and can result in a lack of structural integrity postoperative (Zalon, 2004).

The aim of successful surgical intervention is to return the patient to a condition of improved health in a short period of time. Nursing intervention can help the patient have a rapid recovery. A positive relationship between the nursing staff and the patients, including information and knowledge transfer, and encouragement through the difficulties has a positive effect on recovery (Rankin & Stallings, 2001).

There is a relationship between preoperative distress and postoperative recovery; recovery increases when there is no distress. An excellent postoperative recovery may be indicative of moderate levels of anxiety, but excessively high levels of distress results in impaired recovery (Ebnesahidi & Mohseni, 2008).

By correctly delivering all the information to the patients, staff can help them to cope better with any anxiety inducing triggers. The patient can naturally cope and deal with the tensions or threatening incidents by understanding their meanings. The information given promotes a better understanding of how to emotionally and behaviorally respond to abnormal incidents and results in patients coping better (Golanowski, et al., 2007).

Preoperative education is a very important issue during preoperative nursing which improves patient knowledge and prepares them for surgical interventions. According to Chetty Ehlers' 2009 studies, preoperative teaching decreased anxiety among 78% of surgical patients. Preoperative education is widely used in order to increase the sense of self-respect and psychological well-being of patients (Chetty Ehlers VJ, 2009).

1.2 Problem Statement

Anxiety in preoperative patients may lead to many adverse effects in terms of anesthetic requirements, length of recovery, postoperative anxiety and pain, length of hospital stay, nausea and vomiting. Considering the limited amount of time for patients' preparation and their need for

information, nurses must take interventions to decrease preoperative anxiety levels in order to improve outcomes.

As cited in Devine and Cook (1986), preoperative education is defined as providing the patients with health-related information, psychosocial support and the opportunity to learn selected skills in preparation for surgery. Patients who are admitted for surgery are found to be anxious about the outcome of surgery. These patients also fear possible complications and are in emotional stress before surgery. The patient's anxiety level is an indication of possible postoperative problems.

Preoperative anxiety can increase postoperative pain, the amount of analgesic that might be taken, and also the patient's hospital stay. Preoperative education plays a very important role in decreasing anxiety and reducing anxiety related complications; so, it is important to study these variables among surgical patients in Palestine.

Our study will evaluate the effectiveness of a structured education program on preoperative anxiety and postoperative pain among abdominal surgery patients in governmental Palestinian hospitals in the Nablus region. According to the results of the study, we will then make recommendations to policy makers to make effective changes.

Surgical care is an integral part of health care throughout the world, with an estimated 234 million operations performed annually. This yearly volume now exceeds that of childbirth. Surgery is performed in every

community: wealthy and poor, rural and urban, and in all regions (Carson & Arnold, 1996).

Some of the patients know in advance that they are going to be treated by an operation; they cannot help feeling worried, anxious, and nervous about the upcoming surgical treatment. Ramsay (1972) conducted a preoperative interview among 382 patients (183 males and 199 females) 24 hours before they were delivered to the operating room. It was found that 73% of them were afraid of the surgery while 62% were afraid of being administered anesthesia (Lin & Wang, 2005).

1.3 Significance of the Study

Healthcare delivery systems aim at providing extremely good care for patients by using the most cost-effective methods. High quality outcomes for patients undergoing surgery can be achieved through joint efforts of various health personnel. Advances in medical practice, together with increasing healthcare costs have resulted in reduced length of hospital stay. Surgery is a major life change that causes anxiety. Hospitalization, irrespective of disease, stimulates anxiety among patients posted for surgery. Unrecognized, sustained anxiety may create stress, which may harm the patients and also result in delayed recovery (Yilmaz, et al., 2011).

Studies have 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, problems with elimination, anxiety, and depression (Pavlin, et al., 2004, Schulz, et al., 2011). Nurses, being the member of the single largest group of health professionals, must use the opportunity to make an enormous impact on the quality, effectiveness and the efficiency of the patient's journey in the health care delivery system (Schulz, et al., 2011).

Prevalence of pre surgical anxiety fluctuates from 60% to 92% and also differs from one surgical group to another. Extreme anxiety results in increased blood pressure and heart rate, diminished immune response, increased risk of infection, and poor psychosocial outcome after surgery (Scott A, 2004).

Intense anxiety experienced in the preoperative period raises the severity of pain among patients after surgery in the postoperative period (Caumo, et al., 2001). Preoperative anxiety is considered to be a normal part of the surgical experience. With this in mind, in order to improve the postoperative outcome, hasten postoperative recovery, and reduce the need for hospitalization, morbidity and convalescence, the concept of multimodal, evidence based interventions were introduced more than 10 years ago (Chaudhury, et al., 2006).

Adequate preoperative teaching not only alleviates anxiety, but also increases patients' participation in their care and minimizes the development of postoperative complications. Inadequate preoperative

education has a negative influence on clinical outcomes and patient satisfaction. Hence, the nurse must possess the requisite skills and education to cover the multidimensional needs for promoting, protecting, and restoring health (Lee, 2000).

Preoperative teaching about surgical procedures and outcomes serves as a basis for nursing practice within the surgical setting (Lewis, et al., 2002). Nurses face a major challenge in providing patients with the most needed information about postoperative activities within a limited timeframe (Bernier, et al., 2003).

A descriptive study, which was carried out to identify important areas in preoperative teaching, recommended the inclusion of situational information, patient role, and psychosocial support (Brumfield, et al., 1996).

The researcher's experience in caring for abdominal surgical patients has shown that the patients' primary problems are that they were not able to understand the treatment plan and the reasons and the necessity of the operation, this causes them to have a high degree of anxiety towards the operation. Some of them have even turned down an operation because they anticipated possible discomfort and danger caused by the operation.

In view of the above issues, the researcher felt the need to evaluate the impact of preoperative education programming on postoperative outcomes among patients undergoing abdominal surgery. This educational program consists of preparing the patients for the preoperative readiness

and postoperative self-practices such as deep breathing, coughing and leg exercise techniques so that they can recover rapidly and without any unfavorable postoperative complications.

1.4 Aim of the Study

To evaluate the impact of preoperative education on the psychological and post-operative physiological among abdominal surgical patients.

Specific Objectives:

1. To assess preoperative anxiety level of patients undergoing abdominal surgery.
2. To assess the impact of preoperative educational programs on the post-operative pain level among patients undergoing abdominal surgery.
3. To investigate the effect of demographic characteristics of the patients on their anxiety and pain.
4. To compare the level of the anxiety in the experimental group and the control group of the abdominal surgical patients.
5. To compare the postoperative pain between the experimental group and the control group of the abdominal surgical patients.

1.5 Research Questions

1. What is the level of anxiety of patients undergoing abdominal surgery?

2. Does a preoperative educational program reduce preoperative anxiety?
3. Does a preoperative educational program reduce the postoperative pain level of patients undergoing abdominal surgery?
4. Is there a relationship between the level of preoperative anxiety and postoperative pain?
5. Is there a relationship between various demographic variables and the level of anxiety and pain experienced?

1.6 The Hypothesis of the Research

H1- There is a significant reduction in the preoperative level of anxiety among patients after receiving a structured educational program.

H2- There is significant reduction in postoperative pain level among patients after receiving a structured education program.

H3- There is a significant association between the preoperative level of anxiety and postoperative pain levels.

1.7 Research Variable under Study

Independent Variables: Structured health education, demographic variables, and type of surgery.

Dependent Variables: Anxiety pre op, pain post op, blood pressure, pulse, and respiratory.

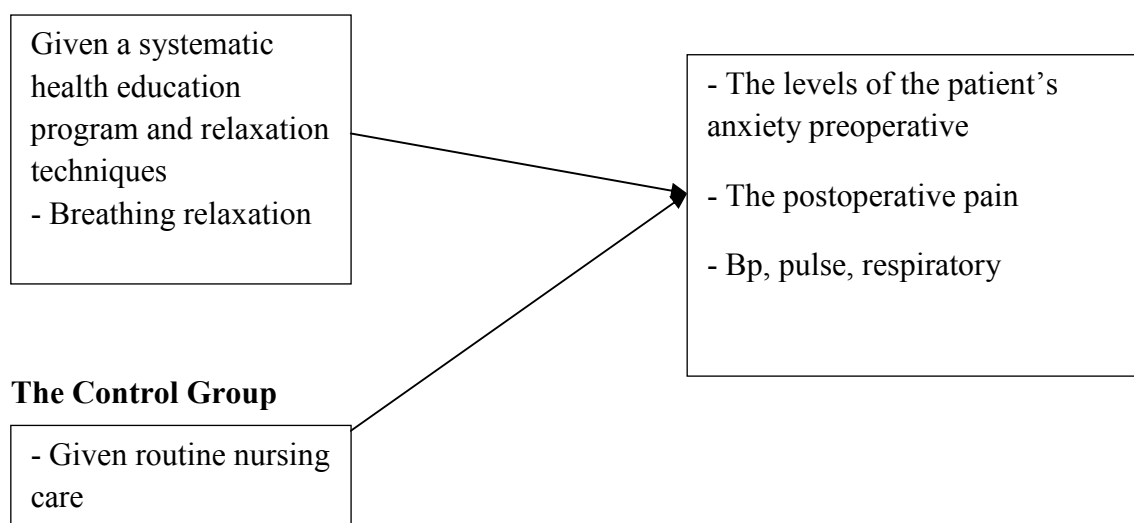
1.8 Assumptions

- A structured education program will reduce the anxiety among abdominal surgery patients.
- Educational programming will reduce postoperative complications.
- Educational programming helps to produce positive outcomes for the patient.
- Educational programming helps to increase the knowledge of preoperative patients and as a result they feel more secure.
- Educational programming helps patients for early ambulation and discharge

1.9 Conceptual Framework

Independent Variables Dependent Variables

The Experimental Group



1.10 Conceptual Definition of Variables

Pain: is an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage. (International Association for the Study of Pain, 2011)

Anxiety: is an emotion characterized by an unpleasant state of inner turmoil, often accompanied by nervous behavior, such as pacing back and forth, somatic complaints, and rumination. It is the subjectively unpleasant feelings of dread over anticipated events (Seligman, 2013)

Effectiveness: is the capability of producing a desired result or the ability to produce desired output. When something is deemed effective, it means it has an intended or expected outcome, or produces a deep, vivid impression (Harper, 2011).

1.11 Operational Definition of Variables

Effectiveness: Refers to the extent to which preoperative teaching is useful in promoting postoperative outcome among patients undergoing abdominal surgery.

Abdominal surgery patients: Refers to clients between 18 and 65 years of age undergoing abdominal surgery such as hernia repair, cholecystectomy and appendectomy, who are scheduled for elective abdominal operation under general anesthesia and admitted at least one day prior to the surgery in general wards.

Preoperative teaching: A planned preoperative education given to the patients individually; regarding different areas like introduction, information regarding preoperative procedures, postoperative care in SICU, discharge plan, postoperative exercises with demonstration of deep breathing, coughing exercises and leg exercises.

Routine care: The usual method of preoperative care in a managed care environment that occurs on the day of surgery. The content is selected by the nurse and is dependent on time constraints for preparation.

Anxiety: The subjective feelings of uneasiness experienced by patients undergoing abdominal surgery, as measured by the State Anxiety Inventory.

Postoperative outcome: Refers to the restoration of physiological condition of those patients who have undergone abdominal surgery, as measured in terms of the length of postoperative hospital stay, postoperative complications, pain, and recovery inventory scores.

Pain: Refers to the subjective physical discomfort experienced due to tissue trauma by the patient after abdominal surgery, measured using the Visual Analog Scale (VAS) and reflected by physiological parameters which include pulse rate, respiratory rate, and blood pressure.

1.12 Conceptual Model

The research study involves preoperative education and the specific impact that this learning experience has on the patient. King's Goal of

Attainment Theory in 1971 developed a model for this study in identifying the process within the outpatient surgical experience. This theory is defined by the perceptions of the nurse's influence on the patient within the interaction process. The goals and needs of the nurse and patient are interrelated concepts or abstractions assembled together in a rational scheme by virtue of their relevance to a common theme and are referred to in a conceptual framework (George, 2011).

The present study aims at evaluating the effectiveness of preoperative teaching in promoting positive postoperative outcomes among patients undergoing abdominal surgery. The conceptual framework of the present study is developed by the investigator, based on Imogene King's Goal Attainment Theory.

Imogene King emphasizes the nurse's role as a process of action, reaction, and interaction. Here, a nurse and the patient share information about the nursing situation and the process of human interaction begins between them. Each of them evaluates the situation, then they set goals and explore and agree to the means to achieve them. In this present study, role refers to the nurse investigator who administers preoperative teaching to promote postoperative outcomes among patients undergoing abdominal surgery.

Perception

Perception is a process in which data obtained through senses and from memory are organized, interpreted and transformed, which are influenced by past experience, concept of self, and background.

Action

During the action phase, the nurse investigator assesses and records physiological parameters (blood pressure, pulse, respiration) and preoperative anxiety using the State Anxiety Inventory Scale among the experimental and control groups. The nurse investigator administers individual preoperative teaching with demonstrations of deep breathing, coughing, and leg exercises to the experimental group.

Interaction

Interaction is defined as a “process of perception and communication between two people, represented by verbal and non verbal behaviors that are goal directed. During the interaction, the investigator records physiological parameters and pain using the Visual Analog Scale, in both groups, six hours after surgery. The investigator assesses patient’s recovery in both groups on the postoperative day and records postoperative complications.

Transaction

Transaction is defined as the observable behaviors of human beings interacting with their environment. When transaction occurs between nurse and client, the goals are achieved.

In the present study, the postoperative patients who received preoperative teaching will have reduced anxiety, postoperative hospital

stay, postoperative complications, pain and an increase in their recovery inventory scores.

Mutual Goal Setting

In the present study, during this phase, the investigator and abdominal surgery patients will set mutual goals to promote postoperative outcome.

Chapter Two

Literature Review

Chapter Two

Literature Review

This literature review involves identification, location and summary of written information that contains knowledge relevant to the problem under study. The review of the literature was done extensively and presented under the following headings.

2.1 Studies about need of Preoperative Education

Preoperative education is extremely important in the care of surgical patients. Inadequate information results in an increased rate of postoperative complications (Halaszynski, et al., 2004). Adequate and essential preoperative patient information can lessen these potential problems and clarifies expectations related to patient postoperative care.

Yilmaz & Özkan, S. (2015) conducted an explorative study that aimed to assess needs of patients at the surgical outpatient clinics of two hospitals in western Turkey, among 575 clients. Results show that participants rated medication and improving the quality of life as the most important needs and community and follow-up as least important. Therefore, nurses caring for surgical clients should make a plan for preoperative education according to client's individual needs.

Ting, et al. (2013) carried out a descriptive, cross-sectional study that aimed to assess the effect of teaching programs among patients who underwent abdominal surgery in the surgical department of the Kuala Lumpur hospital. The study included 80 patients. The results show that

78.8% expressed some level of preoperative anxiety. 97.5% of patients agreed to receive preoperative education. The educational program included details about the surgery, anesthesia, and nursing considerations about surgery. The patients considered these details as the most important factors in helping to relieve anxiety related to surgical intervention.

Sivarajan & Ganesan (2012) conducted a descriptive study that aimed to identify the level of satisfaction related to discharge information given to postoperative patients at the surgical department in Chennai hospital, in India. The study included 102 patients. The study results showed that proper education for discharge patients may reduce the incidence of return to the hospital and fewer complications that can result from wound care mistakes, lack of self-care and pain care.

Sayin, Aksoy (2012) conducted a non-experimental explorative study that aimed to identify the preoperative education required by surgical patients and their relatives, in the surgical department of the Istanbul Hospital, in Turkey. A total of 394 surgical patients, their relatives and 30 nurses participated in the study. The results indicated that the surgical patients and their relatives received inadequate education and information about the surgery and did not know everything about the surgery. Patients indicated that they needed education regarding the surgical procedure and duration during the intraoperative period. Also, their family members expected more education about postoperative care, complication, and prognosis.

Soever, et al. (2010) carried out qualitative research that aimed to recognize the information needs of total knee and total hip replacement surgical patients in Canada. Twenty-two potential participants were included in this study, of which 15 agreed to the study. The results highlighted diverse educational needs, such as preoperative, surgical and medical recovery, restoration, career recovery, and concerns and expectations.

King NK, et al. (2004) carried out a prospective study that aimed to assess the information needs and areas of deficiency seen among 49 patients undergoing abdominal surgery in emergency situations. The results of the study showed that insufficient information was provided regarding the impact of emergency abdominal surgery on daily activity and about the procedure, which plays an important role in meeting patient information requirements.

Henderson & Chien (2004) conducted a descriptive study in Hong Kong that aimed to recognize Chinese surgical patients' information needs at admission. By using convenience sampling technique, 83 surgical patients were selected for the study. The study findings demonstrated that patients wanted more knowledge with regard to the postoperative complications and when to seek medical help. Patients rated information regarding the importance of surgery, treatment choices and explanation regarding surgical procedure as least important.

Jacobs (2000) conducted a descriptive study that aimed to determine patients' perceptions on instructions for carrying out self-care activities after abdominal surgeries. Activity level samples, personal care, pain management, wound care, elimination, and complications were recognized as the most important and had the highest priority. All patients reported the need for information on wound care before discharge, and most were satisfied with the information they received. Patients were found to have inadequate information on complications, postoperative exercise, bowel problems and urinary problems.

Lithner, Zilling (2000) conducted a descriptive study that aimed to identify patients' pre and post surgery needs for instructions among 50 patients admitted to open cholecystectomy in Lund Landskrona, Sweden. The study demonstrated that patients admitted for cholecystectomy required sufficient information both at admission and at discharge. The highest rated information related to anxiety provoking variables such as postoperative side effects and pain after surgery. The findings of the study focused on the need to create and impart to the patient both verbal and written instructions. Consequently, 30% of the patients expressed need for both verbal and written instructions.

King J et al (2014) conducted a descriptive study that aimed to describe what knowledge patients for operation in a lung cancer surgical resection wanted to learn before and after surgery. Ten patients were interviewed preoperatively and postoperatively. The result showed that the

effective aspects of the preoperative education included surgical information and the importance of physiotherapy, which includes exercises. Postoperatively, patients wished that they had understood more about postoperative pain. Patients were satisfied with the information they received; they felt that they had prepared for their surgery but not for postoperative pain control.

Breemhaar, et al. (1996) conducted a descriptive study that aimed to identify patients' educational needs among those undergoing either cholecystectomy or herniorrhaphy. In this study, data was collected from 21 patients regarding their treatment, care, and education during the course of their admission in the hospital. The study findings demonstrated that the majority of the patients had fear of surgery, pain, and complications. The patients wanted more information about discharge and recovery, methods to improve their physical condition, time of suture removal, and measures to improve recovery at home. The patients stated that adequate information was provided on the day of admission; whereas the information delivered on the day of discharge was insufficient.

Fitzpatrick & Hyde (2006) carried out a descriptive study that aimed to determine which preoperative education content rated highly by patients and nurses in ambulatory surgery settings at a mid sized hospital in the south eastern United States. Thirty ambulatory surgery patients and 29 perioperative nurses were included. The study showed that patients considered situational information as the most important, whereas nurses considered

psychosocial support as the most important. Patients preferred to have pre-admission teaching, whereas nurses gave importance to post admission information.

Ali, et al. (2012) conducted a descriptive exploratory study that aimed to evaluate awareness among healthcare workers in minimizing the risk of morbidity and mortality of patients undergoing surgery, and to evaluate nurses in surgical wards for the accurate assessment and education of patients undergoing surgery. All three surgical care units of the University teaching hospital were selected as project sites, and in order to conduct the project, permission and verbal consent was obtained from a manager of each of these units. A total of 30 patients undergoing surgery were included in the project and were followed throughout their complete preoperative assessment and education by nurses and other health care workers. Based on the assessment, altogether, three educational sessions were conducted for all health care workers working in the surgical care areas. Results revealed that education sessions increased the health care worker's knowledge for assessing all the necessary components of a patient before surgery.

2.2 Studies on Effectiveness of the Preoperative Education on Anxiety and Pain

Anxiety is the most vital predictor of post surgical pain. Preoperative education is the initial phase in reducing anxiety during the emotional preparation of patients (Bernier MJ, et al., 2003).

Anusha, et al. (2015) conducted a quasi-experimental study that aimed to examine the effect of preoperative education in reducing anxiety among cardiac surgical patients in Andhra Pradesh, India. A sum of 60 cardiac surgical patients were chosen for the study. The outcomes demonstrated that there was a significant difference between pre and post anxiety levels after preoperative education.

Das, et al. (2015) conducted a pre-experimental study that aimed to assess the effect of preoperative Video-Assisted Teaching (VAT) on knowledge and anxiety among the patients undergoing abdominal surgery in Odisha, India. For the study, one group pre-test post-test design was adopted (n=60). VAT was administered after the pre-test, followed by a post-test on the eighth day. There was a great increase in knowledge score (mean difference=8.12) and decrease in anxiety (mean difference=9.79) and a negative correlation was found between knowledge and anxiety. There was no significant relationship between anxiety and age, but a significant relationship was found between anxiety and disease condition, and socioeconomic status. These results suggest that preoperative education is effective and should be incorporated into routine practice in reducing anxiety and improving knowledge among patients.

Hatefi Moadab, et al. (2015) performed a randomized clinical trial on 60 primiparous cesarean section women in Abadan, Iran. Participants were randomized into two groups (each group with 30 persons) as the interventional and control group. An educational program based on the

teach-back method was presented for the intervention group and their anxiety scores were assessed before and after the intervention using the Spiel Berger Trait Anxiety Inventory (STAI). The study findings demonstrated a significant statistical difference, and the mean preoperative anxiety was significantly less in the interventional group than the control group ($P < 0.001$).

Thilagavathi & Rajeswari (2014) carried out a quasi-experiment that aimed to find the effectiveness of preoperative instructional protocol on postoperative anxiety and depression status in a Salem Polyclinic, Salem. By using convenience sampling technique, 20 women undergoing hysterectomy were selected. Preoperative education was delivered to an experimental group during the preoperative period, at discharge, and two months after surgery. At discharge, anxiety scores differed statistically ($P < 0.05$) between the control group and experimental group.

Priya, et al. (2014) carried out a randomized, parallel group, double blinded clinical trial that aimed to assess whether planned pre-operative education decreases anxiety and improves satisfaction in patients undergoing uterine fibroid surgery. Sixty-four patients admitted for fibroid surgery were randomized to the intervention group ($n=32$), which received planned preoperative education, and to the control group ($n=32$), which did not receive any education. The anxiety levels of patients in both the groups were assessed prior to receiving education, using the Amsterdam Preoperative Anxiety and Information Scale (APAIS), and were reassessed

by a blinded assessor after receiving education on the day before surgery. The mean combined anxiety score of APAIS showed a significant decrease in the intervention group, after receiving education. All three subscales of APAIS also showed a decrease in the educated group. The overall patient satisfaction score and all seven subscales of PSQ-18 showed a significant increase in the intervention group.

Nigussie, et al. (2014) conducted a cross-sectional study that aimed to assess the effect of the educational program on surgery patients at Jimma University Specialized Teaching Hospital. By using a structured questionnaire, data was collected from 239 patients. The findings revealed that the majority of patients had significant anxiety. There was a negative correlation between receiving preoperative information and the preoperative anxiety scores. These findings revealed that adequate information helps to reduce preoperative anxiety.

Priya & Roach (2013) conducted quasi-experimental study that aimed to evaluate the effectiveness of preoperative instruction on anxiety among women undergoing abdominal hysterectomy for nonmalignant conditions in the multispecialty hospital in Bangalore. By purposive sampling method, 60 women were selected and allotted to study and control groups. On day two of admission, pre-test anxiety was assessed and the study group was given a 45 minute instructional session, whereas the control group did not receive the preoperative instruction. Assessment of post-test anxiety was done 24 hours after surgery. The results showed a

significant reduction in anxiety ($p < 0.001$) for women in the study group who received preoperative instruction.

Jung, et al. (2013) carried out an evaluative study that aimed to find the effects of structured instruction on anxiety and self-care activities. By using a randomized control group pre-post design, 60 cataract surgical patients were randomly assigned to a study and a control group. The study findings showed a significant difference between the two groups in the postoperative anxiety ($t=3.57$, $p=.001$). Postoperative blood pressure and pulse rate did not differ significantly between the two groups.

Pinar, et al. (2011) conducted a quasi-experimental research that aimed to find the result of planned education on the postoperative anxiety among oncology patients. The oncology patients admitted to the Gynecologic Oncology Service at Zekai Tahir Burak Gynaecology Training and Research Hospital from May to September 2010 were included in the study. By using random sampling, 60 patients were assigned to each group. The planned preoperative instruction was given to the study group, whereas the control group received routine nursing care. The results revealed that there was a significant reduction in postoperative anxiety among the study group compared to the control group ($p < 0.05$).

Karabulut & Cetinkaya (2011) conducted an evaluatory study that aimed to identify the impact of various teaching programs on the anxiety and pain level of inguinal hernia operation patients in the Ataturk University and Suleyman Demirel Medical Centre in Erzurum. The study

information was gathered from a sum of 90 patients. Video teaching was given to 30 patients and 30 other patients were recruited to a control group. Booklets were distributed to the remaining 30 patients. There was a significant ($p < 0.001$) difference found in the pain and anxiety readings of the two groups throughout all measurement times.

Jlala, et al. (2010) conducted a study that aimed to assess the impact of preoperative multimedia information on perioperative anxiety among upper or lower limb surgery patients. By using random sampling technique, 110 patients were assigned to intervention and control groups. The study group was shown a short film depicting the patients in a hospital journey. There was no difference in anxiety between the two groups before the film. After viewing the film patients in the intervention group were less anxious before surgery than those in the control group ($P = 0.04$). There was a significant difference in anxiety among patients in the intervention group than the control group ($P = 0.005$).

Tameh, et al. (2011) carried out an empirical study that aimed to study the impact of two verbal and audio methods of preoperative teaching on patient's anxiety before surgery at Imam Khomeini Medical Centre in Sari, Iran from 2009-2010. By using random sampling technique, 35 individuals were assigned to each group. The results showed significant differences in anxiety and conditions two hours before operation, between the two test groups as well as the control group ($P = 0.03$).

Fariborz, et al. (2009) carried out an interventional study that aimed to determine the impact of preoperative information on postoperative anxiety among patients undergoing CABG. By using random sampling, 85 patients were included and completed the Spielberger State Anxiety questionnaire the day before surgery. Preoperative education, with reassurance was given after the completion of the questionnaire. There was a statistically significant difference in anxiety before and after preoperative information was received. After the intervention, mean anxiety scores reduced from 39 ± 5.8 to 34 ± 4.2 in 21 patients with a mild anxiety disorder. The mean anxiety decreased from 52.61 ± 3.8 to 50.76 ± 56 among 39 patients with a moderate anxiety disorder. Mean anxiety decreased from 63.88 ± 2.8 to 53.88 ± 7.6 among 25 patients who had a severe anxiety disorder.

Koshy (2007) conducted a quasi-experimental study that aimed to find the effectiveness of health education on the anxiety of patients undergoing a craniotomy. The study was conducted in the Neurosurgical ICU and Neuro Surgery Ward of Sree Chitra Tirunal Institute for Medical Sciences and Technology. Consecutive sampling technique was used for selecting the 30 samples; individual health education, using a pamphlet, was given after initial assessment. Major findings of the study were that the anxiety state of the patients was reduced, both in males and females after surgery, while the mean trait anxiety score remained the same before and after surgery. The results supported the existing knowledge that preoperative health education reduces post operative anxiety.

Deyirmenjian, et al. (2006) conducted a study on preoperative patient education for Lebanese open-heart surgery patients. Data was collected from 110 samples who were randomly assigned to an experimental (n=57) and a control group (n=53). Preoperative education was given to patients in the experimental group on admission day. The routine hospital protocol was followed among the control group. Statistical significance was found in terms of preoperative and postoperative anxiety among the experimental group.

Blay & Donoghue (2005) carried out a randomized controlled study that aimed to find the result of pre-admission patient education on postoperative pain, activities of daily living and patient recall following a laparoscopic cholecystectomy at a pre-admission clinic of St. George Hospital Sydney, Australia; a tertiary referral hospital. Data was collected regarding participants' knowledge of LC and postoperative management by using a questionnaire in the pre-admission clinic. The findings revealed that there was no significant difference in the pain levels of standard pre-admission and individualized education participants.

Lin & Wang (2005) conducted an experimental study that aimed to look at the impacts of education on preoperative pain, anxiety, and postoperative pain in a hospital in southern Taiwan. The researcher delivered a preoperative nursing intervention with routine care to the study group; whereas routine care alone was given to the control group. There was a significant reduction in anxiety and positive preoperative pain

attitude among participants in the study group. Perceived pain and deep breathing/coughing in the control group was significantly higher than that of the study group.

Kain (2000) conducted a study that aimed to determine the relationship between preoperative anxiety and the postoperative pain response among patients undergoing a hysterectomy. State of anxiety, pain and analgesic intake were recorded at multiple time periods. The study findings showed that preoperative anxiety state is a significant positive predictor of the immediate postoperative pain ($p=0.30$), which in turn, is a positive indicator of pain ($p=0.54$). Pain in the hospital, in turn, is predictive for pain at home ($\beta=0.30$).

Kim, et al. (2000) conducted an evaluatory study that aimed to demonstrate the impact of preoperative education on surgery patients at the University Hospital in Seoul. The data was collected from a sample of 60 patients (30 in an experimental group, and 30 in a control group). The results of the study showed that the stress scores prior to surgery were significantly lower for the preoperative teaching group than for the control group ($t=2.61$, $p<.01$). While the difference in anxiety level prior to surgery was significantly higher for the preoperative teaching group than for the control group ($t=2.82$, $p<.01$). In conclusion, this study found that preoperative teaching is a beneficial intervention that has a positive effect on the stress and anxiety of patients prior to surgery.

Kalogianni, et al. (2016) conducted a randomized controlled study that aimed to find the effectiveness of nurse-led preoperative education on anxiety and postoperative outcomes. Patients in the intervention group received preoperative education by specially trained nurses. The control group received the standard information by the ward personnel. Measurements of anxiety were conducted on admission-A, before surgery-B, and before discharge-C by the state-trait anxiety inventory. The state of anxiety on the day before surgery decreased only in the intervention group (34.0 (8.4) versus 36.9 (10.7); $P=0.001$). The mean decrease in anxiety state score during the follow-up period was greater in the intervention group ($P=0.001$). No significant difference was found in the length of stay or readmission. Lower proportions of chest infection were found in the intervention group (10 (5.3) versus 1 (0.5); $P=0.004$). Multivariate linear regression revealed that education and score in trait anxiety scale on admission are independent predictors of a reduction in state anxiety.

Sadati, et al. (2013) conducted a quasi-experimental design that aimed to find the effects of preoperative nursing visits on anxiety and postoperative complications in candidates for laparoscopic cholecystectomy. One hundred consecutive patients were randomly assigned into two equal groups of 50 patients each. Patients in the control group received routine nursing care. Patients in the intervention group received two pre-operative interviews, one on the day before surgery and one just before entering the operating room. At admission, state and trait anxiety measurements in the intervention and control groups were

approximately 56 and 55 in both groups. Just before entering the operating room, these values reduced to 40.30 and 39.04 in the intervention group, with no significant change in the control group ($p > 0.05$). The average time it took to reach an Aldrete consciousness score of 9, frequency of nausea and vomiting in the recovery room, the level of postoperative pain, vital sign stabilization and time interval to get out of bed all improved significantly in the intervention group.

2.3 Effectiveness of Preoperative Education on Anxiety

Preoperative guidelines empower patients to better comprehend their operation and aftercare, reduces their fears and anxieties, and permits them to encounter a shorter length of stay. Numerous studies have evaluated the effectiveness of different formats on a variety of outcomes (Al-Qalah TAHS, et al., 2015).

Ricci (2010) carried out a quasi-experimental research that aimed to find the result of preoperative instruction on self-care activities for patients undergoing cardiac surgery in the cardiac center at Al-Thawra Modern General Hospital in Sana'a, Yemen. The study was conducted on 100 adult cardiac surgical patients. A planned pre-operative teaching was given to study group on self-care activities. The post-test results showed that the majority of samples (84%) in the study group had adequate knowledge. Study group showed improved performance level of self-care activities, reduced pain, reduced analgesic intake, less complications, and shorter postoperative period and ICU stay than the control group.

Wong, et al. (2010) conducted a study that aimed to assess the effectiveness of a preoperative teaching among adult surgical patients over a four month period, in a general hospital. The 20 subjects in the study group received the preoperative instruction in small groups conducted by the investigator. The results showed there was no significant difference in duration of hospital stay, postoperative complications, postoperative analgesics intake, and the level of satisfaction between the study and control group.

Beaupre, et al. (2004) conducted a pre-experimental study that aimed to find the impact of a preoperative intervention on pain, anxiety and self-care activities among orthopedic surgery patients. The preoperative intervention was delivered for 30 minutes to a sum of 125 patients. The data was collected prior to the surgery and on day 2, day 4, day 7, a month and 3 months after the surgery. The experimental group reported reduced pain scores, decreased anxiety level, and better self-efficacy during hospitalization than the control group. There was no significant difference noted on the duration of stay. A statistically significant difference was found in anxiety level in the experimental group at the 3-month evaluation.

McDonald, et al. (2004) conducted an evaluatory study that aimed to find the effect of a preoperative exercise on functional recovery and health-related quality of life following total knee arthroplasty. Data was gathered from 131 randomly selected (control n=66 and treatment n=65) surgical patients. The information was collected 6 weeks preoperatively, in the

immediate postoperative period, and 3, 6 and 12 months after surgery. There were no significant differences found in pain, functional recovery or HRQOL between the two groups. There were no significant differences in the duration of hospitalization between control and treatment group.

Krouse, et al. (2001) conducted a meta analysis that aimed to find the influence of preoperative instruction on postoperative outcomes among surgical patients. Health professionals delivered preoperative instruction within six weeks of hip or knee replacement surgery. Four studies involving 365 participants revealed no significant difference in length of hospital stay between study and control group (WMD -0.97; 95% CI -2.67 to 0.73). One study of 133 participants indicated that individual preoperative teaching was effective in decreasing duration of hospitalization. There was no significant difference on postoperative anxiety, either on the first postoperative day or at discharge. There was no significant difference noted between the groups related to postoperative pain either.

Hanucharunkui & Vinya-nguag (2001) carried out an experimental study that aimed to compare the recovery outcomes of subjects receiving pre-admission, preoperative education, planned and presented by the clinical nurse specialist with subjects receiving routine preoperative preparation by clinical staff nurses. There was a significant difference found in the bowel function ($P < 0.01$), but not in pulmonary complications ($P > 0.057$), inspiratory capacity and post-discharge recovery ($P > 0.71$, $P > 0.72$).

Babae G, et al (2007) conducted an evaluatory study to find the effectiveness of patients' participation in self-care aimed at expediting the rate of recovery from surgery and increasing satisfaction with care received. The experiment was tested with adult patients undergoing pyelolithotomy and nephrolithotomy. Forty subjects participating in the study were randomly assigned to either an experimental (n = 20) or a control group (n = 20). Patients in the experimental group participated in their self-care through nurse-patient interaction, in addition to the usual care received in that setting. Results of the study indicated that patients in the experimental group had significantly less pain sensation and distress, used fewer analgesics, ambulated more, had fewer complications, and had higher satisfaction with care than patients in the control group.

Chapter Three

Research methods

Chapter Three

Research methods

This chapter deals with the different steps undertaken by the investigator. It includes the description of the research approach, research design, setting, population, sample and sample size, sampling technique, sampling criteria, selection of tools, data collection procedure and the plan for data analysis.

3.1 Study Design

The study design adopted for the present study is a time series quasi experimental study design.

The patients are assessed by an observer for anxiety and pain at 2 and 6 hours pre-operatively and for post-operative pain.

Experimental Group: C1 E C3

Control Group: C2 C3

C1: Assessment of Preoperative, anxiety, Physiological Parameters (Blood Pressure, Pulse Rate, respiratory rate) before the preoperative education.

C2: Assessment of Preoperative Anxiety, Physiological Parameters (Blood Pressure, Pulse Rate, respiratory rate) on the day of surgery.

C3: Assessment of Pain, on the first 1/2 hour, 2 hours, and 6 hours postoperative day.

E: Preoperative education with demonstration of deep breathing, coughing, and leg exercises.

3.2 Study Population

The study population consisted of adult men and women over 18 years old undergoing any type of elective open abdominal surgery under general anesthesia at Rafidia Hospitals between February 15 to April 15, 2017.

3.3 Sampling of the Study

The study sample consisted of (100) abdominal surgery patients chosen from all patients who will be under elective abdominal surgery in Nablus district, and they were assigned randomly.

Intervention group (1) n= 50 patients who had preoperative education, in addition to routine preoperative care.

Control group (2) n= 50 patients who had routine preoperative care.

The two groups were divided according to:

1. Gender.
2. Education level: illiterate (no school), some school and university graduate.
3. The patients had to undergo the same type of surgery.

3.4 Inclusion Criteria

1. The patients were 18 to 60 years old.
2. The patients had no hearing or speaking problems.
3. The patients were diagnosed and considered by the doctors to show no signs of neurotic and/or psychotic disorders.
4. The patients were not prescribed an anxiety suppressant or tranquilizer before or after the surgical nurses' visit.
5. The patients had no operative history.
6. The patients were willing and pleased to cooperate in this research.

3.5 Exceclusion criteria

1. Any age under 18.
2. Those who did not experience any operation

3.6 Instruments

A questionnaire composed of three sections. First part included demographic information such as age, gender, level of education, occupation, past medical history, and smoking habits. The second and third parts included the State Anxiety Inventory and the Visual Analog Scale (VAS) for pain scales (See Appendix A)

State Anxiety Inventory

State Anxiety Inventory was developed by Spielberger in 1977. It is a Likert '4' point scale (McCaffery & Beebe, 1989).

Scoring of State Anxiety Inventory

Each State Anxiety Inventory item was given a score of 1 to 4 ranging from "not at all" to "very much so." The state anxiety score varied from a minimum of 20 to a maximum of 80. The range of scores is 20-80, with a higher score indicating greater anxiety.

Anxiety was interpreted as:

20-35 Mild

36-50 Moderate

51-65 Severe

66-80 Extreme

Visual Analog Scale (VAS)

The pain VAS is a single-item continuous scale comprised of a horizontal (HVAS) or vertical (VVAS) line, usually 10 centimeters (100 mm) in length, anchored by two verbal descriptors, one for each symptom extreme. Instructions, time period for reporting, and verbal descriptor anchors have varied widely in the literature depending on intended use of the scale (See Appendix C).

Score Interpretation

A higher score indicates greater pain intensity. Based on the distribution of pain VAS scores in postsurgical patients (knee replacement, hysterectomy, or laparoscopic myomectomy) who described their postoperative pain intensity as none, mild, moderate, or severe, the following cut points on the pain VAS have been recommended: no pain (0–4 mm), mild pain (5–44 mm), moderate pain (45–74 mm), and severe pain (75–100 mm).

Reliability for Visual Analog Scale (VAS)

Test–retest reliability has been shown to be good, but higher among literate ($r = 0.94, P < 0.001$) than illiterate patients ($r = 0.71, P < 0.001$) before and after attending a rheumatology outpatient clinic.

Validity for Visual Analog Scale (VAS)

In the absence of a gold standard for pain, criterion validity cannot be evaluated. For construct validity, in patients with a variety of surgical patients, the pain VAS has been shown to be highly correlated with a 5-point verbal descriptive scale (“nil,” “mild,” “moderate,” “severe,” and “very severe”) and a numeric rating scale (with response options from “no pain” to “unbearable pain”), with correlations ranging from 0.71–0.78 and 0.62–0.91, respectively). The correlation between vertical and horizontal orientations of the VAS is 0.99.

3.7 Educational Program (See Appendix B)

The knowledge-providing program, as defined by Prapapen Suwan and Sawing Suwan (1993) is health education as an educational process. It is planned to initiate the changes focusing on the direct or in direct problems or behaviors which influence the health of a target population. The problems and the behaviors may vary, depending on the nature of the problems. In some cases, the target group might be an individual, or a small group, or focus on the structure and the process. The educational program has been validated by experts.

The types of data for the educational program are classified as follows:

1. On the Basis of the Information Contents

- 1.1 The procedural information is the data which will tell the patients step by step about what is going to happen.
- 1.2 The sensory information is the data which will tell the patients about how they are going to feel by describing the feelings of other patients who have faced the same situation. These feelings will be perceived by their five senses.
- 1.3 The coping information is the data which will help the patients to know what to do for their own benefit when they have to cope with threatening situations.

1.4 Poor blood circulation can contribute to pain. Pain can be relieved by moving abdominal muscles slowly and frequently. It is important for you to breathe deeply several times an hour to keep your lungs filled with air. Breathing deeply will speed your recovery and help keep your lungs clear.

2. On the Aspect of the Characteristics of the Information

2.1 The general information is wide and overall data and is similar to the procedural information.

2.2 The specific information is the detailed data of each situation that the patients have to face when coping with threatening predicaments.

3. On the Aspect of the Details of the Information

3.1 The information about diseases and the reasons for medical treatments.

3.2 The information about the medical procedures.

3.3 The information about the feelings arising from the medical treatments.

3.4 The information about the ways to confront the upcoming incidents.

In brief, the preoperative data should consist of information about diseases and the reasons for an operative treatment, preoperative preparation, and the self-practices before, during, and after an operation.

Additionally, some extra information which they may use before, during, and after an operation and the coping information, should be provided. However, due to patient's heightened anxiety at the preoperative stage, the patients may not be ready to get too much detailed information or various types of information, so giving some necessary procedural information, and the sensory information is better than giving too much detailed information.

3.8 Pilot study

The pilot study was conducted in Rafidia hospitals in January 2017. After obtaining formal permission, the tool was administered to 10 patients (5 in the control and 5 in the experimental groups) undergoing abdominal surgery. The study was found to be feasible and practicable.

3.9 Data Collection Procedure

Phase 1: Formal administrative permission was obtained from the directors of the concerned hospitals and concerned surgeons. Informed written consent was obtained from the patients after explaining the procedure and their role in the study (See Appendix A). Pre-test (C1) was conducted on both the experimental and control groups on the day before surgery in the evening. Physiological parameters (blood pressure, pulse, respiration) were recorded and preoperative anxiety was assessed using the State Anxiety Inventory Scale.

Phase 2: Individual preoperative teaching was given with a demonstration of deep breathing, coughing, and leg exercises in the evening to the

experimental group for about 45 minutes. For the control group, routine preoperative care was given. In post-test I (C2), physiological parameters and anxiety were assessed using the same scale in both the groups on the morning of the day of surgery.

Phase 3: In the post-test III (C3), physiological parameters and pain were assessed using the same scale

Independent variable

- Preoperative Education

Dependent variables

- Anxiety
- Physiological parameters (blood pressure, pulse rate, and respiration)

Extraneous Variables

- Age, sex, educational status, previous history of hospitalization

Randomization: The study was controlled and randomized. Patients were randomly selected to receive educational program preop plus routine care or routine care only (control care group). All other aspects of preoperative care were not affected. After consent. Instruction on the randomization process were given by a statistician.

3.10 Setting of the Study

Nablus Rafidia Hospital – surgical ward.

3.11 Study Steps

- 1) Prepared the study tools in their final form after being presented to the arbitrators and verifying their validity and reliability.
- 2) Decided on the subject of the study sample.
- 3) Received permission from selected MOH to carry out the study at Rafediya Hospital obtained.
- 4) The relevant data was analyzed and entered into the statistical model using SPSS to find results for the established hypotheses:

3.12 Statistical Analysis

This study is a descriptive analysis of the correlation between patients that receive preoperative education and their level of postoperative anxiety and pain. The statistical analysis was performed using the SPSS software. The relationship between preoperative education and preoperative anxiety and postoperative pain was assessed using data from all pre- and post-operative times.

A standard statistical power analysis was performed to determine the size of the randomized, prospective study necessary to demonstrate that the educational program decreases anxiety pre op and pain post op.

Additionally, the relationship between anxiety and pain, and age and sex, will be assessed using:

1. Frequencies and percentages.
2. Mean and Standard Deviation.
3. Pearson chi square.
4. Cronbach Alpha.
5. T-test.
6. Maan-whitney.

3.13 Ethical Consideration:

The researcher is cognizant that the issue of research is a sensitive and private matter and as such, has an ethical responsibility to adhere to key ethical principles such as respect, informed consent, beneficence, non-maleficence, veracity and justice, which were explained to the patient, and the IRB.

Before commencement of data collection, approval for this study was obtained from the institutional review board (IRB).

To attenuate bias and assure confidentiality of all study participants, identification numbers were assigned to each patient and anesthesia provider. These identification numbers allowed avoidance of using any patient or provider identifiers such as name and/or medical record number. No participation risks were identified for this observational study. In the surgical ward on the day of their scheduled procedure, the researchers met

with all patients undergoing elective abdominal surgery. The purpose of the study, the participant's role, confidentiality, and right to refuse was explained to each patient. At that time, all patients who met the enrollment criteria were invited to participate in the study. Additionally, each nurse was informed about the purpose of the study, their right to refuse, and confidentiality measures.

Chapter Four

Result

Chapter Four

Result

This chapter presents analysis and findings of the data results, descriptive statistics for frequencies and percentages, mean, and standard deviation. To answer the research question, the researcher calculated the mean, standard deviation, cross tabulation, Chi-Square, and Mann-Whitney U Test.

4.1 Demographic Data

Table (1): Demographic variables of participants according to group type (control group and experiment group)

Variable		Control group N=50	Experiment group N=50	P-value
Age		34.11±17.492	33.34±15.561	0.671
Gender	Male	35 (70%)	33 (66%)	0.831
	Female	15 (31%)	17 (34%)	
Previous Hospitalization	Yes	18 (36%)	14 (28%)	0.751
	No	32 (64%)	36 (72%)	
Previous Medication	Yes	11 (22%)	9 (18%)	0.639
	No	39 (78%)	41 (82%)	
Smoking	Yes	20 (40%)	17 (34%)	0.314
	No	30 (60%)	33 (66%)	
Chronic Diseases	Yes	13 (26%)	14 (28%)	0.654
	No	37 (74%)	36 (72%)	
Level of Education	Illiterate	4 (8%)	3 (6%)	0.292
	School	28 (56%)	33 (66%)	
	University	18 (36%)	14 (28%)	
Type of Surgery				
Open Cholecystectomy		6 (12%)	5 (10%)	0.184
Lab Cholecystectomy		15 (30%)	11 (22%)	
Hernia		21 (42%)	24 (48%)	
Appendectomy		8 (16%)	10 (20%)	

Significant at 0.05 level. Data are Mean±SD with P-values derived from Mann-Whitney U test or Frequencies and Percentages (%) with P-values derived from Chi Square test. Demographic variables with means,

standard deviation, and P-values of the Mann Whitney Test of differences in all demographic variables of participants. At baseline, patients' demographics and clinical characteristics were similar in the experiment and control groups.

4.2 Participant Vital Signs

Table (2): Effectiveness of Preoperative Teaching on Anxiety among Patients Undergoing Abdominal Surgery in Terms of Vital Signs

Aspect of vital signs	Time	Control care group	Experimental group	Independent t-test	P value
SBP (mmHg)	Pre- op	115.14 ± 11.38	114.18 ± 11.26	-0.51	0.6
	Post- op	134.20 ± 12.38	126.26 ± 12.68	-2.4	0.01
DBP (mmHg)	Pre- op	74 ± 8.5	74.08 ± 9.39	0.02	0.9
	Post- op	83.75 ± 9.8	81.5 ± 6.8	-1.1	0.01
Heart rate (bpm)	Pre- op	79.43 ± 5.5	80.56 ± 5.7	1.58	0.11
	Post- op	88.53 ± 8.3	84.9 ± 6	-1.76	0.08
Respiratory rate/min	Pre- op	16.28 ± 5.7	16.88 ± 6.3	0.39	0.69
	Post- op	24.85 ± 8.3	17.08 ± 3.9	- 2.2	0.03

According to table above there is a statistically significant difference in postoperative vital signs between the experimental and control group. No significant difference noted preoperatively.

Table (3): Comparison of Post-Test Pulse and Respiration among Three Different Surgeries between Experimental and Control Group

Type of surgery	Variables	Experimental	Control	P value *
		Mean±SD	Mean±SD	
Appendectomy (18)	Pulse	76.65±5.05	84.50±2.92	0.001
	Respiration	21.45±1.92	27.35±1.71	0.001
	SBP	116±6.93	126±6.62	0.001
	DBP	76±7.64	85±5.52	0.001
Lab Cholecystectomy (26)	Pulse	78.10±4.10	81.75±2.97	0.001
	Respiration	23.15±1.62	25.10±2.30	0.001
	SBP	121±9.46	129±7.49	0.001
	DBP	77±4.52	83±6.62	0.001
Open Cholecystectomy (11)	Pulse	78.10±4.10	81.75±2.97	0.001
	Respiration	23.15±1.62	25.10±2.30	0.001
	SBP	121±9.46	128±5.16	0.001
	DBP	77±4.52	83±4.90	0.001
Hernia repair (45)	Pulse	78.65±3.87	83.55±3.18	0.001
	Respiration	22.20±1.91	25.35±2.45	0.001
	SBP	125±6.07	122±6.30	0.001
	DBP	78±5.33	85±7.51	0.001
Total (50+50)	Pulse	77.80±4.41	83.27±3.22	0.001
	Respiration	22.27±1.94	25.93±2.39	0.001
	SBP	120.08±7.93	127.33±6.04	0.001
	DBP	77.50±5.98	84.75±6.08	0.001

*= significant

The post-test mean pulse and respiration of the experimental group was less than the post-test mean pulse and respiration of the control group among all four different types of surgeries. The difference was highly significant in post test pulse and respiration among all four types of surgeries between experimental and control group ($P < 0.001$).

4.3 Preoperative State Anxiety Inventory among Experiment and Control group

These tables answer our first and second questions

* what is the level of anxiety of patients undergoing abdominal surgery?

* does a preoperative educational program reduce preoperative anxiety?

Table (4): Effectiveness of Preoperative Teaching on Anxiety among Patients Undergoing Abdominal Surgery in Terms of State Scale Anxiety scores.

Symptoms of anxiety	Control group (\pm SD)	Experiment group Mean (\pm SD)	P-value
1. I feel calm	2.35 \pm 1.02	2.71 \pm 10.91	.019
2. I feel secure	2.61 \pm 0.95	2.91 \pm 0.89	.021
3. I feel tense	1.68 \pm 0.74	1.29 \pm 0.61	.006
4. I feel strained	1.62 \pm 0.85	1.24 \pm 0.55	.009
5. I feel ease	2.14 \pm 1.04	2.24 \pm 0.93	.559
6. I feel upset	1.21 \pm 1.06	1.20 \pm 0.52	.989
7. I am presently worrying over possible misfortunes	1.29 \pm 0.61	1.31 \pm 0.71	.978
8. I feel satisfied	2.22 \pm 0.87	2.38 \pm 0.79	.498
9. I feel frightened	1.81 \pm 0.82	1.51 \pm 0.82	.094
10. I feel comfortable	2.20 \pm 0.91	2.41 \pm 0.87	.073
11. I feel self-confident	2.29 \pm 0.87	2.49 \pm 0.79	.197
12. I feel nervous	1.86 \pm 0.87	1.41 \pm 0.72	.003
13. I feel jittery	1.78 \pm 0.64	1.19 \pm 0.59	.001
14. I feel indecisive	1.16 \pm 0.49	1.19 \pm 0.62	.788
15. I feel relaxed	2.12 \pm 0.11	2.51 \pm 0.78	.006
16. I feel content	2.33 \pm 0.89	2.33 \pm 0.78	.989
17. I feel worried	1.49 \pm 0.72	1.14 \pm 0.81	.006
18. I feel confused	1.29 \pm 0.60	1.18 \pm 0.61	.179
19. I feel steady	2.29 \pm 0.89	2.71 \pm 0.79	.005
20. I feel pleasant	2.21 \pm 0.14	2.68 \pm 0.92	.003

According to table 4 there is statistical significant in some STAI scale items which is (I feel tense with mean 1.29 in experimental group less than 1.68 in control group , I feel strained with mean 1.24 in experimental group less than 1.62 in control group , I feel nervous with mean 1.41 in experimental group less than 1.86 in control group , I feel relaxed with mean 2.51 in experimental group less than 2.12 in control group , I feel steady with mean 2.71 in experimental group less than 2.29 in control group , I feel pleasant with mean 2.68 in experimental group less than 2.21 in control group) .

Table (5): Frequency, Percentage and Distribution of Subjects According to State Scale Anxiety Scores in Experimental and Control Groups Cross Tabulation.

	Experimental group (N=50)	Control group (N=50)
Level of State Anxiety scores	n (%)	n (%)
Mild (20-35)	18 (36%)	6 (12%)
Moderate (36-50)	8 (16%)	11 (22%)
Severe (51-65)	20 (40%)	27 (54%)
Extreme (66-80)	4 (8%)	6 (12%)
Chi-square = 11.6		P-value = 0.023

According to table 5 there is a statistically significant relationship between the educational program and anxiety. This is clear from the showings of moderate, severe, and extreme anxiety levels which were higher in the control group than the experimental group. This relationship confirms research hypothesis 1 (H1) that there is a significant reduction in the preoperative level of anxiety among patients after giving a structured education program.

Table (6): Comparison of Experiment and Control Group in State Scale Anxiety Scores between four Different Surgeries among Experimental Group

Type of surgery	Control group		Experiment group		P value*
	Range	Mean SD	Range	Mean SD	
Appendectomy (n=18)	32-70	55.15±12.18	22-60	41.42±11.41	0.001
Lab Cholecystectomy (n=26)	40-77	60.35±10.63	27-72	45.67±12.07	0.001
Open Cholecystectomy (n=11)	36-74	56.35±10.33	27-72	47.35±11.17	0.001
Hernia repair (n=45)	34-74	57.71±12.93	25-70	44.43±17.20	0.001
Total(n=100)	32-77	57.82±12.01	22-72	43.84±13.77	0.001

*= significant

Post-test range and the mean state anxiety scores were less than the experiment group's mean scores among all four different types of surgeries

in experimental group. The difference between pre-test and post-test state scale anxiety scores was highly significant among all four types of surgery ($P < 0.001$).

4.4 Visual Analog Scale (VAS)

This table answer our third question

* does preoperative educational program reduce the postoperative pain level of patients undergoing abdominal surgery?

Table (7): Effectiveness of Preoperative Teaching on Postoperative Pain among Patients Undergoing Abdominal Surgery in Terms of Visual Analog Scale (VAS)

Time after	Control group Mean (\pm SD)	Experiment group Mean (\pm SD)	P-value
1/2 hour	4.773 \pm 0.44	4.266 \pm 0.44	0.022
2 hours	3.400 \pm 0.49	2.733 \pm 0.63	0.013
6 hours	2.633 \pm 0.76	2.033 \pm 0.31	0.014

According to Table 7 there is a statically significant relationship between pain and the preoperative educational program. This is evident in that the pain scores were less in the experimental group than the control group at all three times of reading. This answers research hypothesis 2 (H2), there is significant reduction in postoperative level of pain among patients after being given a structured preoperative education program.

This table answer our fourth question

* Is there a relationship between the level of preoperative anxiety and postoperative pain?

Table (8): Relationship between Preoperative Level of Anxiety and Postoperative Level of Pain at 6 hours Postoperative (cross tabulation)

		Pain (VAS)			
		Mild (1)	Moderate (2-3)	Severe (4-5)	Total
Level of State Anxiety Scores	Mild (20-35)	14 (58%)	8 (33%)	2 (8%)	24
	Moderate (36-50)	8 (42%)	8 (42%)	3 (16%)	19
	Severe (51-65)	19 (40%)	17 (36%)	11 (24%)	47
	Extreme (66-80)	3 (30%)	4 (40%)	3 (40%)	10
Chi square: 8.32		P-value: 0.001			

There is a significant relationship between the preoperative level of anxiety and postoperative level of pain at 6 hours postoperative, at significant level 0.05, with P-value 0.001. Also, the table shows that pain was less when anxiety was lower in all categories. This goes with hypothesis (H3), there is a significant association between the level of preoperative anxiety and post-operative pain.

4.5 Relationship between Demographic Variables and Anxiety Level and Pain

This table answer our fifth question

* Is there arelationship between various demographic variables and the level of anxiety and pain experienced?

Table (9): Relationship between Demographic Variables and Anxiety Level

		Sum of squares	df	Mean square	F	Sig.
Age	Between Groups	1.048	2	.524	0.42	0.65
	Within Groups	189.388	155	1.222		
	Total	190.437	157			
Gender	Between Groups	9.500	3	3.167	2.164	.092
	Within Groups	471.114	322	1.463		
	Total	480.613	325			
Education Level	Between Groups	7.500	3	3.167	2.15	0.041
	Within Groups	311.114	228	0.011		
	Total	318.614	331			
Pervious Medication	Between Groups	.023	3	.008	1.277	.282
	Within Groups	1.964	322	.006		
	Total	1.988	325			
Smoking	Between Groups	2.811	3	.937	1.166	.323
	Within Groups	258.726	322	.803		
	Total	261.537	325			
Chronic Diseases	Between Groups	.188	3	.063	.164	.921
	Within Groups	123.554	322	.384		
	Total	123.742	325			

The above table shows that there is a statistically significant relationship between anxiety and educational level. The table also shows that there is no statistically significant relationship between anxiety and other demographic variables.

Table (10): Relationship between Demographic Variables and Pain according to VAS Scale

		Sum of squares	Df	Mean square	F	Sig.
Age	Between Groups	.035	2	.018	.016	.984
	Within Groups	172.148	155	1.111		
	Total	172.184	157			
Gender	Between Groups	.140	4	.035	6.062	.000
	Within Groups	1.848	321	.006		
	Total	1.988	325			
Education Level	Between Groups	0.92	3	0.471	1.48	0.190
	Within Groups	192.11	241	0.352		
	Total	194.03	244			
Pervious Medication	Between Groups	12.767	4	3.192	2.190	.120
	Within Groups	467.847	321	1.457		
	Total	480.613	325			
Smoking	Between Groups	3.027	4	.757	.940	.441
	Within Groups	258.510	321	.805		
	Total	261.537	325			
Chronic Diseases	Between Groups	1.968	4	.492	1.297	.271
	Within Groups	121.774	321	.379		
	Total	123.742	325			

Table 10 shows that there is a statistically significant relationship between pain and gender. No statistically significant relationships between pain and other demographic variables were found.

Chapter Five

Discussion

Chapter Five

Discussion

This chapter presents the discussions.

The aim of the study was to evaluate the effectiveness of preoperative education on the preoperative anxiety level and postoperative pain among abdominal surgical patients. The findings indicate that the anxiety level and pain decreased, as observed in the experimental group, which acknowledges that preoperative education decreases patients' anxiety levels and decreases their postoperative pain.

5.1 Demographic Characteristics

As far as age, the majority of participants belonged to the age group of 40-50 years; regarding gender, most of the participants were male, and most of them non-smokers without chronic illnesses.

As we can see, there is consistency in age and gender with the study by Deyirmenjian, et al. (2006) about the effects of preoperative health education programs for surgical patients, where the majority of participants belonged to the age group of 25-45 years; and most of the participants were male.

This is also in agreement with the studies where participants in the experiment and control groups were not significantly different. As well as in another study where the majority of participants were from the age group of 40-58 years, and most of them were males (Ricci JR, 2010).

In our study, the majority of the participants in the experimental group and control group had no history of hospitalization. In addition, the majority of them did not have any comorbidity chronic diseases. Similar to this study, the studies of Sansiriphun (1997) and Deyirmenjian, et al. (2006) also had participants without a history of hospitalization.

In contrast, in the study of Lin & Wang, (2005) most of the patients in the intervention and control group had a previous history of hospitalization. This is due to the fact that the majority of the study group, experimental group, and control group had co-morbidities. This is due to the majority of the samples belonging to the 60-70 year old age group.

In our study, no significant difference appeared when the data of the experimental group and the control group were tested. The study results are consistent with a study of Karakhuen (2003), which revealed no difference between the demographic data of the control group and the experimental group.

5.2 Level of Anxiety

The findings of the study suggest that preoperative patient teaching lowers anxiety levels in patients undergoing surgical intervention. In addition, the findings suggest that the experiment group mean of the state of anxiety score was less than that of the control group among all four types of surgeries. The difference in the State Scale Anxiety score between the experimental and control group was highly significant ($P < 0.0001$).

These results are consistent with the results of the study conducted by Karakhuen, 2003 on the effects of a teaching program. They showed that anxiety scores in the experimental group were lower than that of the control group and that there was a highly significant difference between the post-test State Scale score of the experimental and control group ($P < 0.001$). These study findings are also supported by the study conducted by Lin LY, Wang RH (2005) on preoperative nursing intervention, which revealed that the experimental group was lower than the control group in preoperative anxiety; there was a significant difference in anxiety scores between groups ($P < 0.001$). Also, the outcome of this research turned out to be relevant to a study of Díez-Álvarez, et al. (2012) which suggested that there was significantly lower anxiety in participants in the experimental group ($p < 0.01$).

The findings were supported by a study of Junwijit (1996) that aimed to find the effectiveness of preoperative teaching on anxiety in patients undergoing CS surgery. The study showed that the effect of the teaching on anxiety was significant; also the mean state of anxiety was lower in the experimental group than in the controls. However, there are some studies like Stinton, et al. (2012) which did not show a decrease in anxiety in the experimental groups. This may be due to the content of information in teaching.

In our study, lower levels of anxiety among experiment groups may be due to preoperative teaching, such as the proper explanation of all

procedures. This helps the surgical patient to experience less anxiety in comparison to the group of patients who were not given the structured preoperative teaching and received routine nursing.

The results showed improved vital signs among the experimental group, although both the experiment and control group had a normal reading of vital signs.

These findings are consistent with previous research studies. After preoperative education, there was an improvement in vital signs among the experimental group ($P < 0.002$) (Taskin, 2008).

The findings are also consistent with the renal surgical patients who received the education program. Their vital signs were statistically significant than those who received only routine care ($p < .05$ and $.001$) (Özberksoy, et al., 2007).

5.3 Postoperative Outcome Related to Pain

In our study, the experimental group experienced less pain than the control group throughout the three-time readings during the six hours post-op. There was a high, significant difference in the numeric rating pain score between the experimental and control group ($P < .0001$).

Previous studies showed similar findings. After undergoing education programs, there was statistically significant lower pain in the numeric rating pain scores among experimental groups of patients undergoing inguinal hernia surgery ($p < 0.001$) (Karakhuen, 2003).

Another study of Watt-Watson (2004), showed that level of pain was statistically significantly higher in the routine care group than in the experiment group. Similarly, in the study of Özberksoy, et al. (2007) patients undergoing mastectomy experienced less pain on the Visual Analog Scale after preoperative teaching. In another study of Karayurt (1998), that assessed the impact of preoperative instruction on the anxiety and pain levels of patients, scores were lowest in the experimental group, which received information.

These findings are contradicted by a study of Guo, et al. (2012) that there were no statistically significant differences in level of pain between control and experiment groups. Another study of Kruzik (2009), examining the effect of teaching on pain among patients having CABG, failed to demonstrate a significant difference in aspects of pain, mood, walking and general activity score.

5.4 Relationship Between Anxiety and Pain

According to Table eight, there is a significant relationship between the preoperative level of anxiety and postoperative level of pain. At six hours postoperative the level was 0.05, with P-value 0.001. The table also shows that pain decreased when anxiety was lower in all categories.

These findings contrast with a study by Guo, et al., (2012) because there was a significant difference between anxiety level and the average level of pain, and interference with general activity, mood, and walking

ability. Another study examining the effect of preoperative anxiety on pain levels among patients having coronary artery bypass grafts failed to demonstrate a significant difference (Kruzik, 2009).

5.5 Relationship Between Demographic Variables and Anxiety Level

There is a statistically significant relationship between anxiety and patient education level. This may be due to the fact that an educated patient can gain more understanding of the preoperative educational program and have enough information about surgery. There were no other statistically significant relationships between anxiety and other demographic variables.

The table shows that there is a statistically significant relationship between pain and gender. This can be explained according to LeResche, et al. (2003). LeResche concluded that the relationship between sex and pain is not simple; nevertheless, they found a higher prevalence of pain in women than in men. In another study of Hastie, et al. (2012), it was suggested that multiple pain measures in a sample of healthy young adults (166 female, 167 male). Sex differences were statistically significant for all pain measures ($P < 0.05$).

Conclusion, Implications and Recommendations

Conclusion

The aim of this study was to evaluate the effectiveness of preoperative education on the preoperative anxiety level and postoperative pain among abdominal surgical patients.

Preoperative education is not practiced in governmental hospitals, or sometimes it is practiced in a haphazard manner. Preoperative teaching is highly capable of producing favorable outcomes among patients undergoing abdominal surgery.

The level of preoperative anxiety in the experimental group of abdominal surgical patients, who were given the systematic health education program, was different from that of the control group, who were given routine nursing care. The statistical significance at the level of .05 was in line with the hypothesis, on their recovery phase and on the outcome of the surgery it self that the period of hospitalized was decreased that is cost effect become better .

The postoperative pain of the abdominal surgical patients of the experimental group, who were given the systematic health education program, was different from those of the control group, who were given general information by routine nursing personnel; with the statistical significance at the level of .05, which was in line with the hypothesis.

The reason that caused the abdominal patients, who were given the systematic health education program, to have lower levels of anxiety than those who were given general information by the routine nursing personnel were that they were given the systematic health education programs, such as relaxation practices. They also had the close attention of the nursing personnel, who could help the patients to lessen their anxiety more than the group of patients who had not been given the systematic health education program.

Implications of the study

Nursing Practice

As the world is progressing, the demand for cost effective nursing care is also increasing day by day. Nurses are responsible for clinical judgments (nursing diagnosis) based on individual's responses to actual or potential health problems. It is nurse's duty to identify the problems faced by the patients and to give appropriate treatment to resolve them. Nurses should assess the need for preoperative teaching and it should be included, practiced in the in hospitals.

Nursing Education

Nurses have a vital role in providing comfort and relaxation for patients especially those undergoing surgery. Nursing curriculum should enable nursing students to develop advanced knowledge and acquire skills in practice of preoperative education as it is now being practiced in many health care settings. The study findings suggest that the course content in

the curriculum should include various methods of preoperative education. In-service education programs and workshops on methods of imparting preoperative education should be conducted for nursing personnel so that they can upgrade their knowledge and skills and apply it in their practice. The nursing students should also be encouraged for the effective utilization of research based practice in the clinical areas.

Nursing Administration

The nurse administrators face challenging roles these days, where they need to know the recent developments, the new methods and technologies. The nurse administrator should provide in service training programs for nurses focusing on the importance of educating patients prior to surgery to promote postoperative outcome in order to prevent complications and promote the wellbeing of the patients.

Nursing Research

There is a need for nursing research in the areas of methods and timing of imparting preoperative education to patients undergoing surgery. Research explains the effectiveness of preoperative education and this will be foundation for further research in Palestine.

Recommendations

The preoperative education program should be used and facilitated in a systemic manner. There should be more concern towards patient's anxiety and psychological problems.

There should be research done to follow up on the postoperative complications of the patients who are given a systematic health education program.

Research in the field of intraoperative anesthesia consumption, recovery duration, analgesia consumption, discharge time and patient satisfaction should be conducted to formulate greater understanding about the effect of teaching preoperation it is benefits .

Limitation of the study

- The study was limited to one hospital (Rafedia Governmental hospital).
- Some of the items in STAI scale where similar in meaning to each other; this was hard to explain to the patients.

References

- Agrawaln A, Ranjan R, Dhiraaj S. (2005). *Acupressure for prevention of preoperative anxiety: a prospective, randomized placebo controlled study*. *Anaesthesia*, 60(1), 978-9.
- Ali RB, Lalani NS, Malik A. (2012). *Pre-Operative Assessment and Education*. *SurgicalScience*,3,10-14.
- Allvin R, Ehnfors M, Rawal N, Idvall E. (2008). *Experiences of the Postoperative Recovery Process: An Interview Study*. *Open Nurse Journal*, 2:1–7.
- Al-Qalah TAHS, Salam WIS, Hassanein AA. (2015). *Effectiveness of Planned Preoperative Teaching on Self-Care Activities for Patients Undergoing Cardiac Surgery*. *International Journal of Healthcare Science*, 3(1), 210-27.
- Anusha G., Thulasi SLE., Begum HSM, Sujatha V, Shalini R. (2015). *Effect of Preoperative Teaching on Anxiety among Cardiac Surgical Patients*. *American Journal of Advances in Nursing Research*, 2(1), 32-5.
- Asilioglu K, Celik SS. (2004). *The effect of preoperative education on anxiety of open cardiac surgery patients*. *Patient Education and Counselling*, 53(1), 65–70.

- Babae G, Keshavarz M, Hidarnia A, Shayegan M. (2007). *Effect of a Health Education Program on Quality of Life in Patients Undergoing Coronary Artery Bypass Surgery*. *Acta Medica Iranica*, 45(1), 69–75.
- Bally K, Campbell D, Chesnick K, Tranmer JE. (2003). *Effects of Patient-Controlled Music Therapy During Coronary Angiography on Procedural Pain and Anxiety Distress Syndrome*. *Critical Care Nurse*, 23(50), 7.
- Beaupre LA, Lier D, Davies DM, Johnston DB. (2004). *The Effect of a Preoperative Exercise and Education Program on Functional Recovery, Health Related Quality of Life, and Health Service Utilization following Primary Total Knee Arthroplasty*. *J Rheumatol*, 31(6), 1166-1173.
- Bernier MJ, Sanares DC, Owen SVI. (2003). *Preoperative teaching received and valued in a day surgery setting*. *AORNJ*, 77(3), 563–82.
- Blay N, Donoghue J. (2005). *The Effect of Pre-admission Education on Domiciliary Recovery following Laparoscopic Cholecystectomy*. *Australian Journal of Advanced Nursing*, 22(4), 14-9.
- Breemhaar B, Van den Borne HW, Mullen PD. (1996). *Inadequacies of surgical patient education*. *Patient Education Counsel*, 28, 31-44.

- Brumfield VC, Kee CC, Johnson JY. (1996). *Preoperative Patient Teaching in Ambulatory Surgery Settings*. *AORN Journal*, 64(6), 941-948.
- Carson, V. B., & Arnold, E. N. (1996). *Mental health nursing : The nurse – patient journey*. Philadelphia : W. B. Saunders.
- Caumo W, Schmidt AP, Schneider CN, Bergmann J, Iwamoto CW, Bandeira D, Ferreira MB. (2001). *Risk Factors for Preoperative Anxiety in Adults*. *Acta Anaesthesiol Scand*, 45(3), 298-307.
- Chaudhury S, Sharma S, Pawar A, Kumar B, Srivastava K, Sudarsanan S, Singh D. (2006). *Psychological correlates of outcome after coronary artery bypass graft*. *MJAFI*, 62, 220-3.
- Chetty M Ehlers VJ. (2009). *Orthopaedic Patients' Perceptions about their Preoperative Information*. *Curationis*, 32, 55-60.
- Das S, Pradhan J, Pradhan R. (2015). *Effect of Preoperative Video Assisted Teaching on Knowledge and Anxiety among the Patient Undergoing Abdominal Surgery*. *Journal of Medicine*, 5(1), 1-7.
- Debas HT, Gosselin R, McCord C, Thind A, Surg, Jamison DT, Breman JG, Measham AR. (2006). *Disease Control Priorities in Developing Countries. 2nd ed. Disease Control Priorities Project*. Washington, D.C. 1245–60.

- Devine and Cook. (1986). *A review of the impact of pre-operative education on recovery from surgery*. Volume 36, Issue 2, April 1999, Pages 171-177.
- Deyirmenjian M, Karam N, Salameh P. (2006). *Preoperative Patient Education for Open-heart Patients: A source of anxiety? Patient Education and Counselling*, 62(1), 111–7.
- Díez-Álvarez E, Arrospide A, Mar J, Alvarez U, Belaustegi A, Lizaur B, Larrañaga A, Arana JM.(2012). *Effectiveness of Preoperative Education in Reducing Anxiety in Surgical Patients*. *Enferm Clinic*, 22(1), 18-26.
- Doering LV, McGuire AW, Rourke D. *Recovering from cardiac surgery: what patients want you to know*. *Am J. Crit Care* 2002; 11(4):333–43.
- Ebneshahidi A, Mohseni M. (2008). *The Effect of Patient-selected Music on Early Postoperative Pain, Anxiety, and Hemodynamic Profile in Caesarean Section Surgery*. *The Journal of Alternative and Complementary Medicine*, 14(7), 827–31.
- Fariborz A, Fatemeh RK, Zahra B, Mohammad GJ. (2009). *Effect of Preoperative Information and Reassurance in Decreasing Anxiety of Patients who are Candidate for Coronary Artery Bypass Graft Surgery*. *Cardiovasc Thorac Res*, 1(2), 25-8.

- Fitzpatrick E, Hyde A. (2006). *Nurse-related factors in the delivery of preoperative patient education*. **J Clin Nurs Jun**;15(6):671-7.
- Flum DR, Koepsell TD. (2002). *The clinical and economic correlates of misdiagnosed Appendicitis: nationwide analysis*. **Arch Surg**. 137, 799-804.
- George BJ. (2011). **Nursing theories: the base for professional nursing practice**. 6th ed. New Jersey: Pearson Education.
- Golanowski M, Beaudry D, Kurz L. (2007). *Interdisciplinary shared decision making: taking shared governance to the next level*. **Nurs Adm Q**;31(4), 341-53.
- Guo P, East L, Arthur A. (2012). *A preoperative education intervention to reduce anxiety and improve recovery among Chinese cardiac patients: a randomized controlled trial*. **International J Nurse Studies**, 49(2), 129-37.
- Halaszynski TM, Juda R, Silverman DG. (2004). *Optimizing postoperative outcomes with efficient preoperative assessment and management*. **Critical Care Medical**, 32:80.
- Hanucharunkui S, Vinya-nguag P. (2001). *Effects of promoting patients' participation in self-care on postoperative recovery and satisfaction with care*. **Nurse Science Q Spring**; 4(1), 114-20.
- Harper, Douglas. "Etymology Online." **Online Etymology Dictionary**. 2011. Web. 04 Oct. 2016. <<http://www.etymonline.com/>>.

- Hastie, B. A., Riley, J. L., Kaplan, L., Herrera, D. G., Campbell, C. M., Virtusio, K. Fillingim, R. B. (2012). *Ethnicity interacts with the OPRM1 gene in experimental pain sensitivity*. *Pain*, 153(8), 1610-1619. doi:10.1016/j.pain.2012.03.022
- Hatefi Moadab N, Elahi N, Moradbeygi Kh, Fakhri M, Latifi SM, Elhami S. (2015). *Effect of teach-back educational method on surgical anxiety in primiparous caesarean section women*. *J Clin Res Paramed Sci*, 4(2), 169-77.
- Henderson A, Chien WT. (2004). *Information needs of Hong Kong Chinese patients undergoing surgery*. *Journal of Clinical Nursing*, 13(8), 960-6.
- Imogene M. King's. (2011). Theory fo goal attainment. "**International Association for the Study of Pain: Pain Definitions**". Retrieved 12 January 2017. Pain is an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage Derived from The need of a taxonomy. *Pain*. 1979;6(3):247–8. doi:10.1016/0304-3959(79)90046-0. PMID 460931.
- Jacobs V. (2000). *Informational needs of surgical patients following discharge*. *Applied Nurse Res*, 13(1), 12-8.
- Jawaid M, Mushtaq A, Mukhtar S, Khan Z. (2007). *Preoperative anxiety before elective surgery*. *Neurosciences*; Vol. 12 (2), 145-48.

- Jlala HA, French JL, Foxall GL, Hardman JG, Bedforth NM. (2010). *Effect of preoperative multimedia information on perioperative anxiety in patients undergoing procedures under regional anaesthesia*. **Br J Anaesth**;104(3), 369-74.
- Jung CM, Park, Sook S. (2013). *The effects of structured preoperative instruction on anxiety and self-care compliance in patients with cataract surgery*. **Korean Journal of Adult Nursing**, 25(4), 473-82.
- Junwijit S. (1996). **Effects of educational and relaxation program on postoperative recovery in renal surgical patients**. Masters' degree thesis, Chiang Mai University.
- Kagan I, Bar-Tal Y. (2008). *The effect of preoperative uncertainty and anxiety on short-term recovery after elective arthroplasty*. **J Clinical Nurse**, 17(5), 576-83.
- Kain NZ. (2000). *Preoperative anxiety and postoperative pain in women undergoing hysterectomy: A repeated-measures design*. **Journal of Psychosomatic Research**, 49(6), 417-22.
- Kalogianni A, Almpani P, Vastardis L, Baltopoulos G, Charitos C, Brokalaki H. (2016). *Can nurse-led preoperative education reduce anxiety and postoperative complications of patients undergoing cardiac surgery?* **Euro J Cardiovasc Nurse**, 15(6), 447-58.
- Karabulut N, Cetinkaya. (2011). *The impact on the level of anxiety and pain of the training before operation given to adult patients*. **Surgical Science**, 2(6), 303-11.

Karakhuen N. (2003). **Effects of health education program on preoperative anxiety among abdominal surgical patients.** A thesis submitted in partial fulfillment of the requirements for the Degree of Master of Public Health in Health Systems Development, College of Public Health Chulalongkorn University Academic Year: ISBN 974-9599-53-5.

Karayurt, O. (1998). *The effects of different preoperative teaching methods on state anxiety preoperative and postoperative period and level of the pain postoperatively.* **Journal of Cumhuriyet University School of Nursing**, 2, 20-6.

Kiecolt-Glaser JK, Page GG, Marucha PT, Maccallum RD, Glaser R. (1998). *Psychological influences in surgical recovery.* **American Psychologist**, 53:1209-1218.

Kim BH, Jung Y, Kang HJ, Lee SW, Kim JS, Lee MS. (2000). *The effect of preoperative teaching on the emotional status of patients prior to surgery.* **J Korean Academic Adult Nursing**;12(3), 407-17.

King J, Chamberland p, Rawji A, Ager A, Leger R, Renee RM, Skelton D. (2014). *Patient Educational Needs of Patients Undergoing Surgery for Lung Cancer.* **J Cancer Education**, 29(4), 802–807.

King NK, Cheeseman GA, Siriwardena AK. (2004). **Development of procedure specific patient information sheets for acute abdominal surgery and validation in patients undergoing urgent**

cholecystectomy or appendicectomy. International J Clinical Practice, 58(6), 559-63.

Koshy PP. (2007). **The effectiveness of health education on anxiety of patient undergoing craniotomy. Submitted in partial fulfilment of the requirements for the Diploma in Neuro Nursing.** Sree Chitra Tirunal Institute for Medical Sciences and Technology Trivandrum Oct;5-7.

Krouse JH, Fisher JA, Yarandi HN. (2001). *Utility of Video Modeling as an Adjunct to Preoperative Education.* **Southern Online Journal of Nursing Research, 8(2), 1-38.**

Kruzik N. (2009). *Benefits of preoperative education for adult elective surgery patients.* **ACORNJ journal; 90(3): 381-7.**

Lee DS, Lee SS. (2000). *Pre-operative teaching: how does a group of nurses do it?* **Contemporary Nurse. 9(1), 80-88.**

Leresche L, Mancl L, Sherman JJ, Gandara B, Dworkin SF. *Changes in temporomandibular pain and other symptoms across the menstrual cycle.* **Pain. 2003;106(3):253-61.**

Lewis C, Gunta K, Wong D. (2002). *Patient knowledge, behaviour, and satisfaction with the use of a preoperative DVD.* **Orthopedic Nursing, 21(6), 41-3.**

- Lin LY, Wang RH. (2005). *Abdominal surgery, pain and anxiety: preoperative nursing intervention*. **J Adv Nurs**,51(3), 252-260.
- Lithner M, Zilling T. (2000). *Pre- and postoperative information needs. Patient Education and Counselling*. 40(1), 29-37.
- Masood Z, Haider J, Jawaid M, Alam SN. (2009). *Preoperative anxiety in female patients: The issue needs to be addressed*. **Kust Med Journal**, 1(2), 38-41.
- McDonald S, Hetrick SE, Green S. (2004). *Pre-operative education for hip or knee replacement*. **Cochrane Database System Rev**; (1):CD003526.
- Munafo MR, Stevenson J. (2001). *Anxiety and surgical recovery. Reinterpreting the literature*. **J Psychosom Res**. 51(4), 589-96.
- Nigussie S, Belachew T, Wolancho W. (2014). *Predictors of preoperative anxiety among surgical patients in Jimma University Specialized Teaching Hospital, South Western Ethiopia*. **BMC Surgery**. 5(14), 67.
- Nunoo-Mensah JW, Rosen M, Chan LS, Wasserberg N, Beart RW. (2009). *Prevalence of intra-abdominal surgery: What is an individual's lifetime risk?* **South Med Journal**. 102(1), 25-29.
- Ortiz J, Wang S , Elayda MA, Tolpin DA. (2015). *Preoperative patient education: can we improve satisfaction and reduce anxiety?* **Brazilian Journal of Anaesthesiology**. 65(1), 7–13.

- Özberksoy A, Özbayir T. (2007). **The effect of informative and educative nursing approaches on postoperative anxiety and pain in patients with breast cancer.** Surgical and Operating Room Nurse in Congress Papers, Ege Universty Press, Izmir; 211.
- Pavlin DJ, Chen C, Penaloza DA, Buckley FP. (2004). *A survey of pain and other symptoms that affect the recovery process after discharge from an ambulatory surgery unit.* **Journal of Clinical Anaesthesia.** 16(3), 200-6.
- Pinar, Kurt A, Gungor T. (2011). *The efficacy of preoperative instruction in reducing anxiety following gynaecological surgery: a case control study.* **World Journal of Surgical Oncology.** 9(38).
- Piscatella JC. (2010). *Thirty-three years after bypass surgery: a heart patient's perspective.* **Proc (Bayl Univ Med Cent);** 23(3), 266–9.
- Priya P, Roach EJ. (2013). *Effect of pre-operative instruction on anxiety among women undergoing abdominal hysterectomy.* **Nursing Journal India.** 104(6), 245-248.
- Priya VV, Sebastian SM, Fenn MG, Mathew A, Velusamy SK. (2014). *A study to assess whether planned pre-operative education decreases anxiety and improves satisfaction in patients undergoing surgery-a randomized controlled trial.* **IOSR Journal of Dental and Medical Sciences.** 13(12), 1-7.

- Ramsey, M.A.E. 1972. *A survey of pre-operative fear*. *Anesthesia*. 27 : 396 - 401.
- Rankin S, Stallings KD. (2001). **Patient education: issues, principle, practice. 4th ed.** Philadelphia: J. B. Lippincott.
- Ricci JR. (2010). **The effectiveness of a structured preoperative teaching program for the adult surgical patient.** [online].
Retrieved from: <https://open.library.ubc.ca/cIRcle/collections/831/items/1.0093962>.
- Sadati L, Pajouki A, Mehdizadeh A. (2013). Effect of preoperative nursing visit on preoperative anxiety and postoperative complications in candidates for laparoscopic cholecystectomy: a randomized clinical trial. *J Caring Sciences*; 27(4), 994–998.
- Sansiriphun N. (1997). **Effect of pre-caesarean section visits by operating room nurse on anxiety of pregnant women.** Masters' degree thesis, Chiang Mai University.
- Sayin Y, Aksoy G. (2012). *The Nurse's role in providing information to surgical patients and family members in Turkey: a descriptive study.* **ACORN Journal**. 95(6), 772-87.
- Schulz PS, Zimmerman L, Pozehl B, Barnason S, Nieveen J. (2011). *Symptom management strategies used by elderly patients following coronary artery bypass surgery.* **Apple Nurse Res**. 24(2), 65–73.

- Scott A. (2004). *Managing anxiety in ICU patients: the role of preoperative information provision*. *Nursing in Critical Care*; 9(2): 72–9.
- Seligman, M.E.P.; Walker, E.F.; Rosenhan, D.L. (2013). *Abnormal psychology (4th ed.)*. New York: W.W. Norton & Company.[page needed].
- Shelley M, Pakenham K. (2007). *The effects of preoperative preparation on postoperative outcomes: the moderating role of control appraisals*. *Health Psychology*. 26(2), 183–91.
- Sivarajan N, Ganesan R. (2012). *Study on discharge information for surgical patients*. *Indian Journal of Science and Technology*. 5(7), 3014-3016.
- Soever LJ, MacKay C, Saryeddine T, Davis AM, Flannery JF, Jaglal SB, Levy C, Mahomed N. (2010). *Educational needs of patients undergoing total joint arthroplasty*. *Physiother Can*; 62: 206–214.
- Sommer M, De Rijke JM, Van Kleef M, Kessels AG, Peters ML, Geurts JW, Gramke HF, Marcus MA. (2008). *The prevalence of postoperative pain in a sample of 1490 surgical inpatients*. *European Journal of Anaesthesiology*. 25(4), 267-74.
- Stinton LM, Shaffer EA. *Epidemiology of gallbladder disease: cholelithiasis and cancer*. *Gut Liver* 2012 Apr; 6(2):172–87.

- Sullivan. (2004). *Communicative dimensions of pain catastrophizing: social cueing effects on pain behaviour and coping*. *Pain*.;107:220–226.
- Tameh I, Sadegh R, Safari M, Douki ZE. (2011). *Effect of verbal and audio methods of training on pre-surgery anxiety of patients*. *J Qazvin University Medical Science*;15(1), 21-5.
- Taskin L. (2008). *Maternal and women health nursing*. 7th ed. Ankara: System Offset Publication Corporation.
- Thilagavathi K, Rajeswari V. (2014). *A pilot study to evaluate the effectiveness of preoperative teaching protocol on selected postoperative outcomes in terms of anxiety and depression status among women undergone hysterectomy*. *Asian Journal of Nursing Education and Research*. 4(4), 412-416.
- Ting KEL, Sim MS, Siew WF. (2013). *Patient perception about preoperative information to allay anxiety towards major surgery*. *IEJSME*. 7(1), 29-32.
- Watt-Watson J, Stevens B, Katz J, Costello J, Reid GJ, David T. (2004). *Impact of preoperative education on pain outcomes after coronary artery bypass graft surgery*. *Pain*; 109:73–85.
- Wong EM, Chan SW, Chair SY. (2010). *Effectiveness of an educational intervention on levels of pain, anxiety and self-efficacy for patients*

with musculoskeletal trauma. Journal of Advanced Nursing. 66(5), 1120-1131.

Yilmaz E, Özkan S. (2015). *Learning needs of surgical patients. Journal of Anatolia Nursing and Health Sciences.* 18(2), 107-15.

Yilmaz M, Sezer H, Gürler H, Bekar M. (2011). *Predictors of preoperative anxiety in surgical inpatients. Journal Clinical Nursing.* 21(7-8), 956-64.

Zalon ML. (2004). *Correlates of recovery among older adults after major abdominal surgery. Nursing Research.* 53(2), 99-106.

Appendices

Appendix A

Consent Form and State Anxiety Inventory

بسم الله الرحمن الرحيم

An-Najah National University
Faculty of Graduate Studies



جامعة النجاح الوطنية
كلية الدراسات العليا

نموذج موافقة على المشاركة في الدراسة

كلية الدراسات

الباحث: صلاح فتحي صلاح الحج طاهر . رقم الهاتف: 0569212222

أخي/ أختي المشارك/ة

أنا الباحث الطالب صلاح الحج طاهر تخصص تمريض صحة نفسيه ومجتمعيه ,جامعة النجاح الوطنية يسرني أن أدعوك للمشاركة في بحثنا المتعلق بدراسة أثر التوضيح قبل الجراحي على الجوانب الجسدية والنفسية لمرضى جراحة البطن.

لك كامل الحرية والإرادة في المشاركة في هذا البحث ولك الحق في أخذ الوقت الكافي للتفكير في المشاركة من عدمها وسؤال الباحث عما تراه مناسباً والتحدث لأي شخص أو جهة عن هذا البحث.

كما يمكنك الاستفسار عن أي جزء يتعلق في البحث الآن أو فيما بعد وإذا كانت هناك كلمات أو أجزاء غير مفهومة بإمكانك سؤال الباحث وستجد/ين الوقت والإجابة الكافيتين.

نؤكد بان كافة المعلومات التي سوف يتم جمعها منك سوف تستخدم فقط لأغراض البحث العلمي ,وسوف يتم الحفاظ على السرية التامة وعدم استخدام هذه المعلومات لأغراض أخرى.

إذا كان لديك أي أسئلة، مخاوف أو شكاوى، يرجى الاتصال بالباحث الرئيسي للدراسة على الأرقام المدرجة على الصفحة الأولى من هذه الموافقة.

Part 1:

Gender () Male () Female

Age:

Type of surgery:

Previous medications: () Yes () NO

Previous hospitalization: () Yes () NO

Smoking: () Yes () NO

Chronic diseases: () Yes () NO

Educational Level: illiterate () school () University ()

State-Anxiety Inventory**Directions**

A number of statements which people have used to describe themselves are given below. Read each statement and then circle the appropriate value to the right of the statement to indicate how you feel right now, that is, at this moment. There is no right or wrong answers. Give the answer which seems to describe your present feelings best.

		Not at all	Somewhat	Moderately	Very much
1	I feel calm				
2	I feel secure				
3	I am tense				
4	I feel strained				
5	I feel at ease				
6	I feel upset				
7	I am presently worrying over misfortunes				
8	I feel satisfied				
9	I feel frightened				
10	I feel comfortable				
11	I feel self-confident				
12	I feel nervous				
13	I am jittery				
14	I feel indecisive				
15	I am relaxed				
16	I feel confused				
17	I feel content				
18	I am worried				
19	I feel steady				
20	I feel pleasant				

Appendix B

Educational program

تم تصميم التوضيح والتعليم للمريض قبل العملية الجراحية على أن تكون أداة مفيدة في تحضيره جسدياً ونفسياً.

يتم إجراء الجراحة لتصحيح العيوب التشريحية أو الفسيولوجية أو لتوفير التدخلات العلاجية للمريض.

ان الاستجابة لإجراء أي عملية جراحية ممكن ان تعرض الشخص لضغوطات معينة. وسوف يجد الشخص نفسه يشعر بالخوف الشديد أو القلق قبل وبعد الجراحة. ان معرفة بعض التفاصيل مثل أين ومتى ستتم العملية وما يجب عليك القيام به في وقت مبكر. سوف تساعد المريض على الشعور أكثر سهولة لمواجهة الجراحة والانتعاش السريع.

لذا سيقوم فريق يرأسه طبيبك ويتكون من عدد من مقدمي الرعاية الصحية العمل معا لرعايتك قبل وأثناء وبعد العملية الخاصة بك.

طبيب التخدير هو الشخص المسؤول عن إعطاء التخدير والحفاظ على التحقق من آثاره.

وسوف يساعد التمريض طبيبك أثناء الجراحة، وأداء المهام الخاصة، ويساعد على جعلك تشعر براحة اكثر . قد تتم زيارتك قبل أو بعد الجراحة من قبل أعضاء فريق الرعاية الصحية. قد يناقشون التخدير والأشياء التي قد تحتاج إلى القيام بها لمساعدتك على الحصول على ما يرام .

موافقة مسبقة

وكجزء من الموافقة على العملية، سوف يتحدث طبيبك معك عن:

- ما سيتم القيام به أثناء الجراحة
 - لماذا كنت في حاجة إليها
 - مخاطر الجراحة
 - عدم وجود أي علاج
 - ما الخيارات الأخرى التي قد تكون لديك
- يجب التأكد من فهم هذه المعلومات.

لا تخاف/ي لطرح الأسئلة. اطلب/ي من طبيبك أن يشرح اي شيء ما إذا لم يكن واضحاً لك

يمكن إجراء بعض الاختبارات والاختبارات الروتينية:

* قياس درجة الحرارة، والنبض، وضغط الدم

* فحص الدم

* اختبار البول

* الأشعة السينية الصدر

* التخطيط القلبي (ECG)، حيث يتم فحص وظيفة القلب مع أداة التي تطبع النتائج كرسم بياني

فحص الدم

يجب أن تتوقع أنه سيتم سحب عينات من دمك/ي في أكثر من مناسبة أثناء التحضير لعملية جراحية

اختبار البول

جنباً إلى جنب مع الدم ، سيتم جمع عينة البول. عينات البول مفيدة لاختبار عدد من الأشياء. تحليل البول يمكن أن يشير إلى حالة التغذية الخاصة بك، ومستوى الترطيب (أو الجفاف)، وجود مرض السكري، أو وجود عدوى.

الأشعة السينية الصدر

لا يتم إجراء الأشعة السينية قبل الجراحة على جميع المرضى ، ولكنه روتين إلى حد ما بالنسبة لأولئك المرضى الذين تزيد أعمارهم عن 40 أو المرضى الذين لديهم تاريخ من التدخين أو أمراض الرئة. ، وربما تحتاج إلى إجراء صورة اشعه للصدر قبل الجراحة. في الحصول على هذا الاختبار، جراحك يبحث عن عدد من الأشياء، بما في ذلك وجود عدوى، ومؤشر لأمراض الرئة، أو وجود كتلة الرئة.

تخطيط القلب (رسم القلب الكهربائي، والمعروف أيضا باسم تخطيط القلب)

الحصول على رسم القلب قبل الجراحة هو جزء مهم من العمل قبل الجراحة. كما ذكر من قبل، والجراحة تسبب ضغوطا هائلة على الجسم، وان القلب هو احد الأجهزة الأكثر أهمية في الاستجابة للضغط .

تحضير الجهاز الهضمي

هذا التحضير هو بلا شك واحدا من الأجزاء المهمة قبل العملية . والهدف من إعداد الأمعاء ذو شقين: الأول هو إفراغ الجهاز الهضمي ، والآخر هو تقليل كمية البكتيريا التي تعيش داخل الأمعاء. وبالتالي يقلل كثيرا من فرصة لتطويع عدوى بعد العمل الجراحي.

ولتحقيق ذلك، المبدأ الأساسي هو إدارة الدواء الذي يحفز الأمعاء وطرده جميع محتوياته في شكل البراز. ويمكن القيام بذلك لتطهير الأمعاء مع أقراص ملين، وبعض الجراحين يفضلون استخدام الحقن الشرجية.

ليلة قبل الجراحة

سوف يطلب منك أن لا تأكل أو تشرب شيئاً بعد منتصف الليل مساءً قبل الجراحة. ويتم ذلك بحيث معدتك سوف تكون فارغة تماماً قبل أن يتم إعطاء التخدير . بعد العملية سوف تبقى تحت تأثير المخدر وتكون غير قادر على حماية مجرى الهواء والرئتين ، وخطر استنشاق عصائر المعدة في الرئتين إذا حدث هذا، تكون هناك نسبة عالية لخطر الإصابة بالالتهاب الرئوي. وهذا النوع الخاص من الالتهاب الرئوي يمكن أن يكون من الصعب علاجها. أبسط طريقة لمنع ذلك هو أن يكون المعدة فارغة قبل إعطاء التخدير.

تقييم التخدير

طبيب التخدير يلعب دوراً أساسياً في نجاح العملية الخاصة بك .. قبل الجراحة، فريق التخدير الخاص بك وسوف يتحدث إليكم بشأن العديد من الجوانب ذات الصلة بصحتك. وسوف يستفسر عن جراحتك الحالية، تاريخ ما بعد الجراحة والتخدير الخاص بك وسوف يسألون الأسئلة المتعلقة بحالتك الطبية الماضية والحالية. وهم يريدون أن يعرفوا عن أي الأدوية التي تتناولها حالياً. أيضاً، قد ترغب في مناقشة اذ كان لديك أي نوع من أنواع الحساسية.

ان التخدير يحمل بعض المخاطر. الأدوية والتقنيات المستخدمة اليوم هي آمنة جداً، اما إذا كنت قلقاً، تحدث مع طبيبك أو طبيب التخدير.

في يوم الجراحة

هذا هو ما يمكن أن تتوقعه:

سيتم تنظيف الجزء من الجسم الذي سيعمل فيه الطبيب، وقد يتم حلقه.

قد تعطى ملين أو حقنة شرجية لتفريغ الأمعاء. سيطلب منك تفريغ المثانة.

- ستتم مطالبتك بإزالة أي من العناصر التالية:
- الأسنان والجسور
- أجهزة السمع
- العدسات اللاصقة والنظارات
- طلاء الأظافر
- الباروكات، دبابيس الشعر، أمشاط، والمشابك
- المجوهرات
- سوف يطلب منك إزالة جميع ملابسك. سوف ترتدي ثوب خاص و قبعة.
- سوف يتم نقلك إلى منطقة حيث عليك الانتظار حتى يكون الفريق الجراحي جاهز لك. وممكن لبعض أفراد العائلة أو الأصدقاء بالانتظار معك في بعض الأماكن المسموح بها.
- قد تعطى دواء لمساعدتك على الاسترخاء. قد تعطى أيضا أدوية أخرى ينصح بها طبيبك.



يمكن وضع إبرة في الوريد في ذراعك أو معصمك. يتم إرفاق هذه الإبرة إلى أنبوب من شأنها أن تزود جسمك مع السوائل، والأدوية، أو الدم أثناء وبعد الجراحة. وهذا ما يسمى القسطرة الوريدية (IV).



يمكن وضع أنبوب يسمى القسطرة في المثانة لاختراق البول.

غرفة العمليات



سوف يتم نقلك إلى غرفة العمليات. ويعمل في غرفة العمليات فريق من المهنيين المدربين تدريباً عالياً. وهذه المنطقة حساسة جداً من ناحية التعقيم للبيئة الجراحية لتكون معقمة قدر الإمكان. فيمكن أن ترى الطاقم بلباس معين أو كامات على الوجه وغطاء للرأس. يتكون فريق غرفة العمليات من:

- طاقم التخدير

- طبيب جراح

- تمريض العمليات

- مساعد الجراح



وسوف يوضع طبع لاصقه على الصدر ، وأجزاء أخرى من جسمك قبل إعطائك المخدر. التخدير العام يجعلك فاقد الوعي. أولاً، قد تعطى الأوكسجين من خلال قناع يوضع على الأنف والفم.

ثم يتم إعطاء مخدر من خلال القسطره الوريديه الخاصه بك. سوف تنام ، ستستمر في تلقي التخدير من خلال القسطره الوريديه ، و القناع ، أو الأنبوب الذي يوضع في فمك الى الرئه . سيتم إزالة هذا الأنبوب بعد فترة وجيزة من العملية

بعد العملية

بمجرد انتهاء العملية، سيتم نقلك إلى غرفة الافاقه او الانعاش ، وقد تم تجهيز هذه المنطقة لمراقبة المرضى بعد الجراحة. حيث تكون في هذه الغرفه المراقبة عن كثب للتأكد من أنه لا يوجد أي مشاكل تتطور في فترة ما بعد الجراحة مباشرة. في غرفة الافاقه لديهم

القدرة على مراقبه عن كثب قلبك ومستوى الأوكسجين في الدم، وتوفير الدعم الميكانيكي لرتيتك، وتسمح لك أن تكون الرعاية بشكل مستمر تقريبا من قبل واحد على الأقل من الممرضين او التخدير المدربين تدريبا عاليا. الفائدة هي أنه حتى التغيرات الصغيرة في حالتك يمكن الكشف في وقت مبكر، مما يسمح للجراح أو طبيب العناية المركزة لتغيير العلاج الخاص بك لمنع المشاكل من تطوير الجراحية

قد يكون لديك القسطره الوريديه في ذراعك أو معصمك لتوفير السوائل / الدم لأنك لن تكون قادرا على تناول الطعام على الفور. قد يكون لديك أيضا أنبوب في أنفك أو قناع على وجهك لتوفير الأوكسجين.

كثير من المرضى يشعرون بالذعر، والخلط، والبروده عندما يستيقظون بعد عملية. ومن الشائع أن يكون الصداع والغثيان والقيء، وآلام في العضلات، أو التهاب الحلق بعد فترة وجيزة من الجراحة. وينبغي ألا تستمر هذه المضايقات لفترة طويلة. يمكنك طلب الدواء لتخفيفها.

انبوب التصريف الجراحي



واحدة من أكثر الأشياء غير السارة للمرضى للتعامل مع بعد العمل الجراحي هو وجود المصارف الجراحية. والغرض منها هو منع تراكم السوائل في الفضاء المفتوح التي أنشأها الشق الجراحي . اعتمادا على نوع العملية ونوع الأنسجة المنتجة للسوائل، وهذا الصرف يمكن ان يبقى في غضون أيام أو قد تستمر لمدة أشهر حسب نوع العمليه .

العلامات الحيوية والنوم

عندما تستيقظ سيقوم الممرض/ة في القسم بأخذ العلامات الحيوية مرتين أو ثلاث مرات في المساء، فمن الصعب الحصول على نوم مريح. حيث من المهم متابعة علاماتك الحيوية

يرجى تذكر أن التحقق من العلامات الحيوية الخاصة بك هو وسيلة جيدة لجراحك للكشف عن المشاكل في وقت مبكر، وأنه من خلال عدم التحقق، يمكن أن تترتب عليه عواقب وخيمة. أيضا، لا تلوم الممرض/ة بأخذك العلامات الحيوية للاضطرابات المتكررة .. على نفس المنوال.

الألم بعد العملية الجراحية

تجربة الألم بعد العملية الجراحية متنوعة ويعتمد على أشياء كثيرة، بما في ذلك القدره على التحمل ، وموقع الشق الجرحي . الخطر الحقيقي في مرحلة ما بعد الجراحة هو عدم وجود السيطرة على الألم. يسبب الألم العديد من الاستجابات التلقائية، بما في ذلك ارتفاع ضغط الدم، وزيادة معدل ضربات القلب، وانخفاض في توسع الرئة . انخفاض توسع الرئة يهيئ لك لمناطق انهيار الرئة ، والذي بدوره يسبب الحمى ويزيد من خطر الالتهاب الرئوي .

وبالتالي، السيطرة على الألم جيدة و مهمة لضمان انتعاش سريع وطبيعي . والقاعدة العامة هي أنه يجب أن تكون قادرا على أخذ نفسا عميقا والسير دون أن تعاني من آلام شديدة. من المستحيل في كثير من الأحيان إعطاء ما يكفي من الدواء لإزالة كل الانزعاج، لذلك يجب أن نتوقع أنك سوف تواجه بعض الامم للأيام الأولى بعد العملية.

التغذية

تختلف الوجبات الغذائية بعد العملية الجراحية، اعتمادا على نوع العملية لديك، وكذلك على تفضيل الجراح. بشكل عام، لن يتم إعطاء نظام غذائي حتى يكون هناك بعض الأدلة على عودة وظيفة الأمعاء. في الأساس، وهذا يعني أنه بعد جراحة البطن الأمعاء الخاص بك سوف تتوقف عن العمل لمدة ساعات إلى أيام. أول إشارة إلى أن الأمعاء قد استأنفت وظيفة هي "أصوات الأمعاء" التي يمكن سماعها عن طريق وضع سماعة الطبيب على بطنك، العلامة التالية للعودة لوظيفة الأمعاء هو مرور الغازات.

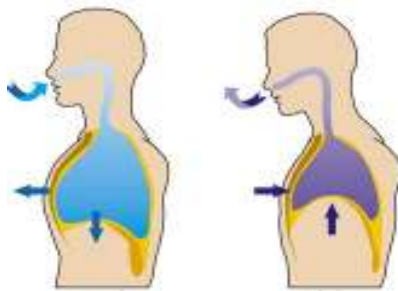
على مدى الأيام القليلة المقبلة، سيتم إرجاع المزيد من المواد إلى النظام الغذائي الخاص بك حتى تناول الطعام الصلب. ولأسباب مختلفة، قد يستغرق ذلك عدة أيام؛ حتى إذا واجهت حلقات من الغثيان أو القيء، قد تعاد إلى نظام غذائي سائل أو مرة أخرى يطلب عدم تناول الطعام أو شرب أي شيء (في المصطلحات الطبية وهذا ما يسمى صوم (NPO) ، وهو ما يعني في الأساس لا شيء في الفم)

الحركة

بعد الخروج الكامل من التخدير سوف يطلب منك البدء بالحركة و النزول من السرير تدريجاً و الجلوس على الكرسي و بعد استعادة التوازن البدء بالمشي في قاعات المستشفى مع احد الاقارب او الممرض/ة أو المعالج لك .لان طول فترة الاستلقاء في السرير قد تشكل جلطات الدم، لا تقلق بشأن الغرز الخاصة بالجرح من التمزق أو فتح الجرح الخاص بك .

التمارين

ضعف الدورة الدموية يمكن أن تسهم في الألم. مع شق البطن . يمكن تخفيف الألم عن طريق تحريك عضلات البطن ببطء وبشكل متكرر.



من المهم بالنسبة لك أن تتنفس بعمق عدة مرات في الساعة للحفاظ على الرئتين مليئة بالهواء. التنفس العميق سوف يسرع الانتعاش الخاص بك ويساعد على الحفاظ على الرئتين واضحة، ولكن المرضى غالباً ما تتردد في القيام بذلك خوفاً من الألم أن تأخذ نفساً عميقاً بشكل صحيح، يجب عليك استخدام الحجاب الحاجز الخاص بك (العضلات أسفل صدرك) وعضلات البطن، وليس فقط عضلات الصدر. هذا التمرين يخصص لك كيف. يجب عليك ممارسة التنفس العميق عدة مرات في اليوم.

- الزفير عادة. أغلق فمك، واستنشق بعمق من خلال أنفك.
- استنشق نفسا عميقا من خلال أنفك، وببطء عد إلى خمسة. ثم احملي/ي شفتيك كما لو كنت تريد ان تصفر، وتنفس الهواء بقدر ما تستطيع من خلال فمك .



- السعال والتنفس العميق مرغوب فيهما في أي موقف، والاصل ان تكون جالس او واقف للسماح الحجاب الحاجز الخاص للتوسع.
- إذا كنت مستلقيا، يمكنك أن تحمل وسادة على الصدر أو موقع شق البطن اضغط بيدك على وسادة. وهذا سوف يقلل من الانزعاج في حين السعال.
- يمكنك أيضا القيام بتمارين الجلوس، وللوقوف ضع يديك على حافة السرير أو الكرسي وقدميك بحزم على الأرض . ثني جسمك إلى الأمام قليلا .

حركة ما بعد العملية مع ألم أقل

الحركة ضرورة أخرى للانتعاش بعد العملية. على سبيل المثال، إذا كنت تريد أن تتحول من الخلف إلى الجانب الأيسر تفعل ذلك على مراحل: "ثني ساقك اليمنى مع الحفاظ على الساق اليسرى على التوالي، ثم امسك بيدك اليمنى بالحوجز الحديدية الجانبية من يسارك. أخذ نفس عميق ببطء ، زفير ببطء ، وادفع بكعبك الأيمن، واسحب نفسك نحو الحاجر الحديدي. "

هذه التقنية تسمح باستخدام القوة في الذراعين والساقين لتقليل آلام في البطن.

عندما تقف لأول مرة بعد العملية، تحتاج الى التنفس بشكل طبيعي مع الحركة .

بمجرد أن تقف على قدميك، تأخذ بعض الأنفاس الطبيعية قبل محاولة المشي . عندما

تشعر بثبات على قدميك، تستنشق بعمق وتفرغ ببطء من خلال الشفاه أثناء استقامة وضعك.

الاستعداد للسير مع ألم أقل

التدريبات الموضحة أدناه تساعد على زيادة الدورة الدموية، وتساعد على منع تشكيل خثرة، وجعل المشي أسهل. كما أنها تزيد من تقدير الذات. فهي ذات قيمة خاصة خلال الساعات الأولى بعد الافاقه .

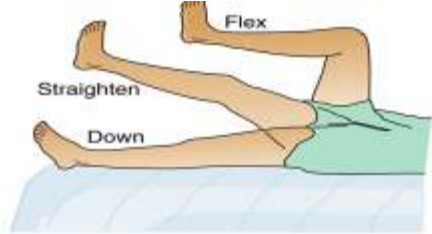
تمارين القدم

لماذا؟

لزيادة الدورة الدموية في ساقيك للمساعدة في منع تخثر الدم .

كيف تفعلهم؟

وجه أصابع قدميك، ثم ثني قدميك إلى الوراء بحيث أصابع قدميك تشير نحو الجزء العلوي من الجسم - قدم واحدة أو معا في وقت واحد. بعد القيام بالتمارين عدة مرات.



ارفع قدمك قليلا حرك القدم المرفوعة في اتجاه عقارب الساعة وعكس عقارب الساعة من الكاحل.

ثني ساق واحدة في الركبة مع الحفاظ على الساق الأخرى على التوالي . ثم حرك ببطء الساق مع عزم عن طريق تحريك كعب على طول السرير. بعد عدة انحناءات في الركبة مع ساق واحدة، كرر التمرين مع الساق الأخرى عبور ساقيك في الكاحلين، وتشديد عضلات الساق الخاص بك، ودفع الركبتين لأسفل نحو السرير.

التحرك في السرير

لماذا؟

انه الامر جيد لدورتك الدمويه ، فإنه يساعد على منع التقرحات السريرية، كما أنه يساعد على خروج الغازات .

الطريقة

دائماً اثني الركبتين قبل ان تتحرك صعوداً وهبوطاً السرير. إذا كنت في السرير من المهم بالنسبة لك أن تتحرك من أجل تخفيف الضغط على الكعب.

في اليوم الأول بعد العملية سوف يتم تشجيعك على الجلوس في مقعدك، حتى لو كان فقط لفترات قصيرة من الزمن.

عند الخروج من السرير، استخدم القضبان الجانبية لدعم جزء من وزنك.

للخروج من السرير اثني ركبتك، تتحول إلى الجانب الخاص بك واستخدم ذراعيك لدفع ما يصل من تحت نفسك إلى وضعية الجلوس على حافة السرير. ثم الجلوس على جانب السرير لبضع دقائق قبل الوقوف.

الراحة لبضع لحظات، ثم حرك ساقك اليمنى أقرب إلى حافة السرير في حين خفض الساق اليسرى إلى الحواجز الحديدية . بعد الاستراحة وأخذ بعض الأنفاس العميقة، ضع قدمك اليسرى على الأرض بينما تتحرك قدمك اليمنى أسفل القضبان واحدة في وقت واحد.

الجرح والغرز

في البداية قد يكون لديك ملابس خاصة تغطي الجرح . وسوف يقوم الممرض بفحص جرحك مرتين يومياً على الأقل.

إذا كنت قلقاً بشأن الجرح، يرجى التحدث إلى ممرض/ة. سوف يتم عمل غيار على الجرح الخاص بك عندما يسمح الطبيب بذلك . هذا ليس مؤلماً عادة. إذا كان لديك غرز قابل للدوبان، فإنها لا تحتاج إلى إزالتها.

انتعاشك

الانتعاش هو عملية تستغرق وقتا طويلا، والتي يمكن أن تترك لك شعور متعب جدا، هذا يحدث في كثير من الأحيان خلال الأيام الأولى وهو رد فعل طبيعي. يحتاج الجسم الوقت والمساعدة في بناء خلايا جديدة وإصلاح نفسه.

الذهاب الى المنزل

سوف يتم خروجك من المستشفى اذا كان مناسباً طبيياً. وسوف يكون هذا خلال 3 - 5 أيام بعد العملية، ولكن في بعض الحالات قد يكون أطول. حاول عدم مقارنة وضعك الصحي مع الآخرين في الجناح، لأن الجميع مختلفون.

قبل العودة إلى المنزل:

- تأكد من أنك تفهم تماما العملية التي لديك.
- قم بترتيب أي أدوية تحتاج إلى أخذها معك. • شرح كيفية متابعتك.
- مناقشة أي أسئلة أو مخاوف قد تكون لديكم.

المساعدة في المنزل

يفضل أن يكون شخص في المنزل للأسبوع الأول والثاني للرعاية وللقيام بالطبخ والغسيل والأعمال المنزلية.

الأسبوعين الأولين في المنزل

ماذا تفعل:

- اتباع نظام غذائي متوازن بما في ذلك الفواكه والخضروات وشرب الكثير من السوائل لتجنب الإمساك. من خلال تناول نظام غذائي صحي سوف تساعد على تحسين عملية الشفاء

- اتبع الواجبات المنزلية الخفيفة فقط . مسح الغبار ، صنع كوب من الشاي الخ.
- اقبل أي عروض مساعدة من العائلة أو الأصدقاء لضمان الضروريات مثل الغسيل والطهي.
- الاستمرار في القيام التدريبات و التعليمات التي تلقيتها من الطاقم الصحي .
- المحافظة على النظافة الشخصية .
- اشغل نفسك بالقراءة ، او فعل الأشياء التي تجعلك تستمتع و تسعد .

لا تفعل

- التسوق، حمل الأطفال الصغار أو الأشياء الثقيلة .
- إزالة الأثاث أو استخدام المكنسة الكهربائية.
- قيادة سيارة

العودة إلى وضعك/ي الطبيعي

بعد أسبوعين يمكنك البدء تدريجيا لبذل المزيد من الجهد. وبحلول 6 أسابيع معظم الناس يعودون إلى النشاط العادي باستثناء أي عمل ينطوي على رفع الأشياء الثقيلة أو الرياضية لفترات طويلة أو قوية. كقاعدة عامة، لا تدفع نفسك إلى القيام بمجهود كبير جدا

ممارسه الرياضه

من المهم الاستمرار في ممارسة الرياضة والمشي هو مثال ممتاز على ذلك. مع زيادة تدريجية في طول المسافة التي تمشيها ، ولكن تذكر أن المشي فقط للمسافة التي يمكن تحقيقها بشكل مريح.

عد إلى العمل

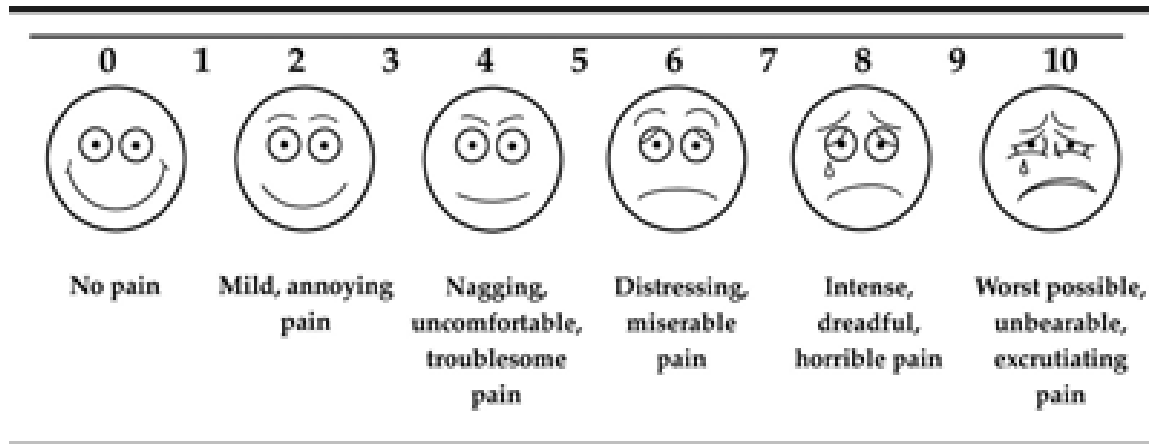
بعض الوظائف أكثر تعب من غيرها. بعضهم قادر على العودة إلى العمل بعد فترة وجيزة من فحص ما بعد الجراحة في حوالي ستة أسابيع، ولكن يمكنك أن تكون بعيدا عن العمل لفترة أطول من هذا. ناقش هذا مع الجراح لتحديد ما هو أفضل بالنسبة لك. قد يستغرق الأمر ما يصل إلى ستة أشهر حتى تشعر بالراحة تماما.

أخيرا...

مواجهة عملية يمكن أن تجعلك عصبيا. معرفة ما يمكن توقعه سوف تساعدك على الشعور أكثر سهولة. كل عملية جراحية فريدة من نوعها. وكلما تعرفت على الجراحة الخاصة بك، كلما كان ذلك أفضل يمكنك المشاركة في الحصول على ان تكون على ما يرام.

Appendix C

Visual Analog Scale



Appendix D

Facilitate student task

**An- Najah
National University**

Faculty of Medicine & Health Sciences
Department of Nursing



**جامعة النجاح
الوطنية**
كلية الطب وعلوم الصحة
دائرة التمريض

التاريخ 20-03-2017 :

المحترمة الفلسطينية الصحة وزارة في للتمريض العامة الادارة مديرة حضرة

حضرة مديرة التعليم الصحي في وزارة الصحة الفلسطينية المحترمة

الموضوع : تسهيل مهمة طالب ماجستير تمريض الصحة النفسية والمجتمعية

تحية طيبة و بعد ،،،

تهديكم كلية الدراسات العليا / جامعة النجاح الوطنية أطيب التحيات ونشكر
لحضرتمكم حسن تعاونكم معنا ونرجو التكرم بالموافقه على تسهيل مهمة الطالب
صلاح فتحي صلاح الحج طاهر

حيث أنه يقوم بعمل دراسة بغرض البحث العلمي لرسالة الماجستير تحت عنوان:

اثر التوضيح قبل الجراحي على الجوانب الجسديه و النفسيه لمرضى جراحة البطن

The Impact of Preoperative Education on the Psychological and
Physiological Aspects of Patients Undergoing Abdominal Surgery

وسيقوم بعمل مقابلات مع مرضى عمليات جراحة البطن المبرمج في اقسام
الجراحه في مستشفى رفيديا في محافظة نابلس وذلك في الفتره الواقعه ما بين :
15/02/2017 - 15/04/2017.

وتفضلوا بقبول الطلب ولكم فائق الاحترام،،،


منسق برنامج ماجستير الصحة النفسية والمجتمعية

د. سابرينا روسو

Appendix E

Approve title

An-Najah National University
Faculty of Graduate Studies
Dean's Office


2016 - 2017

جامعة النجاشة الوطنية
كلية الدراسات العليا
مكتب العميد

التاريخ : 2016/9/26

٦٨٥

مختارة الدكتورة ماريانا روسو المشترحة
مستحق برنامجي ماجستير تخصصي المسحة النفسية والمجتمعية، علم النفس الاكلينيكي
تحية طيبة وبعد،

الموضوع : الموافقة على عنوان الأطروحة وتحديد المشرف

قرر مجلس كلية الدراسات العليا في جلسته رقم (311)، المنعقدة بتاريخ 2016/9/22، الموافقة على مشروع الأطروحة المقدم من الطالب/ صلاح فتحي صلاح الحج طاهر، رقم تسجيل 11256057، تخصص تخصص الصحة النفسية المجتمعية، عنوان الأطروحة:

(أثر التوضيح قبل الجراحي على الجوانب الجسدية والنفسية لمرضى جراحة البطن)
(The Impact of Preoperative Education on the Psychological and Physiological Aspects of Patients Undergoing Abdominal Surgery)

بالشرف: د. جمال شومي

يرجى اعلام المشرف والطالب بضرورة تسجيل الأطروحة خلال اسبوعين من تاريخ اصدار الكتاب. وفي حال عدم تسجيل الطالب/ة للأطروحة في الفترة المحددة له/ها ستقوم كلية الدراسات العليا بالغاء اعتماد العنوان والمشرف وتعمسوا بقبول واقر الاحترام ...

عميد كلية الدراسات العليا
د. محمد سليمان

نسخة : د. رئيس قسم الدراسات العليا للعلوم الطبية والمسحة المجتمعية المحترم
: د. أ.ج. القبول والتسجيل المحترم
: مشرف الطالب
: ملف الطالب

ملاحظة: على الطالب/ة مراجعة دائرة المالية (محااسبة الطلبة) قبل دفع رسوم تسجيل الأطروحة للضرورة.

فلسطين، نابلس، ص.ب 7-707 هاتف /2345115، 2345114، 2345113 (09) 972* فاكسيل (09) 2342907 (972)
Nablus, P. O. Box (7) * Tel. 972 9 2345113, 2345114, 2345115 (5) 3200
* Facsimile 972 92342907 * www.najah.edu - email fgs@najah.edu

Appendix F

IRB permission

An-Najah National University
 Faculty of Medicine & Health Sciences
 Department Of Graduate Studies

جامعة النجاح الوطنية
 كلية الطب وعلوم الصحة
 دائرة الدراسات العليا

IRB Approval letter

Study title:
 "The Impact of preoperative Education on Psychology and physiology aspect of Patients Undergoing Abdominal Surgery "

Submitted by:
 Salah Haj Taher

Date Reviewed:
 May , 15 ,2016

Date approved:
 August 29,2016

Your study titled: "The Impact of preoperative Education on Psychology and physiology aspect of Patients Undergoing Abdominal Surgery " with archived number 3 May 2016 , was reviewed by An-Najah National University IRB committee and was approved on August 29,2016

Hasan Fitian', MD

IRB
 IRB Committee Chairman,
 An-Najah National University

تيلين - من باب 7 أو 707 | هاتف 14/7/8/14 (970) (09) 2342902 | فاكس (970) (09) 2342910 | E-mail : hgs@najah.edu
 نابلز - P.O Box :7 or 707 | Tel (970) (09) 2342902/4/7/8/14 | Fax (970) (09) 2342910

جامعة النجاح الوطنية

كلية الدراسات العليا

أثر التوضيح قبل الجراحي على الجوانب الجسدية والنفسية لمرضى جراحة البطن

إعداد

صلاح فتحي الحج طاهر

إشراف

د. جمال قدومي

قدمت هذه الأطروحة استكمالاً لمتطلبات الحصول على درجة الماجستير في تمريض الصحة النفسية والمجتمعية بكلية الدراسات العليا في جامعة النجاح الوطنية في نابلس، فلسطين .

2017م

ب

أثر التوضيح قبل الجراحي على الجوانب الجسدية والنفسية لمرضى جراحة البطن

إعداد

صلاح فتحي الحج طاهر

إشراف

د. جمال قدومي

الملخص

إن القلق يمكن تعرفه على انه عاطفة تميزها حاله من الإضرابات الداخلية غير محبوبة ويمكن أن تكون مصحوبة بمشاعر ذاتيه من القلق, العصبية, التوتر والألم, ويمكن أن ينفعل الجهاز العصبي نتيجة الإجهاد النفسي والجسدي وبعض الأحيان يرفع القلق معدل ضربات القلب وضغط الدم وذلك بسبب التنشيط العصبي للغده النخامية وأعصاب الدماغ بشكل عام.

الهدف من الدراسة

تهدف هذه الدراسة إلى تقييم فعالية التعليم والتوضيح قبل الجراحة وذلك على مستوى القلق من المرضى الذين يخضعون لعملية جراحية في البطن وآلم ما بعد الجراحة.

المنهجية المستخدمة

تم اختيار المرضى البالغين عشوائيا لإعطائهم تعليمات قبل الجراحة وتقسيمهم إلى مجموعتين مجموعته تلقى توضيحات قبل الجراحة ومقارنتها بمجموعه أخرى لم تتلقى توضيحات .

حيث كانت الدراسة تتمحور حول الرجال والنساء البالغين الذين تزيد أعمارهم عن 18 عاما والذين يخضعون لأي نوع من عمليات جراحة البطن في المستشفيات الحكومية في منطقة نابلس.

النتائج

تمحورت النتائج على الخصائص الديموغرافية للمرضى في المجموعتين وكانت هناك علاقة واضحة ما بين البرنامج التوضيحي التعليمي والقلق حيث قلت نسبة القلق بالنسبة للمجموعة التي تلقى التوضيحات مقارنة بالمجموعة الضابطة.

وجود علاقة ما بين الألم والبرامج التوضيحية وهذا واضح في درجة الألم الذي هو أقل في المجموعة التجريبية من المجموعة الضابطة, وأن هناك علاقة ما بين مستوى القلق قبل الجراحة ومستوى الألم بعد العملية الجراحية في 6 ساعات حيث بينت الدلالات الإحصائية ذلك عند مستوى 0.05.

هناك علاقة ذات دلالة إحصائية بين الألم والجنس حيث تعاني النساء أكثر من ناحية الألم وتبين أيضا أن هناك علاقة ذات دلالة إحصائية بين القلق والمستوى التعليمي.

يجدر بالذكر أنه لا توجد علاقة ذات دلالة إحصائية بين القلق والمتغيرات الديموغرافية بين مجموعتي الدراسة.

وتبين أن هناك انخفاض كبير في مستوى القلق قبل العملية ومستوى الألم بعد العملية الجراحية بين المجموعتين بعد إعطاء برنامج توضيحي تعليمي منظم.

ونستنتج من الدراسة الحالية أن التوضيح وإعطاء تعليمات قبل الجراحة هو أحد الطرق الفعالة في الحد من القلق بين المرضى الذين يخضعون لعمليات جراحية في البطن, والحد من الألم بعد العملية الجراحية وأيضاً تحسن في العلامات الحيوية لتكون أقرب إلى وضعها الطبيعي .

وتوصي الدراسة لجعل لتتقيف الصحي قبل الجراحة من أهم الاستعدادات التي يتم العمل عليها قبل إجراء العمليات لمرضى جراحة البطن.