

Relaxation-Focused Nursing Program for Women with Adnexal Mass in the Preoperative Period

ABSTRACT

Adnexal masses, mostly benign, carry the risk of ovarian cancer in the postmenopausal period. The masses give late symptoms, and the definitive diagnosis is determined by surgery. For this reason, patients experience psychological problems such as anxiety and depression due to uncertainty in the diagnosis and treatment process, the burden of symptoms, the suspicion of cancer, and the lack of knowledge about the procedures to be performed. Relaxation-focused nursing program that will be applied to women in the preoperative period can contribute to the solution of these problems. Relaxation-focused nursing program includes Lazarus' methods of dealing with stress, giving information and using relaxation exercises, to create a positive language and environment, to reduce anxiety. The program was developed by 2 academic nurses who are experienced in obstetrics and gynecology nursing and have hypnosis certification. As a result of the experience of the authors, literature review, and their academic research, it has been shown that the relaxation-focused nursing program used in patients diagnosed with adnexal mass is effective in reducing preoperative anxiety and pain and increasing the level of knowledge. This article explains the relaxation-focused nursing program and how it can be used during the preoperative period for women with adnexal mass/ovarian cancer. The program can be practiced safely as it does not require costs and has no side effects. It was aimed to reduce anxiety and pain because of the practice of this program in preoperative period in patients hospitalized with a diagnosis of an adnexal mass.

Keywords: Anxiety, ovarian cancer, ovarian cysts, preoperative care, relaxation techniques, stress.

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Introduction

Adnexal masses, which can be seen in all age groups, are particularly common in women of reproductive age. Adnexal masses are 0.17%-5.9% asymptomatic and 7.1%-12% symptomatic.¹ Most adnexal masses originate from the ovaries.² These masses, which are mostly benign, carry the risk of ovarian cancer in the postmenopausal period.^{2,3} These tumors' benign and malignant characteristics are often distinguished by the pathological analysis that follows surgery.³

Ovarian cancer, in which combined treatment methods are used, is a complex process. Due to surgical procedures, reproductive organ loss, early menopause, and the adverse effects of adjuvant chemotherapy, patients may have psychological issues.⁴ The most common psychological problems experienced by cancer patients are anxiety and depression.⁵ Preoperative anxiety is a common problem for patients with and without cancer.⁶ Because of this, nurses caring for women with adnexal masses should be aware that anxiety and depression are important problems and should give an early diagnosis. It should also focus on empowering these patients and helping them cope with anxiety and depression. Nurses should adopt a multidisciplinary approach in cooperation with psychologists and psychiatrists. The relaxation-focused nursing program (RFNP) was developed to help women with adnexal masses or ovarian cancer reduce their anxiety and meet their preoperative care needs. In this article, after explaining the concepts of stress, anxiety, and the effects of stress and anxiety on the patient in the perioperative period, the RFNP prepared for patients with adnexal mass/ovarian cancer will be introduced.

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Stress

Stress is a situation that occurs as a result of the interaction of the organism with itself or its environment and contributes to its development at the appropriate level, but when it is excessive, it causes the individual to be exhausted.⁷ Selye defined stress as the body's response to various stimuli to adapt.⁸

According to the Transactional Model defined by Lazarus and Folkman,⁹ the perception by individuals of situations that disrupt the interaction or harmony of the individual with the environment as a threat is stated as "stress." According to the model, stress is evaluated in two different ways. The individual evaluates the threatening or harmfulness of the stressor in the primary evaluation of stress. For women, being diagnosed with ovarian cancer/adnexal mass is acutely stressful. In women's primary evaluation, stress keeps getting worse when it is combined with things like illness, death, fewer social connections, the loss of social connections, and a worsening view of oneself. In the secondary evaluation stage, it is determined whether the individual can overcome the stress.⁹ At this stage, women evaluate whether they can cope with the disease and need support in coping with uncertainty, anxiety, and stress associated with the diagnosis of the disease.^{10,11} After these, the individual chooses the appropriate "coping" method for him. The model states that there are 2 types of coping methods: problem-focused and emotion-focused. The purpose of problem-focused coping is to change the source of stress. For this purpose, the person first determines the problem and its cause, then develops solution-oriented alternatives, selects the best one among these alternatives, and implements it. To reduce problem-oriented stress in the program, for example, make the environment more positive if it is currently negative, or eliminate the lack of information about the surgery. Emotion-focused coping allows negative emotions caused by a stressful situation to be directed in a positive direction.⁹ As emotion-focused coping strategies, this program employs positive language, a positive environment, information, and relaxation exercises.

Anxiety

Anxiety is a feeling of unease or worry that comes from anticipating a real or perceived dangerous event or situation. Its density varies according to the perception of individuals. While mild anxiety allows people to expand their perceptions, high levels of anxiety have both physical and psychological consequences for the human body. Anxiety activates the stress mechanism by stimulating the sympathetic nervous system and the hypothalamic-pituitary-adrenal axis.¹² It is a common problem in women diagnosed with an adnexal mass and in the preoperative period.^{4,5,10}

The Effect of Stress and Anxiety on the Patient in the Perioperative Period

Surgery and hospitalization can cause the patient to experience anxiety as a stressor. It was stated that the rate of depression and anxiety in women with ovarian cancer was 25.3% before treatment and 19.1% after treatment, and these rates gradually increased during and after treatment.⁵ In another study, the rate of preoperative anxiety was found to be 74% and then slowly went down.⁴ It was determined that anxiety in women with gynecological cancer started from the planning stage of the treatment and continued, reaching a peak on the day of admission to the hospital.⁴ It has been determined that preoperative anxiety in women with gynecological cancer is caused

by hospitalization, uncertainty about the diagnosis and future, being diagnosed with malignancy, problems related to symptoms, lack of information about treatment and side effects, surgical interventions, insufficient social support, fear of death, separation from loved ones, and loss of independence.^{4,11-13}

When the person encounters a stressor, such as a surgical procedure, the nervous system activates the stress response by sending a warning to the hypothalamus. Negative feedback mechanisms are negatively affected during and after surgery. Pituitary hormones exacerbate the stress response to surgery by causing elevations of cortisol, glucagon, catecholamines, and inflammatory cytokines. Cortisol stimulates gluconeogenesis in the liver, causing blood glucose levels to rise. Hyperglycemia increases other comorbidities such as delayed wound healing, infection, ischemia, sepsis, and death.¹⁴

As in the case of stress, anxiety also has negative health consequences. Anxiety can increase susceptibility to infection and delay wound healing by suppressing the immune system.^{12,15} It has been determined that mortality rates are higher, hospitalizations are higher, and treatment results are poor in women with anxiety and depression.⁵ The effect of RFNP on stress and anxiety is explained in Figure 1.

Relaxation-Focused Nursing Program Practiced to Women with Adnexal Mass in the Preoperative Period

When people feel like they cannot do anything about a stressful situation, they use certain techniques to ease or get rid of their feelings of stress.⁹ In the Enhanced Recovery After Surgery protocol prepared for gynecological oncology surgery, psychological interventions are recommended to increase the mental well-being of the patients before the surgery, reduce their stress, and provide behavioral change.¹⁶ Psychological support practiced before cancer surgery did not affect the length of hospital stay, complications, use of analgesia, or mortality; however, it has been stated that it positively affected the immunological functions of the patients.¹⁷

Determining and intervening with the anxiety and stress levels of women diagnosed with adnexal mass/ovarian cancer will make significant contributions to diagnosis, treatment, and care. Preoperative RFNP is a nursing care prepared by focusing on relaxation. This program has been prepared by combining the literature on stress, anxiety, and psychosocial support in gynecological cancers with the professional experiences of 2 academic nurses who are experts in obstetrics and gynecological nursing (Figure 2). The corresponding author has approximately 35 years of experience in the field of obstetrics and gynecology and has received hypnosis training within hypnobirthing and hypnofertility training. The second author worked with gynecological oncology patients during her graduate and doctorate education in obstetrics and gynecology nursing. The authors conducted research on patients with adnexal or ovarian cancer. Before creating the program, the authors determined the problems experienced by patients with ovarian cancer, their anxiety levels, and their care needs. Expert opinion was taken for the prepared program. The program continues throughout the preoperative period, starting with the first encounter with a woman with suspected or diagnosed ovarian cancer/adnexal mass. It excludes postoperative care. Patients are usually admitted to the clinic 2 days before the operation. For this reason, the program was been prepared for 2 days. If the length of stay of the patient is prolonged, the program can be extended by maintaining

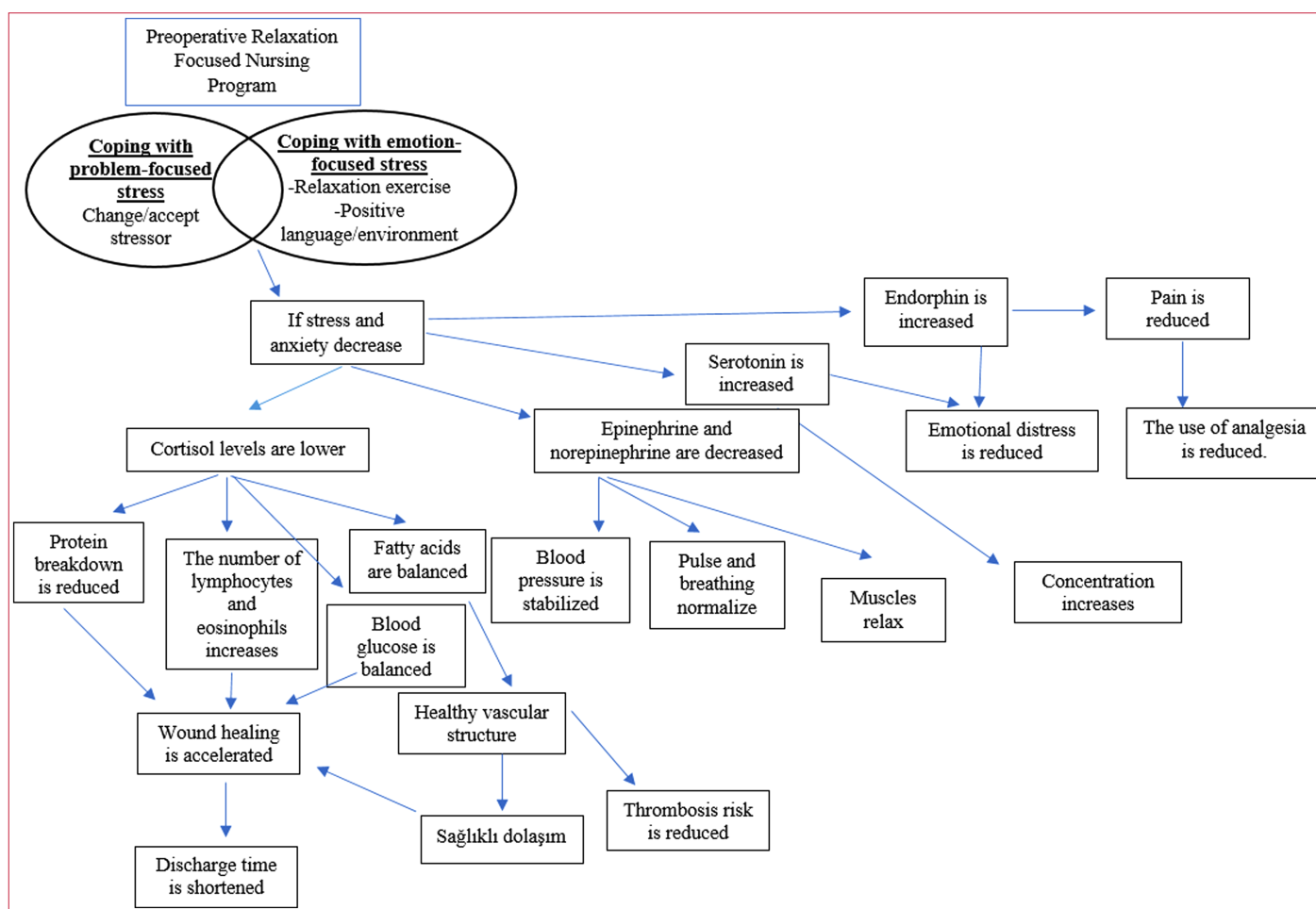


Figure 1. The effect of the preoperative relaxation-focused nursing program on stress outcomes.

the same principles. The more relaxation exercises are practiced, the greater the effect will be. After the program was prepared, a pilot study was conducted with four patients to test its applicability. After the pre-application, no change was required in the program.

Relaxation-focused nursing program is built on three elements. These include positive language and creating a positive environment, giving information, and coping with stress methods. Details of the program will be given later.

The main goal of the program is to remove and reduce the stressors that cause stress and anxiety and to empower women to cope with stress/anxiety. Because of this, it was decided that the Transactional Model by Lazarus and Folkman⁹ would be a good way for diagnosed women to deal with stress. Nurses who will use this model should first be able to make a primary assessment of stress. At this point, the nurse should figure out what the woman's adnexal mass means, how it will affect her, and how stressed she is about it. Then, in the secondary evaluation, the nurse should evaluate the causes of the stress, how damaging it is, and whether the person can cope with the stress.

After these, together with the nurse, the woman should decide which of the emotional-focused or problem-focused coping methods she will

use. Managing the disease by trying to get information about the disease is an example of a problem-focused approach.¹⁸ Some of these interventions are breathing exercises, progressive muscle relaxation, music, and yoga, which are emotion-focused interventions used in the preoperative period.^{12,15,19} For this reason, relaxation techniques such as using positive language, creating a positive environment, and practicing simple relaxation, progressive muscle relaxation, breathing techniques, and directed imagery are used for emotion-focused coping purposes in the program. These techniques are emotion-focused; by decreasing sympathetic stimulation, they increase muscle relaxation and a sense of calmness (Figure 2).

Problem-Focused Coping: Identifying Stressors, Accepting or Changing Identifying or Changing the Stressors

At this stage, the nurse determines the stressors together with the patient. They change what they can change and decide that they must accept what they cannot change. One of the most important causes of stress and anxiety in women with gynecological cancer is a lack of knowledge.¹¹ Giving women sufficient information about the disease and surgery to be performed before gynecological surgery and ensuring low postoperative anxiety affect women's perceptions

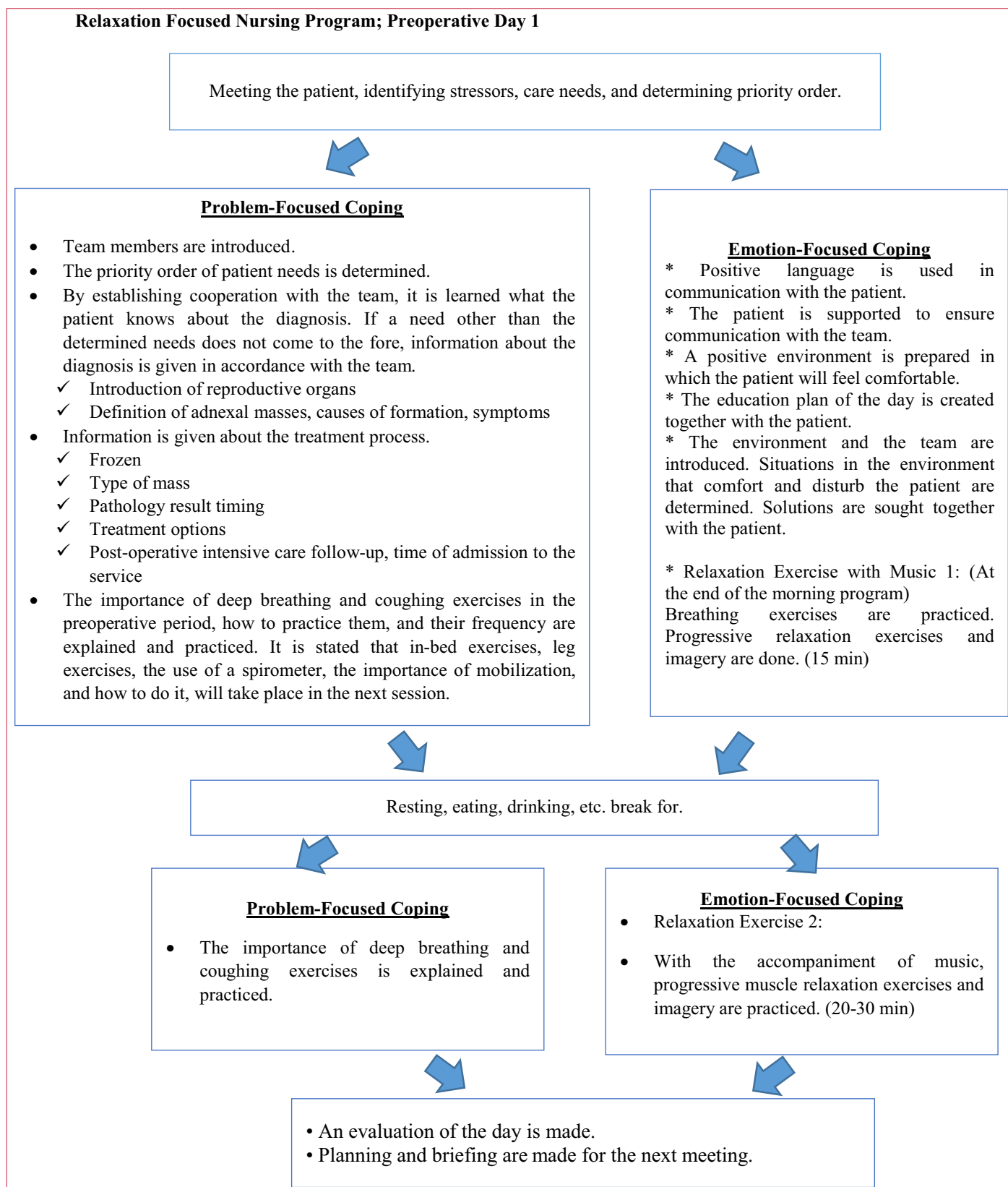


Figure 2. Relaxation-focused nursing program flow chart.

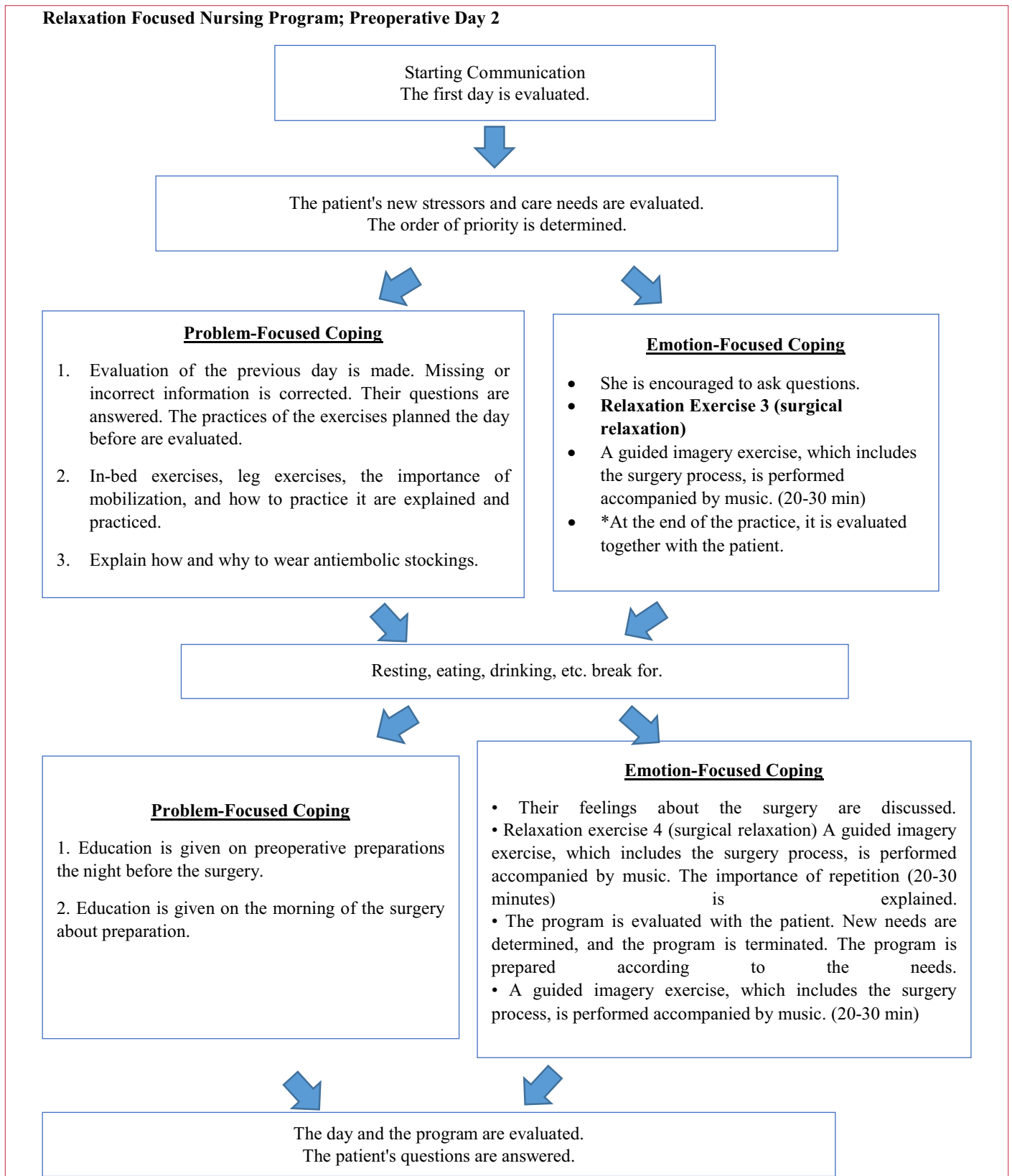


Figure 2. Relaxation-focused nursing program flow chart (Continued).

Table 1. Principles of the Education Program

<p>Prior to education, the patient's primary needs should be determined and it should be aimed to focus on education by meeting the patient's primary information needs. Giving unnecessary and excessive information to the patient should be avoided.^{41,42}</p> <p>Since education is the most preferred method for patients, it should be preferred to give one-on-one and face-to-face interviews.^{41,42}</p> <p>The education process should be planned together with the patient, and the patient's active participation in the process should be ensured by supporting them to ask their questions.¹⁵</p> <p>The exercises taught in the education should be practiced to the patient one by one and repeated in order to be permanent.¹⁵ The patient should be asked to read the booklet given on the first day and to repeat the exercises to reinforce the knowledge and practices and ensure that the patient takes responsibility in this process.</p> <p>Written booklets, brochures, etc., are provided to the patient in order to ensure the permanence of the information should be given.¹⁵</p> <p>Patients who do not repeat the exercises or do not read the booklet should be respected, discussed with the patient about the obstacles in doing them, and supported.</p> <p>In order to determine whether the patient understands the education correctly and completely, feedback should be obtained from the patient about the education given. According to the feedback, education should be reorganized and incorrect information should be corrected.¹⁵</p> <p>The second day of education should start with a summary of the first day, and the patient's questions should be answered.</p>
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of the disease positively.²⁰ It is stressed that giving patients systematic information before gynecological surgery makes them feel less anxious²¹ and that giving patients oral or written education in addition to standard education makes them feel less anxious and shortens the length of their hospital stay.^{22,23} For this reason, procedures, diagnosis, treatment, nursing interventions, physical activity, discharge, etc. giving information about the subject will reduce anxiety, provide relaxation, and facilitate good management of this process.^{24,25} The information to be given to the patient in the program was prepared using the principles of creating a positive language and environment and adult education.²⁵⁻²⁸ The principles of the education program prepared for the patient are given in Table 1.

Emotion-Focused Coping: Positive Language, Environment Building, and Relaxation Exercises

Creating Positive Language and Environment

The language used in care has a strong influence on the diagnosis and treatment processes. What women hear about the disease and how they interpret it affects their perceptions and self-confidence about their health status.²⁶ The language used affects consciousness. Positive language should be used to positively affect consciousness. In order to create these effects, they must be individual, positive, precise, present, logical, and practicable.²⁷ Instead of what is frightening, abnormal, or wrong, language that empowers the patient and states what the situation is and what the patient can do be used.²⁶

Creating a positive and healing environment for patients is one of the important responsibilities of nurses. Within the scope of the positive/healing environment, the nurse should be accessible to the individual and the family, the room should be well ventilated, the heat and light should be adjusted appropriately, a screen should be used to ensure privacy, and the noise of the announcement system, personnel, and equipment should be reduced. The use of healing music to relax patients and combining surgical treatments with complementary therapies can also be used to create a positive environment.²⁸

Relaxation Exercises

Relaxation interventions aim to make the individual feel more comfortable both psychologically and physiologically. Relaxation exercises, which are effective as a distraction technique, reduce negative emotions and thoughts.¹⁹ All relaxation processes include rhythmic breathing.^{29,30} The positive effects of relaxation exercises such as vasodilation, muscle relaxation, relaxation, reduction of pain, acceleration of wound healing, reduction of blood glucose levels, and early discharge are known.^{19,29-32} For all these reasons, relaxation exercises should be used in nursing care during the preoperative period. In this program, breathing, progressive muscle relaxation, and guided imagery methods were used to reduce stress and anxiety. On the first day of the program, breathing and progressive muscle relaxation exercises were used; on the second day, in addition to the progressive muscle relaxation exercise, a guided imagery exercise specific to the surgery was used (Table 1). Detailed information about these exercises is given below.

Pre-Exercise Preparations

It is important to create a suitable environment while practicing the relaxation exercise. The temperature and light of the room should be well organized. The clothes of the person doing the exercise should be comfortable. Before starting the exercise, care should be taken not to take alcohol or drugs and not to eat heavy meals. An environment where the exercise will not be interrupted should be preferred, and the exercise should preferably be performed in a single room. If it will be practiced in rooms where more than 1 patient stays or where patient relatives are present, the people in the room should be allowed to participate in the exercise or they should be asked to be quiet. So that the relaxation exercises do not get interrupted, the doctors and nurses should be consulted about the best time to do them, and a note should be put on the door to let people know that relaxation is happening inside. Before the practice, mobile phones should be asked to be turned off or muted. When this exercise is being practiced for the first time, the presence of a guide ensures that the exercise is understood and applied correctly. In addition, a voice recorder with instructions or recording one's own voice can also help with the exercise.^{30,33,34}

Before the exercise, the patient should be informed about the purpose of the exercise and how it will be practiced. During the exercise, people can perform it lying down or sitting with their backs supported.^{30,33,34} The program begins with a deep breathing exercise. Then, there is progressive muscle relaxation and guided imagery exercises.

The use of music during the entire relaxation exercise can increase its effect. Relaxing music should be used to reduce stress and anxiety. This music should be low-pitched, slow-paced, using close tones, and soft-timed.^{35,36} Also, the more a person uses certain music, the

greater their relaxation response. It is important that the selected music does not become boring as a result of repeated listening by people. For this reason, it is often helpful to match the chosen music to activity and stress levels and gradually reduce its tempo. The length of the selected track should be 20-30 minutes. Pieces with shorter lengths can also be selected, but care should be taken to ensure that the repetition or transition of the piece is smooth. Music with lyrics should not be chosen because it can be distracting and the words can stimulate cortical responses.³⁶ The music used for relaxation should also be in harmony with one's musical taste. For all these reasons, the choice of music has a critical place in relaxation exercises.

Relaxation Exercise I Breathing

Correct breathing is necessary for the body to move and for the systems to work in balance.³⁷ In cases of danger, our healthy breathing is disrupted. The first response in a stressful situation is rapid and shallow breathing. It causes many adverse conditions such as very shallow or rapid breathing, muscle tension, an increase or decrease in blood pressure, gastrointestinal problems, and insufficient oxygen delivery to the body. Decreased oxygen causes breathlessness and creates a vicious circle of stress.³⁰

With balanced breathing, muscle tension decreases, energy production increases, and blood flow is improved. Relaxation breathing is the first lesson in the progressive muscle relaxation exercise. The better the breathing, the more effective the relaxation.³⁰ Before starting the relaxation breathing, the person is asked to take a comfortable position, focus on her breath, and breathe slowly and deeply through the nose as if smelling a flower that she likes very much. She is asked to inflate her abdomen while inhaling and lower it while exhaling. When ending the exercise, one should not rush; first, the body should be moved slowly and the eyes should be opened.^{30,37} In this program, deep and rhythmic breathing was used at the beginning of the gradual relaxation. In the later stages of the exercise, rhythmic and calm breathing continued automatically.

Relaxation Exercise II Phase Muscle Relaxation

Developed by Edmund Jacobson, this technique provides control of excessive muscle tension. In this exercise, the person becomes aware of the lowest level of muscle tension. The patient is asked to first stretch and then relax a certain muscle group. It is provided to distinguish the difference between these two cases.³⁸ Progressive muscle relaxation also teaches you to relax one or more muscle groups in optional, stressful situations.³⁰ This exercise stimulates the parasympathetic nervous system and suppresses the sympathetic nervous system, which causes anxiety.³³

After the environment is made suitable, the patient should also be prepared to relax mentally. The exercise begins with deep breathing and exhalation. This is followed by stretching and then a relaxation exercise. Meanwhile, the patient holds each muscle group tense for 10 seconds and relaxes for 20 seconds. In addition to each relaxation and stretching command, the person is asked to take deep breaths.^{33,35} It is supported to focus on the breath first and then relax with words such as "relax" and "cool down" with each exhalation.³⁰ In the cognitive relaxation exercise, the person is relaxed by creating mental images with the help of words.³³ In the relaxation exercise used in the program, a text should be used that will enable the person to go to a peaceful and calm environment that they love.

Relaxation Exercise III Guided Imagery

The guided imagery technique is the visualization of images, sounds, smells, and tastes in the mind. In other words, it is a technique in which images are used to enable the patient to imagine that they are in an environment where they can feel safe and peaceful. Guided imagery works by using the connection between the nervous system and the visual cortex. The goal of this method is to generate positive thoughts by focusing on different mental images while avoiding false or negative thoughts.³⁵ Imagination is used to visualize places, objects, or events that do not exist.³⁹

It has been found that guided imagery makes muscles less tight and lessens pain and anxiety.^{34,35} It has been shown that directed imagery reduces preoperative stress, the use of analgesia, postoperative pain, strengthens coping, and reduces preoperative and postoperative cortisol levels in patients undergoing abdominal surgery. However, norepinephrine levels were found to be higher in the intervention group.⁴⁰ It has been shown that guided imagery reduces the stress, state anxiety, and blood glucose levels of patients undergoing surgery and positively affects wound healing.^{31,32}

In our program, guided imagery is practiced together with relaxation exercises. Each session of guided imagery, which is practiced twice on the second day of hospitalization, lasts 35 minutes. Text visualizes the morning of the patients going to the surgery, starting from the preoperative period, the operating room, the intensive care unit, and their arrival at the service. With this practice, it is aimed to prepare the patient for these stages, to adapt, and to reduce her anxiety.

Implications for Practice

Surgical treatment is one of the important causes of anxiety for women with ovarian cancer because of the uncertainty of the diagnosis and the results of the treatment. The level of anxiety in surgical patients generally starts with the planning of the surgical procedure and increases during hospitalization. High levels of anxiety can activate the sympathetic nervous system of patients, resulting in poor surgical results. Due to the high levels of anxiety experienced, the immune system is suppressed and the tendency to infection increases; wound healing due to hyperglycemia is delayed; recovery time, hospital stay, and mortality rates increase.^{5,12,14}

Preoperative nursing care of patients diagnosed with adnexal mass/ovarian cancer is very important in terms of preoperative anxiety, pain, and knowledge level. By practicing RFNP in the preoperative period, patients can be relaxed and stress reduced with a problem-focused and emotion-focused approach. Thus, the immune system is strengthened, the risk of infection is reduced, wound healing is positively affected, and early discharge is encouraged. Considering the problems such as the workload and time constraints of the nurses, the relaxation exercises can be recorded and uploaded to the patients' phones in order to implement the program, or these relaxation exercises can be practiced with the patients with MP3 players provided by the managers. The lack of knowledge in cancer patients is one of the important causes of anxiety. For this reason, the information in this program can be supported by providing an education booklet to inform the patients systematically.

Conclusion

Reducing the anxiety of women diagnosed with adnexal mass/ovarian cancer in the preoperative period ensures that their physiological

parameters are within normal limits, shortens the hospital stay, and increases the satisfaction of the patients. To achieve this, women need to be supported with a well-prepared preoperative intervention. Today, however, preoperative training is carried out in an unplanned and rapid manner. For this reason, this program, which was prepared to be applied to women hospitalized for surgery with the diagnosis of adnexal mass/ovarian cancer, aims to reduce the preoperative anxiety of women and help them relax. Thus, it is thought that it will contribute to both women's having a positive surgical experience, increasing their preoperative and postoperative psychological and physiological well-being, and reducing complications. Problem-focused coping practices in this program are partially practiced. However, emotion-focused interventions are practiced in a very limited way. This article has been prepared to introduce the program and its results. Thus, nurses' recognition and implementation of the program will be tested. The program can be practiced safely because it does not require any cost and has no side effects. There is a need to increase the examples of practice in the program for gynecological oncology patients. It is also recommended to support and develop the program with research.

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