

Analysis of Physical and Psychological Consequences of Cancer with an Emphasis on Spirituality-Based Palliative Care Training Program

Parisa Sabetsarvestani, Shahnaz Karimi and Azizallah Dehghan

Abstract--- *The prevalence of cancer and its significant effects on all aspects of patients' lives increase, the concept of life quality and its related factors are overlooked in patients with cancer in Iran, and no studies have examined the effect of spirituality-based palliative care on these patients. Considering all these, the researcher intended to analyze the effect of spirituality-based palliative care training program on pain, life quality, and nausea and vomiting in cancer patients, so that an effective step can be taken in the care process of these patients using the results of the study. The study method was theoretical using library approach. Books and papers related to the study topic were used for data collection. Multidimensional Model for Understanding Cancer Pain, pain treatment interventions, nursing measures to reduce nausea and vomiting, life-quality measurement methods, characteristics of palliative care, palliative care outcomes, and palliative care role in cancer treatment were examined. According to the results, religious beliefs could have a significant role in life quality enhancement of these patients. Therefore, more effective steps can be taken in improving the life quality and even using religious beliefs as a kind of therapeutic strategy by strengthening these beliefs through religious programs and meetings for cancer patients and knowing their morale and religious views.*

Keywords--- *Cancer, Life Quality, Physical and Psychological Consequences, Palliative Care, Spirituality.*

I. INTRODUCTION

Cancer is among the deadliest common diseases in all human communities. As cancer registry is not done in all countries, one cannot decisively judge the epidemiology of various kinds of cancers. However, it is estimated that about 14,100,000 people were added to the patients with cancer diagnoses in 2012, of whom 6,700,000 were women and 7,400,000 were men. In this statistic, 6,100,000 people were in the developed countries - North America, Japan, Europe, including Russia, Australia, and New Zealand, and 8,000,000 were in developing countries [1]. Thus, given the nature of this disease, patients with this type of cancer suffer from many complications because of the disease and its treatment. The most important complications are pain, nausea, vomiting, and reduced life quality.

Pain is one of the most common complications of cancer and its treatment. What is more frightening than appearance deformities and affective disorders in advanced cancers is the patients' pain. It could be stated that pain

Parisa Sabetsarvestani, Master of Science in Medical Surgical Nursing, School of Nursing, Fasa, University of Medical science, Fasa, Fars, Iran. E-mail: parisasabet244@yahoo.com

Shahnaz Karimi, Assistant Professor of Medical Education, School of Nursing, Fasa University of Medical Sciences, Fasa, Fars, Iran. E-mail: Sh.karimi16@yahoo.com

Azizallah Dehghan, Assistant Professor of Epidemiology, Non-communicable Diseases Research Center, School of Medicine, Fasa University of Medical Sciences, Fasa, Iran. E-mail: Dehghan.aziz@yahoo.com

is one of the biggest fears and one of the main causes of cancer patients' agony [2].

Cancer pain is significant from many perspectives as pain can affect the pattern of sleep, social relationships, job, and other life aspects of the cancer patients and their families. The patients with cancer pain experience many physical and psychological problems that alter their lives and affect their life quality [3].

Nausea and vomiting are the most prevalent complications of cancer chemotherapy. The incidence and severity of nausea and vomiting in patients undergoing chemotherapy largely depend on the type of chemotherapy drug, drug dosage, and timing of drug use, combined medicines, and patient characteristics. About 70 to 80% of the patients undergoing chemotherapy experience nausea and vomiting. Expected nausea and vomiting occur in about 10 to 44% of the patients undergoing chemotherapy. The incidence of nausea and vomiting is higher in women compared to men. Severe nausea and vomiting can lead to serious metabolic disorders, nutritional deficiency, anorexia, weakening of the patient's physical and psychological state, esophageal rupture, fractures, non-healing of wounds, withdrawal from anti-neoplastic treatment, reduced self-care, and reduction in patient's functioning. The psychological stress caused by these complications can threaten the acceptance of chemotherapy program and endanger the patient's life quality. Nausea and vomiting may increase anxiety, depression, and incoherence in daily life activities [4].

Cancer leads to disruptions in the patient's economic, social, and occupational status, and can affect different aspects of a patient's life quality like mental, psychological, social, and economic status, and sexual performance. In terms of priority, life quality is one of the top ten priorities of the oncology nursing community's suggestions [5].

The World Health Organization (WHO) (2010) considers palliative care as an integral and basic part of cancer control and sees palliative care essential for children as adults. Effective palliative care, which calls for a broad interdisciplinary approach involving family and patient caregivers, utilizes resources available in the society and can be implemented even if the resources are restricted. Palliative care is at hand in the society, tertiary care centers, homes, hospitals and specialized centers. In most parts of the world, most cancer patients are diagnosed at advanced stages of the disease. According to them, the only reasonable and realistic treatment option is pain relief and palliative care. However, there are effective approaches in palliative care that enhance the life quality of cancer patients [6].

Considering that the prevalence of cancer and its significant effects on all aspects of patients' lives increase, the concept of life quality and its related factors are overlooked in patients with cancer in Iran, and no studies have examined the effect of spirituality-based palliative care on these patients. Considering all these, the researcher intended to analyze the effect of spirituality-based palliative care training program on pain, life quality, and nausea and vomiting in cancer patients, so that an effective step can be taken in care process of these patients using the results of the study.

II. MULTIDIMENSIONAL MODEL OF CANCER PAIN

A multidimensional conceptualization of cancer pain includes combining various aspects of pain and determining the relationship between pains with various aspects. According to a study on 191 cancer outpatients, it

was found that pain could disrupt various aspects of mood, activity, and enjoyment of life. The study showed that psychological (behavioral and emotional), demographic (social, cultural, and medical) physiological (sensory and behavioral) factors can affect the evaluation and treatment of cancer-related pain. Lance et al. found that cancer symptoms had a direct effect on depression (emotional domains) and that pain was the most significant factor in leading to depression [2].

People experiencing more pain become moody and this affects their behavior as well. Depressed people may attempt to show behaviors shortening their lives (such as suicide) or refuse to perform activities that prolong their lives [7].

Dysfunction because of pain (behavioral) and fear of cancer due to its pain (cognitive) are considered as the indirect effects of pain on causing depression. For instance, a study among young (aged 30 to 64) and old (aged 65 to 90) groups found that the effects of pain on depression were due to functional impairment resulting from pain. This disorder makes younger patients more depressed than older ones. However, the degree of depression in these patients is not so high to be clinically significant. The treatment team has to consider various variables such as period and pattern of pain in physiological aspect, severity, and quality of pain in sensory dimension, mood changes in affective dimension, and the effect of pain in behavioral aspect in pain evaluation perform specific interventions for each of these variables. For instance, painful bone metastasis (physiologic) with radiotherapy will alleviate pain intensity (life dimension) using painkillers and modify pain response (cognitive) using thought diversion strategies [8].

Pain Treatment Interventions

Treatment should deal with all aspects of pain, such as all functional (like sleep disorders, appetite, mood, activity, body status, and sexual issues), physical, emotional, and psychological aspects [2]. Given the multidimensionality of cancer pain, it is usually necessary to combine analgesic approaches, such as pharmacological, non-pharmacological, and invasive techniques in physiological and psychological aspects to reach maximum relief. In selecting the right pain relieving method, one should consider the method that, if possible, has the least possible risks and complications besides the highest possibility of pain relief.

The second approach changes the perception or feeling pain, uses interventional, and medication techniques to reduce or prevent the perception of pain from the environment by altering the perception of pain by the sensory cortex of the brain.

The third approach tries to control the emotional component of the pain response by using behavioral or cognitive strategies for modifying central pain processing. The purpose of the last approach is to create a positive effect on the underlying aspects of pain by reducing or alleviating emotional stress through negative reactions to pain [9].

Nonetheless, medicine therapies can completely relieve stress and pain in these patients and have complications; thus, it is important to consider non-pharmacological therapies to control stress and pain. Moreover, there are several psychological and palliative interventions available to help cancer patients, management, and pain [10].

Nursing Measures in Reducing Nausea and Vomiting

Helping cancer patients to control and reduce distress along nausea and vomiting is a difficult area in taking care of cancer patients undergoing chemotherapy. Significant advances have been reached in pharmacological and non-pharmacological interventions in controlling nausea and vomiting caused by chemotherapy. The main intervention in the nursing practice of nausea and vomiting is using anti-nausea and vomiting medicines [11].

Pharmaceutical Control of Nausea and Vomiting

Proper prevention and treatment of nausea and vomiting caused by chemotherapy are critical for the successful and safe application of antineoplastic regimens with high vomiting potential. The main intervention for the appropriate management of chemotherapy-induced nausea and vomiting has recently been anti-nausea and vomiting drugs, and primary nausea and vomiting drugs to control nausea and vomiting caused by chemotherapy have been phenothiazines, cannabinoids, corticosteroids, and diazepam. Cisplatin development in the 1980s changed the researchers' method of coping with chemotherapy-induced nausea and vomiting. HT3-5 receptor, which is most commonly used to control and reduce nausea and vomiting, is reduced with increase in their recurrence days and perhaps in the frequency of chemotherapy. Thus, oncology nurses and other health professionals have to be trained to talk to patients and their families about non-pharmacological interventions to prevent and control nausea and vomiting even more. No studies have proven the benefit of using non-pharmacological therapy over medicine therapy of anti-nausea and vomiting. However, using non-pharmacological methods may be beneficial to patients besides using pharmacological methods. Hence, nurses should be familiar with non-pharmacological therapies that could maximize nausea and vomiting response in the patient [12].

Non-pharmacological Methods of Controlling Nausea and Vomiting

Non-pharmacological measures are the techniques that create control on physiological responses by connecting the mind and body through psychological interventions. Non-pharmacological measures used to prevent nausea and vomiting in cancer patients are classified as behavioral interventions - comprised of learning adaptive behavioral skills training - and the studies on behavioral therapy for conditional complications of chemotherapy have focused on six methods, including self-hypnosis, guided imaging, systemic desensitization, distraction, biofeedback and relaxation. Other non-pharmacological interventions include acupuncture, acupressure, and music therapy and nutritional adjustment. Acupuncture and acupressure are old Chinese techniques, developing in oncology nursing [11].

Methods for Measuring Nausea and Vomiting

Morrow Assessment of Nausea and Emesis (MANE) is a device that has been designed to examine nausea and vomiting caused by chemotherapy in cancer patients. This device is an objective and optional questionnaire, by which the patient records the value, severity and duration of nausea and vomiting prior to and following chemotherapy, as well as the amounts of the medication used [13].

Functional Living Index-Emesis (FLIE) is another device designed based on Lindley et al. based on Functional Living Index - Cancer (FLIC), which allows patients to list the effects of chemotherapy-induced nausea and

vomiting on their life quality. This tool has a 7-option criterion. The information from this tool allows the physicians and nurses to evaluate the severity of the patient's symptoms (e.g., decreased ability to eat, drink with normal daily baseline function). Moline et al. have designed a questionnaire to help health professionals control and measure nausea and vomiting in cancer patients undergoing outpatient chemotherapy (1). This 12-item questionnaire has been developed by combining options from the Morrow Assessment of Nausea and Emesis (MANE) and Functional Living Index- Emesis (FLIE). The options are number of vomiting periods, duration of nausea, the value of nausea and vomiting, severity of nausea and vomiting, effect on life quality, and complications. Studies on the precise control and reduction of nausea and vomiting in cancer patients are ongoing [14].

Methods of Measuring the Life Quality

As a significant therapeutic index, measuring life quality has always been discussed. As life quality is a subjective index, patient's recorded reports are necessary. The different causes of examining life quality have led to the creation and development of various tools for measuring life quality. One of the oldest and largest clinical trial groups in Europe is European Organization for Research and Treatment of Cancer (EORTC), which has prepared and developed questionnaires to evaluate the life quality of cancer patients. These questionnaires are intended both generally for patients with different types of cancer and specific for specific cancers [5].

Nowadays, life quality has been introduced as a part of the evaluation criteria for cancer treatment. In recent years, the comprehensive evaluation of the status of cancer patients has become so significant, going beyond traditional biomedical outcomes and examining the effects of disease on patients' life quality [15].

The Characteristics of the Concept of Palliative Care

Characteristics of palliative care concept were identified in two approaches: end of life and general approach.

III. PALLIATIVE CARE WITH AN END OF LIFE APPROACH

In this approach, the characteristics of the palliative care were identified specifically at the end of life stage, such as improving the life quality of the patients and their families, improving the patient's physical, mental, and social well-being, focusing on spiritual well-being, and alleviating physical pain. Palliative care is an approach that improves the life quality of patients and their families in facing life-threatening illnesses [16]. Moreover, the characteristic of palliative care at the end of life considering spirituality has been shown that patients have stated palliative care at the end of life in the form of thanking God for their lives as well as God as a superior being. In the concept of God or Supreme Being, patients consider God as someone who protects them against fear, death, and loneliness and grants them power, comfort, and convenience [17].

Palliative care with General Approach

In this approach, the conceptual features were identified as enhancing the life quality for all patients at all stages, palliative care for patient care, having an interdisciplinary approach, focus on physical, mental, social, supportive, spiritual, and cultural aspect of collaborative care and meeting people's needs not only in the late stages of life and in conditions of illness but also in famine conditions. In the definition of palliative care, it was stated that this care is not only for patients at end-of-life stages but is generally used to enhance the life quality of all patients [18].

The Consequences of the Palliative Care Concept

The consequences that follow the concept of palliative care are both positive and negative ones.

IV. POSITIVE CONSEQUENCES

Effective palliative care leads to gaining energy during the life and death journey and rich and productive experiences for the patient [6]. The care enhances the patient's physical pain and relieves psychological and emotional stress [19]. Palliative care enhances the life quality of the patients and their families [20] and copes with the sociocultural taboos related to the disease in its effective form [18].

V. NEGATIVE CONSEQUENCES

When palliative care services are presented improperly, they lead to confusion in the accountability of the suppliers of these services for these patients [21]. Inefficient palliative care improves the destructive power of the disease and strengthens the patient's death taboo [22]. Patients may face heterogeneity in service coverage when these services are financially disadvantaged [23]. Finally, palliative care, regardless of the patients and their families, may lead to the provision of poor care [24].

The Role of Palliative Care in Cancer Treatment

Palliative care is a human and urgent need in the world for cancer patients, whose essential part is to alleviate the pain and sickness of the patient. The purpose of this type of care is to focus on the patients' needs in physical, psychological, and social aspects. Comprehensive and humanistic care is a significant approach in human care focused on the physique and mentality. Hence, although the experiences of researchers show that most nurses working in cancer wards decrease the pain in the patients, more attention is required to relieve pain in this group of patients to help them [25].

Spirituality-based Palliative Care

One form of palliative care is spirituality-based palliative care. Spiritual care is based on professional, anthropocentric, and sensitive care in all existential patient segments and is a valuable part of overall patient care [26]. The results of spirituality care studies from 1984 to 2005 have indicated that spirituality-based care has beneficial effects on people with psychological disorders like eating disorders, stress, anxiety, and depression [27]. Studies have shown that people with spiritual beliefs, using their beliefs in adapting to the disease and life stress, have positive attitudes and a better life quality [28]. The results of a study on heart transplant patients indicated that the ones taking part in religious activities had a better status in terms of post-treatment follow-up programs and physical functioning, self-confidence, anxiety, and lower health concerns [29]. Hence, spirituality is one of the key areas in the palliative care of cancer patients in late stages of life that can guarantee the high quality of care provided to this group of patients. Nonetheless, it is necessary that nurses consider various aspects of spirituality in providing palliative care for cancer patients and identify these dimensions more as patients feel more comfortable when their spiritual needs are met. Moreover, in the absence of spirituality for patients with cancer, their palliative care suffers. Thus, their spiritual and religious needs are considered to provide comprehensive care for these patients [30].

VI. CONCLUSION

The results of this study clearly indicated the effect of spirituality-based palliative care on improving life quality, reducing pain, and symptoms of diseases. This shows the need to develop effective spiritual interventions and to focus the content of courses and training sessions. In addition to building spiritual bases and training for nurses, the health system needs to develop relationships with specialists in the field so that it can use the spiritual power of the community to support patients.

As palliative care:

1. Is not in the monopoly of a specific time like the end-of-life stage and is implemented to all other stages
2. Is not in the monopoly of a specific place, as this care can be provided at the patient's home or in the hospital, and is not confined to the palliative care unit in the hospital context
3. has a group and interdisciplinary approach, so that besides nurses, it includes other groups like patients' families, physicians and health professionals

Hence, according to the results, one can understand the significance of the role of individuals in health systems, family, community, and their commitment to palliative care promotion more than before.

What deduced from the results was that religious beliefs could have a significant role in life quality enhancement of these patients. Therefore, more effective-steps can be taken in improving the life quality and even using religious beliefs as a kind of therapeutic strategy by strengthening these beliefs through religious programs and meetings for cancer patients and knowing their morale and religious views.

VII. SUGGESTIONS

The results can be used in various areas of nursing. Thus, this section deals with the explanation of the practical suggestions of the study. The following are the suggestions for future studies.

Nursing Training

Based on the results, educational authorities can enhance clinical education system at different levels by encouraging students to use spirituality-based palliative care in patients with cancer and have regular planning for spirituality-based palliative care in clinical training. This issue can encompass various levels of educational planning, educational strategies, and evaluation in the areas of theoretical and clinical training. Additionally, it is suggested that nursing students and staff be familiarized with spiritually-based palliative care conceptually to promote conceptual knowledge by including in-service training or courses teachers, so that training the graduates not only provide knowledge-based care, but also nurture empowered individuals who can provide effective care in the complex world today. Nursing managers and educators must take steps in palliative care education for nurses and nursing students.

Nursing Studies

According to the results, designing quantitative tools for measuring palliative care delivery to patients, training and evaluation of spirituality-based palliative care services tailored to the culture and context of various

communities seems necessary. This is because establishing, developing, and evaluating palliative care in each community rely on the individual, environmental, cultural, and other factors that call for studies.

Nursing Management

Health care managers and health care centers can use the results of such studies to enhance the life quality of cancer patients. In doing so, they should make training spirituality-based palliative care as an essential part of in-service training of health care workers and make the employees be aware of the need for providing this type of care by constant training.

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