



Perspective

Exploring the role of complementary therapy in enhancing quality of life for cancer survivors: A nursing perspective



Introduction

Various types of treatments are practiced worldwide, including folk medicine, traditional medicine, and complementary therapy combined with Western medicine. These treatments are tailored to consider cultural and social backgrounds, age, gender, and personality traits. Complementary therapy shares similarities with Oriental medicine, such as Chinese medicine, known for its holistic approach to health. It aims to promote recovery from illness, enhance health, and improve quality of life (QOL) by viewing the human being as a whole and boosting natural healing processes. This aligns with Nightingale's concept of harnessing the body's inherent healing power. In the human body, each organ is interconnected, linked to the psyche, cranial nerves, endocrine, and immune systems. These systems interact through feedback circuits to maintain bodily function and mental well-being. Embracing this concept, I have applied complementary therapy in nursing, focusing on its use as stress coping strategies for cancer-related symptoms, including anxiety, depression, pain, nausea, lack of appetite, and fatigue. Through my studies, I believe that complementary therapy, as part of nursing skills, can significantly contribute to enhancing patients' QOL.^{1,2}

With recent advancements in cancer diagnosis and treatment, there has been a notable increase in the number of long-term cancer survivors including elderly patients.^{3,4} However, alongside physical pain, the survivors often experience psychological, social, and spiritual distress, presenting significant challenges. To help survivors lead positive lives and cope with these challenges, we advocate for the individualized adoption of complementary therapy as part of self-care management. By integrating complementary therapies into their daily routines, survivors can effectively manage stress, thereby enhancing their overall QOL. This approach can be considered a form of self-care management.

Given my perspective on complementary therapy as a means of stress coping, and recognizing the importance of understanding stress mechanisms and reactions, I will delve into complementary therapy's role in stress management in the following discussion.

When it comes to self-care management, I'd like to delineate the distinctions among self-care, self-management, and self-care management as follows:

Self-care entails the actions one takes to maintain and enhance their physical and mental well-being. It involves managing stress and cultivating healthy lifestyle habits.

Self-management involves effectively overseeing one's actions, emotions, and time to achieve goals and self-actualization. This encompasses prioritizing tasks, time management, and emotional regulation.

Self-care management refers to a more structured approach to self-care, involving specific techniques or processes aimed at enhancing one's self-management skills.

The stress mechanism and stress coping related to complementary therapy

In the illustrated figure (Fig. 1) stressors such as unpleasant stimuli are identified in the limbic system (including amygdala and hippocampus) and cerebral cortex. These signals are then transmitted to the hypothalamus, from where they propagate throughout the body via the endocrine and autonomic nervous systems, impacting immune functions. The hypothalamus serves as a command center, regulating the endocrine and autonomic nervous systems. It adapts to changes in the body's external and internal environments, performing vital functions such as metabolism, temperature regulation, emotional response, and instinctual behavior. Essentially, the hypothalamus plays a crucial role in integrating both the mental and physical aspects of stressors.⁵

The stress response to unpleasant stimuli such as anxiety, worry, threat, or dislike is mediated by the endocrine system through the amygdala of the limbic system. Here, the hypothalamus secretes adrenocorticotropin-releasing hormone (CRH). CRH stimulates the anterior pituitary gland to release adrenocorticotrophic hormone (ACTH), which in turn stimulates the adrenal cortex to produce cortisol, known as the stress hormone. Additionally, in the autonomic nervous system, both the sympathetic and parasympathetic nerves release adrenaline and acetylcholine. If this state persists, it can lead to stress reactions such as discomfort, insomnia, lethargy, fatigue, and elevated blood pressure accompanied by irritability or nervousness, which can contribute to a decrease in immune function and the development of disease.

On the contrary, pleasant stimuli such as feeling good, laughter, and having fun can effectively block the stress mechanism. These pleasant stimuli, experienced through the five senses of sight, hearing, smell, touch, and taste, are transmitted through the limbic system to the hypothalamus, often referred to as the brain's control center. Here, the secretion of cortisol, known as the stress hormone, and the transmission of autonomic nerves are suppressed, effectively blocking the stress response and alleviating symptoms. This ultimately leads to the maintenance and enhancement of QOL. For instance, for patients experiencing

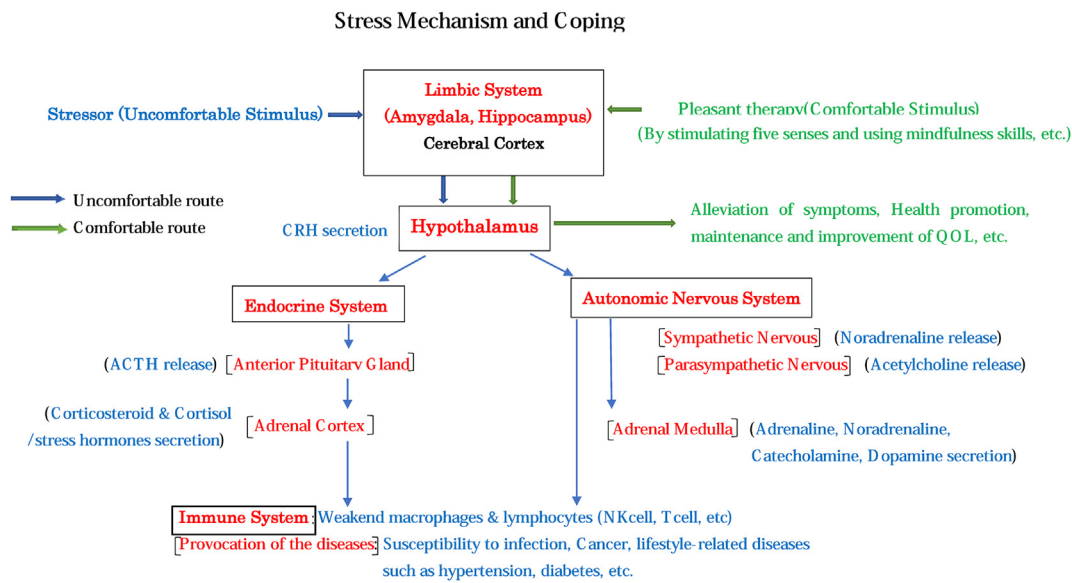


Fig. 1. Stress mechanism and coping. ACTH, adrenocorticotropic hormone; QOL, quality of life.

anxiety or tension, engaging in complementary therapies that provide pleasant stimuli can lead to symptom relief and an improvement in QOL. There is a wide variety of complementary therapies available, allowing patients to select those that align with their preferences. Examples include color therapy, music therapy, aromatherapy, dietary therapy, massage therapy, physical stimulation (such as acupuncture and moxibustion), psychotherapy, and exercise therapy. Introducing patients to these complementary therapies and assisting them in making informed choices can be considered an important aspect of patient education in nursing.

Complementary therapy is believed to play a role in supporting long-term cancer survivors and in preventing cancer recurrence by boosting immunity, akin to immunotherapy in a broader sense. While immunotherapy has garnered attention in recent years due to advancements in cancer treatment, complementary therapy offers a different approach.⁶ By providing pleasant stimulation to the hypothalamus of the brain, complementary therapy activates mental, nervous, endocrine, and immune functions, thereby contributing to symptom relief and the maintenance and improvement of QOL. This enhancement of natural healing power or autoimmunity aligns with the principles of nursing care. We anticipate that the efficacy of complementary therapies will be further elucidated in the future with advancements in brain science, quantum mechanics, as well as the development of artificial intelligence and information technology.

Studies on stress coping and complementary therapy

In studies ① through ⑦, research on complementary therapy for stress coping and symptom management to maintain and improve QOL is presented. Through these studies, the use of complementary therapy tailored to individual needs contributes to the maintenance and enhancement of QOL.

① “Study on Stress” (Study period 1995–1997): This study involved experimental interventions such as autonomous muscle tone relaxation training, music therapy, hot spring/sauna therapy, and exercise therapy for 48 healthy subjects. Various physiological parameters including peripheral circulating blood volume, blood pressure, pulse rate, body temperature, and psychologically the Short Form of the Profile of Mood States (POMS-SF) were measured and statistically analyzed, demonstrating positive effectiveness. The details of this study can be found in the provided references.^{7,8}

② “Study on the Application of Music Therapy with Aroma for Nausea and Vomiting in Chemotherapy Patients” (Study period 1995–1998): This experimental study investigated the effects of combining music therapy with aroma on nausea and vomiting in hospitalized cancer patients undergoing chemotherapy. The participants were divided into two groups of 20 patients each: an experimental group receiving the intervention (relaxing music with aroma) and a control group receiving no intervention. The State-Trait Anxiety Inventory (STAI) and the Numerical Rating Scale of Nausea and Vomiting (NRSNV) were administered before and after chemotherapy to both groups individually. Data analysis compared the differences between the experimental and control groups. The findings revealed reductions in nausea and anxiety levels among the experimental group. Additionally, the study suggested an association between anxiety reduction and sensory stimulation via auditory and olfactory sensations, indicating the effectiveness of this intervention on the limbic system and hypothalamus. The details of this study are found in the provided references.^{4,9}

③ “Study on Alternative and Complementary Therapy as a Means of Nursing Care” (Study period: 2001–2003): In this study, 43 participants were subjected to stimulation of the five senses (hearing, smell, sight, touch, and taste) with the aim of reducing anxiety and stress and achieving a state of well-being. The study also examined the relationship between individual personality traits and the effectiveness of sensory stimulation. Physiological and psychological analyses were conducted before and after the participants used a relaxation capsule, which incorporated music therapy, aromatherapy, and thermotherapy. The data collected were evaluated and analyzed using a thermography measuring device, the State-Trait Anxiety Inventory (STAI) and the YG personality test questionnaire. The results demonstrated a reduction in anxiety levels and an improvement in overall well-being following the use of the relaxation capsule.

Additionally, the study revealed that individuals with a positive attitude tended to respond more positively to sensory stimuli. The details of this study are presented in the provided references.^{10,11}

④ “Study of Complementary Therapy for Personality-Based State Anxiety in Nursing Students” (Study period 2003–2005): This study aimed to investigate the effectiveness of complementary therapies for reducing anxiety in female nursing students (23 college students) experiencing tension and anxiety. Additionally, it sought to elucidate the relationship between personality traits

and alternative therapies. The State-Trait Anxiety Inventory (STAI) and the YG personality test questionnaire were used for data collection. The findings indicated a reduction in anxiety levels following complementary therapy interventions. Specifically, individuals with personality traits categorized as mediocre, stable-aggressive, and unstable-aggressive exhibited significantly reduced state anxiety with complementary therapy. The results of this study are showed in the *Mie Journal of Nursing Science*.¹²

- ⑤ “Survey of Alternative and Complementary Therapies in Foreign Countries (United Kingdom and China)” (Study period: 2006–2008): This survey investigated the landscape of alternative and complementary therapies in the United Kingdom (UK) and China. In the UK, the CAM (complementary and alternative medicine) center facilities offered residential training programs lasting 3 or 5 days. These programs encompassed dietary therapy, psychotherapy, aromatherapy, lymphatic massage, and other modalities, catering not only to cancer patients but also to their family members. The therapeutic interventions involved a multi-disciplinary medical team consisting of physicians, nurses, nutritionists, physical therapists, and others. In contrast, Chinese medicine, rooted in the dialectic theory of traditional Chinese medicine, emphasized practices such as acupuncture, moxibustion, cupping therapy, and herbal medicine. It was observed that the dialectic theory underlying Chinese medicine shares similarities with the concept of complementary therapy. This survey provided valuable insights into the integration of Western and Eastern medical philosophies. The detailed findings of this survey are presented in the *Mie Journal of Nursing Science*.¹³
- ⑥ “Study on Alternative and Complementary Therapy (Moxibustion) in Alleviating Painful Symptoms in Patients with Late-Stage Cancer” (Study period: 2007–2010): This study investigated the efficacy of moxibustion, using an electric device, in relieving painful symptoms experienced by 48 patients with late-stage cancer. The intervention aimed to alleviate symptoms such as fatigue, nausea, respiratory distress, anorexia, and depressed mood, with a focus on maintaining and enhancing the patients' QOL. The SF-8 (QOL measurement) was used to evaluate their QOL. Additionally, the study incidentally observed a reduction in numbness, although this was not the primary objective. The findings suggest that moxibustion therapy may offer benefits beyond pain relief and could be considered as a nursing intervention for managing numbness in patients. Detailed results and analysis of this study can be found in the provided references.^{14,15}
- ⑦ “Study on the Application of Complementary Therapy to Stressed Nurses and Cancer Patients (Outpatients)” (Study period: 2009–2013): This study aimed to assess the impact of complementary therapies on stress reduction and improvement in QOL for 100 highly stressed nurses and 160 cancer patients receiving outpatient care. The data collected were evaluated and analyzed using the POMS-SF (Short Form of the Profile of Mood States), the SRS-18 (Stress Response Scale), and the SF-8 (QOL measurement). The study revealed that complementary therapies effectively reduced stress levels among nurses, aiding in their recovery from physical and mental fatigue and fostering a positive work environment. However, while the mental aspects of anxiety and depression were alleviated in cancer patients, there was no significant improvement observed in their overall QOL. This discrepancy in outcomes may be attributed to factors such as the severity of the patients' cancer condition or other underlying reasons, which may necessitate longer-term follow-up assessments. The study, conducted over an 8-week short-term period, suggests the need for further investigation through longer-term, continued studies spanning 6 months to 2 years. Detailed

findings from this study can be referenced in the provided literature.^{5,16–18}

Summary

In the studies, various complementary therapies such as progressive muscle relaxation, music therapy, autogenic training, hot foot-bath therapy, thermal moxibustion, and massage with aromatherapy were evaluated for their psychological and physiological effects. The evaluation utilized questionnaires including the STAI, the NRS of nausea and vomiting, the POMS-SF, the SRS-18, and the SF-8, as well as physiological indicators such as blood pressure, pulse rate, sweating state, and thermography measuring body surface temperature. While physiological assessments did not demonstrate statistically significant reductions in symptoms, they also did not reveal any adverse effects of complementary therapies. Conversely, questionnaire-based surveys of subjective symptoms such as anxiety, depression, pain, nausea, loss of appetite, and fatigue showed statistically significant reductions in anxiety and stress. It was observed that complementary therapy enhanced the psychological and spiritual aspects of individuals' emotional states.

Given that complementary therapy integrates the individual's physical, mental, social, and spiritual aspects, solely relying on short-term physiological treatments may negate its effects and overlook significant improvements in QOL. Effective QOL enhancements may arise when tailored complementary therapies are selected, considering the individual's physical and mental health, personality traits, and environmental factors of both natural and social, and when applied consistently over an extended period. As my current research has only assessed complementary therapies over a brief two-month period, it's crucial to investigate whether these therapies become ingrained habits over a longer timeframe, spanning from six months to a year or beyond. We posit that advocating for complementary therapy as a nursing skill from a long-term standpoint will foster stress management, alleviate symptoms, and uphold or enhance QOL, essentially constituting self-care management. Furthermore, self-care management encompasses maintaining a balanced personal lifestyle, encompassing essential daily activities such as nutrition, hygiene, exercise, rest, and sleep, while also safeguarding against environmental stressors, both natural and social, to sustain QOL.¹⁹

Based on these observations, the utilization of complementary therapies as methods of stress management is deemed crucial in enhancing self-care management and improving QOL in daily life. As a nursing profession, it is considered meaningful to conduct research on complementary therapies that account for the individuality of patients.

Ethics statement

Not required.

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Declaration of competing interest

The author declares no conflict of interest. Professor Onish, serves as a member of the editorial board of the *Asia-Pacific Journal of Oncology Nursing*. The article has undergone the journal's standard publication procedures.

Declaration of generative AI and AI-assisted technologies in the writing process

No AI tool/services were used during the preparation of this work.

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