

Kundalini yoga as a support therapy for cancer patients

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ABSTRACT

This study was designed to describe cancer patient's experience of kundalini yoga and its effect on their internal coping resources. The intention of this study is to put forward kundalini yoga as a support therapy for cancer patients for improving their wellbeing during active cancer treatment.

This is a descriptive study. An academic literature review was conducted for cancer, cancer treatment, internal coping resources and yoga as therapy topics. Four voluntary female cancer patients (N= 4) participated in this study who took part in a six-week kundalini yoga course and were individually interviewed using semi-structured interviews after the yoga course. The interview outcomes were analysed using a content analysis method.

This study found that the experience of cancer and its treatment has a clear effect on the patient's internal coping resources during active treatment. It confirmed that cancer diagnosis was received with a shock triggering an internal process that caused feelings of fear, panic and anxiousness. It also found that self-healing tools such as kundalini yoga can have a positive impact on the patient's wellbeing during this time. In particular, this study highlighted the benefits of kundalini yoga improving patient's wellbeing through enhancing their sleep, mood and vitality, reducing anxiety and depression, and bringing a better connection to themselves through feelings of peacefulness and self-acceptance.

This study shows that kundalini yoga is an effective intervention tool for reducing unwanted side-effects from cancer treatment, which drain a patient's internal coping resources.

Key words: cancer, cancer treatment, internal resources, internal coping resources, stress, anxiety, depression, yoga therapy, kundalini yoga

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1 INTRODUCTION

As a leading cause of morbidity and mortality worldwide, cancer has a major impact on people's health (Wyatt et al., 2015, p. 1). Cancer diagnosis changes a person's life quickly and dramatically. Going through cancer treatment is a physically, emotionally and socially exhausting time. Treatment schedules and recovery periods as well as feelings of fear, uncertainty and anxiety often fill the daily schedule (Bono, Rosenberg-Ryhänen, 2014, p. 3). Although some side-effects are acute and short-lived, others can persevere and become chronic (DeSantis et al, 2014, p. 268). Therefore, the ongoing and long-term physical and psychosocial needs of cancer patients should not be overlooked (Ngune et al, 2015, p. 2).

Cancer and its treatment have a multidimensional effect on a person influencing their physical, psychological, social and spiritual wellbeing (Wyatt et al., 2015, p. 1). Cancer can challenge a person's internal coping resources because when a cancer becomes part of a person's life, at some stage and to some degree most people will experience stress, anxiety, fear and depression. This may be due to fear of death, suffering, pain or dealing with the unknown or simply feeling grief at the loss of control over ones' life events (Chapman, 2015, p. 184).

Yoga is a 3000-year-old tradition, which in the West is regarded as a holistic approach to health. It is a form of mind-body medicine, which combines an individual's physical, mental and spiritual aspects to improve their health, with stress related illnesses in particular. Yoga's therapeutic effects are due to its direct effect on the workings of the autonomic nervous system (Streeter et al, 2012, p. 577). These techniques have been shown to reduce imbalances in the autonomic nervous system leading to improved mood, decreased anxiety and improved health overall (2012, p. 574).

The purpose of this study is to describe cancer patient's experience of kundalini yoga and its effect on their internal coping resources. The objective is to investigate what effect practicing kundalini yoga will have on cancer patient's internal coping resources during active cancer treatment.

2 ABOUT CANCER

“Cancer is a disease in which DNA changes” (Wyatt et al., 2015, p. 55).

Normal cells function and reproduce in a controlled manner in response to body's needs. Cancer cells lose this control and begin to divide and multiply without control (2015, p. 56). When cells continue dividing even when the body doesn't need them to, extra cells form tumours, which can be benign and not cancerous, or malignant and cancerous (THL, 2014).

As a leading cause of morbidity and mortality worldwide, cancer has a major impact on people's health (Wyatt et al., 2015, p. 1). According to a European cancer study, there were an estimated 3.45 million new cases of cancer (excluding non-melanoma skin cancer) and 1.75 million deaths from cancer in Europe in 2012. The most common cancers were female breast cancer, followed by colorectal, prostate and lung cancer. These represent half of the overall burden of cancer in Europe. The most common causes of death were lung, colorectal, breast and stomach cancer (Ferley et al, 2013, p. 1374).

In Finland, every third person has cancer at some point during their life (THL, 2014). According to the Finnish Cancer Registry, in 2014, 16 190 men and 16 121 women were diagnosed with cancer making it more than 30 000 new cancer diagnosis in Finland in one year. The most common cancers with women were breast and colorectal cancer, and with men prostate and lung cancer.

2.1 Causes and symptoms of cancer

The risk of developing cancer is caused by many factors and include genetic and lifestyle factors, age, smoking, occupational exposure to carcinogens, infections, diet and body weight, hormones, physical activity and sunlight (Campbell, 2015, p. 16-19).

“Cancer incorporates a large number of diseases that can affect any body system” (Seddon, Mackenzie, 2015, p. 31).

Symptoms patients may experience is dependent on where, how big the cancer is and how much it affects the nearby organs, tissues, blood vessels or nerves. Some of the general symptoms are unexplained weight loss, fever, extreme tiredness, pain, skin changes, lumps or sores that do not heal, changes in bowel habits and bladder function, nagging cough, indigestion or trouble swallowing, unusual bleeding or discharge (THL, 2016).

2.2 Treatment and side-effects of cancer

Cancer diagnosis changes a person’s life quickly and dramatically. Going through cancer treatment is a physically, emotionally and socially exhausting time. Treatment schedules and recovery periods as well as feelings of fear, uncertainty and anxiety often fill the daily schedule (Bono, Rosenberg-Ryhänen, 2014, p. 3). The most common cancer treatments are surgery, radiation therapy as well as pharmaceutical treatments. Surgery and radiotherapy are localized therapies whereas pharmaceutical treatments affect the whole body (2014, p. 4). Common treatment side-effects across several cancers include pain, nausea and vomiting, fatigue, anemia, and hair loss (2014, pp. 11-20).

Although some side-effects are acute and short-lived, others can persevere and become chronic (DeSantis et al, 2014, p. 268). According to research, long-term physical problems and psychological morbidity such as anxiety, depression, fear of recurrence as well as financial worry and activity limitation often continues to affect patients for years after their treatment (Ngune et al, 2015, p. 2). For example, lymphedema of the arm is a long term side-effect of breast cancer surgery and radiation therapy with about 20 per cent of women who go through axillary lymph node dissection (DeSantis et al, 2014, p. 257). Additional long-term local effects of surgery and radiation therapy include numbness, tingling or tightness in the chest wall, arms or shoulders (2014, p. 252).

Also, impaired fertility and premature menopause can increase the risk of osteoporosis, and between 25 to 60 per cent of women after breast cancer treatment develop chronic but usually not severe pain. Some have also been reported to experience cognitive impairment and chronic fatigue (2014, p. 257).

Although the number of cancer survivors continues to grow due to improvements in early detection and treatment (DeSantis et al, 2014, p. 252), the ongoing and long-term physical and psychosocial needs of cancer patients should not be overlooked (Ngune et al, 2015, p. 2).

3 INTERNAL COPING RESOURCES AND CANCER

“Coping is the process of attempting to manage the demands created by stressful events that are appraised as taxing or exceeding a person’s resources” (Taylor and Stanton, 2007, p. 378).

When a person is exposed to a life-threatening disease such as cancer, they are often also exposed to events, which trigger stress. In order to cope with these, a person must adapt to the situation and manage their emotions about it. This is when the internal coping process starts. A person’s ability to cope with life events is closely connected to quality of life because this is referred to as multidimensional and subjective dimension of health. Cancer and its treatment are connected with many symptoms, which affect a patient’s quality of life, such as physical (pain, nausea, fatigue), psychological (anxiety, emotional distress), social (loss of role, lack of support) and existential (lack of meaning in life). This means that internal coping resources, emotional distress and quality of life are closely connected (Mårteson, G. et al, 2008, p. 351).

In Antonovsky’s salutogenic concept of health, the relationship between health, stress and coping can have either a supporting or hindering effect on person’s health and wellbeing. In this model, focus on individuals’ strengths can be used to explain their capacity to adjust and successfully cope with exposures to life stressors from the environment (Greimel et al, 2016, p. 2). According to Antonovsky’s theory, the origins of health is determined by the strength of a person’s ‘sense of coherence’ (SOC) (Silke et al, 2016, p. 1), which in the model is a necessary condition for health and quality of life overall (Greimel et al, 2016, p. 2). It is said,

“SOC portrays the degree to which a person perceives the world and inevitable stressful events encountered in life as comprehensible, manageable, and meaningful. The strength of a person’s SOC is shaped by negative or positive life events and internal (e.g., personality) or external resources (e.g., social support). In turn, a strong SOC facilitates adaptive coping in stressful situations leading to a favorable health outcome” (Silke et al, 2016, p. 1).

Life events and resources are considered to be components of a person's SOC (Silke et al, 2016, p. 2).

3.1 Cancer's effect on internal coping resources

Cancer and its treatment have a multidimensional effect on a person influencing their physical, psychological, social and spiritual wellbeing (Wyatt et al., 2015, p. 1). A cancer diagnosis often comes with an immediate experience of shock and trauma and as a result turns the body into a high-tension and high-stress mode (Chapman, 2015, p. 184). Stress is a negative experience, which affect our emotional, biochemical, physiological, cognitive, and behavioral wellbeing (Taylor and Stanton, 2007, p. 378).

Cancer can challenge a person's internal coping resources because when a cancer becomes part of a person's life, at some stage and to some degree most people will experience stress, anxiety, fear and depression. This may be due to fear of death, suffering, pain or dealing with the unknown or simply feeling grief at the loss of control over ones' life events (Chapman, 2015, p. 184). Psychological stress is characterised by what people feel when they are under mental, physical or emotional pressure. The body then releases stress hormones in response to the body's physical, mental and emotional pressure. The physiological indicators are the result of increased activity of the sympathetic and neuroendocrine systems (Berman and Snyder, 2009, p. 1082). Physical symptoms such as pain, nausea and fatigue may also trigger emotional distress (Berman and Snyder, 2009, p. 1082). About a third of breast cancer survivors report that fatigue interferes with their daily activities (Kiecolt-Glaser et al, 2014, p. 1). People with cancer can also find the physical, emotional and social effects of the disease to be stressful to deal with.

According to Thingbaijam et al (2012, p. 240), psychological stress among breast cancer patients is linked with a worse clinical outcome while advanced stages of cancer seem to be most stressful and have a higher risk for emotional distress. High levels of psychological stress over a long period of time affect a person's physical and emotional wellbeing.

3.2 Symptoms of underlying stress

The physiological impact of stress is connected to the nervous, endocrine and immune system contributing to chronic fatigue, stress, and weakened immune system making people more receptive to illnesses. Studies also show how the inability to adapt to stress is associated with the onset of depression and anxiety (Berman and Snyder, 2009, p. 1079).

Depression is characterised by feeling down, sad or hopeless, with the inability to enjoy or be interested in doing things. The symptoms can also be physical such as vague bodily pains, lack of energy, loss of sleep and appetite (Thingbaijam et al, 2012, p. 241). Thingbaijam et al (2012, p. 240) found that prevalence of major depression increased with cancer progression, from 11 per cent with early-stage to as great as 50 per cent in women with metastatic breast cancer undergoing palliative therapies. They found that the risk of developing a depressive disorder is highest in the year after receiving diagnosis of breast cancer.

According to Fann et al (2009, p. 417), depression has a substantial impact on health in patients with comorbid medical conditions and is associated with increased symptom burden (e.g., pain, fatigue), decreased cognitive and physical functioning, decreased adherence to medical regimes and healthy behaviours, and potentially decreased immunity and increased mortality. At worst, depression reduces a patient's quality of life and weakens their physical and emotional strength, which is needed to go through cancer treatment. It may even modify the symptoms related to the cancer and its treatments (Thingbaijam et al, 2012, p. 241).

Anxiety is a broad term for a number of disorders that cause nervousness, fear, apprehension, and worrying. It affects how people feel and behave, and can manifest real physical symptoms. Throughout the treatment and the recovery process, patients with cancer often feel fearful and anxious (Amber et al, 2012, p. 22). According to studies,

“between 15 and 40 per cent of cancer patients develop anxiety and/or depression” (Sheard and Maguire, 1999, p. 1770).

As Linden et al state (2012, p. 343),

“emotional stress in cancer patients (operationally defined here as anxiety or depression) reduces patient’s quality of life, negatively impacts compliance with medical treatment, and carries an elevated risk of mortality”.

4 YOGA AS A SUPPORT THERAPY FOR CANCER PATIENTS

Yoga is a 3000-year-old tradition, which in the West is regarded as a holistic approach to health. Practicing yoga regularly improves physical strength, endurance and flexibility. It also makes people friendlier, more compassionate and calmer while improving their self-control. Often people who practice yoga for a long period of time report changes in their life perspective and self-awareness while feeling more energetic overall. This allows them to live their life more fully whilst overall feeling more energetic (Woodyard, 2011, p. 49).

The practice of yoga connects the mind and body through coordinated breathing, movement and meditation in order to increase internal peacefulness and clarity of the mind. It is a system that is designed to develop health and happiness through a better sense of self-awareness and higher consciousness (Jeter et al, 2015, p. 1), and better physical health.

People often start to practice yoga when they are faced with some kind of suffering be that physical (pain), mental (disorder), emotional (stress) and/or spiritual (separation) (Payne, 2015, p.1). There are four principles that underline yoga's healing system. The first principle sees the human body as a holistic entity, which include various dimensions (body, mind, soul) that are connected to each other. An illness in one dimension will affect other dimensions. The second principle sees the individual as a unique entity with unique needs and experiences. The practice of yoga is therefore always a personal and an individual process. The third principle views yoga as a self-empowering tool where the student becomes his or her own healer. This means they have an active role in their healing process and in their journey towards health. Finally, the fourth principle sees the individual's state of mind as essential to their healing. Positive mind promotes quicker healing and negative mind may prolongue healing altogether (Woodyard, 2011, p. 49-50).

4.1 Yoga as a therapeutic intervention

Yoga is a form of mind-body medicine, which combines an individual's physical, mental and spiritual aspects to improve their health, with stress related illnesses in particular. Stress underlines many diseases so the ability to manage stress reduces the burden of the disease (Woodyard, 2011, p. 50). The autonomic nervous system has a central role in response to stress. This is due to imbalances that stress creates in the autonomic nervous system by decreased parasympathetic nervous system activity and increased sympathetic nervous system activity. Some of the stress aggravated symptoms due to underactivity of parasympathetic nervous system include depression and chronic pain. Therefore, yoga's therapeutic effects are due to its direct effect on the workings of the autonomic nervous system (Streeter et al, 2012, p. 577).

By increasing the body's parasympathetic activity, yoga has been shown to improve sleep and calm the mind and the body overall (Papp et al, 2013, p. 1). In a study with cancer survivors, yoga practices were shown to lower fatigue and improve the patient's mood and sleep quality (Kiecolt-Glaser et al, 2014, p. 2). Similarly, a study assessing the role of yoga in stress reduction in postoperative breast cancer patients found the use of yoga as an effective technique for reducing the symptoms of stress (Amber et al, 2012, p. 27). The intentional practice of yogic principles triggers the body's relaxation response, which strengthens the body's ability to relax itself, as well as helping one to gain greater parasympathetic control. The ability to counter the effects of the involuntary physiologic or stress responses will restore the balance in the nervous system (Jeter et al, 2015, p. 2). Therefore, yoga can have a restorative effect on the nervous system because it improves the resilience of the autonomic nervous system and its ability to recover after stress (Papp et al, 2013, p. 7).

Overactivity or underactivity of stress responsive systems is associated with increased symptoms in a wide spectrum of disorders including depression and anxiety (Streeter et al, 2012, p. 572). Conscious focus on breath in yoga helps one to develop awareness of the body's relaxation and tension states. According to Streeter et al (2012, 573), voluntary changes in breath patterns can account for 40 per cent of the variance in feelings of anger, fear, joy and sadness so there is a clear connection between how emotional states affect respiratory rate, depth and pattern. During yogic chanting for example, the pattern of slow resistance breathing takes place in which longer periods of exhalation than inhalation occurs. These techniques have been shown to reduce imbalances in the autonomic nervous system leading to improved mood, decreased anxiety and improved health (2012, p. 574). Controlled studies have also found that yoga-based interventions are effective for treating depression and reducing the symptoms of anxiety and stress (Köhn et al, 2012, p. 5) because of the connection between the breath-based intervention and increased parasympathetic activity (Streeter et al, 2012, p. 575-576).

Lastly, one of the main aims of yoga is to increase awareness through witnessing practice, which is about cultivating acceptance about things as they are without any need to change them. This can be useful for cancer patients because

“the practice of being a witness cultivates a level of awareness and develops a level of acceptance over time that carries into observing what happens when waiting for test results or after receiving test results as well as many other potential challenges during cancer treatment” (Chapman, 2015, p. 187).

Therefore, yoga as a complementary therapy for cancer patients undergoing a treatment can help the patients to become reconnected with their bodies through exploring movement and stillness in the body and assist them in finding a deeper connection within themselves (Chapman, 2015, p. 203).

4.2 Kundalini yoga therapy

Kundalini yoga is called the “mother of all yogas”. It’s the most comprehensive of all yoga, combining meditation, prayer, dynamic postures and breathing exercises. It is considered to be one of the more spiritual styles of yoga, called "the yoga of awareness," because it opens the heart, builds physical and mental strength and aims to cultivate compassion and consciousness in an individual. An Indian kundalini yoga teacher, Yogi Bhajan, introduced kundalini yoga to the West in 1969 (Shakta Kaur Khalsa, 2000, p.9).

Kundalini yoga as taught by Yogi Bhajan uses rhythmic targeted movement of kriyas in conjunction with breath with movement, which distinguishes kundalini yoga from other forms of yoga. Kriya means completed action that consists of a predetermined set of postures with breathing exercises and mantra. These are designed to affect various nerves, glands and organs so each kriya has a specific effect on the person’s physical structure and physiology (Shanti Shanti Kaur Khalsa, 2015, p. 375). Mantra, a specific application of sound, is used in kundalini yoga to equalize and distribute energy. Chanting out loud regulates breath rhythm to slow down and deepen the breath. It can create movement in the lymphatic circulation, release stress and build vitality if the body movement is restricted because of pain or surgery. With mantra, one can also create movement in structural, psychological and physiological levels (p. 386)

Kundalini yoga provides a person with tools that work by activating and transforming the body’s energy centres, chakras, which are centers of consciousness and focal points of energy. There are seven major chakras plus aura, which interact with the body influencing the moods, thoughts and health. The tools enable one to harness the energy of the mind and the emotions, so that one can be in control of themselves, rather than being controlled by thoughts and feelings, and other triggers from outside.

In kundalini yoga practice, energy is stimulated to rise in order to balance and coordinate all chakras so that one can release negative thoughts and emotions that hinder their development and health. Energy flows through the entire body from the charkas and the purpose of the kundalini yoga practice is to balance the chakras for increased wellbeing (Shakta Kaur Khalsa, 2000, p. 11).

On a physical level, kundalini yoga practice balances the glandular system and strengthens the nervous system. The practice activates the energy on the physical level by reinforcing the immune system and stimulating the body's self-healing systems. Healthy people practicing kundalini yoga have reported it to reduce stress and improve sleep, and helping them to become more positive, consciouss and happy in life (Shakta Kaur Khalsa, 2000, p.11). The practice of kundalini yoga among chronically ill people has helped them to release pain, stress and fatigue, increase vitality and endurance and strengthen the body's natural defence. They have also reported to have experienced reduced anxiety and depression, and had fewer symptoms and side-effects from treatments (Shanti Shanti Kaur Khalsa, 2015, p. 373).

5 OBJECTIVES AND PURPOSE

The purpose of this study is to describe cancer patient's experience of kundalini yoga and its effect on their internal coping resources. The objective is to investigate what effect practicing kundalini yoga will have on cancer patient's internal coping resources during active cancer treatment.

The study examined in detail:

1. What are cancer patient's experiences of kundalini yoga?
2. What effect kundalini yoga has on patient's internal coping resources?

6 STUDY METHODOLOGY

The study methodology for this research is qualitative, which is

“a systematic, interactive, subjective approach used to describe life experiences and give them meaning” (Burns and Grove, 1997, p. 27).

The results are therefore more descriptive than predictive. Qualitative has become increasingly important mode of inquiry for the social sciences and applied fields, such as education, regional planning, social work, health science, community development, and management (Marshall and Rossman, 2011, p. 1). In nursing research, it is a useful method to describe and promote understanding of human experiences such as pain, powerlessness and comfort because emotions are difficult to quantify (Burns and Grove, 1997, p. 27). The study could also be considered practice-based research because it includes an element of practice as part of the research output. According to Candy (2006),

“Practice-based Research is an original investigation undertaken in order to gain new knowledge partly by means of practice and the outcomes of that practice.”

However, qualitative method was overall more suitable and chosen because it involves the studied use and collection of a variety of empirical materials such as personal experiences, interviews and observations as well as an academic literature review. This requires a qualitative researcher to deploy a wide range of interconnected interpretive practices in order to get a better understanding of the subject matter (Denzin and Lincoln, 2003, p. 5). This was considered most appropriate in the investigation of the objective of the study, which was to examine the patient's experiences of kundalini yoga and what effect it had on their internal coping resources during cancer treatment.

6.1 Description of research target audience

Target audience, also sometimes referred to as target population,

“is the entire set of individuals or elements that meet the sampling criteria” (Burns and Grove, 1997, p. 293).

The target audience for this study was cancer patients who had their first diagnosis and were in active cancer treatment. Cancer patients as a study group was chosen because of the growing number of cancer in the world. Only in Europe, there were an estimated 3.45 million new cases of cancer in 2012 (Ferley et al, 2013, p. 1374). The intention of this study is to put forward kundalini yoga as a support therapy for cancer patients for improving their wellbeing during active cancer treatment. Therefore, the target audience’s behavior, experience and perception with reference to the topic is important.

A Finnish cancer organization in Lahti, Etelä-Suomen Syöpäyhdistys, was contacted to seek voluntary participants for the study. The members of the organisations were provided with an overview presentation about the research project and participation requirement at a women’s evening at the organisation’s premises in February 2016. An invitation letter (please see appendix 1. *Invitation letter to cancer patients*) was also shared and posted on the information board at the office. Four female cancer patients between the ages of 49 and 66 voluntarily participated in this study. Three had breast cancer, which were diagnosed in late 2015. They were treated with a different combination of surgery, chemotherapy, radiation and hormone therapy. Two were receiving chemotherapy and one was receiving hormone therapy during the yoga course, which took place in the first half of 2016. One woman had had a bone marrow cancer, which was diagnosed in 2014. She had chemotherapy and a stem cell transplant in 2015. It was discovered in the interview, after the yoga course, that she was not in active treatment during the yoga course.

6.2 Research data collection

Data collection in qualitative research typically draws on multiple methods that are interactive, focus on context, and is emergent and evolving rather than tightly prefigured, and where the findings are allowed to be fundamentally interpretative (Marshall and Rossman, 2011, p. 2). Also, data gathering often includes a combination of structured and unstructured observation and communication where the interaction with the subjects is not controlled (Burns and Grove, 1997, p. 29).

In this research study, the data collection comprised of an academic literature review; a 6-week kundalini yoga course led by a certified kundalini yoga instructor; and semi-structured individual interviews after the yoga course. The purpose of the literature review was to get a broad and current understanding of the information related to the research issue (Burns and Grove, 1997, p. 117). Databases used for the research were Academic Search Elite (EBSCO), Cochrane Library (Terveysportti), Mastofinna and Theseus. Keywords were cancer, cancer treatment, internal resources, internal coping resources, yoga and yoga as therapy. The practical part of the research, the kundalini yoga course, took place between March and April 2016. The classes were once a week and lasted for one and a half hours at a time. Each class included breathing exercises, mantras, a kriya or kriyas, meditation and a long relaxation (for full details on each class, please see appendix 3. *Overview of the kundalini yoga course*). Semi-structured individual interviews were conducted in April 2016 because

“interviewing is the predominant mode of data collection in qualitative research” (May, 1991, p. 188).

Semi-structured interviews provide an open framework which allows the communication to be focused yet conversational and where the interviewer can explore the topic in question. The purpose is to get the interviewee to talk as freely as possible while ensuring the interviewer gets the information they need for the research.

Typically list of topics are developed in advance to ensure key areas are covered in the interview (Whiting, 2008, p. 36). The interview structure was developed ahead of the interviews for this study, which included background information questions and key themes to be explored (please see appendix 2. *Interview themes*). Notes were taken during the interviews and they were tape recorded anonymously with the permission from the interviewees. The interviews were conducted at the Etelä-Suomen Syöpäyhdistys in Lahti and lasted between one and one and a half hours each.

6.3 Research analysis

Content analysis is widely used in qualitative research which is considered as a flexible method for analyzing data. The analytic approaches range from intuitive and interpretative analyses to systematic textual analysis (Hsieh and Shannon, 2005, p. 1277). This is why it was used to analyse the findings in this research as well. The individual interviews were transcribed and analysed by emerging topics and themes. Although the research questions examined cancer patient's experiences of kundalini yoga and what effect kundalini yoga has on patient's internal coping resources, additional topics emerged from the interviews. These were experiences of cancer and experiences of cancer treatment, which were foremost on the participants' mind. The topics were further broken down into themes such as shock, fear of death, panic, worry, calmer mind, improved self-acceptance etc. To make the discussion of the findings in the content of the literature review clearer, experiences of cancer and experiences of cancer treatment topics are included in the research findings and discussion. The interview findings were compared to the findings from the literature review and analysed further. Together with the analysis and some additional observation from the yoga course, the final conclusion was formed.

As an example of the content analysis process, conscious focus on breath in yoga has been found to help a person to develop awareness of their body's relaxation and tension patterns (Streeter et al, 2012, p. 572). This was also highlighted in this study, where a participant found that yoga made her realise the importance of breathing in helping her to deal with stressful situations outside the class and helping her to relax overall. She says:

“I became aware how important focusing on breath is and how it gives you power to go forward. ...I need to remember (this in the future) how it helps with stressful situations.”

6.4 Research ethics

Code of ethics has been observed for this research study; informed consent, privacy and confidentiality, and accuracy in particular. Participants were also made aware of the duration, methods, possible risks, and the purpose of this study, which is important (Denzin and Lincoln, 2003, p. 217). Participants' privacy and confidentiality have been respected in that their identities have not been revealed at any stage of the study or otherwise and any materials relating to their personal information have been destroyed. All the interviews have been quoted as said without editing to ensure accurate representation of the research material. It is understood that qualitative research is interpretative and grounded in the lived experiences of people (Marshall and Rossman, 2011, p. 2).

This research topic was chosen because of the author's passion towards kundalini yoga and her own experience of using the tools for a personal transformation and healing. This is in line with qualitative researchers' approach which stress the intimate relationship between the researcher and what is studied, and the situational constraints that shape inquiry (Denzin and Lincoln, 2003, p. 13). The author acknowledges the potential bias that may exist in observing the findings due to the personal experience with kundalini yoga.

That said, every effort will be made to remain objective in this study as it is the duty of a qualitative researcher to remain sensitive to their own biographies/social identities and how they shape the study (Marshall and Rossman, 2011, p. 2). The findings from this qualitative study are unique to this study.

6.5 Research validity and reliability

“Validity describes the extent to which a measure accurately represents the concept it claims to measure.” (Roberts P et al., 2006, p. 43).

Consideration for validity in this study is given because it addresses

“the ability to apply with confidence the findings of the study to other people and other situations, and ensures that the ‘conditions under which the study is carried out are representative of the situations and time to which the results are to apply” (2006, p. 43).

Similarly, consideration is given to reliability because

“In qualitative research, reliability can be thought of as the trustworthiness of the procedures and data generated. It is concerned with the extent to which the results of a study or a measure are repeatable in different circumstances” (2006, p. 43).

Admittedly, it would be difficult to confirm the findings in different circumstances because not all participants attended all yoga classes in this study. For example, the benefits of yoga generally depend on how much one commits to the practice. In other words, the more one practices, the more benefits they will experience. To get a systematic view of the participants' experience of kundalini yoga, it would have been important that all participants attend all six classes, however, only one participant attended the entire 6-week course and she was not in active cancer treatment.

Therefore, the findings are not all-encompassing because not everyone was exposed to the same amount of 'yoga therapy'.

In addition, because the effect of cancer and its treatment has such a vast impact on a patient's internal coping resources, it is not easy to draw a definite conclusion about the yoga's effect on their self-awareness process because this could have been triggered by the cancer already. Also, some people have more advanced coping strategies initially, which affect how they feel about negative experiences and how open they are to new intervention tools. Finally, experiences are always subjective and subject to personality so conclusions will never be all-encompassing.

7 RESEARCH FINDINGS

This research examined cancer patient's experiences of kundalini yoga and what effect kundalini yoga has on patient's internal coping resources, however, during the interviews important additional topics emerged. These are worth including in addition because it shows the prominence of them in the patient's mind during active cancer treatment. The topics are grouped into experiences of cancer (Picture 1.), experiences of cancer treatment (Picture 2.), experiences of kundalini yoga (Picture 3.) and yoga course's effect on internal coping resources (Picture 4.).

7.1 Experiences of cancer

When interviewed about their experiences of cancer, for most participants hearing the diagnosis was a shock, which initially made them fearful of death, anxious, and aware of how limited life is. One participant describes it thus:

"The feelings of fear and anxiety after the diagnosis is awful. Cancer is such a bad word. I felt panic 24/7 waiting for the results, which was exhausting and just awful."

Some also felt sad and were worried about how their family would cope and they didn't tell many people about the diagnosis or chose to tell others slowly, saying:

"Worrying about my family was my main concern."

"I didn't tell people (about my cancer) straightaway because I didn't want people to worry."

Some also felt coming to terms with cancer started an inner journey in them, saying:

"I don't feel sorry for myself at the moment. I want to go within and deal with this."

Some said the only thing they worry about in the future is money.

Experiences with cancer	
Shock	Fear of death
Anxiety	Panic
Worry	

Picture 1: Summary of experiences with cancer

7.2 Experiences of cancer treatment

According to the participants, the main and most challenging side-effects from the cancer treatment were feeling tired, powerless and lacking energy and having low mood as a result.

From the perspective of side-effects experienced, chemotherapy was found to be most challenging causing pain in the body, powerlessness and exhaustion, which often escalated to low mood and anxiousness. As a participant describes it:

“Recovering from chemotherapy was the hardest, especially after the first time. I felt exhausted and powerless and nauseous although I had medication for this. After the second and third treatment, my mood would just crash two or three days after the treatment.”

A participant, who usually had a good body awareness, reported the overloading of medication having had the biggest affect on her. She says:

“I have a good body awareness and the overloading of medication has had the biggest effect on me. This has made me look at life around me differently as well.”

Hormone therapy was reported to cause sweating and swelling of ankles.

Experiences with cancer treatment	
Pain	Powerlessness
Tiredness	Low mood
Sweating	Swelling
Anxiety	

Picture 2: Summary of experiences with cancer treatment

7.3 Experiences of kundalini yoga

When interviewed about their experiences of kundalini yoga, most participants said they were energized after the classes. Initially, some could sleep better after the class. This is how one participant describes it:

“in the beginning I felt more peaceful and I could sleep better... towards the end (of the yoga course) I felt I had more energy.”

According to participants, practicing kundalini yoga made them realise how important it is to take care of oneself. As one participant says:

“...I realise now that I need to learn to take care of myself differently.”

Participants also said that attending kundalini yoga class helped to reduce anxiety and feelings of depression because for that moment in time the concentration was on yoga, which took the mind off cancer and other issues in their life. This calmed the thoughts down. This was described thus:

“...Often even when I came to the class feeling low, ..., the (mood) dissolved when I was able to concentrate on yoga and calm my thoughts down.”

Participants also reported feeling more peaceful after kundalini yoga and the mind being more balanced because of the time they took to look within during classes. According to a participant:

“My mood has been corrected because during the classes you had to go within and you were able to give yourself time to be with yourself. I never stop like that to be with myself otherwise. Afterwards, it was possible to feel empty of thoughts.”

The participants said the experience of kundalini yoga highlighted the importance of breath helping them to relax and to deal with stressful situations outside the class. A participant says:

“I became aware how important focusing on breath is and how it gives you power to go forward. ...I need to remember (this in the future) how it helps with stressful situations.”

Additionally, practicing kundalini yoga strengthened the idea of accepting, loving and appreciating oneself as one is. She adds:

“...Through the songs, I realised the importance accepting and loving yourself as you are. It was like strengthening my self confidence.”

According to a participant, movement together with music and meditation was the most effective way to start ‘stirring’ things inside her. She describes it thus:

“I realized that I need movement and meditation together and this starts to move things inside me. If this is connected to music as well as it was in the class, I am able to get a different connection to myself.”

A participant felt hyper active after the first yoga class saying that she couldn’t initially sleep and then got up many times to get a drink which left her feeling tired in the morning. She says:

“I was over active after the first class and had to get up for a drink many times at night. I think I slept for only two hours that night. I felt tired in the morning as a result.”

Overall, the participants felt that the experience with kundalini yoga was more physical than they had imagined although in the beginning of the course there was a lot of breathing exercises and sitting still. Some participants in particular enjoyed the physical aspect of yoga although they felt limited to participate fully due to the side-effects from their treatment.

A participant felt that the medication overload in the body made it very challenging to participate in the classes and concentrate on yoga poses because of physical discomfort and feeling of disconnection from the body.

Experiences with kundalini yoga course	
Improved sleep	Calmer mind
Improved energy level	Improved body and self-awareness
Reduced anxiety and stress	Improved awareness of breath

Picture 3: Summary of experiences with kundalini yoga course

7.4 Kundalini yoga's effect on patient's internal coping resources

When interviewed about the yoga courses effect on their internal coping resources, a participant said yoga helped her to stay in the present moment, which liberated her from fears and worry about the future. She says:

“Yoga was uplifting because it allowed me to be in the moment which was good because then all ‘monsters’ disappeared from that moment.”

Another one said she became aware of the importance of self-acceptance and how strengthening and accepting who you are and what you feel helps to face events in life generally better.

She says:

“The yoga course experience confirmed that thoughts and feelings are important that they can all be accepted. Turning to look within is different (experience) and good because it made me see that there are different kinds of phases in life so you are able to face them better if you can accept them.”

According to a participant, the calming and peaceful effects of yoga on the mind highlighted the need for taking care of herself better and prioritise her wellbeing. She says:

“I am now truly aware that I won’t fall back into the old (stressful) patterns and I will put my wellbeing first.”

Over the course of the kundalini yoga course, a participant reported that she strongly felt some old issues come up for her that needed addressing. These were issues from the childhood that had been coming up periodically over the years bringing up same emotions over and over again but they had not been dealt with. These emotions were eating up her energy. She says:

“During this period it has become clear that I have some undealt issues that I need to face and deal with. I don’t want to carry them with me anymore. ...This is clearer now than before. ...I have been grappling with same emotions for many years and emotions really drain my energy.”

Finally, a participant had an experience with the treatment process where she was misinformed about the care process; for example, she had to wait for a long time for one referral and was told different things by care professionals. Even though her cancer operation had been easy, the care process afterwards was unclear and lacked communication, which drained her internal coping resources making her stressed, feel tired and upset.

She says:

“Waiting around for the next step in the cancer treatment process was more stressful than dealing with the cancer itself. Misinformation about the process was stressful and confusing.”

Yoga course's effect on internal coping resources	
Clarity of thoughts	Uplifting
Reduced anxiety and stress	Calmer mind
Improved self-acceptance	More peaceful inner world

Picture 4: Summary of experiences of yoga course's effect on internal coping resources

8 DISCUSSION

This research found that the experience of cancer and its treatment have an obvious effect on the patient's internal coping resources during active treatment. It also found that self-healing tools such as kundalini yoga can have a positive impact on the patient's wellbeing during this time. To discuss the findings in the context of the literature review, they have been broken into experiences of cancer and its treatment, cancer's effect on internal coping resources, benefits of yoga and kundalini yoga as a support therapy for cancer patients. In the end, some future research ideas have also been considered.

8.1 Experiences of cancer and its treatment

As found in the literature review, cancer and its treatment have a multidimensional effect on a person influencing their physical, psychological, social and spiritual wellbeing (Wyatt et al., 2015, p.1). The interviews confirmed that cancer diagnosis was received with a shock by most of the participants and it triggered an internal process causing feelings of fear, panic and anxiousness. All the participants discussed a lot about their treatment and its side-effects, which highlighted how prominent this experience had been and continued to be for them. Even though the cancer had been removed from the physical body, the treatment effects on the body kept the experience on top of the mind creating emotions in the patients. Also, participants who were receiving chemotherapy had the most adverse side-effects, were sometimes unable to participate in the course. This shows that physical side-effects such as fever or pain limited their ability to attend indicating that in some active treatment phase, attending yoga class is not possible. This highlights that there is a need to provide support for cancer patients both short and long-term because in line with the research findings, long-term physical problems and psychological gloom continue to affect the patients after their treatment (Ngune et al., 2015, p. 252).

8.2 Cancer's effect on internal coping resources

According to the literature review, cancer patients will experience stress, anxiety, fear and depression at some point and to some degree due to fear of death, pain, suffering or dealing with the unknown (Chapman, 2015, p. 184), which was also revealed in this study. Worry about family, test results, money, fear and unclarity about care processes was found to be exhausting and taking up a lot of energy. On top of this, physical effects of the treatments caused pain and fatigue. It is no surprise then that mood with the participants was sporadically low during the treatment causing anxiousness, depression and low energy. This study confirms that cancer has a great impact on patient's internal coping resources and their ability to cope with stressful situations. This suggests that cancer patients would benefit from support and emphasis on self-management techniques to improve their wellbeing and quality of life during and after their treatment.

8.3 Benefits of yoga for cancer patients

There has been a lot of research about the positive effects of yoga in general on reducing stress in the body through its connection to the workings of the autonomic nervous system (Streeter et al., 2012, p. 577) but less on its direct effect on internal coping resources in connection to a specific illness like cancer. This study confirms many aspects of the benefits of yoga for supporting the overall wellbeing of cancer patients as found in the literature review. In particular, this study highlighted the benefits of kundalini yoga on calming the mind, improving awareness of breath and increasing awareness overall. The study also shows how powerful the kundalini yoga technique is considering that most participants had never practiced it before but they were able to gain benefits from it in a short period of time. Kundalini yoga is a powerful form of yoga that quickly builds physical and mental strength and cultivates compassion and consciousness in an individual (Shakta Kaur Khalsa, 2000, p.9).

The benefits of yoga emerged in this study in particular were:

Calming the mind - Yoga works by connecting the body and mind through coordinated breathing, movement and meditation, which helps to clarify the mind and increase the feelings of inner peace (Jeter et al, 2015, p. 1). In line with the findings in literature review, this study also found that yoga practices have a positive effect on patients by improving their mood and sleep quality while lowering feelings of fatigue. These have a holistic and calming effect on the mind and body (Papp et al, 2013, p.1).

Breathing - Conscious focus on breath in yoga has been found to help a person to develop awareness of their body's relaxation and tension patterns (Streeter et al, 2012, p. 572). This was also highlighted by the study, where a participant found that yoga made her realise the importance of breathing in helping her to deal with stressful situations outside the class and helping her to relax overall. In addition, breath was said to be an engine for power for going forward and bringing awareness to one's wellbeing. Research has found that because of the connection with breath, yoga-based interventions have been shown to reduce anxiety and depression (Köhn et al, 2012, p. 575-576). This was confirmed in this study as well as a participant felt her anxiety decrease after attending yoga classes.

Increased awareness - Yoga is a system, which purpose is to develop health and happiness through better sense of self-awareness and higher consciousness (Jeter et al, 2015, p. 1). This is achieved through witnessing practice, which cultivates acceptance about things as they are without any need to change them (Chapman, 2015, p. 187). This became evident in this study as well because participants reported becoming more aware of the need to take care of themselves better as a result of the yoga course. One participant in particular reported that practicing yoga made her realise the importance of self-acceptance and self-love as a way to be in peace with what happens in life.

Reconnecting with the body through exploration with movement and stillness helps people find a deeper connection within themselves (Chapman, 2015, p. 203).

Similarly, one participant said that the ability to stay in the moment when practicing yoga created a sense of peace, calm and acceptance within her.

8.4 Kundalini yoga as a support therapy for cancer patients

The purpose of this study was to describe cancer patient's experience of kundalini yoga and its effect on their internal coping resources. The objective was to investigate what effect practicing kundalini yoga will have on patient's internal coping resources during active cancer treatment with a view to put kundalini yoga forward as a support therapy for cancer patients for improving their wellbeing during active cancer treatment.

This study confirms that kundalini yoga improved patient's wellbeing through enhancing their sleep, mood and vitality, reducing anxiety and depression, and bringing a better connection to themselves through feelings of peacefulness and self-acceptance. This was especially the case when a cancer patient practiced yoga regularly. It also revealed that some active treatments have such an adverse effect on the body, making it difficult for the cancer patient to participate in yoga. Therefore, the benefits of kundalini yoga could be even more suitable to relieve long term side-effects from cancer and its treatment.

8.5 Future research

Based on the findings of this study, it would be recommended that more research is done about the benefits of kundalini yoga as a rehabilitation therapy for cancer patients as part of their recovery process after the active treatments or in-between treatment cycles with chronic cancer patients.

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APPENDIX

1. *Invitation letter to cancer patients (in Finnish)*

KUTSU

Arvoisa vastaanottaja,

Olen sairaanhoitajaopiskelija Lahden Ammattikorkeakoulusta ja teen opinnäytetyönäni tutkimusta kundaliinijoogasta tukiterapiana syöpähoidossa. Tarkoituksena on kuvailla potilaiden kokemusta kundaliinijoogasta kun heillä on aktiiviset syöpähoidot meneillään ja miten tämä vaikuttaa heidän sisäisiin voimavaroihinsa. Joogasta ja sen vaikutuksesta syöpäpotilaiden hyvinvointiin on jonkin verran tutkittu mutta kundaliinijoogasta ja sen vaikutuksesta hoidon ohessa on hyvin vähän tietoa. Sen vuoksi Teidän osallistuminen ja tuntemuksenne ja kokemuksenne kuvaileminen on ensiarvoisen tärkeää.

Tutkimukseen osallistuminen tarkoittaa osallistumista 6-viikon kundaliinijooga kurssille joka pidetään maanantaisin 17.00 – 18-30 (alkaen 21.3.16 ja päättyen 25.4.16) Hannunsalissa, Lahden keskustassa. Lisäksi tutkimukseen kuuluu noin tunnin pituinen haastattelu joogakurssin jälkeen joka äänitetään Teidän luvallanne. Kaikkia haastattelussa esiin tulevia asioita käsitellään luottamuksellisesti ja ne ovat ainoastaan tutkimuksen tekijän nähtävissä ja kuultavissa. Tutkimustuloksista raportoitaessa saatetaan käyttää lyhyitä lainauksia Teidän puheestanne esimerkinomaisesti mutta henkilöllisyytenne ei tule missään vaiheessa julki.

Kundaliinijoogassa yhdistyy hengitysharjoitus, jooga-asennot, mantrat ja meditaatio. Kokonaisvaltainen harjoitus rauhoittaa mieltä ja syventää itsetuntemusta. Fyysisellä tasolla se tasapainottaa rauhasjärjestelmää ja vahvistaa hermostoa sekä vastustuskykyä. Yleinen hyvinvointi lisääntyy, kun unen laatu paranee ja selkäongelmat helpottuvat. Onnellisuuden tunne kasvaa, kun piilevä ja tietoinen stressi sekä kielteiset ajatukset vähenevät.

Etsin 4-6 osallistujaa. Jos olette kiinnostunut osallistumaan tutkimukseen, ilmoittautukaa minulle viimeistään 29.2.2016 sähköpostitse miahuikuri@yahoo.co.uk tai puhelimitse 044 973 8050.

Jos Teillä on kysyttävää opinnäytetyöstäni tai kundaliinijoogasta, älä epäröi ottaa minuun yhteyttä.

Yhteistyöstä etukäteen kiittäen,

Mia Kröneck

Olen kansainvälisesti koulutettu Sivananda hatha -joogan (RYT 200hrs) ja Kundalini Research Institute (KRI 200hrs) kundaliinijoogan opettaja. Joogamatkani alkoi yli 10 vuotta sitten Intiassa. Harjoiteltuani vuosia ashtanga, hatha vinyasa ja power joogaa, löysin kundaliinijoogan Meksikossa joka mullisti elämäni täydellisesti. Nyt jaan intohimoisesti kundaalinijoogan opetuksia ja pyrin auttamaan muita löytämään yhteyden itseensä. Olen opettanut kundaliinijoogaa Suomessa, Kiinassa ja Australiassa. Tuntini ovat tarkoitettu kaikille kokemuksesta riippumatta.

2. Interview themes

Background:

Gender

Age and occupation

What cancer

When diagnosed

Which treatment and how far in the process

Theme 1

Experiences of kundalini yoga

Theme 2

Effects on internal resources after kundalini yoga course

3. *Overview of the kundalini yoga course*

Week 1:

Pittra Kriya (The Aquarian Teacher Training Manual Level Two - Vitality & Stress)

The essence of self Kriya (Overcoming Cold depression Teacher Training Manual)

Shabt Kriya (Overcoming Cold depression Teacher Training Manual)

Week 2:

Burn inner anger (Praana, Praanee, Praanayam)

Recharge yourself Kriya (Self experience)

Naadi cleansing (Praana, Praanee, Praanayam)

Getting rid of tension so you can live Kriya (Crisis Kit)

Week 3:

Kriya to throw throw off stress (Crisis Kit)

Meditation for absolutely powerful energy (Crisis Kit)

Three-stroke breath for health, energy and radiance (Praana, Praanee, Praanayam)

Week 4:

Sitalee Kriya (Praana, Praanee, Praanayam)

Spinal series Kriya (The Aquarian Teacher Training Manual)

Relieve, relax, recharge Kriya (Serving the infinite)

Gyan mudra Kriya (Praana, Praanee, Praanayam)

Week 5:

Exercise set for the liver, colon and stomach (Overcoming Cold depression
Teacher Training Manual)

Gan puttee Kriya (Self-knowledge)

Week 6:

Withstand the pressure of time Kriya (Crisis Kit)

Eight-stroke breath for energy and stress release (Praana, Praanee,
Praanayam)