

What do we know about the psychological effects of a cancer diagnosis, and how can we use that knowledge to determine the most effective coping method for a cancer patient?

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Abstract

Cancer is considered a chronic illness that can negatively affect any part of the body. There has been extensive research on cancer itself, how it can be treated, and how it can be prevented. However, not until recent years have researchers aimed to investigate the psychological impacts. Understanding how cancer can affect an individual's mind is crucial to improving the overall well-being of a cancer patients. Not only is it crucial to understand the psychological effects that can occur as a result of cancer, it is also important to determine how these effects can be managed. The psychological health of a cancer patient can be managed by a variety of different coping mechanisms. Thus, this paper focuses on what we know about the psychological effects of a cancer diagnosis and how we can use that knowledge to determine the most effective coping method for a cancer patient. The investigation of this paper was undertaken by analyzing a variety of psychological journals/databases in addition to personal interviews with cancer patients/survivors regarding coping mechanisms. Each coping mechanism deals with different types of psychological impairments, such as anxiety, fear, distress, and clinical depression. The coping mechanisms that this paper centers around is group therapy, psychotherapy, mindfulness/meditation, yoga, and music therapy which are analyzed and evaluated in order to determine the most effective coping mechanism. It is determined that mindfulness and/or meditation is the most effective method of psychological treatment for cancer patients primarily because there are no restrictions to mindfulness; it can be practiced by any person who is willing. There is clinical evidence that mindfulness and meditation can improve the mental process of a patient and ultimately the quality of life for a person living with cancer.

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Introduction

Cancer has afflicted people around the world for many centuries. Thus, it is the early research of cancer that has allowed today's society to hold such sufficient knowledge on cancer and how it can be treated. Although there is still much to be discovered about cancer, cancer research has come a long way, particularly in the past 40 years. Not until recently have researchers focussed their attention on the psychological effects of cancer and how cancer can impair one's cognitive functioning. In modern days, we are beginning to discover how detrimental cancer can be not only physically, but mentally. Jared Acoba M.D. (hematologist/oncologist at OnCare Hawaii, Inc.) stated, "The study of how a cancer diagnosis can affect a person psychologically is becoming just as important as the study of cancer itself" (J. Acoba, personal communication, January 4). Now that we have a better understanding of how cancer affects the mind, it has become prevalent in our modern society to research effective ways of psychologically coping with a cancer diagnosis to improve patient's overall well-being. It is important to investigate the psychological effects of cancer and how these effects can be managed since cancer is prevalent around the world. Thus, this essay will delve further into the following research question: What do we know about the psychological effects of a cancer diagnosis and how can we use that knowledge to determine the most effective coping method for a cancer patient? In order to determine this, it is crucial to outline the different ways a cancer diagnosis can result in different psychological impairments, such as stress, anxiety, and clinical depression. Using the knowledge that has been acquired regarding the psychological hardships of cancer patients, different coping strategies have been devised to aid in a patient's mental healing throughout their journey with cancer.



Psychological Effects on Cancer Patients

Nowadays, cancer can be defined as a chronic disease, “They are permanent, leave residual disability, are caused by nonreversible pathological alteration, require special training of the patient for rehabilitation, or may be expected to require a long period of supervision, observation, or care” (Timmreck, 1982). Even after a cancer patient has completed his/her treatment, many cancer survivors will need assistance from multiple medical professionals to handle any long term consequences of their cancer and the treatments that they underwent. Consequently, this will play a role in someone’s psychosocial journey through cancer. For people living with cancer, the stress of the cancer diagnosis along with the treatment, the fear that the illness may return, and the anguish that comes with each day and a variety of physical issues can result in new or intensified pre-existing psychological stress (Adler, 2008). The degree to which a cancer patient will suffer from psychological impairments will vary depending on the type of diagnosis, prognosis, degree of pain, etc. Although a patient may have successfully completed their treatment, there is still a possibility of post-cancer related psychological impairment. In a study regarding quality of life in long-term breast cancer survivors in 2013 conducted by Koch et al., it was determined that breast cancer survivors may be subject to negative consequences of cancer years after treatment, ultimately decreasing the former cancer patient’s quality of life. The results of the study concluded that cancer survivors reported having increased restrictions on multiple functioning and symptom scales. In many dimensions of quality of life, such as physical and social functioning, pain, financial complications, detriments were present from year five to ten. Thus, significant restrictions in quality of life for breast



cancer survivors are endured over following years after completion of treatment (Koch et al. 2013).

Clinical Depression/Anxiety/Distress:

Cancer patients, as a result of their prognosis, will potentially struggle with carrying out daily activities and normal tasks; this may be considered as clinical depression. One in four cancer patients will suffer from clinical depression (American Cancer Society). Depression can affect both men and women suffering from cancer, as it is said to affect both genders equally (National Cancer Institute). Consequently, this can cause extreme distress, impairment of functioning, and could potentially make a cancer patient less able to follow their cancer treatment plan. A study was conducted by Schumacher et al., in 2013 on characterizing the psychological distress response before and after the diagnosis. The researchers of this study aimed to investigate psychological distress differs in patients without cancer. Data regarding anxiety and depression was compared between participants with and without cancer. The results showed that individuals who had survived cancer had an increased chance to suffer from depression and anxiety in comparison to those without cancer (Schumacher et al. 2013).

Method for Psychological Treatment: Support group

The purpose of a support group is to “present information, provide comfort, teach coping skills, help reduce anxiety, and provide a place for people to share common concerns and emotional support” (American Cancer Society). A study conducted by a group of Stanford University School of Medicine researchers, lead by David Spiegel, MD, conducted a study involving metastatic breast cancer patients who utilized support groups as a coping strategy. The



results of the study indicated that joining and participating in a support group does not extend the longevity of life of those with metastatic breast cancer. However, results did suggest that support groups did improve the quality of life of those who participated. David Spiegel, professor and associate chair psychiatric and behavioral sciences, has conducted previous studies that support his findings; “the groups can lead to better coping, improved mood, and reduced pain, depression and anxiety for cancer patients” (Brandt, 2007).

Some cancer patients who are part of support groups feel very strongly that they can better themselves, mentally and physically, by relating to other people who are also going through the same situation. Some cancer patients claim that, with emotional support from others, they have an easier time coping with the hardships of their health and social life. Bonds that patients form with other patients can help them to feel stronger. Sharing experiences that others may have also experienced can help to decrease anxiety and fear in one’s life. Different types of support groups may consist of; education, behavioral training, and group interaction (American Cancer Society).

A systematic review and meta-analysis was conducted regarding psychosocial (including psychoeducational) treatment on quality of life in breast cancer patients during their early stages in 2014 by Matsuda et al. The results indicated that there was no significant improvement in global quality of life. However, patients who received psychosocial support had higher scores on the Breast Cancer Symptom subscale. In addition, there was a notable effect observed on the Emotional subscale for psychoeducational in the psychosocial. Thus, the meta-analysis provides a significant amount of evidence that receiving psychosocial support can result in improvements of breast cancer symptoms. In addition, psychoeducational support can be effective for



improving emotional well-being (Matsuda et al. 2014). Another study was conducted on the effects of support group intervention on anxiety and depression after breast cancer treatment. Thus, the objective of the study was to determine if psychosocial support intervention would have an effect on anxiety and depression during the first year post breast cancer diagnosis. The results indicated that there was no significant decrease in symptoms of depression for this particular study. However, support group intervention did result in decreased anxiety over time. Therefore, the participation in support groups and social support ultimately lowered anxiety in patients with breast cancer over time (Björneklett et al 2012). By using both of these studies conducted by Matsuda et al. and Björneklett et al., it can be determined that support groups/group therapy can be used as a psychological coping mechanism due to the improvements in emotional well-being and the lowered levels of anxiety. However, limitations of both studies should be considered. For example, in the study conducted by Matsuda, publication bias was present. Publication bias is often a possibility in meta-analyses. In addition, meta-analyses can often include subjects compared with previous studies, which can serve as a limitation. This also makes it difficult to replicate the study. In Björneklett's study, there was an clear selection of the patients who decided to participate. The sample was not as random as it could have been, thus it is more difficult to draw conclusions for the general breast cancer population. A chemotherapy patient from a local clinic (OnCare Hawaii) in Honolulu quoted, "I was first diagnosed with colon cancer 18 years ago and I've pretty much been going through chemotherapy off and on throughout that entire time. Surrounding yourself with positive people who have gone through, or are going through, the same situation as you makes life seem more



bearable. It's important to be reminded that you're not alone." (B. Gantt, personal communication, July, 17 2014).

Methods of Psychological Treatment: Psychotherapy

Psychotherapy in reference to cancer is a method of treatment that aims to change the way one thinks, behaves, or feels toward their diagnosis. Psychotherapy has shown to improve cancer patient's quality of life. Typically, psychotherapy can aid in reducing anxiety or depression, which is very common in people who are diagnosed with any disease. It is also known to help people face unexpected changes that are occurring in their life. Although psychotherapy has shown significant improvements in mental health, it has not been proven to increase survival rates. Psychotherapists believe that such therapy can help cancer patients ultimately enjoy life to a greater extent by improving their inner strength to be able to create new coping mechanisms. Psychotherapy is available in a variety of forms. One form of psychotherapy is a one-on-one relationship with a therapist. In contrast, a therapist can meet with entire families or couples to support everyone who is being affected (either directly or indirectly) by cancer. In addition, psychotherapy can be held in groups, where there is typically a therapist who leads the discussion/therapy session. This type of treatment can be long term or brief (American Cancer Society).

A study was conducted by Lo et al., in 2014 regarding the use of psychotherapy, called Managing Cancer and Living Meaningfully (CALM), for patients with advanced cancer. The aim was to determine the effectiveness of the psychotherapy to reduce distress and encourage psychological well-being. The results showed reductions over time in depressive symptoms and anxiety regarding death. The results also indicated an increase in spiritual well-being. Therefore,



this method of psychotherapy may be an effective coping mechanism to benefit patients with advanced cancer (Lo et al 2014). Although this study supports that psychotherapy is effective, limitations must be considered. For example, the sample size (in phase two) was small and there was a significant loss of participants in the follow-up. This could have lead to bias of the regression estimates. There was also a lack of randomization in this study, as most participants were of Caucasian descent. In addition, there was no control within the study. This makes it difficult for the researchers to decipher whether the changes over time within the patients were a result of psychotherapy or an uncontrolled factor.

Methods of Psychological Treatment: Mindfulness/Meditation

There are multiple different types of meditation practices. One of the primary purposes of meditation is for an individual to train their mind and body to become more relaxed. “Regular meditation can give clarity, insight, and peace of mind, which may improve your wellbeing and health” (Cancer Research UK). Meditation can help with a variety of symptoms, both physiological and psychological. Mindfulness, a practice that is used worldwide, is a technique that allows an individual to be aware and to be present in the moment. Mindfulness is centered around returning one’s thoughts back to the present moment when they begin to wander. This is done through steady, consistent breathing.

In a study conducted by Rie Tamagawa (2013), the effectiveness of mindfulness for cancer patients was examined. This study aimed to determine an association between trait mindfulness, suppressive, and repressive emotional styles and self-reported psychological health of patients with breast cancer. Patients completed surveys regarding their personality trait, stress symptom, and mood. The results indicated that increased levels of mindfulness were correlated



with decreased symptoms relating to stress and mood disturbances. In contrast, increased levels of suppression were correlated with declining self-reported well-being. “Helping patients cultivate mindful insights and reduce deliberate emotional inhibition may be a useful focus for psycho-oncological interventions” (Tamagawa, 2013). Although this study suggests that mindfulness may be an effective way of managing emotions for cancer patients, limitations are evident. All of the participants were women with breast cancer, which limits the applicability of the findings to only one gender and one type of cancer. Also, participants were almost entirely Caucasian, so results are not pertinent to all ethnic groups (Tamagawa, 2013).

In another study, the symptoms of patients with breast cancer were analyzed for severity for one group that attended Mindfulness Based Stress Reduction (MBSR) in addition to another group that did not attend. The symptoms of the patient and interference with the patients life on a day to day basis were measured before attending MBSR and post MBSR using the M.D. Anderson Symptom Inventory. At baseline, both groups displayed similar results for mean symptom severity and daily interference. After completion of the intervention, the MBSR group showed a significant decrease in symptoms such as fatigue and interrupted sleep. The individuals showed improved symptom interference items in comparison to the group that was controlled. Therefore, this study suggests that MBSR intervention may be effective in limiting fatigue and related interference in quality of life for breast cancer survivors (Lengacher et al., 2012). However, it is said that the participants in this study had very mild symptoms to begin with. Therefore, the participants symptoms may not have been serious enough to adequately examine the full effectiveness of MBSR (Lengacher et al., 2012). Robert Yanabu, a seven year cancer survivor with stage four colon cancer, said, “I believe that mindfulness meditation has kept me



from turning toward antidepressants during my cancer treatment” (R. Yanabu, personal communication, July 17, 2014).

Methods of Psychological Treatment: Yoga

Another common mode of therapy for coping with the anxiety and stress of cancer is yoga. The primary reason that people diagnosed with cancer practice yoga is that it simply makes them feel calm and relaxed. Yoga is a way to naturally lift one’s mood and enhance one’s well being. Yoga can allow an individual to clear their mind and focus their thoughts. In March of 2010, a review of a study was published by Cancer Research UK (CRUK) that investigated the effects of yoga on cancer patient which included 10 trials. The study reported that yoga can decrease stress, depression, and fatigue, while improving one’s quality of sleep and mood. Authors of the study deduced that practicing yoga may result in positive effects on a cancer patient’s psychological well being (Cancer Research UK).

These findings were supported by the Centre for Reviews and Dissemination at the University of York. Smith KB and Pukall CF reviewed the use of yoga as an intervention mechanism for cancer patients. The author’s evidence supported that yoga might be related to positive effects on psychological functioning of cancer patients. The authors also noted, however, that findings of the review may be limited due to methodological weaknesses and differences within the studies. The conclusion of the study states that evidence regarding the improvement of psychological functions in cancer patients is likely reliable. However, because only a small sample size of patients were reviewed, weaknesses should be considered when analyzing the findings (Smith KB, 2009). According to the University of Texas MD Anderson Cancer Center, yoga can benefit breast cancer patients undergoing radiation therapy in terms of



reducing fatigue. These initial findings were reported by Lorenzo Cohen, Ph.D., director and professor of the Integrative Medicine Program at MD Anderson in 2011. These findings are now reported in the Journal of Clinical Oncology. This same study also supported that yoga is capable of regulating stress hormones due to the decline in cortisol levels in women who practiced yoga. This is a crucial finding because increased levels of stress during the day are known to lead to negative outcomes for breast cancer patients (University of Texas MD Anderson Cancer Center).

A breast cancer patient at a local clinic (OnCare Hawaii) in Honolulu quoted that, “I really found that what worked for me and my anxiety and stress about my breast cancer diagnosis was regular exercise, specifically yoga. It really helped to keep my anxiety about my cancer at a manageable level” (V. Wada, personal communication, July 8, 2014). In addition, A meta-analysis was conducted to determine yoga’s influence on multiple factors that are correlated with cancer diagnosis, treatment, and recovery. The meta-analysis, including 10 different studies, examined the effects of yoga on psychological well-being, quality of life, and physical well-being. The authors of the meta-analysis discovered that, when compared to control groups, the yoga groups indicated “significantly greater improvements in aspects of psychological health, such as anxiety reduction, depression alleviation, distress reduction, and stress reduction” (Sharma, Haider, & Knowlden, 2013). However, limitations of this study include small sample sizes, which can limit the findings. Also, many outcomes were measured rather than focusing on one.

Methods of Psychological Treatment: Music Therapy

Music therapy, used by healthcare professionals, is the utilization of music as a mode of psychological treatment to encourage healing and to improve one’s quality of life. Music therapy



can be used to promote emotional expression, social interaction or to decrease harmful psychological symptoms of cancer. Music therapy has been shown to relieve stress and offer an overall sense of well being. Many studies have been carried out to investigate the psychological effects of music therapy. A systematic review and meta-analysis was conducted in order to examine psychological and physical outcomes of music interventions in cancer patients. The meta-analysis had a variety of findings. For example, seven high-quality studies indicated that music has beneficial effects on coping anxiety assessed by the Self Rating Anxiety Scale and seven moderate-quality studies demonstrated that music improved depression. Although the findings are likely reliable, more high-quality trials are crucial in order to examine the advantages of music intervention in more detail (Zhang et al., 2012). According to a patient at a local clinic (OnCare Hawaii) in Honolulu, “Music has always been my safe place and when I was told I had breast cancer, music became even more important. Playing the piano and singing means so much more to me now” (E. Chapman, personal communication, July, 17 2014).

Determining the Most Effective Psychological Treatment

There is an evident correlation between psychological impairment and a cancer diagnosis. Using this knowledge, the most effective coping mechanism can be determined. It is important to recognize that there is a variety of different symptoms that a cancer patient can experience, such as reduced quality of life, anxiety, distress, and clinical depression. These symptoms are much more likely to be experienced by individuals who have undergone cancer treatment than individuals who have not. Thus, using this information, an effective coping mechanism can be derived that should be able to be applied to all individuals currently receiving cancer treatment or individuals who have survived cancer.



Using the research that has been provided, the most effective coping mechanism that can be applied to every person suffering from cancer is mindfulness. Mindfulness can be practiced by people of any age, gender, financial status, physical capability, etc. Using findings from Tamagawa (2013), it can be determined that higher levels of mindfulness were associated with decreased symptoms of stress and mood disturbances. In addition, in the study conducted by Lengacher (2012), Mindfulness Based Stress Reduction was found to improve symptoms such as fatigue and overall quality of life of patients who participated in comparison to those who did not.

A report by Jones et al, 2013, shows the potential effectiveness of Mindfulness-based Interventions (MBIs) for adolescents with cancer who suffer from a variety of psychological disorders. In the study, researchers demonstrate the potential benefits that MBIs would provide for adolescents with cancer by reviewing evidence from clinical trials of MBIs that indicate a multitude of benefits for cancer patients who are older, adolescents with disorders related to anxiety, and clinically healthy teenagers. These previous findings regarding benefits of MBIs indicate likely benefits for adolescents with cancer. The authors also examine ways psychological issues that are handled by teens with cancer (i.e. feelings of anxiety regarding the future) can be managed by means of mindfulness approaches All in all, this article provides a variety of open-ended questions with prior results/data to promote future research of MBIs and their benefits on adolescents with cancer (Jones et al., 2013).

There are a vast amount of studies conducted by a variety of researchers that support the claim that the practice of mindfulness can result in positive benefits for patients suffering from cancer. A meta-analysis was conducted by Zainal (2013) that investigated the evidence of



success of MBSR in improving stress, anxiety, and depression in breast cancer patients. For this study, data was gathered by analyzing relevant articles regarding the effect of mindfulness on breast cancer patients. Symptoms of psychological impairment were gathered from each article at baseline. The results of the study indicated that MBSR shows a moderate to significant positive effect on the mental well-being of breast cancer patients. This meta-analysis demonstrates the potential for MBSR to make significant improvements in the future for the mental well-being of women with cancer (Zainal, 2013). Although the findings of this study do support the claim that MBSR is effective in alleviating depression, anxiety and distress in cancer patients, limitations must be considered. For example, prior attitude of the participants toward mindfulness-based intervention could have influenced the results of the study. A large portion of the participants were Caucasian and educated, which means that findings are not applicable to every woman with breast cancer. In addition, the meta-analysis was restricted by the small amount of qualified randomized studies and small sample size. As a result, this can produce biased data and statistical errors.

Although there are limitations within the studies, mindfulness is a form of meditation that any individual with cancer is capable of practicing if they are open to the idea. Mindfulness is a treatment method that has recently become more common amongst cancer patients. Thus, further examination of the effects of mindfulness on cancer patient's psychological well-being would need to be conducted in a large population study. For example, further research must be conducted on the effect of mindfulness on a variety of different types of cancer.



Conclusion

For people living with cancer, the psychological stress of a cancer diagnosis can often outweigh the physiological aspects of cancer. These psychological aspects include reduced quality of life, anxiety, distress, and clinical depression. Thus, it is important that research is conducted regarding different coping mechanisms that will allow a cancer patient to cope with the psychological hardships of cancer. Despite the limitations and weaknesses of the meta-analyses conducted by Tamagawa (2013), Lengacher et al. (2012), Jones et al. (2013), and Zainal (2013), it is evident that mindfulness-based intervention has provided significant mental health benefits for cancer patients. There are a variety of different methods that can be used by patients to cope with mental health issues. However, mindfulness is a practice that targets all psychological impairments, whether it be stress, anxiety, or clinical depression. In addition, mindfulness can be practiced by all walks of life. There are no restrictions to mindfulness and it is a practice that everyone can control with the correct mindset toward life. Although mindfulness has not been proven to extend life longevity nor eliminate physical pain/cancer itself, there is clinical evidence that mindfulness can improve cancer patient's psychological well-being, ultimately improving the quality of life for cancer patients.

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