Cancer is a group of more than 100 different diseases and is characterized by the presence of new cells that grow and spread beyond control and usually forms a malignant neoplasm. Cancer cells are always being created in the human body. It is an ongoing process that has gone on for eons. In fact, the immune system developed components whose job is to seek out and destroy cancer cells. Cancer has been around as long as mankind, but only in the second half of the 20th century did the number of cancer cases explode. The contributing factors to this explosion are, the huge amounts of toxins and pollutants we are exposed to, high stress and faulty lifestyles that zap the immune system, poor quality of junk food that’s full of pesticides, pathogens, electromagnetic stress, lights and just about anything that wasn’t around 200 years ago. Cancer tumors begin when more cancerous cells are being created than an overworked, depleted immune system can destroy. This article focuses on the psychosocial and behavioural aspects to cancer so as to provide vital information on the role of psychosocial and behavioural factors in the cancer prognosis so that people can begin to empower and help themselves to successfully cope with the cancer monster.

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Causative Factors for Cancer

Cancer is caused by the interplay of genetic and environmental factors, and also stress can promote the development and progression of the disease. Environmental factors include UV radiation, household and work site chemical hazards. Some research has also found a link between certain viral infections and the development of cancers, such as in the cervix and in the liver (Laszolo, 1987; Williams, 1990). It is estimated that about 80 percent of all cancers are related to what we eat and drink, to the use of tobacco products. Most risk factors for cancer involve personal, behavioural, and lifestyle, especially smoking and diet (Doll & Peto, 1981). Alcohol consumption and physical inactivity are also contributing factors (Bernstein, Henderson, Hanish, Sullivan-Halley & Ross, 1994; Lee, Paffen Barger & Hsiech, 1992).

Some people are more sensitive than others to the factors that can cause cancer. Patients who experience high level of stress and don’t cope well, show poor immune system activity, and some evidence suggests that patient’s cancers worsen more quickly if their immune functions are impaired (Kiecolt-Glaser & Glaser, 1986; Redd et al, 1991). Evidence also suggests that people with healthy lifestyles including exercising, getting enough sleep, eating balanced meals and not smoking, show stronger immune functioning than those with less healthy lifestyles (Kusa Ka, Kondu & Mori Mito, 1992).

Psychological Variables in Development of Cancer

Cancer creates unique stress for patients and their families. These patients have a disease they recognize as a “Real Killer” and one that can lead to intense pain, disability and disfigurement. Even among the patients who go into remission and adapt well during their first months or years, the threat of a recurrence looms and if the disease flares up, some individuals are psychologically paralyzed by their fear. Studies have generally found that less than half shows significant emotional difficulties, and most of these involve relatively transient problems, chiefly anxiety and depressed mood, that are usually responsive to psychological therapy (Burish, Meyerowitz,
The incidence of emotional problems may seem to be high and patient’s emotional problems result from many factors other than their disease, such as experiencing other major stressful events and not having social support in their lives. Thus, there is a strong psychological component to the potential susceptibility of a person to succumb to cancer.

Anxiety and Depression are integral parts of this disease. It is also “normal” for cancer patients to have elevations in depression and anxiety. After a diagnosis of cancer, one may feel shock, disbelief, fear, guilt, sadness, and anger. Each person may experience some or all of these feelings. All the above aspects weaken the immune system, and alter the internal environment in the body to an environment that leads to the creation of excessive numbers of cancerous cells and promotes the growth of cancer. As the weakened immune system leads to cancer, an important aspect in dealing with cancer is supporting the immune system so that it can fight cancer, especially if patients are getting medical treatment that wipe out the immune system, and makes the body more acidic to boot.

Anxiety

Anxiety is a normal reaction to cancer; people with cancer may feel fear and anxiety at many critical times during their treatment and recovery. One may experience anxiety while undergoing a cancer screening test, waiting for test results, receiving a diagnosis of cancer, undergoing cancer treatment, or anticipating a recurrence of cancer. Fear of treatment, doctor visits and tests may also produce apprehension (the sense that something bad is going to happen). People may be afraid of uncontrolled pain, dying, and what happens after death, including what may happen to loved ones. Despite symptoms, the person may deny feeling anxious or fearful. It is normal to feel afraid when a person’s life is changing so much.

In one study, 77% of 913 patients within 2 years of treatment recalled experiencing anxiety (Ashbury, Findlay, Reynolds et al, 1998). Anxiety associated with cancer may increase feelings of pain, interfere with one’s ability to sleep, cause nausea and vomiting,
and interfere with the patient’s and his or her family’s quality of life. It is a disorder that needs to be recognized and treated. If left untreated, severe anxiety may even shorten a patient’s life. Anxiety may also be present in association with depression (Jenkins, Bebbington, Brugha, et al., 1998).

**Depression**

Depressive symptoms are common in cancer patients. Up to 58% have depressive symptoms and up to 38% have major depression (Honda, Goodwin, 2004), Depressive disorders worsen over the course of cancer treatment (2007), persist long after cancer therapy, recur with the recurrence of cancer and significantly impact quality of life.

Depressive symptom prevalence varies by cancer site, stage, and treatment, as well as by the methods and criteria used in assessing depression. Research has shown that pessimism, depression and stress from major and minor events are related to impaired immune functions (Binodi & Pancheri, 1995; Dun, 1995; Leonard, 1995; Levy & Heiden, 1990 Zautra et al., 1997).

**Stress**

From the first quarter of the twentieth century to the present, numerous research studies have been published concerning the effects of stress and psychological variables on development and growth of cancer. These studies revealed that the stressful life events frequently preceded the appearance of several forms of Neoplasia (Bahnson & Bahnson, 1964; Greene, 1966; Horne & Picard, 1979; Jacobos & Charles, 1980). Several studies suggest that stress particularly our attitudes towards it, may have far more impact on people after diagnosis of cancer than before. For example, many studies show that quality of life (Buccheri, Ferringo, Tamburnini (1995) – how someone who has cancer feels, how well he or she functions in the world, and the level of distress from cancer and its treatment- is an important factor in predicting not only how well but also how long some one who has cancer will live.
Studies of people already diagnosed with cancer have found that patients who have suffered relapses within a subsequent time period, such as a year, tended to have experienced more stressful life events or received less social support than those who did not have relapses (Rogentine, et al, 1979; Sabbioni, 1991; Watson & Ramirez, 1991). People who generally respond to stressors with appeasing and unexpressive behaviours (Sometimes called the Type C behaviour pattern) seem more likely than others to develop cancer. (Temoshok & Dreher, 1992).

Patients who experience high level of stress and don’t cope well, show poor immune system activity, and some evidence suggests that patient’s cancer worsen more quickly if their immune functions are impaired (Kiecolt-Glaser & Glaser, 1986; Levy, 1985). Thus stress and lowered quality of life conspire to produce a difficult trajectory on the road to cancer survivorship (Gotay and Muraoka, 1998; Green, Krupnick, Rowland, Epstein, Stockton, Spertus, & Stern, 2000).

**Emotions**

Feelings are created in the mind for the sole purpose to be expressed, if negative feelings are not expressed, they remain trapped inside the body and over time cause physical illness. This is due to high levels of stress within the body and can also be due to a breakdown of the emotional reflex centre in the brain. Trapped or repressed negative feelings are harmful to the body and increase the person’s level of the stress hormone Cortisol - a hormone which has been found in many studies around the world to directly suppress immune system functioning. When the immune system is not functioning properly cancer cells that exist in every human being can multiply and form tumor sites. In addition, suppression of anger, hate, resentment, and grief, usually after a traumatic event, can also damage the emotive reflex centre in the brain, causing it to slowly break down. When this centre breaks down, it will start sending wrong information to the corresponding organ it controls, resulting in the formation of deformed (cancer) cells in that organ. There is much evidence to suggest that repressed anger, hate,
resentment, and grief are the root emotional causes leading to the development of cancer.

Dr. Ryke-Geerd Hamer a cancer specialist from Germany who has examined 20,000 cancer patients with all types of cancer noticed that all his patients seemed to have something in common: there had been some kind of psycho-emotional conflict prior to the onset of their cancer - usually a few years before - a conflict that had never been fully resolved. He believed that cancer people are unable to share their thoughts, emotions, fears and joys with other people. He calls this “psycho-emotional isolation”. These people tend to hide away sadness and grief behind a brave face, appear ‘nice’ and avoid open conflict. Some are not even aware of their emotions, and are therefore not only isolated from other people, but also from themselves. On the basis of these findings, Dr. Hamer suggests that “when we are in a stressful conflict that is not resolved, the emotional reflex centre in the brain which corresponds to the experienced emotion (e.g: anger, frustration, grief) will slowly break down. Each of these emotion centres are connected to a specific organ. When a centre breaks down, it will start sending wrong information to the organ it controls, resulting in the formation of deformed cells in the tissues: cancer cells. He also suggests that metastasis is not the same cancer spreading. It is the result of new conflicts that may well be brought on by the very stress of having cancer or of invasive and painful or nauseating therapies. Dr. Hamer started including psychotherapy as an important part of the healing process and found that when the specific conflict was resolved, the cancer immediately stopped growing at a cellular level.

*Personality*

Studies on personality and cancer indicates that certain kinds of people are somewhat more likely to develop cancer: those who have experienced prolonged stress, particularly stress from which they have been unable to escape; those who have suffered significant losses early in life; and those who have what has been called a “repressive coping” style (Greer, Watson, 1985), a pronounced tendency to deny and repress their own feelings, which has been described as “type C personality” (Temshok, 1987).
LeShan (1966) during the first five years of his research into personality and cancer tested and interviewed over 450 patients and found that 72% of them had particular life-history events and personality characteristics that occurred in only 10% of a non-cancer control group. As he explored their case histories, he found that these personality characteristics preceded the onset of cancer by many years and generally developed in childhood, when the patients often felt rejected and unloved and were constantly searching for ways to please others, inhibiting expression of their own feelings of anger and hostility in order to gain acceptance. They were generally thought by others to be fine, gentle, and uncomplaining people. Simonton and Simonton (1975) in their work connected with the psychological management of malignancy reviewed the medical literature concerned with the etiology of cancer, and in more than two hundred articles they found a relationship between personality factors, emotional factors, and cancer. The most common personality characteristics they found were a tendency to hold resentments, difficulty in forgiving others, a tendency towards self-pity, poor ability to develop and maintain long-term relationships, a poor self-image, and feelings of rejection in general.


**Attitude**

The mind affects the body mainly through the immune system - a positive attitude improves the immune system while a negative attitude depresses it. Those with a positive attitude will do better and those with a negative attitude will do worse. In the most extreme version, how well you do depends entirely on your attitude. Several studies have shown that a positive attitude or emotional state can boost chances of surviving cancer. In one study, among patients with metastatic (spreading) cancers, those who expressed
greater hope at the time of diagnosis of cancer survived longer (Gottschalk, 1985). In another study, over 400 reports of spontaneous remission of cancer were reviewed and analyzed. The patients themselves attributed their cure to a broad range of causes, but only one factor was common to all the cases - a shift towards greater hope and a positive attitude (Green & Green, 1975).

The late Norman Cousins (1989) described a national survey of oncologists (completed during his stay at UCLA Medical School) in his last book, *Head first: the biology of Hope*. Of the 649 who offered their opinions on the importance of various psychological factors in fighting cancer, “more than 90% of the physicians said they attached the highest value to the attitude of Hope and optimism.” Cousins (1979), in his book ‘Anatomy of an Illness’ has shown how important it is for the patient to mobilize his body’s own natural healing resources and has proved what powerful weapons all the positive emotions can be in the war against disease. Laughter, courage, tenacity, love and consideration for others and a connection to the patient’s own understanding of spirituality are all positive aspects essential for healing. Lacking these, the patient’s total healing will be slowed.

All of this research is consistent with the findings of a study showing that when actors asked to generate emotion of joy within themselves showed a increase in the number of natural killer cells circulating in the blood stream within 20 minutes. (Remember, a key role of natural killer cells is to seek out and destroy tumor cells throughout out the body). There have always been doctors who have emphasized the “importance of a will to live” in fighting serious diseases. Most recently, this banner has been carried out nobly by Siegel (1986) the author of *Love, Medicine & Miracles and How to Heal Yourself*. He emphasize the importance of hope, optimism, and a “fighting spirit” among patients who are battling cancer. Evidence of the importance of a fighting spirit was obtained in another study of cancer survivors. Cancer patients with a fighting spirit were most likely to be long-term survivors and have no relapses (Pettingale, et al. 1985).
Hope and Optimism

Millions of people who have had cancer are alive today. People with cancer can lead active lives, even during treatment. Chances of living with-and living beyond-cancer are better now than they have ever been before. People often live for many years after their cancer treatment is over. The importance of hope to health care is linked to increased quality of life, less use of health care resources, and better health outcomes (Owen, 1989). Personality traits, information processing in stressful states of mind, the social support experiences, psychological distress, “depression”, “anxiety”, and “anger-hostility” affects the degree of hope. Once people accept that they have cancer, they often feel a sense of hope. There are many reasons to feel hopeful. Hope has been identified as a vital component to individuals with cancer. In addition hope may encourage seeking out a new way of life.

Some doctors think that hope may help body deal with cancer. Scientists are looking at the question of whether a hopeful outlook and positive attitude helps people feel better. Hope influences the psychosocial responses of persons to a life-threatening diagnosis such as cancer. Although optimism may not directly affect the outcome of cancer, it can be an important coping mechanism. “Having hope and being optimistic is very important from quality of life point of view, rather than a quantity of life point of view.

Intrusive Thoughts

Intrusive thoughts have been conceptualized as one mechanism through which a stressful event can have a continuing impact on individuals. Intrusive thoughts are one of the re-experiencing symptoms in post-traumatic stress disorder, and have been suggested as a predictor for the continuous presence of psychological distress in cancer survivors. Such thoughts are common among individuals who are diagnosed as having cancer. Network of supporters with whom they could share their feelings and fears did not necessarily have fewer intrusive thoughts. However, compared to women who did not have that support, the women who had reported a better quality of life and physical well being.
Social Variables in Cancer

Over the last two decades, clinicians have accepted that while survival and disease-free survival are critical factors for cancer patients, overall quality-of-life is fundamental. Research has shown that strong and extensive social support are positively related to length of survival of cancer patients, whereas social isolation is negatively related to survival time (Helgeson, Cohn, & Fritz, 1998; Spigel & Kato, 1996). Retrospective analysis conducted in hospitals (Greene, 1966) and in the general population (Bloom, et al. 1978; LeShan, 1966; Lombard & Potter, 1950) indicated that cancer appeared is higher than expected frequency among individuals that were widowed, divorced, or separated. A 1979 demographic analysis (Ernster, Sacks, Selvin, & Petrakis, 1979) confirmed these earlier reports and indicated that in Caucasian females separation stress was associated with an increase of cervical cancer, whereas in males the incidence of lung and bronchial cancer was increased but the incidence of hormone-dependent cancers was reduced.

Bereavement is also associated with impairment of cell-mediated immunity (Bartrop, Lazarus, Luckhurst, Kiloh & Penny, 1977). Several studies have pointed to the possibility that cancer incidence is marked among individuals that expressed a sense of loss and hopelessness and inability to cope with the stress of separation (Greene 1966; LeShan, 1966).

In a study, Kiecolt - Glaser and her co-workers (1987) analyzed blood samples of married and separated or divorced women. Among the married women, those who reported less marital satisfaction showed weaker immune function than those who reported greater satisfaction. Among the separated or divorced women, those who refused to accept the fact of separation or thought excessively about their ex-spouse had weaker immune function than those who did not. The findings of these two studies provide direct evidence of an association between marital stress and immune suppression.

Studies by other researchers support these results / findings, for example, the immune function is suppressed in individuals several weeks following the death of their spouses. Consistent with earlier,
less structured experimental procedures in adults, the incidence of cancer was particularly prevalent among individuals who had lost an important emotional relationship. (Bahnson & Bahnson, 1964; Greene, 1966; LeShan, 1966; 1978).

Many studies have focused on the benefits of social support for cancer patients; however, the earliest empirical efforts pointed to the difficulties faced by patients when support was attempted by friends, family difficulties, and acquaintances (Gates, 1980; Golden, 1982). Even support that is well intended but not necessary or desired- has been found to be related to increased negative affect, lowered self esteem, decreased feelings of mastery, and greater existential difficulties. Hampton & Fromback, (2000) says especially for women, aversive “support” such as criticism, callousness, or disrespect, demanding behaviour, and other difficult behaviours by health care professionals, friends and family is a useful predictor of post-traumatic stress symptoms.

Finally a cancer diagnosis can also result in subsequent financial difficulties, jeopardize insurance coverage, and narrow employment options, as one fifth of cancer survivors report these chronic, stressful difficulties (Hewitt et al, 1999).

CONCLUSION

Clinical studies indicate that stress, depression, social support and other psychological factors might influence cancer onset, progression and prognosis. Research studies also indicate that the disease and treatment may also lead to functional restrictions or disabilities which in turn may give rise to a diversity of psychosocial problems. To plan effective interventions it is important to gain insight into the prevalence, severity and course of the psychological squeal and the other variables influencing these problems.

REFERENCES


