CHAPTER 3

CANCER AND APPLIED THEORETICAL FRAMEWORKS: STRESS, SOCIAL LEARNING THEORY AND LOCUS OF CONTROL

3.1 Introduction

Within the framework of a pluralistic study, different theories seem appropriate. To come to an understanding of the experience of a diagnosis of breast cancer, it is necessary to understand a variety of concepts involved in human adaptation to a severely stressful situation such as having cancer. An outline of theories of stress is given to provide a theoretical framework against which the experience of cancer as a chronic stressor can be intellectualised. One of the possible ways of making sense of an event such as cancer has to do with one's sense of control. The development of social learning theory from which concepts such as locus of control evolved is discussed in this chapter. In Chapters 4 and 5 the other applied theories applicable to this study are discussed.

To assist in the understanding of how people learn to react to stress, a brief outline of the social learning theory of Bandura (1977) is given. With its emphasis on self-sufficiency, this theory is applicable in the field of health psychology. Rotter's work (1966) that is also based on social learning theory, provides a framework for the understanding of the different pathways a person may follow to gain control over the situation. It follows that these theories behind the concept of locus of control also form the background against which the studies, regarding breast cancer and locus of control, have been done.

Within the field of psycho-oncology theories are constantly applied and redefined. Particularly in the case of locus of control, this is well illustrated. The concept of locus of control developed from social learning theory. Locus of control seemed to be a useful construct in understanding how patients react to the news of a diagnosis of cancer and its recurrence. In the case of those patients who experience recurrence of their cancer, one of the possible options that may be followed, is the use of alternative medicine rather than conventional medicine that has failed to cure. This option has been examined in this study and the theory and its application is discussed in this chapter. Lastly, the integration of locus of control with the other theories used in this study is presented.

3.2 Stress

In my initial study on stress and cancer (Falkson, 1999) I emphasised that the individual's emotional reaction to stress played an important role in coping with cancer. In the present study, this subject is explored further to incorporate aspects such as locus of control.

Even before describing theories surrounding coping and control, it is important to look at the concept of stress and more specifically chronic disease as a stressor to understand what it is that these patients experience and what they have to cope with. The author dealt with this concept in more detail in the aforementioned research, but a short review of the literature provides the necessary background to this study. It also provides the definitions of how the concept of stress was used in these studies.

Traditional theories failed to account for individual differences in human response to potentially averse conditions and characterised the stressed organism as a passive

recipient of external forces. Janis (1974) stated that the experiments provided reliable data, but that the value of the data for extrapolating to actual life stress was dubious because human behaviour involves more than just instinctive behaviour.

Selye (1976) gave a useful definition of stress as the non-specific response of the body to any demand. All endogenous or exogenous agents that make such demands are called stressors. It is immaterial whether the situation is pleasant or unpleasant, what is important is the intensity of the demand for adjustment.

A confusing aspect of stress is that a distinction is often not made between psychologically based stress and physiologically based stress. In the case of cancer, both types are relevant. The cancer itself causes physical stress reactions, especially in secondary cancer where back pain, for example, may become an everyday problem. Furthermore, there are the noxious side effects of chemo- and radiotherapy, which cause different degrees of physiological stress. Psychological stress seems to be caused by living with the knowledge of having a life threatening disease and the fear of recurrence. Once the recurrence has occurred the stressful situation seems to be: "*How long do I have to live?*"

During therapy with cancer patients it seems clear that stress cannot be described exclusively by a single stimulus - response observation. A theory suitable for studying the experience of being a cancer patient should accommodate multifactorial aspects of coping and a thorough understanding of what the stress of having cancer means to the individual. Differences among individuals in cognitive appraisal are important determinants of affective and physiological responses to potentially threatening events.

Miller and Leary (1993) pointed out that each individual within his or her specific situation and psychological make up, interprets the stress situation and reacts according to that

interpretation. In a psychoanalytic study of the stress associated with having to undergo surgery, Janis (1974) also emphasised the importance of individual differences in reaction to stress. He described aspects such as family situation, occupation and daily activities as essential contexts necessary for the most elementary understanding of why one person reacts differently to another. In practice, it is very often difficult to interpret the resulting behaviour in terms of the stressful situation. For example, it is not uncommon to find patients with recurrent cancer who have low anxiety and depression levels. They confirm that they regard themselves as fortunate individuals because they have had good lives, and have lovely children and grandchildren who take good care of them. They do not appear to experience emotional pain and carry on with their lives. They seem to cope better than one may assume the situation warrants. The fact that some people apparently cope so much better than others confronted with the same stressor, may lie in differences in their personality, socio-economic status and social support, amongst others. As Lazarus (1966) confirmed, the important role of personality factors in producing stress reactions requires that we define stress in terms of transactions between individuals and situations, rather than either one in isolation. Because it is also a relational theory, this particular theory of coping also corresponds to, or complements, the interactional theory of research therapy that was used as framework for the qualitative research.

Lazarus (1966) suggested that stress may be treated as an organising concept for understanding a wide range of phenomena in human adaptation. Many factors in the environment and aspects within an individual combine to generate stress. Stress should not be understood as a variable but as a rubric, consisting of many variables and processes. Selye (1976) also pointed out that a real understanding of stress is dependent upon a holistic and integrative approach; no aspect of it can be analysed in

depth without a full realisation of where and how it fits into the whole picture. A study, by Chen and Craske (1998), years later, showed the intricate relationship between anxiety and stress and confirmed that these factors cannot be studied in isolation. In the same line of thought, Mc Gill (1998) proposed a unified model for studying stress and coping. A multifactorial analysis seems to be the right approach to follow in examining the psychological impact of recurrence of breast cancer, because there are many variables that cause stress in these patients and it is not possible to reduce this to just one variable called "stress". In order to keep individual differences of the psychological reaction to the stressful situation of having cancer in mind, it is imperative to include as many variables as possible, for example, demographic factors, social support and locus of control in the final analysis. A study using a systematic theoretical framework for examining the psychological impact of cancer and by comparing levels of depression, anxiety and general health between a group of women with recurrent breast cancer and a group of women whose breast cancer was in remission for at least one year, should add to our understanding of the concept of stress. It should also provide information on how to improve therapy with cancer patients. Such a multifactorial approach should allow for interactions between the many variables involved in human behaviour.

One way of reacting to a stressful situation may be to take control of the situation. Particularly in the case of a life threatening disease such as cancer, the concept of locus of control seems to be a construct suitable for studying the way a person reacts to the news that she has breast cancer or that it has recurred.

3.3 Social learning theory and locus of control

An important part of the emotional experience of breast cancer and the stress involved in its diagnosis, has to do with a person's sense of control over events. The more control a

person perceives to have, the better the coping. When a person is diagnosed with cancer and then rediagnosed with recurrence, it can be expected that issues around control will be prominent. In the case of the recurrence of breast cancer, there may be doubt regarding the health practitioners' ability to control the disease and patients may opt for alternative forms of treatment.

Although control is studied within the more integrative theoretical framework of the process coping theory of Lazarus (1966, 1993), a broader theoretical background to the concept is given in this chapter.

The concept of locus of control originated in behavioural psychology. Behavioural psychologists have always acknowledged the importance of reinforcement, reward, or gratification in the acquisition and performance of skills and knowledge. The strict stimulus response theory of the behaviourists, however, did not take individual differences in behaviour into account and was criticised by both Rotter (1966) and Bandura (1977). They became advocates of social learning theory, which is based on the principle that an event regarded by some persons as a reward or reinforcement, may be differently perceived and reacted to by others. One of the determinants of this reaction is the degree to which the individual perceives that the reward follows from, or is contingent upon, his own behaviour versus the degree to which he feels the reward is controlled by forces outside of himself, independent of his own actions. Social learning theory differs from behaviourist theory in the premise that the effect of a reinforcement following some behaviour on the part of a human subject, is not a simple stamping-in process. It depends upon whether or not the person perceives a causal relationship between his own behaviour and the reward. This implies an interaction between the environment and the person, rather than the outcome being dependent upon one or the other. Behaviour, personal factors and environmental factors all operate as interlocking

determinants of each other. Bandura (1966, 1977) pointed out that the relative influences exerted by the interdependent factors, differ in various settings and for different behaviours. He showed that there are times when environmental factors exercise powerful constraints on behaviour and other times when personal aspects the override determinants over the environmental factors. This means that in social learning theory, people are neither driven by inner forces nor buffeted by environmental stimuli. Behaviour is rather explained by a continuous interaction between the two.

Bandura (1977) used this theory to show how symbolic, vicarious and self-regulatory processes assume a prominent role. I found this view to be particularly applicable to patient behaviour and again it compliments the other relational theories used in this study.

Bandura (1977) showed how people not only learn from direct trial and error basis but also vicariously by observing other people's behaviour and its consequences. This ability of people to learn from observations, enables people to acquire large, integrated patterns of behaviour which saves them a great deal of effort in acquiring knowledge by trial and error. Particularly in the cancer field, this ability may be of critical importance, for example, where one woman can learn from another cancer patient about ways to adjust more comfortably to the loss of a breast and the side effects of treatment, such as hair loss.

Another distinguishing aspect of human learning behaviour according to social learning theory, is our ability to use symbols as a powerful means of dealing with the world. Through verbal and imagined symbols, we process and preserve experiences in representational form as references for future behaviour. A practical use of this ability of humans in psycho-oncology is, for example, to use images to help with pain relief.

Several relaxation techniques proved to be useful in pain relief with patients. When these techniques are applied, the patient can, for example, be asked to imagine a restful place, or to imagine her body floating without any pain.

Another strong feature of social learning theory is the important role it assigns to self-regulatory behaviour (Bandura, 1977). By arranging environmental inducements, creating cognitive supports and regulating consequences for their own actions, people manage to gain some control over their behaviour and events that happen to them. In the oncology field, this ability to reinforce one's own behaviour has the benefit of creating a sense of control over a potentially overwhelming situation.

Bandura (1966) stated that there are three essential components of successful reinforcement procedures. Firstly, the reinforcements must be powerful and durable to maintain responsiveness over long periods, while patterns of behaviour are stabilised. Secondly, reinforcing agents must be made contingent upon the desired behaviour and thirdly, a reliable procedure for eliciting desired behaviour is essential.

Bandura also elaborated the concept of self-efficacy as a central part of social learning theory (Zimabardo, McDermott, Jansz & Metaal, 1993). Self-efficacy is the belief that one can perform adequately in a particular situation. One's sense of self-efficacy influences one's belief of whether one will be successful in a given situation or not. The result is that self-efficacy has an influence on motivation and self-confidence. It is self-evident what the implications of this theory are for the field of psycho-oncology, where it is so important that the patient should believe that the treatment will have the desired outcome in order to remain motivated to complete the often difficult regimens. This does not mean an unrealistically optimistic view, but the will to survive and the motivation to try everything in one's power to promote the healing process. One's self-efficacy

influences persistence when faced with difficulty and is therefore an important aspect of self, particularly in cancer, which is a chronic disease.

Social learning theory as elaborated by Rotter (1966) provides the general theoretical background from which the idea of locus of control developed. In social learning theory, reinforcement acts to strengthen expectancy that a particular behaviour or event will be followed by that reinforcement in the future. Rotter stated that once expectancy for such a behaviour reinforcement sequence is created, the failure of the reinforcement to occur, would reduce or extinguish the expectancy. As an infant develops and acquires more experience, he differentiates between events that are causally related to preceding events and those which are not. Rotter deducted a general hypothesis that when the reinforcement is seen as not contingent upon the subject's own behaviour, that its occurrence will not increase expectancy as much as when it is seen as contingent. Conversely, its non-occurrence will not reduce expectancy as much as when it is seen as contingent. It seems likely that, depending upon individuals' history of reinforcement, they would differ in the degree to which they attributed outcomes to their own actions.

He described their basic hypothesis as the following: if a person sees reinforcement as being the result of his previous behaviour then he may repeat that behaviour. If he perceives something as outside his own control or not contingent upon his own behaviour, but dependent upon chance, fate, powerful others, or unpredictable, then the preceding behaviour is less likely to be strengthened or weakened. Rotter (1966) stated that an individual who has a strong belief that he can control his own destiny is likely to :

(a) be more alert to those aspects of the environment which provide useful information for his future behaviour;

(b) information for his future behaviour;

(c) take steps to improve his environmental condition;

(d) place greater value on skill or achievement reinforcements and be generally more concerned with his ability, particularly his failures; and

(e) be resistant to subtle attempts to influence him.

3.3.1 Defintions of control

According to Syme (1989) one should keep in mind that, although so many investigators have suggested the importance of control for health and well being, few studies are comparable, because they did not use the same concept in exactly the same way.

Syme described control as a complex concept seen differently by different researchers. Some think of control as a personal 'state of being' (of being in control) while others see it as a 'condition' (where things are under control).

Control is a multifaceted construct and Wallston (1989) cautioned that one should be clear about which aspect of control one wishes to study and why one wishes to do so. One should distinguish between "perceived control" as opposed to "actual control" in health-related research. Wallston described perceived control as a belief that one can determine one's own internal states and behaviour, influence one's environment, and/or bring about desired outcomes. He stated that the definition perceived control as a belief, indicates that it is an individual difference construct; something which, when assessed, varies among individuals and within the same individual over time. In contrast, actual control is conceived of as a property of the situation and setting.

Thompson (1981) also defined control as the belief that one has at one's disposal a response that can influence the aversiveness of an event. She pointed out that this definition had the advantage of being general enough to include all types of control. It

also recognised that control did not need to be exercised for it to be effective and it did not even need to be real, just perceived, to have effects.

3.3.2 Development of a theory of multidimensional health locus of control

B. S. Wallston, K. A. Wallston , Kaplan and Maides (1976) and K. A. Wallston, B. S. Wallston and Vellis (1978) developed the original Health Locus of Control scale (HLC) as part of a theory of multidimensional health locus of control. The scale is a unidimensional measure of people's beliefs that their health is or is not determined by their behaviour. Individuals with high scores on the 11-item HLC scale are "health-externals".This means that they are presumed to have generalised expectancies that the factors which determine their health are such things as luck, fate, chance, or powerful others, all factors over which they have little control. At the other end of the dimension are the health internals, who believe that the locus of control for health is internal and that one stays or becomes healthy or sick as a result of one's own behaviour.

The theory and the original scale have been criticised, however, because both Powerful Other Health Locus of Control (PHLC) and Chance Health Locus of Control (CHLC) are external dimensions. Wallston (1989) pointed out that scoring high on the PHLC dimension does not necessarily indicate low perceived control. Particularly in the case of cancer, when patients are chronically ill and under long treatment regimens, it is realistic to believe that other people's actions can influence one's health status. He also stressed that it may be beneficial to hold these beliefs, particularly if the 'powerful other' people are expert practitioners who have only one's best interests at heart. Scoring high on the CHLC dimension usually does mean low perceived control (except if one truly believes one can control random events); however, moderately high CHLC beliefs may be advantageous in certain circumstances when, in fact, there is little one could actually do to change one's health status.

3.3.3 Multidimensional health locus of control

Levenson (1974) also questioned the conceptualisation of locus of control as a unidimensional construct and argued that the understanding and prediction of locus of control could be further improved by studying fate and chance expectations separately from external control by powerful others. She attempted to develop a conceptually "cleaner" instrument, than the Wallston I-E scale.

Levenson (1974) did a study on activism. She hypothesised that the reason the I-E scale did not meaningfully differentiate between those who are involved and those who are not involved in activism, is because of the broad definition of externals as those with expectancies that fate, chance, or powerful others will control events.

She constructed three new Lickert type scales (Internal, Powerful Others, and Chance - I, P, C) in order to measure belief in chance expectancies as separate from a "powerful others" orientation. According to Levenson, it seemed that those orientations reflected quite different beliefs and therefore should not be grouped together under the rubric of external control. The rationale of the finer differentiation stemmed from the reasoning that people who believe the world is unordered (chance) would behave and think differently from people who believe the world is ordered, but that "powerful others" are in control. In the latter case a potential for control exists.

To test the discriminant validity of the I, P, and C scales, they were administered to 329 male undergraduate students enrolled in an introductory chemistry course at a Texas University. A factor analysis of the data confirmed that the refinement of the I-E scale into the three orientations of "internal", "powerful others", and "chance" was justified.

Since its construction, the Multidimensional Health Locus of Control Scale (MHLC) had been widely used and Wallston (1989) commented that the MHLC Scale still

predominated in the literature as the preferred means of assessing control in health-related settings. He warned, however, that it was not always used well or wisely in the erroneous belief that a single measure of a single construct will somehow magically help explain a significant amount of the variance in health behaviour and status. Health behaviour is multidetermined and locus of control should be used with other measurements to predict health status.

3.3.4 Locus of control and adjustment

Locus of control should not be seen separately from a person's total behaviour but only as one more construct in human coping behaviour. Particularly in sick role behaviour locus of control seem to be relevant in order to understand patient behaviour. B. S. Wallston and K. A. Wallston (1978) already found evidence, in their review of the literature in 1978, evidence that the construct of locus of control is relevant to the prediction of sick role behaviour, particularly behaviour which will be important in this study such as compliance with treatment. They commented that internals generally showed more positive behaviours but warned that there are many factors other than locus of control which influence behaviour and this may lead to inconsistent results.

Folkman (1984) warned that the relationships between personal control and stress, coping, and adaptation outcomes are complex. She said that believing that an event is controllable does not always lead to a reduction in stress or to a positive outcome, and believing that an event is uncontrollable does not always lead to an increase in stress or to a negative outcome. A more integrated approach towards studying these factors may shed more light on the relationships between them.

3.3.5 Effect of a diagnosis of cancer on locus of control

One would expect that the news of breast cancer will have an impact on a person's sense of control over her life. Once again she becomes a patient who has to undergo an operation or receive chemotherapy which result in feeling unable to cope with daily demands and of being dependent on doctors, family and friends. Some patients also realise that they cannot be cured and that they will not survive. A natural reaction to such devastating news would leave a patient at least initially anxious, depressed and feeling helpless.

Syme (1989) stated that the importance of the concept of control to researchers in the health field, is that it has practical value as a concept that deals with behaviour that may be amenable to intervention and it involves behaviour which hopefully we can do something about.

Spiegel (1993) also emphasised the practical value of locus of control as a concept and underlined the possibility of enabling patients to regain control. He confirmed that patients with cancer often feel sick and helpless. They are in desperate need of being in control of their personal lives and illness and he suggested that control could be enhanced in the mental, physical and social domains. The illness cannot be undone, but an active approach can control the current situation. By understanding how patients perceive control in a situation where they clearly express feelings of fear and dependency, we may be able to assist them in regaining some control. This may lead to better emotional well being.

Particularly in the case of cancer patients, the feeling of being in control may improve well being. In many ways, patients are deprived of the ability to exert control. This perceived absence of the ability to control is debilitating. When there are good reasons

why it is either undesirable or impossible to remove restrictions on freedom, that is, when it is not possible to enable the exercise of real control, Langer (1975) suggested that it might be advantageous to induce the illusion of control. For example, by allowing patients in the hospital to decide whether he wants an injection of penicillin or a penicillin tablet (when the difference in the amount of time it takes to get into the bloodstream is not important), he has been given the opportunity to exercise control, although the important decision - that he is going to have penicillin - has already been made. Thompson, Sobolew-Shubin, Galbraith, Schwankovsky, and Grunzen (1993) agreed with the view that it is important to maintain perceptions of control in low control situations by allowing control in day-to-day activities. They found that even patients who were physically or psychosocially worse off, were better adjusted if they had higher perceptions of control.

Taylor, Helgeson, Reed and Skokan (1984) found a positive correlation between belief in self-control and adjustment. They also found a positive correlation between belief in the control of others and adjustment, which is explained as understandable in the case of cancer patients where the physician is in control. Years later Taylor, Helgeson, Reed and Skokan (1991) confirmed that a sense of control was adaptive and reduced psychological distress. They found, however, in their later study that although patients with good prognosis benefited psychologically from a belief in the control of powerful others, those with poor prognosis did not.

Grassi, Rosti, Lasalvia, and Marangolo (1993) investigated the role of psychosocial variables such as social support and locus of control on adjustment to cancer. They found that external locus of control and inadequate interpersonal support was associated with less effective strategies of adjustment to cancer. They concluded that a high internal locus of control may influence a "better mental adjustment" to cancer. They

defined this "better mental adjustment" as a tendency to have a positive attitude towards illness, to perceive it as a challenge, and to take an active role in his/her own recovery. They described those patients with an inadequate social support and external locus of control to have a tendency towards helplessness and despair, and to a fatalistic attitude, with absence of active strategies to deal with illness and treatment.

Lewis (1989) examined the effects of attributed control over one's health and experienced meaning of one's situation on anxiety and self-esteem in 57 adults with advanced cancer. Although he found that the extent to which the patients attributed meaning to their situation was a significant predictor of both higher self-esteem and lower anxiety, he did not find that patients' locus of control affect either their self-esteem or their anxiety. Contrary to this hypothesis, no significant relationship between control over one's health status and self-appraisal and anxiety was found. He gave a plausible reason for this result in stating that these patients had advanced disease and realistically experienced their cancer as uncontrollable. He suggested that in late-stage cancer, the emphasis as far as psychological support should not be on responsibility and control over health status but rather on perceived meaning and purpose.

Hilton (1989) did a descriptive correlational study to investigate the relationship between factors such as uncertainty about the cancer situation, control of the cancer situation and a set of coping strategies used by women to cope with breast cancer. She accommodated many influencing variables in the design of her study in order to reflect the complexity of real-world stress and coping. The group consisted of 277 non-hospitalised women with breast cancer. Women who had high control used systematic problem solving, escape avoidance, positive reappraisal and self-controlling strategies. This study seem to confirm that those patients who experience high control will actively use problem solving behaviour and may well engage in the use of alternative treatments

if they believe that it may enhance their chances of a cure or better their quality of life as we hypothesised in our study. Norman, Bennett, Smith and Murphy (1998) stressed that locus of control should be studied in relationship to other health behaviour and not as a phenomenon on its own.

3.3.6 The use of complementary treatments as a means of taking control

Conventional or mainstream cancer treatment usually consists of a combination of chemotherapy, radiotherapy, pharmacology and surgery. Each patient is, however, treated in an individualised way depending on the stage of her disease (Fallowfield & Clark, 1991). The side effects of these types of treatments such as the scarring and disembodiment of the surgery, the hair loss and nausea of chemotherapy and the nausea, fatigue and burns of radiotherapy, often cause varying degrees of distress. Patients often say that cancer itself is painless, but that the side effects of the treatment make them feel sick to the point of giving up. Many actually stop treatment before the cycle has been completed because they cannot endure the side effects. Those patients whose cancer recur, often feel that they cannot even contemplate the idea of treatment again and may seriously consider into using alternative forms of treatment. A very moving account of the day to day life of a cancer patient is described in the e-mail messages of Picardie (1998) where the ill effects of treatment such as the loss of hair is poignantly detailed.

The media in the modern Western World have given significant publicity to the possible advantages of complementary treatments for various diseases. Ernst (1995) stated that it had gained medical, economical and sociological importance and that there was a general disenchantment with mainstream medicine. According to Alberts (1993) this interest of the patient population in alternative forms of treatment was widespread, in spite of technological advances in conventional procedures. There is also an increasing

awareness of patient choice in decision making regarding medical procedures, for example mastectomy versus lumpectomy. According to Conrad (1985) patients assumed more responsibility regarding their own health. Against this background we thought that there might be a positive relationship between a high internal locus of control and the use of complementary treatments. We hypothesised that patients with recurrent breast cancer might be disillusioned with mainstream medicine and search for alternative treatments. It is of importance to determine how many patients use complementary treatments and which types they use. Some of these treatments may be harmful and patients should be warned against their use. Other complementary treatments, for example aroma treatment, may have a relaxing effect on the patients. These may be beneficial to their general feeling of well being although they do not cure the cancer.

There is a wide variety of treatments and a plethora of literature available in most bookstores. Maher and Young (1994) pointed out that studies on the use of complementary medicine in breast cancer varied considerably regarding the definition of complementary treatments, with some including support systems such as telephone help lines and counselling.

Ernst (1995) described complementary medicine as the diagnosis, treatment and/or prevention, which complements mainstream medicine by fulfilling a demand not met by orthodox medicine. Complementary medicine attempts to involve the patient's wishes in the treatment. Cassileth (1986) in a thorough overview of unorthodox approaches over time, concluded that complementary treatments have three main characteristics. Firstly, it is not based on pills or potions but on life-style orientated changes such as exercise, diet and stress management. Secondly, there are no more "secret formulas". Patients

want to understand the rationales behind the cures. Thirdly, the treatments often carry an aura of respectability or scientific proof.

Although the term "adjunctive therapies" has also been used to describe therapies that are used in conjunction with established therapies, I use the term "complementary".

3.4 Conclusion

This chapter gives an overview of cancer and the applied theoretical frameworks of stress and social learning theory. It also discusses locus of control and the use of alternative treatments. The next chapter focuses on cancer and the theoretical frameworks of coping, applicable personality theories, and process theory.