

## **2. Theoretical Background**

The following sections present basic theoretical considerations and research findings concerning finding meaning and benefits in adversities, personal and social resources, coping, and well-being.

### **2.1. Finding Meaning in Adversities**

#### **2.1.1. Meaning: Definitional Issues**

During the last decades, theoretical and empirical work on meaning and its effect on adjustment in the face of major life events proliferated (Taylor, 1989; Janoff-Bulman, 1992; Wortman & Silver, 1992; Park & Folkman, 1997). According to this literature, finding meaning can be perceived in different ways. The terms used to refer to finding meaning include *personal significance* (Lazarus & Folkman, 1984), *causal attributions* (Bulman & Wortman, 1997), *post-traumatic growth* (Tedeschi & Calhoun, 1996), *stress-related growth* (Park et al., 1996), *benefit finding* (Antoni et al., 2001), and *benefit reminding*, that is to remind the self of the benefit gained from the experience (Tennen & Affleck, 2001). This diversity regarding the concept of meaning has been reflected in the way meaning is assessed and interpreted in research in coping with major life events and illness.

In the present study, meaning and/or benefit finding refers to the pursuit for the “*silver lining*” of adversities (Schwarzer & Knoll, 2003), that is, the perceived positive contributions from illness, negative experiences or major life events that occur in one’s life.

#### **2.1.2. Meaning: Theories, Models, and Empirical Findings**

Finding meaning in adversities is pivotal to many theories and models of cognitive adaptation to aversive events (Affleck & Tennen, 1991). These theories and models used different conceptual and operational approaches to meaning. They include, among others, Filipp and Ferring’s model of reality construction, Taylor’s theory of

cognitive adaptation to threat (1983), and Park and Folkman's model of global and situational meaning (1997).

#### **2.1.2.1. The Model of Reality Construction**

Filipp and Ferring (2000) offered a model of reality construction based on three processes that they consider to be not necessarily sequential in nature. These processes encompass attentive, comparative, and interpretative coping processes. According to this model, people selectively attend to "bad news"; second they use comparative processes that help shape perceptive reality toward a reality that victims of life crises can gradually tolerate and accept; and third, they use interpretative processes that help construe an interpretative reality mainly through ruminative thinking and related attempts to ascribe *subjective meaning* to what currently makes up one's perspective reality (Filipp & Ferring, 2000). Thus, coping strategies, according to the model, are directed towards creating a "better world to live in" through "negotiating the reality" instead of fluctuating between the two old perspectives; changing the *self* and changing the world. Finding meaning according to this model involves both making sense of the event (i.e., attributions) and positive gains from the experience (i.e., benefit finding).

#### **2.1.2.2. The Theory of Cognitive Adaptation to Threat**

Taylor's theory of cognitive adaptation to threatening events (1983) proposed a model that presents human beings as adaptable, self protective, and functional in the face of setbacks. Her theory is based on three concepts; search for meaning in the experience, gaining mastery or control over the events and one's own life and restoration of self esteem through self enhancement evaluation.

According to this theory meaning is an effort directed to understanding the events, that is, why it happened (i.e., causal attributions) and what impact it has on one's life (i.e., gains and benefits found in the experience). Taylor suggested that understanding the cause of an event may help understand the significance of the event and what it symbolizes about one's life, and one's attitudes, priorities, and changes that are prompted by the negative event.

### 2.1.2.3. The Model of Global and Situational Meaning

Park and Folkman (1997) presented a model of coping with aversive events and conditions that integrates diverse conceptual and operational definitions of meaning in the literature. This model is based on Lazarus' transactional model of stress and coping (1991) and highlights the role of beliefs, goals and the functions of meaning in appraising and coping with stressful events.

Park and Folkman's model distinguishes between two levels of meaning; global and situational meaning. Global meaning refers to the most abstract and generalized level of meaning. It includes basic goals, fundamental assumptions, beliefs and expectations about the self and the world. Situational meaning, on the other hand, is formed in the interaction between a person's global meaning and the circumstances of a particular person-environment transaction.

The content of global meaning is presented in two dimensions. The first one pertains to people's assumptions about *order*, that is distribution of negative and positive events, and the other is motivational dimension that pertains to *goals* and *purposes*. According to this model, beliefs about order can be organized around beliefs about the world, the one's self, and beliefs about the relationship between one's self and the world (Lazarus, 1991; Park & Folkman, 1997). Park and Folkman argued that although most operational definitions of meaning are cast in terms of attributions about causality and perceived benefits, they are not synonymous with meaning as presented in their model. In their model meaning concerns the process through which people reduce discrepancies between situational and global meaning. This process includes the initial appraisal of the meaning of a potential stressor (i.e., attributions), and continues in the form of *reattributions* that are made as a part of the reappraisal efforts of coping. These reappraisal processes transform appraised meaning and global meaning either by modifying the meaning of an event to make it consistent with pre-existing beliefs and goals, or by modifying relevant beliefs and goals to accommodate the event, or by both. Reappraisal can reduce the threatening aspects of the appraised meaning of an event, and can sometime increase its positive aspects as well (see Figure 1).

Although these theories and model enhanced conceptualizing the topic of meaning, gains, and growth following aversive events, there is still a need for a solid integrative theory that makes the differences between and the roles of the previously mentioned concepts of meaning more understandable.

### **2.1.3. Qualitative and Quantitative Assessment of Meaning**

Meaning and/or benefit finding had been assessed in many studies by using interviews (i.e., qualitative assessment), paper-and-pencil assessments (i.e., quantitative assessment), or both of them.

In interviews, meaning was measured either through a priori categories of benefit finding or by using post hoc analysis of participants responses. For example, Collins, Taylor, and Skokan (1990) had interviewed cancer patients about how their illness had influenced their daily activities, plans/goals for the future, views of the self, views of the world, and relations with others. Affleck, Tennen, and Gershman (1985) have interviewed mothers of newborns with serious medical problems. Mothers were asked if their experiences had produced any benefits, gains or advantages. There are other examples of interview studies that reported categorization of positive outcomes based on post hoc analysis of the participants' responses (Mendola, Tennen, Affleck, McCann, & Fitzgerald, 1990). Although structured interviews were proved to be efficient in measuring benefit finding, indicators of gains and growth were influenced by the variability in participants' subjective definitions of benefits.

A lot of studies have also assessed meaning and benefits found by using paper-and-pencil measures. Curbow, Sommerfield, Baker, Wingard, and Legro (1993) assessed meaning experienced by the adult survivors of bone marrow transplantation. Questionnaires, which were sent to participants by mail, measured 20 life changes classified as plans and activities (e.g., plans for the future, leisure time), relationships (e.g., with parents, friends), physical changes (e.g., health, physical strength), and existential and psychological issues (e.g., religious beliefs, control over life).

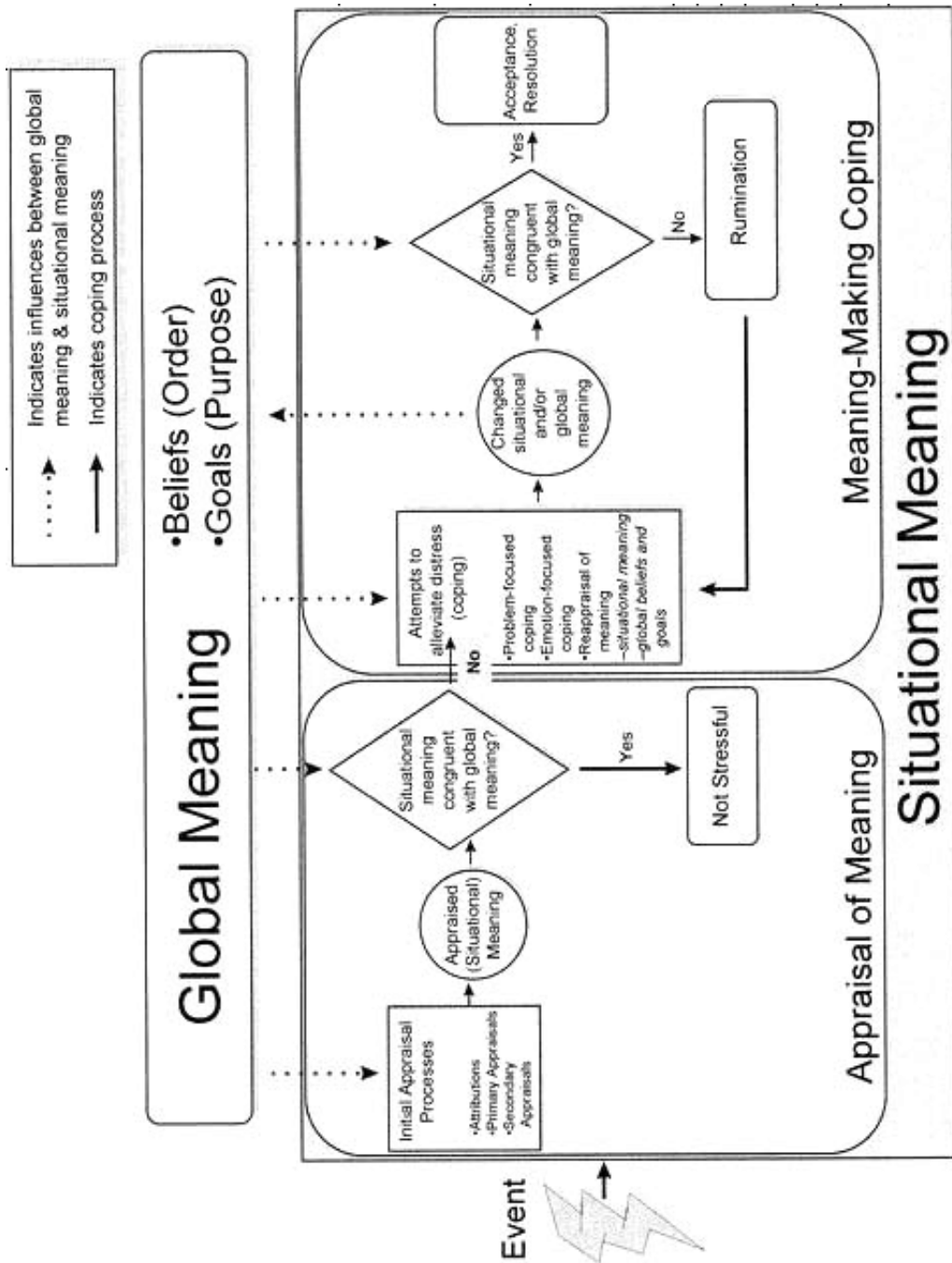


Figure 1. Model of Global and Situational Meaning.

Source: Park, C.& Folkman, S. (1997). Meaning in the context of stress and coping. *Review of General Psychology*, 1(2), 115-144

Tedeschi and Calhoun (1996) designed and used The Post Traumatic Growth Inventory (PTGI) to examine positive changes and growth in undergraduate students who reported that they had experienced negative life events such as bereavement, injury-producing accidents, and separation of parents, during the previous 5 years. The scale is composed of 21 items and 5 subscales all positively worded, with a 0-5 response choice. The subscales of the PTGI assess relating to others, new possibilities, personal strength, spiritual change, and appreciation of life.

Park, Cohen, and Murch (1996) designed and used the Stress Related Growth Scale (SRGS), a unidimensional scale that comprises 50 positively worded items with a response choice between 0 to 2, to study the impact of the most “upsetting events” experienced by college students during the past 12 months. The most frequent events recalled were problems in romantic relationships, academic achievements that did not meet expectations, and moving away to college.

A lot of effort has been already invested in developing reliable measures of meaning and benefit finding. However, some issues remain unsolved. These issues concern the use of different definitions of benefits gained depending on the specific nature of the crises under investigation and the inability of many self-report questionnaires to report basic psychometric characteristics (e.g. reliability, factor structure, and validity). Although, the PTGI and the SRGS are found to have high validity and reliability ( $\alpha = .90$  and  $.94$  respectively), both were validated in college-students, which limits their applicability to other populations. So far only one measure was validated in cancer patients by Antoni, Lehman, Kilbourn, Boyers, Culver, Alferi, Yount, McGregor, Arena, Harris, Price and Carver (2001) and proved to be efficient in tracing gains experienced by patients suffering from breast cancer. In the next sections, more details about the benefit finding scale will be provided.

#### **2.1.4. Factors Affecting the Initiation of Meaning**

Although, some research in cancer patients showed that a significant proportion of patients reported some benefits and changes in their lives as a result of having cancer (Collins et al 1990; Antoni et al., 2001), how do people manage to maintain such optimistic beliefs in the time of distress is not yet clear. This question, according to

Taylor (1989), requires full understanding of the self, its resources of resilience, and its vulnerabilities.

#### **2.1.4.1. Event Characteristics**

Tedeschi and Calhoun (1996), Updegraff and Taylor (2000), and Filipp and Ferring (2000) highlight the role of situations that individuals confront for the initiation of meaning and benefits perceived. According to them, the severity of adversities is associated with the degree of perceived growth, that is, the greater the initial disruption and distress that the event precipitates, the greater the potential that meaning and benefits will be later found. There is little evidence, however, on how meaning develops over time and the processes by which initial distress transformed to later growth (Updegraff & Taylor, 2000).

Another view concerns the relationship between the severity of an event and meaning is suggested by Carver (1998). According to this view, the actual relationship between meaning and severity is curvilinear. Low levels of severity may not be disruptive enough to elicit changes whether they are negative (e.g., distress) or positive (e.g., growth), whereas high severity may be disruptive but also provocative for the experience of both distress and growth. Extreme severity, on the other hand, are commonly associated only with negative changes such as the development of post-traumatic disorder (PTSD).

The degree of the controllability of an aversive event is predicted to affect the degree of the perceived benefits and growth. Whereas controllable severe events are likely to be modified by active and direct coping responses, uncontrollable severe events resist confrontative coping and call for positive reinterpretation coping strategies and, consequently, provide the opportunity to perceive meaning in them (Updegraff & Taylor, 2000).

Filipp (1992, 1999) highlights the role of time in coping with and adapting to traumatic events (i.e., the time elapsed since the traumatic event) and the implications of the timing of an event in the individual's life span. According to her view, stressful events unfold over time and continue to have impact on individuals through subsequent effects on different domains of their lives. Taking cancer as an example, she postulated that changes in the course of cancer itself, *for the worse or the better*, confront patients with different demands and tasks that may result in

changes regarding how patients perceive and cope with cancer, in particular, their hopes and fears as well as their appraisals of the situation as a whole. Thus, the *chronicity* of a traumatic event may facilitate growth and enhance positive changes as it allows for time to work on the meaning and outcomes of that event.

Regarding the effect of the timing of an event on one's perceptions of its implications, the level of significance associated with traumatic events depends on the individual's age, particularly when it occurs non-normatively in the earlier parts of the lifespan (Klauer, Ferring, & Filipp, 1998). Consequently, threatening life events such as cancer might have a more deleterious impact on young patients than old ones. This differential effect should be due to that fact that the probability of loss and occurrence of health problems is, usually, associated with old age, and thus, older individuals would have more experiences to deal with the trauma-related emotional and social consequences than younger ones.

Other factors that are expected to affect the development of meaning, benefits and growth perceived in aversive events include personality factors (e.g., optimism), and coping strategies used (e.g., positive reframing). These factors will be dealt with in details in the following paragraphs.

#### **2.1.4.2. Personality Characteristics**

Personality-related factors including mastery, locus of control, and perceived control over particular stressful events enhance both the way individuals cope with them and meaning attributed to them. Many researchers, for example, have investigated the effect of beliefs in control on illness. Findings showed that beliefs in control with respect to diseases and their treatments are generally adaptive (Merluzzi & Martinez-Sanchez, 1997).

Feeling of control was not only found to be helpful in coping with illness and its treatment but also in coping with the long-term debilitation that may result from them (Taylor, 1989). Furthermore, other personality-related factors, such as optimism, having a sense of coherence, having a sense of purpose in life, hardy personality, dependability, trust, and lack of impulsivity, can provide coping



resources for individuals undergoing traumas as they buffer their co-occurring debilitating effects.

#### **2.1.4.3. Coping Strategies**

According to Updegraff and Taylor (2000) and Carver (1998), the way the individual reacts to and copes with a traumatic event affects his/her adjustment to it. Adjustment, as discussed by these researcher, does not only pertain to a homeostatic return to previous functioning or a prior condition, but also implies that a person is better off after confronting the aversive event than before. Coping strategies that are theoretically predicted to enhance growth and meaning found in traumas are acceptance and positive reinterpretation because they enhance individuals' accommodation to uncontrollable and unchangeable situation (e.g., cancer, bereavement). Accepting the situation helps the individual focus on its positive aspects and implications. Park et al. (1996), Folkman (1997), and carver (1998), among others, have found that using acceptance and positive reinterpretation strategies across a variety of stressful events including HIV, breast cancer, was associated with lower level of depression in cancer patients and better physical functioning and better adjustment in HIV patients. These findings testify that the use of acceptance and positive interpretation *per se* is a determinant of adjustment to unchangeable and not modifiable events.

#### **2.2. Personal and Social Resources**

Personal and social resources are key factors in conservation of resources theory (CRT; Hobfoll, 1998). People learn to recognize what is important through personal experience, modeling, and other forms of learning. People also acquire the knowledge regarding what they need, how to assure the possession of what they consider as important, and in what way things acquired are perceived in relation to success within their culture and their sheer survival. According to Hobfoll (1998, p 54) resources include:

Objects, condition, personal characteristics, and energies that are either themselves valued for survival, directly or indirectly, or that serve as means of achieving these ends. I delimit the range of resources to be resources that are valued by a broad class of individuals and that are seen as highly salient for people in general as well as the self.

The COR theory postulated that people work to possess resources they don't have, hang on to those resources they possess, protect resources when they are threaten, and promote their use. Stress occurs in situations in which resources are threaten with loss, actually lost, and when there is no adequate gain following resources investment. Hobfoll used different methods to categorize resources. The first and the simplest division he used to categorize resources is the internal versus external resource categorization. Internal resources include those that are possessed by the self or are within its domain (e.g., self-esteem, optimism, and sense of mastery), whereas external resources pertain to resources that are not possessed by the self or are external to it (e.g., social support, employment, and socio-economic status). Although, this distinction was found to be valuable in examining how internal resources can manage and enhance external resources (Hobfoll & Lerman, 1989; Holahan & Moos, 1987), questions are raised regarding whether external resources such as perceived social support are not internal resources when measured as perception made by the subjects themselves (Sarason et al., 1986).

According to the COR theory, it is loss and the threat of loss of resources that defines stress. Events are not intrinsically negative or positive; they are interpreted as such if they are associated with losses and gains. Resources gain is important at time of loss or when loss threat resources. The meaning of gain increases in the face of loss because, according to Hobfoll, people weigh up their resources when loss takes place. This evaluation of resources enhance people decide how to act and what resource to utilize in order to get over lose or threat of lose.

The present study examines the effect of this dichotomy of resources (i.e., internal and external resources) for coping and finding meaning in cancer. Perceived self-efficacy and received social support are used as indicators of the aforementioned types of resources. The terms personal and social resources are used to signify the internal and external resources dichotomy.

### 2.2.1. Personal Resources: Self-Efficacy Beliefs

Bandura (1977) introduced the term self-efficacy beliefs within the context of cognitive behavior modification and used it as a key construct in social cognitive theory. Self-efficacy beliefs pertain to the beliefs in personal action control or agency. It can be regarded as an optimistic and self-confident view of one's capability to deal with certain life stressors, to persist in face of barriers and to recover from set backs (Bandura 1992; Schwarzer, 1992; Scholz, Gutiérrez-Doña, Sud, & Schwarzer, 2002). There is growing evidence from diverse lines of research that self-efficacy beliefs function as important proximal determinants of human motivation, affect, thought, and action (Bandura, 1992). High self-efficacious individuals are more likely to perceive stressful situations as challenging and to invest more effort in the face of barriers. Schwarzer (1992, p. ix) described the way self-efficacy beliefs affect individuals performance on different tasks:

High self-efficacious individuals choose to perform more challenging tasks; they set themselves higher goals and stick to them. Actions are pre-shaped in thought, and once an action has been taken, highly self-efficacious people invest more effort and persist longer than those low in self-efficacy. When setbacks occur, they recover more quickly and remain committed to their goals. High self-efficacy also allows people to select challenging settings and explore their environment or create new ones.

In Bandura's theory of behavior change (1997) self-efficacy beliefs determine the choice of coping behavior, expenditure of efforts, and persistence in the face of obstacles and barriers.

Bandura's work on self-efficacy beliefs highlights the influence of *personal accomplishment*, *vicarious experience*, and *Physiological and emotional arousal* on the initiation and maintenance of self-efficacy beliefs. *Personal accomplishment* enhances self-efficacy beliefs through experiencing a repeated success and attributing it to one's self. *Vicarious experience*, on the other hand, affects self-efficacy beliefs through *observing* a model, comparable to the individual, who succeeds or fails to master difficult tasks. *Physiological and emotional arousal* for

achieving a certain behavior affects self-efficacy beliefs, and thus, hinders the individual from performing and mastering a certain task.

Furthermore, Bandura (1992) postulated that self-efficacy beliefs regulate the individual's functioning through four major processes; cognitive, motivational, affective, and selection processes.

*Cognitive Processes.* Self-efficacy beliefs affect patterns of thoughts concerning goals and planned actions. Thus, high self-efficacious individuals would have more challenging goals and more precise action plans that they commit themselves strongly to compared to low self-efficacious individuals.

*Motivational Processes.* Self-efficacy plays a central role in the self-regulation of motivations. Through the exercise of forethought, people motivate themselves and conduct, anticipatorily, their own actions. Bandura distinguishes between three forms of cognitive motivators; causal attributions, outcome expectancies, and goals. In many research findings, a bi-directional causation emerged between causal attribution and self-efficacy, that is each affects and be affected by the other. Other findings showed that self-beliefs of efficacy influenced causal attributions (Alden, 1986; Collins, 1982; Silver, Miltchell, & Gist, 1989; Bandura, 1992), whereas, a few causal analyses indicated a mediating role for the self-efficacy beliefs in the relationship between causal attribution and performance (Relich, Debus, & Walker, 1986; Schunk & Rice 1986; Bandura, 1992). Self-efficacy beliefs affect outcomes expectancy. Individuals who judge themselves as high self-efficacious will expect favorable outcomes, whereas those who perceive their efficacy as low and expect to perform low in a given task, will conjure up negative outcomes.

Explicitly defined goals enhance and sustain motivation. Some research findings showed that self-efficacy beliefs and adjustment of personal standards in light of one's attainments mediated the relationships between individuals' motivations and their performance on certain tasks (Locke & Latham, 1990). Perceived self-efficacy, in particular, helps people select what challenges to undertake, how much effort to invest in the trial, and how long to persist in the face of obstacles.

*Affective processes.* Perceived self-efficacy plays a major role in the self-regulation of affect. Bandura describes three different ways in which self-efficacy beliefs exert their influences on the nature and intensity of an emotional experience; self-efficacy

beliefs can create attentional biases and affect how people construe emotional events. Self-efficacy beliefs can also affect patterns of distressing thought, and influence courses of actions that change environments and modify their emotive potential (Bandura, 1992).

*Selection Processes.* The individual's efficacy judgement influences his/her developmental trajectory by affecting activities and environment he or she selects. Thus, activities and situations that are perceived as exceeding the individual's coping ability are tended to be generally avoided and those within the his/her capability limits are conceived as challenges and, consequently, undertaken. Social influences can also affect choice behavior and, subsequently, profoundly shape the direction of personal development. The effect of social influences on choice behavior, however, is secondary to the effect of self-efficacy beliefs because social influences can only promote selected behavior, values and interests after the effect of decisional determinants on them (i.e., self-efficacy beliefs) is well established.

Although Bandura perceived self-efficacy as being task-specific or domain-specific, that is function-related or situation-related self-efficacy beliefs, other researchers perceived the term as a generalized sense of self-efficacy that pertains to a global self-belief in one's coping ability across a wide range of challenging situations (e.g., Schwarzer & Jerusalem, 1995; Scholz et al., 2002). According to these researchers, general self-efficacy represents a broad and stable sense of personal competence to deal efficiently with a variety of demanding situations and to readjust to stressful life events through providing a broad pattern of coping strategies.

Along these lines, research in patients with serious illness showed that self-efficacy beliefs are related to psychological and psychosocial adjustment and active coping. Patients with high self-efficacy beliefs reported better recovery rate one week post-surgery and better quality of life half a year later compared with patients with lower self-efficacy beliefs (Schröder et al., 1998). Also high self-efficacious person can influence their social network and stimulate more support from others at time of crisis. Conversely, social support may be a source of efficacy information (Merluzzi & Martinez-Sanchez, 1994). Thus, the interaction between self-efficacy and social

support could be a sort of reciprocal sustaining processes; each dynamically affects and sustains the other.

### **2.2.2. Social Resources**

Social resources pertain to the availability of social support in terms of emotional, informational, and instrumental assistance (Cohen & Wills, 1985; House, 1981). The literature on social support distinguishes between structural and functional aspects of social support. The structural aspect refers to the existence of relationships, whereas the functional aspect pertains to the extent to which these relationships provide support for the individual. Both aspects were found to be effective in alleviating stress and releasing distress (Schwarzer & Leppin, 1992).

***Social Support.*** According to Cohen and Wills (1985), and Shumaker and Brownell (1984) social support may directly enhance well being through satisfying human needs for affiliation, affection, and safety and by strengthening feelings of self-esteem and self-efficacy. Thus, socially supported people would be more likely to have lower levels of stress, better quality of life, high self-esteem, and self-efficacy beliefs.

Research attests to the positive effect social support has on individuals' adjustment during time of stress (Hobfoll, 1998). Social support, however, does more than simply functions as a buffer against stressor; it helps foster coping competencies that change the threatening values of stressors (Bandura, 1992). Research examining causal structure indicated bi-directional associations between social support, perceived interpersonal self-efficacy, and depression. Perceived interpersonal self-efficacy motivate people to seek out, promote, and maintain social networks. According to Holahan and Holahan (1987), and Bandura (1992), high socially efficacious people create social support for themselves and, consequently, reduce their vulnerabilities to depression. Perceived efficacy, thus, facilitate the development of supportive network and this supportive network in turn enhance beliefs of efficacy.

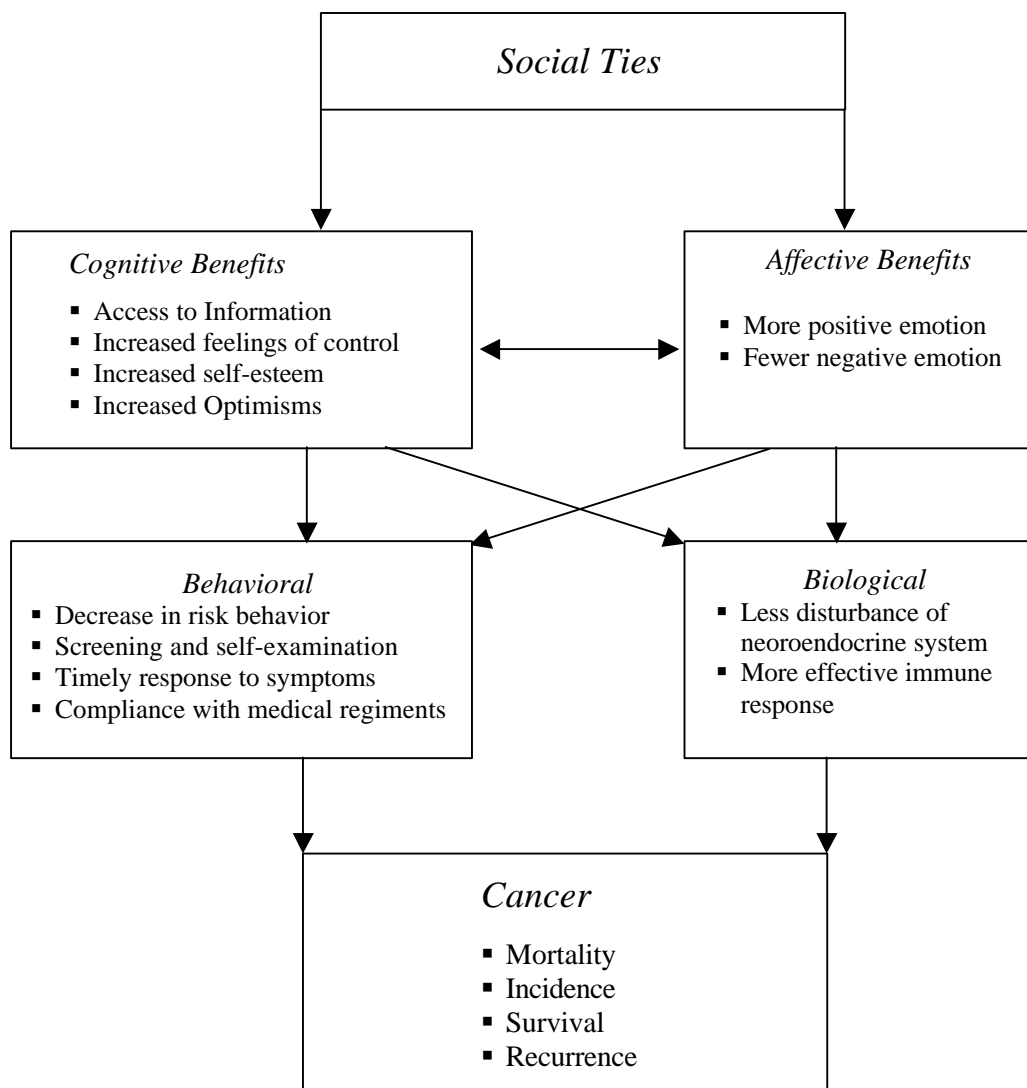
Social networks, however, can have both positive and negative effects on health and well being. Positive effects are attributed to the strength of social network and to the

resources that they provide in time of need, whereas negative effects are attributed to social conflicts and social threat to self concept (Helgeson, Cohen, & Fritz, 1998). Thus, social network can also contribute to onset and progression of serious diseases. Taking cancer as an example, Helgeson, Cohen, and Fritz (1998) designed a model that presents mechanisms by which social ties can influence disease risk and progression (see Figure 2). In this model, positive characteristics of the social environments are associated with cognitive and affective benefits (e.g., feeling of control and the experience of more positive emotion, respectively). These benefits in turn influence behavioral and biological responses that are associated with the onset and progression of cancer. Thus feeling of control, for example, might result in an increased motivation to adopt more healthy behavior, and consequently, reduce risks of cancer incidence or mortality by quitting smoking, self-examination, timely response to symptoms, and improved compliance with medical regiments. In the same way, by buffering against negative emotional reaction, social network can also protect against disturbance in the immune and the endocrine systems associated with the cancer onset. These authors also illustrate that the beneficial effect of social network can occur as a result of two processes; the *direct effect* through which network membership and social interaction directly increase positive cognition, emotion, and behavior, and the *stress buffering effect* through which social network buffer the negative effect of stressful events by providing the individual with coping resources such as emotional, information, and instrumental support.

### **2.3. Coping**

Coping is the key concept helping us to grasp adaptation and mal-adaptation because it is not stress alone that causes distress and dysfunction but how people manage it (Aldwin, 1994, p 84). Coping with stressful life events involves, in general, numerous ways of dealing with the demands associated with these events. Thus, coping in itself, does not represent a homogenous concept as it reflects a diversity of strategies, tactics, responses, cognitions, and behavior that help individual adapt to adversities (Schwarzer & Schwarzer, 1996). Furthermore, similar stress can have varying effects on different people, that is, individuals can respond in diverse ways to stress. The purpose of study coping, as Aldwin simply put it, is to understand why

people differ so greatly in their responses to stress and how differing responses relate to their adjustment and well-being.



*Figure2.* Pathways Linking Social Ties to Cancer.

*Note.* The path identified in the model move in only one direction from social ties to cancer.

The absence of alternative paths is not intended to imply that they do not exist.

Sources: Helgeson, V. S., Cohen, S., & Fritz, H. (1998). Social ties and cancer. In J. C. Holland (Eds.), *Psycho-oncology* (pp 99-109). New York: Oxford Univ. Press.



Schwarzer and Schwarzer (1996) highlight the role of three factors that should be taken into account in the conceptualization of coping. First, coping need not be a complete and successful act, a sheer trial to cope should be perceived as coping as well. Second, coping should not always be expressed as actual behavior as it can take the form of cognitions, too. Third, a cognitive appraisal of the stressful event is a prerequisite of initiating coping attempts. Cognitive appraisal, however, can be intertwined with cognitive coping when, for example, appraising a situation as threat (e.g., cancer) triggers cognitive coping (e.g., positive reframing, search for meaning) that implies further appraisal of the same situation as less or more threatening. According to Schwarzer and Schwarzer, a distinction between appraisal and coping, in such situation, can not be practically made, although, this distinction serves as an aid in interpreting mechanisms and processes involved in the initiation and maintenance of these concepts. In the same way, a distinction between coping resources (e.g., self-efficacy, received social support) and coping would be relative since personal and social resources are regarded as coping antecedents as they can enhance or prohibit the use of certain coping strategies in time of need.

### **2.3.1. Coping: Theoretical Background**

Although the field of stress and coping is filled with many studies, theories, and models being done, there is still a lack of a balanced and statesmanlike treatment of this central concept in the arena of human stress and adaptation (Aldwin, 1994). For the purpose of clarity and simplicity, theories dealing with coping are divided, in this study, into three parts; the psychoanalytic approach, the personality approach, and the coping process approach. While the psychoanalytic approach focuses on defense mechanism, the personality approach focuses on coping styles. These two approaches assume that adaptation to stress is a function of personality. The coping process approach, on the other hand, emphasizes the environmental demands and influences on coping with stress.

*Psychoanalytic Approach.* Freud (1966) postulated that anxiety arises from the unresolved conflict between the *id* (i.e., internal demands) and the *superego* (i.e.,

environmental demands). Anxiety, according to Freud, should be dealt with by the *ego* functioning that works as a mediator between the *id* demands and the environmental demands (i.e., *superego*). The *ego* functioning is responsible for defense mechanisms that protect the individual from overwhelming anxiety and, consequently, control his/her negative affect. Freud identified a number of *ego*-defenses including suppression, denial, projection, and reaction formation, among others. These defense mechanisms are assumed to be unconscious ways of warding off anxiety that are deeply rooted in the personality. Defense mechanisms used by the *ego* are consistent across different situation. Although this approach enriched the field of coping and stress with materials for developmental and growth oriented studies of adaptation, the related schemas can hardly be operationalized in to usable instruments (Aldwin, 1994).

*Personality Approach.* Within the personality approach coping is looked at as inherently stable personality styles. As postulated by Millon (1982), personality styles characterize the manner in which individuals approach and deal with their everyday life events. The earliest typology in personality trait approach is repression-sensitization. Repressors are those who avoid or suppress information, whereas sensitizers are those who seek information. This typology was followed by similar typologies including blunting-monitoring and approach-avoidant typologies among others. Concerning their relationships with adjustment, approach-monitoring-sensitization style of coping proved to be more effective in enhancing adjustment than avoidant-blunting-repression style (Aldwin, 1999; Roth & Cohen, 1986). In addition research finding showed that individuals alternate between avoidant and confronting types of coping when faced with highly stressful events (Aldwin, 1999). Although the use of personality style in assessing coping with stress allow for more complex descriptions of the ways in which individuals behave and cope with life stressors, this approach ignores environmental demands that can affect and shape the individual's behavior (Aldwin, 1994).

*Coping Processes.* This approach is based on the cognitive behavioral perspective that considers coping as an outcome of personal preference and as a response to environmental demand; how individual cognitively appraise a situation is a primary determinant of how he/she copes with it. According to Folkman and Lazarus (1984),

an event could be appraised as benign, threatening, harmful, and challenging based on the environmental demands associated with it and the individual's beliefs, values, and commitments. If the situation is appraised as benign, no coping is required. Threatening and challenging situations call for problem focused coping, whereas harmful events and loss (e.g., cancer, bereavement) evoke *palliative coping* directed at decreasing the negative emotion associated with stressors. Coping, according to this approach, varies within individuals, depending upon the situational context, and within contexts, depending upon individuals' differences (Aldwin, 1994).

### **2.3.2. Coping: Problems of Assessment**

Coping has been assessed using different methods including experimental-based research (e.g., stimulus-response assessment), "paper and pencil" tests of states and personality, and qualitative research (e.g., interviews). How coping *is* assessed and *should be* assessed is still a controversial issue. Questions raised relevant to these issues, according to Aldwin (1994), concern whether psychologists should measure coping *styles*, which are considered to be stable characteristics of individuals, or coping *processes*, that are postulated to fluctuate depending on situations' demands and persons' preferences. Questions were also raised regarding the content of items; should the content of items be general and applicable to a variety of situations or should they be specific to a particular type of events? Should psychologists apply dichotomized items that signify whether a particular coping strategy is used or use ratings of items that indicate coping effort invested by individuals?

With regard to the problem concerning the use of coping style measurements versus coping processes measurements, the key criteria is the research question at hand. A process measurement is preferred if the researcher wants to examine how does an individual cope with *a particular* event (e.g., cancer), whereas a style measure might be better if one wants to assess how the individual *usually* copes with stressful events. In this study, coping processes measurements are chosen as the question at hand pertains to how do cancer patients cope with cancer over time. Section (4.4.5) provides more details about the way coping is assessed in this study.

## 2.4. Cancer Disease

Cancer is a term for diseases in which abnormal cells divide without control. The reason for this uncontrollable division of the cell is the presence of a mutation in the genes responsible for limiting cell growth (e.g., P53; a protein weighing 53,000 Daltons and functions as an inhibitor of cell growth). Cancer cells do not follow ordinary complex regulation that control normal tissues and their functions. Cancer cells can invade nearby tissues and can spread through the bloodstream and lymphatic system to other parts of the body (The National Institute of Health (NIH), 1997). Cancer create symptoms by pressing nerves in the region, by obstructing hollow visceral conduit, by ulceration onto a mucosal surface, and by occupancy of visceral substance with resultant lack of function. Thus cancer patients may experience pain, anorexia, fever, weight loss, and fatigue among others due to the tumor's effect (Holland, 1998). The TNM system is used to classify tumor by size and invasion; section (4.3.2.6.) provides more information about that. Cancer is usually treated using surgery relieve symptoms (i.e., *palliative* surgery) or to excise tumors and, consequently, the cancer-related symptoms (i.e., *curative* surgery). Other types of treatment involve radiotherapy and chemotherapy that proved to be effective, specially, in situations in which tissues can not be resected or could be resected but with great disadvantages (Holland, 1998).

In Germany, more than 340 000 persons develop cancer and more than 210 000 die from their diseases each year. Improvement in knowledge of cancer etiology, however, took place, and accordingly clues as to how the *occurrence* of cancer can be prevented were provided. During the last decade, there was a decline in deaths from cancers that were usually lethal in the past, however, now cancers are diagnosed and treated with a much higher degree of success. Nevertheless, this decline in mortality does not essentially mean that the risk of contracting a particular cancer is reduced; in many cases the risk and incidence of the disease may even continue to rise while its mortality falls (the Atlas of Cancer Mortality, 2001).

### **2.4.1. Cancer: Indicators of Adjustment**

Although the individual's cancer experience can be very unique depending on the specific diagnosis and treatment, commonality of cancer experience that is shared by all survivors does also exist. All the cancer survivors need to overcome uncertainty associated with cancer diagnosis, treatment, and survival issues, maintaining previous roles and functions despite the cancer-related physical limitation, problems of finance and insurance, and network reaction and support. Within this context, different facets of adjustment to cancer have been measured by many studies. In the present study, indicators of well-being and adjustment used include negative affect, quality of life, pain, fatigue, and impairment attributed to illness.

#### **2.4.1.1. Subjective Well-being: Negative Affect**

The term subjective well-being pertains to how people evaluate their lives including individuals' subjective judgements such as life satisfaction; and affective evaluation such as positive and negative emotional feelings. People high in subjective well-being are those who are satisfied with their lives and experience frequent positive emotion. Subjective well-being is composed of global life satisfaction, contentment with different life domains, the present of frequent positive affect and a relative absence of negative affect (Diener & Fujita, 1995). Positive and negative affect could also be reduced into elements constituting them. Positive affect could be divided, for example, in to happiness, elation, and joy, whereas negative affect could be divided into sadness, worry, anxiety, anger, stress, depression, and feeling of guilt. Individuals who receive cancer diagnosis, experience cancer recurrence, or experience a failed cancer treatment usually report most of these symptoms. These symptoms, however, usually resolve over time as patients receive support from family, friends, and the medical staff (see section 3.1). There is a growing evidence from the literature on cancer that a significant proportion of survivors with different sites of cancer adjust themselves very well after the first year post-treatment (Kornblith, 1998).

#### **2.4.1.2. Quality of Life**

Quality of life is a broad term that can be used to refer to several aspects of the individual's life. Within the context of cancer, quality of life pertains to patients' appraisal of and satisfaction with their current level of functioning as compared to what they perceive to be possible or ideal (Cella & Cherin, 1988). This definition was modified in order to incorporate several dimensions related to this concept. Quality of life refers to the extent to which one's usual or expected physical, emotional, and social well-being are affected by a medical condition or its treatment (Cella & Cherin, 1988). Assessments of quality of life of patients suffering from serious and life threatening diseases such as cancer are designed to examine different dimensions including physical concern (e.g., symptoms, pain), functional ability (e.g., activities), social well-being (e.g., family), emotional well-being (e.g., distress), treatment satisfaction, intimacy (e.g., sexual relationship), and social functioning (e.g., social role). In addition to these dimensions, two summery dimensions are also used to assess the individual's global health status (e.g., items measuring the overall quality of life or the overall health status). Quality of life assessments are not only indicators of patients' adjustment but also markers of illness treatment effectiveness. Thus, not only patients' quantity of life (i.e., survival time) but also their quality of life should be taken into account when considering treatment effectiveness, coping, and adjustment to serious illness.

#### **2.4.1.3. Pain**

Among cancer patients, reports of pain are usually associated with the treatment phase (e.g., surgery and adjuvant therapy) and tumor involvement. Report of pain, however involves several aspects other than the physical experience. These aspects include personality, affect, cognition, and social relation (Breitbart & Payne, 1998). Breitbart and Holland (1990) examined the interaction of cognitive, emotional, and socio-environmental and physical aspects of pain in terminal illness; their findings highlight the necessity to extricate and tackle both the physical and psychological aspects associated with pain. In cancer patients, fears of disability, changed body image, pain, and death are found to affect levels of pain reported (Breitbart & Holland, 1990). In order to manage pain, assessment are used to measure pain

intensity (e.g., average, at worse), description (e.g., burning, dull), duration, and frequency. These indicators enhance determining the needed amount of analgesic, evaluation of the effectiveness of the ongoing treatment, identify the mechanism of pain (e.g., somatic, neuropathic), and may suggest the way patients response to adjuvant analgesics (i.e., Opioids). Accordingly, assessing pain in cancer patients and those with terminal illness should be continuous in order to examine changes in pain level, intensity, and interference with everyday life activities over the course of treatment.

#### **2.4.1.4. Fatigue**

Fatigue could be defined as an overwhelming constant sense of exhaustion and decreased capacity for mental and physical activities (Piper, 1989). Cancer-related fatigue is a psychological as well as a physiological phenomenon. The causes of fatigue may be associated with cancer symptoms (e.g., tumor size), treatment side effect (e.g., post-operative fatigue, fatigue caused by adjuvant chemo- and radio-therapy), emotional strain, cancer-related anxiety (e.g., anxiety conditioned by chemotherapy), progressive disease, or the residual physical changes after treatment (Greenberg, 1998). In assessing fatigue, issues concerning intensity, frequency, duration, interference with everyday functioning, as previously presenting in cancer-related pain, should also be taken into account. Fatigue is usually measured by assessment of quality of life designed to examine levels of comfort, mood, function, and side effect (e.g., The functional Assessment of Cancer therapy scale). In cancer patients, fatigue and distress are key predictors of quality of life and of the presence of major depressive disorders as well (Greenberg, 1998). The problem regarding treatment of fatigue is the fact that treatment of cancer itself is one of its causes; accordingly, the presence of fatigue can be an indicator of an ongoing recovery process or a cancer symptom. Specifying the cause of fatigue helps treat the symptom by medical means that increase arousal and concentration (e.g., Catecholamine agonist), by budgeting of energy (e.g., sleep, exercise), and by psychological treatment (i.e., interventions).

#### **2.4.1.5. Impairment Attributed to Cancer**

According to Phillip (1992) cancer experience can be considered as a prototype of experiencing loss and a continuous threat to the patient's life. Cancer does not only signify an existential plight to those suffering from it but also can arouse extreme negative emotions (e.g., anxiety and negative affect). This is always the case because individuals are not *educated* to deal with disease and death (Janoff-Bulman, 1992). Accordingly, patients suffering from cancer or other life threatening diseases usually need to change goals and disengage from many commitments and to cope with multiple medical, social, psychological (e.g., changed self-image), and financial implications of their diseases.

The question regarding how does cancer impair one's life concerns the way the individual appraises the multidimensional impact of cancer on his/her life through affecting goals, plans, social role, and resources. The appraised availability of coping resources, whether they are social or personal, can also affect the way the impact of cancer is appraised, and simultaneously, decreases or increases negative effects and distress caused by cancer. Thus, inter-individual variations in resources and emotional reactions to cancer should be taking in to account when evaluating the impact of cancer on one's life.