

AN EXAMINATION OF THE ROLE OF MEANING IN POSTTRAUMATIC
GROWTH FOLLOWING BEREAVEMENT

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Maria Guadalupe Aguirre, daughter of Antonio and Martha Aguirre, was born in Chicago, Illinois, July 15, 1978. She attended Sprayberry High School in Marietta, Georgia, and graduated in 1996. Maria entered The University of Georgia in the Fall of 1996, and graduated with a Bachelors of Science in Psychology with Honors, in the Fall of 2000. Maria entered graduate school at Auburn University in August of 2001.

DISSERTATION ABSTRACT

AN EXAMINATION OF THE ROLE OF MEANING IN POSTTRAUMATIC
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A growing body of research indicates that some individuals who experience a traumatic event are able to experience posttraumatic growth, that is, experience positive changes as a result of surviving and coping with the traumatic event. This process of posttraumatic growth has been evidenced following a wide range of traumatic life events including bereavement. Of particular interest to this study were the cognitive processes related to meaning that have been associated with the process of post-traumatic growth, specifically, the relationships between meaning-making, cognitive coping strategies, and posttraumatic growth in individuals coping with bereavement. Factors such as the type of death experienced by their loved one and the amount of time elapsed since the death of loved one were also considered. The present study utilized online survey methodology in

which 134 participants completed the Post-Traumatic Growth Inventory (PTGI), Sense of Coherence Scale (SOC), Purpose-in-Life Test (PIL), and Cognitive Emotion Regulation Questionnaire (CERQ).

The results yielded by regression analysis suggest that certain cognitive processes related to meaning and meaning-making, specifically, establishing a sense of coherence, searching for purpose and meaning in life, and some cognitive coping strategies such as positive refocusing and positive reappraisal, were correlated with posttraumatic growth in bereaved individuals. The results also suggest that neither the time elapsed since the death, nor the type of death experienced (expected versus unexpected) impact the relationship between meaning-making and posttraumatic growth.

These findings are consistent with the literature on posttraumatic growth and bereavement, namely, that cognitive coping processes characterized by active engagement play a critical role in the processes of adjustment, growth and transformation.

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CHAPTER I. INTRODUCTION

Stress, suffering, and trauma are inevitable to the human condition. Investigators estimate that 50%-60% of individuals in the U.S. experience at least one traumatic event, defined as violent, life-threatening, or outside of the range of normal human experience (Ozer, Best, Lipsey, & Weiss, 2003). Furthermore, as individuals advance through the cycle of life, most will inevitably experience the loss of close friends and loved ones. There is great variability in how people cope with such potentially disturbing experiences, and thus, the possible outcomes are also quite varied. Some individuals experience acute distress from which they are able to recover, while others can develop severe, chronic psychological symptoms from which they may be unable to recover (Bonanno, 2004; Joseph, Linley, & Harris, 2005; Joseph, Williams, & Yule 1997; van der Kolk, McFarlane, & Weisaeth, 1996). Indeed, studies indicate that as many as one-fifth of those who experience a traumatic event will subsequently develop Posttraumatic Stress Disorder (PTSD Alliance, 2005). Similarly, individuals who have experienced an unexpected death of a loved one have an estimated risk of 14.3% of developing Post Traumatic Stress Disorder. Research also suggests that 10% to 15% of individuals coping with bereavement develop chronic depression and a considerable number also exhibit emotional distress and impairment in occupational and social functioning including cognitive disorganization, dysphoria, and health deficits (Bonanno, 2004).

Traumatic events and major life stressors can have serious, debilitating consequences. Given the prevalence of stress and potentially traumatic events in our lives, it would seem important for researchers to identify and examine ways in which individuals can be assisted in their attempts to cope with such events and possibly even make some kind of positive use of such experiences. Historically, the research on trauma outcomes has focused on negative consequences such as, psychopathology and symptoms of psychological distress (e.g., PTSD, depression, anxiety). However, recently researchers have begun to examine the individuals who respond to trauma and stress with resilience and growth as opposed to PTSD or other chronic psychological problems. In the developmental literature, resilience is defined as the presence of “protective factors, . . . that modify, ameliorate, or alter a child’s response to some environmental hazard that predisposes them to a maladaptive outcome” (Rutter, 1990, p. 600). Bonanno (2004) describes resilience as the “ability of adults in otherwise normal circumstances who are exposed to an isolated and potentially highly disruptive event, such as the death of close relation or a violent or life-threatening situation, to maintain relatively stable, healthy levels of psychological and physical functioning” (p. 20). Thus, resilient individuals generally exhibit a relatively stable trajectory of healthy functioning over time following a traumatic or potentially traumatic experience.

Posttraumatic Growth

A growing body of research indicates that some individuals who experience a traumatic event are able to cope with their tragic experience by making some kind of positive change (psychologically, emotionally, and/or spiritually) (Burt & Katz, 1987;

Calhoun & Tedeschi, 1990; Collins, Taylor, & Skokan, 1990; Linley & Joseph, 2004; Schwartzberg & Janoff-Bulman, 1991; Silver, Boon, & Stones, 1983; Tedeschi & Calhoun, 1996; Thompson, 1985). How is it that some individuals not only overcome stressful challenges and traumatic events, but also seem to become strengthened by such adversity, while others collapse and become weakened by such events?

There are many theories that seek to describe or explain the process by which some individuals grow from adversity while others do not. O’Leary and Ickovics (1995) theorize that there are three possible outcomes when individuals are faced with a challenge: survival, recovery, or thriving. Survival denotes a deterioration of functioning in comparison to the levels prior to the event, which can be marked by psychological maladjustment or impairment. When the outcome is recovery, individuals are able to return to equilibrium (their previous baseline level of functioning). In this sense, recovery is synonymous with resilience. A third possible outcome, thriving, involves surpassing one’s previous level of functioning through a process of growth. Similarly, Tedeschi and Calhoun (1995; 2004) describe the experience of positive changes and growth that occur as a result of coping with loss and trauma, which they have termed posttraumatic growth. Thus, the process of posttraumatic growth or thriving, is characterized by positive changes in self-perception, interpersonal relationships, spiritual beliefs, and life philosophies (Linley & Joseph, 2004; O’Leary & Ickovics, 1995; Tedeschi & Calhoun, 1995). Furthermore, the individuals who have thrived often describe themselves as coping with the trauma in such a way that they almost seem to be stronger (in various

dimensions) than they were prior to facing loss, trauma, and adversity (Carver, 1998; Linley & Joseph, 2004; Tedeschi & Calhoun, 1995).

A variety of stressors, life-threatening situations and potentially traumatic events may befall an individual across his or her life. In fact, a wide range of traumatic experiences have been empirically identified and reported as factors that may serve as an impetus for the development of psychopathology or for growth. Post-traumatic growth (PTG) has been investigated in numerous populations including those suffering from various types of cancer (Bonanno, 2004; Collins, Taylor, & Skokan, 1990; Curbow, Legro, Baker, Wingard, & Somerfield, 1993; O'Leary & Ickovics, 1995), individuals diagnosed with HIV/AIDS (Sigel & Schrimshaw, 2000), veterans (Aldwin, Levenson, & Spiro, 1994), sexual assault survivors (Veronen & Kilpatrick, 1983), prisoners of war (Sledge, Boydstun, & Rabe, 1980), survivors of natural disasters (Coffman, 1994; Miles, Demi, & Mostyn-Aker, 1984; Saylor, Swenson, & Powell, 1992), adult children of alcoholics (Palmer, 1997; Robitschek & Kashubeck, 1999), and bereaved individuals (Lehman et al., 1993; Lund, Caserta, & Dimond, 1992; Tedeschi & Calhoun, 1995).

Inarguably, bereavement is a universal event that is painful and stressful, and possibly even traumatic to most individuals (Schaeffer & Moos, 1998; Stroebe, Hansson, Stroebe & Shut, 2001). Despite the painful experience of grieving, bereavement can serve as the impetus for PTG through an individual's engagement of various coping mechanisms. Individuals who successfully cope or thrive from the process of bereavement report experiencing various forms of growth: increased sense of personal strength usually in regards to increased independence, self-reliance, and self efficacy;

more wisdom, maturity, and compassion; improved interpersonal functioning marked by more intimate and more meaningful relationships with others and improved understanding of others; increased appreciation for life in general; and changes in spiritual and religious beliefs (Schaeffer & Moos, 1998; Tedeschi & Calhoun, 1995; 2004), and heightened existential awareness (Yalom & Lieberman, 1991). Of particular interest to the present study is the individual who achieves heightened existential awareness by creating new meaning or purpose in life through his or her personal effort to cope with loss (Tedeschi & Calhoun, 1995; Yalom & Lieberman, 1991).

The preceding literature reveals that while most traumatic events typically engender psychological distress, there also exists the potential for growth following adversity. Thus, it is important to understand the underlying factors that differentiate these two processes. To this end, a large body of empirical and theoretical literature describes various personal characteristics, social resources, and cognitive processes that have been associated with post-traumatic growth. Personal variables and characteristics associated with PTG include extraversion (Evers, Kraaimaat, van Lankveld, Jongen, Jacobs, & Bijlsma, 2001; Tedeschi & Calhoun, 1996), openness to experience, agreeableness, and conscientiousness (Tedeschi & Calhoun, 1996), self-efficacy (Abraido-Lanza, Guier, & Colon, 1998), and positive affect (Abraido-Lanza et al., 1998; Evers et al., 2001; Park et al., 1996; Tennen, Affleck, Urrows, Higgins, & Mendola, 1992). Additionally, social resources associated with PTG include emotional social support and social support satisfaction (Park, Cohen, & Murch, 1996). Cognitive processes associated with PTG include cognitive appraisal abilities and ability to control

aspects of the event (Park, Cohen, & Murch, 1996; Evers et al., 2001; Tennen et al., 1992), problem-focused coping (Armeli, Gunthert, & Cohen, 2001; Evers et al., 2001; Koenig, Pargament, & Nielsen, 1998), acceptance (Park, Cohen, & Murch, 1996), and positive reinterpretation (Park et al., 1996), and the process of meaning-making (Calhoun, Cann, Tedeschi, & McMillan, 2000; Cordova, Cunningham, Carlson, & Andrykowski, 2001; Snape, 1997).

The experience of PTG involves a variety of mechanisms that operate to facilitate growth and transformation. According to various researchers, the degree to which a person is cognitively engaged by the trauma appears to be a critical element in the process of PTG (Linley & Joseph, 2004; O’Leary & Ickovics, 1995; Tedeschi & Calhoun, 1995; 2004). Unfortunately, empirical research on cognitive processes and their relation to post-traumatic growth is rather limited, though emerging. In a study by Park, Cohen, and Murch (1996), cognitive coping strategies related to posttraumatic growth included positive reinterpretation coping, acceptance coping, and emotional support coping. Another study indicated that employing problem-focused coping was positively correlated to experiencing positive outcomes in individuals’ coping with a recent stressor (Aldwin, Sutton, & Lachman, 1996).

Meaning-Making

Meaning-making is an important cognitive process linked to growth following a stressful or traumatic event, both as a coping process, through meaning-making, and as part of the positive outcome, through increased meaningfulness (O’Leary & Ickovics, 1995; Parkes, 1998; Schaefer & Moos, 1998; Tedeschi & Calhoun, 1995). Though there

is strong theoretical support for the role that meaning-making may play in posttraumatic growth, there is a lack of empirical evidence of this hypothesized relationship. However, there is a large body of research that discusses meaning and meaning-making in the context of coping with trauma and the process of bereavement.

Empirical research indicates that traumatic events, such as losing a loved one, often challenge or shatter an individual's basic assumptions about the world (Janoff-Bulman & Berg, 1998; Parkes, 1998; Tedeschi & Calhoun, 1995). In efforts to make sense out of the resulting discomfort and confusion, some individuals apparently use cognitive coping or meaning-making strategies. Meaning-making "involves individuals' attempts to assimilate or make congruent the occurrence of the stressful experience with their pre-crisis or pre-event beliefs" (Parkes, 1998, p. 351).

Several studies investigate the role of meaning in relation to coping with bereavement (Davis & Nolen-Hoeksema, 2001; Gilbert, 2002; Janoff-Bulman & Berg, 1998; Murphy, Johnson, & Lohan 2003; Parapully, Rosenbaum, van den Deale, & Nzewi, 2002; Parkes & Weiss, 1983; Schwartzberg & Janoff-Bulman, 1991; Ulmer, Range, & Smith, 1991). These studies suggest that constructing meaning following the loss of a loved one can play a critical role in the adjustment process. Notably, one study indicated that making sense of their loss was essential for bereaved widows to adaptively cope with their loss (Parkes & Weiss, 1983). In addition, Schwartzberg and Janoff-Bulman (1991) found that the ability to find meaning was inversely correlated with intensity of grief in a bereaved sample of college students. Miles and Crandall (1983) posit that finding an answer to the meaninglessness of a death is a critical part of the

bereavement process. Finally, Parapully and his colleagues (2002) examined the processes that facilitate a positive outcome in bereaved parents; through qualitative research they affirmed that acceptance, personal decision, reaching out to others, and finding meaning were the processes most related to a positive outcome, such as posttraumatic growth.

From an existential perspective, the search for meaning is a universal human experience. “To live is to suffer, to survive is to find meaning in that suffering” (Frankl, 1984, p. 9). Painful or traumatic experiences may heighten the search for meaning because these events often leave an individual grappling with such existential questions as, What is the purpose of life?, What is worth living for?, or Why me?. Consequently, a failure to find meaning in order to come to terms with these questions results in existential neurosis (Yalom, 1980).

Purpose of the Present Study

It is important to retain the perspective that loss, trauma, and adversity are not just precursors to growth, but can be profoundly devastating to the individuals confronting them. These experiences typically produce distress and negative psychological consequences, at least temporarily. The opportunity for growth and transcendence occurs as the individual attempts to cope with an extremely negative set of life circumstances. Although the focus of this study was on the individuals who thrive in the face of adversity, it is critically important to remain aware that for a minority of individuals traumatic experiences result in chronic, life-long debilitating psychological and psychiatric disturbances. Nonetheless, there is a growing body of research that

suggests that reports of growth in the aftermath of trauma outnumber reports of the development of psychological disorders (Bonanno, 2004; Tedeschi & Calhoun, 2004). The challenge for the helping professions is to facilitate individuals' efforts to lessen the long-term negative impact of loss and trauma, and simultaneously enhance the long-term positive impact of such events and experiences. To do so, helping professionals need to better understand the nature of posttraumatic growth and its determinants. In particular, there is a need to understand the role of cognitive coping strategies in the experience of posttraumatic growth, such as the relationship of meaning-making to posttraumatic growth.

Overall, most of the literature that examines meaning-making in relation to posttraumatic growth is primarily theoretical in nature with relatively few empirical studies. While some studies have focused on the cognitive coping mechanisms associated with post-traumatic growth, and other studies have focused on meaning-making as a coping mechanism in bereavement, there appear to be no empirical studies that specifically investigate meaning-making as a coping mechanism which may facilitate or promote PTG in bereaved individuals. Empirical research that specifically examines the role of meaning-making and its relation to PTG is needed in order to more fully understand the cognitive processes that may mediate positive outcomes of stress and trauma. In this way, the factors necessary to experience growth following a traumatic event can be elucidated, and facilitated.

The primary goal of this dissertation was to explore the relationship between cognitive coping styles, particularly meaning-making, and post-traumatic growth (PTG).

This study also sought to explain the role of meaning-making from an existential perspective (the search for purpose in life and meaningfulness) in the outcome of PTG. There are several reasons why the relationship of meaning-making and PTG merited further investigation. Evidence suggests that the type of meaning (such as the ability to make sense of a traumatic event versus the ability to find benefits resulting from the traumatic event) has a differential effect on the outcome of bereavement (Davis, Nolen-Hoeksema, & Larson, 1998). Additionally, there is empirical research that examines the role of meaning-making in the bereavement process (Davis et al., 1998; Gilbert, 2002; Janoff-Bulman & Berg, 1998; Murphy & Johnson, & Lohan, 2003; Neimeyer, 2001; Parkes & Weiss, 1983; Schwartzberg & Janoff-Bulman, 1991; Ulmer, Range, & Smith, 1991). One study examined the processes that facilitate a positive outcome in individuals faced with traumatic event (Parapully et al., 2002). However, there are no empirical studies that specifically examine meaning-making as a factor which may facilitate or promote PTG in individuals' efforts to cope with bereavement.

By examining the role of meaning in the process of successfully coping with bereavement, a deeper understanding of cognitive coping mechanisms associated with resilience and posttraumatic growth was established. The present study sought to clarify variables that facilitate or promote growth in individuals faced with bereavement that may be generalizable to individuals facing other types of adversity or trauma. Answering these questions through empirical exploration generated valuable information on the complex processes that enable some individuals to thrive from adversity. This study also has many significant implications for the counseling process. By learning from

individuals who have used internal resources to not only overcome, but to thrive from adversity, clinicians can develop and implement more effective treatment programs for other individuals facing adversity or trauma. Empirical evidence describing the opportunity for growth following adversity could be potentially uplifting to both clinicians and clients by providing hope that trauma can be overcome and transformed. From a strength-based perspective, it is important that clinicians be made aware of the potential for growth in their clients following trauma so that they may capitalize on their clients' personal characteristics that have been empirically associated with PTG thereby transforming these characteristics into strengths. Additionally, interventions can be tailored to targeted needs of the traumatized individuals if they are built upon a deeper understanding of both negative and positive responses to bereavement and other traumatic events. In this way, as the mechanisms by which individuals successfully cope and thrive are better understood, findings such as the ones produced by this dissertation study can be applied to counseling, psychotherapy, and education.

CHAPTER II. REVIEW OF THE LITERATURE

This chapter reviews relevant theoretical and empirical research literature in the fields of trauma, bereavement, posttraumatic growth and meaning-making. Attention also will be given to examining the role of cognitive coping mechanisms in the process of growth following bereavement.

The Role of Trauma

Various types of stressors and crises can serve as the impetus for growth. It is unclear whether certain events are more likely to result in personal growth than others. Although, it is not the event itself that is responsible for posttraumatic growth (PTG) as much as it is how the individual copes with the aftermath of the trauma. In order for the stressor to be an opportunity for growth, it must be seismic enough to cause disequilibrium in functioning (causing great emotional distress and discomfort). As the individual struggles to adapt and cope with the distress, they may emerge from the crisis changed—better off than they were before. This section will review the empirical evidence for PTG following illness, natural disasters, war and combat, and bereavement.

Illness

One type of stressor that has been associated with growth is life-threatening illness. Individuals experiencing serious illness often struggle to cope with the threat of shortened lifespan, pain, or loss of function; for some individuals such stressors prompt them to re-examine their values and priorities. For example, Schwartzberg (1994)

conducted a study in which a majority of the sample of HIV-positive men described a transformative experience as a result of their illness. They reported the struggle with HIV served to mobilize their personal strengths and internal resources. Some individuals reported becoming more compassionate, empathic and altruistic. Another study by Gaskins and Brown (1992) also found HIV-positive men reported positive changes in their life as a result of their diagnosis, including improved philosophy of life, acceptance of their sexual orientation, and a reduction of high-risk behaviors.

Similarly, a number of studies of individuals with cancer have identified post-traumatic growth as evidenced by enhanced personal and social resources (Kristjanson & Ashcroft, 1994; O'Connor, Wicker, & Germino, 1990; Welch-McCaffrey, Hoffman, Leigh, Loescher, & Meyskens, 1989). Studies on women with breast cancer have found positive outcomes, such as improved quality of interpersonal relationships, increased optimism, strengthened personal character, and enhanced empathy towards others (Northouse, 1994; Zemore, Rinholm, Shepel, & Richards, 1989). Research with men diagnosed with advanced testicular cancer also report similar findings (Rieker, Edbril, & Garnick, 1985). Finally, studies on individuals who received bone marrow transplant (BMT) cancer treatment found that individuals reported several positive psychological outcomes. The outcomes reported by BMT survivors included enhanced life philosophy, improved family relationships, and increased social support (Fromm, Andrykowski, & Hunt, 1996) as well as, finding new meaning and value in life, increased self esteem and self confidence, and improved life goals and purpose (Curbow, Legro, Baker, Wingard & Somerfield, 1993).

Disasters

Researchers have also identified positive outcomes that resulted from successful adaptation to natural disasters such as fires, floods, earthquakes, volcanic eruptions, and tsunamis. Two studies on children who endured hurricanes found positive changes in some children, such as increased empathy and compassion for others, improved family relationships, and insight into basic necessities needed for survival (Coffman, 1994; Saylor, Swenson, & Powell, 1992). Miles, Demi, and Mostyn-Aker (1984) examined the experience of rescue workers who confront massive death and destruction from disasters. They found confrontation with disaster changed the life of a majority of the rescue workers in their study; they reported increased altruism and compassion and an enhanced appreciation for the fragility of life.

War and Combat

The danger and uncertainty which characterizes the trauma of war and combat may also serve as an impetus for growth. Yarom (1983) investigated the experiences of Israeli soldiers who fought in the Yom Kippur War. A significant number of soldiers reported that their combat experience heightened their sense of mortality and vulnerability; as a result, they noted improved interpersonal relationships, increased enjoyment of life, and the desire to live more meaningful lives. A study that investigated the experiences of Israeli families who endured the stressors associated with the Gulf War also identified positive consequences (Rosenthal & Levy-Shiff, 1993). The mothers in this study reported that their school-aged children displayed increased altruism and the

desire to assume more responsibility, whereas adults reported renewed awareness of their family's closeness and commitment.

Bereavement

Experiencing the death of a loved one can also provide the context for growth. Kessler (1987) interviewed bereaved individuals and found that many of them described positive changes after their loss, such as enhanced wisdom and maturity, a new life perspective, increased independence and compassion, and purpose in life. Individuals who lost a spouse reported higher levels of independence and self-reliance as they adjusted to living alone. Several individuals in her study described an intention to live life more purposefully and to the fullest as a result of a heightened awareness of the fragility of life. Simon and Drantell (1988) investigated the experience of adult individuals who lost a parent during their childhood; these bereaved individuals reported increased self-reliance and self-efficacy, and a greater understanding of others in adulthood. Similarly, Calhoun and Tedeschi (1990) interviewed individuals about their experience with bereavement. Most of the respondents described some positive psychological changes, including increased independence and maturity, greater social support, improved ability to cope with other crises, a deepening of religious beliefs, and an acceptance of their own mortality.

The Process of Bereavement

The research on coping with trauma and on coping with bereavement has traditionally been investigated as distinct entities, despite the apparent overlap between the two fields. The theoretical and empirical literature on coping with bereavement

primarily seeks to explain how individuals cope and recover with the stress and grief resulting from loss of a loved one. Generally, the psychological mechanisms and strategies that bereaved individuals employ, and the ways in which these mechanisms promote adaptive coping are examined. The following section first describes the conceptual literature on coping with bereavement, with a specific focus on bereavement models that describe outcomes of growth. Additionally, the conceptual and empirical literature on bereavement risk factors and outcome will be critically reviewed.

Models of Bereavement Coping

Theories of bereavement describe the grief reactions that follow bereavement and also explain the mechanisms by which bereavement affects the psychological well-being and health of bereaved individuals. Moreover, most models of coping with bereavement are concerned with patterns of coping that lead to an outcome of adaptation. Implicit is the assumption that adaptive coping is comprised of adaptive strategies which Stroebe and Schut (2001) define as “those [strategies] that actually lead to a reduction in the negative psychosocial and physical health consequences of bereavement or to a lowering of grief” (p. 376). Thus, adaptive coping describes the processes that may lead to an amelioration of negative symptoms and psychological distress by which individuals return to pre-event levels of normal functioning. This trajectory of adjustment and adaptation is analogous to the process of recovery described in O’Leary and Ickovics’ (1995) model of thriving. In contrast, posttraumatic growth following bereavement entails more than just adjustment or adaptation; PTG entails growth. As such, the

following models go beyond examining adaptation by describing how coping with bereavement can lead to personal PTG.

Experiential Theory

The Experiential Theory of Bereavement (ETB) was introduced by Hogan, Morse, and Tason (1996). The theory was developed using qualitative analysis of narratives of bereaved individuals across various dimensions, including the bereaved individuals' relationship to the deceased, timeliness of the death, and the nature of the death. The bereaved individual's relationship to the deceased included child, sibling, and parent; the deaths of the deceased were due to acute or chronic illness, accident, suicide, or homicide. While the context of bereavement was found to have some influence over the course of the bereavement process, a pattern of strategies and behaviors was discovered which individuals employ during bereavement regardless of the nature of the death, the relationship of the bereft to the deceased, or the timeliness of the death. The seven components of the identified pattern include *Getting the News*, *Finding Out*, *Facing Realities*, *Becoming Engulfed with Suffering*, *Emerging from the Suffering*, *Getting on with Life*, and *Experiencing Personal Growth* (Hogan, 1996). The authors describe these seven processes as cyclical and overlapping, such that the bereaved individual may move back and forth through each component or proceed sequentially.

Regardless of the pattern of progress, the final phase of the model is the experience of personal growth. Personal growth is described as “a process of becoming more caring and connected to others...liv[ing] more intentionally and deliberately with regard to people they love” whereby the bereaved “emerge from the experience as a wiser

and ‘better person’ (Hogan et al., 1996, p.59). Hogan and his colleagues attribute the growth to the process of the bereaved overcoming the pain of grief and rising above states of hopelessness and emptiness. A critical component associated with the process of growth is engaging in a search for meaning and purpose. This search entails “evaluating what was really meaningful in life and reassigning priorities” (p.58). Hogan et al. (1996) report that the bereaved individuals engaged in what other researchers term benefit finding or construing benefits or positive effects that result from the tragedy. In addition, many of the participants in their study reported a great sense of altruism in which they felt compelled to join support groups and share their experience with others.

Conceptual Model of Positive Outcomes

Schaeffer and Moos (1992, 1998) constructed a conceptual model for understanding positive outcomes for life crises similar to the model developed by Hogan et al., (1996). Schaeffer and Moos recently applied this model to the bereavement process (2001). The model is comprised of five panels with bidirectional paths: environmental resources (panel I), personal resources (panel II), life-crises or transition (panel III), cognitive appraisal and coping responses (panel IV), and positive outcomes (panel V). Panels I and II represent pre-existing personal and environmental resources that will affect how individuals will confront bereavement described in panel III. These panels also influence the coping responses and cognitive re-appraisals individuals may employ to cope with bereavement. In this way, panels I through IV are all factors that interact with and have some bearing on subsequent positive outcomes following bereavement, in the forms of enhanced personal resources, coping skills, or personal resources.

According to Schaeffer and Moos, “coping is regarded as a pivotal process through which personal and social resources foreshadow enhanced psychological functioning in the aftermath of a life crisis” (2001, p.151). Thus, coping responses are not only employed during bereavement and thereby facilitate or promote personal growth, but they become part of a positive outcome in and of themselves when they become strengthened or enhanced through the process of bereavement. These enhanced coping skills along with improved social resources comprise positive proximal outcomes; in contrast, enhanced personal resources are described as ultimate positive outcomes of coping with bereavement.

Resolution and Growth from Grief

The last theoretical model to be reviewed that is relevant to growth following bereavement is Nerken’s (1993) model of resolution and growth through grief. Nerken’s model posits a dyadic and ontological theory that explains the processes by which loss, recovery and growth occur during the grieving process. The self is envisioned as being comprised of two separate but interactive components: the *core self* and the *reflective self*. The core self encompasses an individual’s identity and involves ideas, talents, opinions, dreams, purposes and commitments. It is from the core self that feelings and emotions originate.

The reflective self is the component of the self that engages in cognitive processes such as thinking, perceiving, interpreting, and meaning-making. It is these cognitive processes that act upon the core self and influence emotions or affect; this interaction between the core self and the reflected self becomes a type of internal dialogue that is

paramount during bereavement. In contrast to the core self, which remains virtually intact after a loss, bereaved individuals have reported the experience of a fragmented or shattered self which Nerken believes is a reference to their reflective self.

The foundations of the reflective self are the attachments and connections one makes to other individuals (objects). Further, attachments serve to lend meaning and purpose to the lives of individuals (Nerken, 1993). Unlike the core self, the reflected self becomes fragmented during loss because the objects of the attachment are lost.

According to this theory, a critical process in grieving is the construction of meaning:

Individuals are strengthened by suffering not because of what happened to them, but by how they choose to respond...The interpretation of suffering, we can now see, is the special work of the reflective self, as it ponders the meaning of the loss, and processes the feelings emanating from the core. The time and effort spent in grief work on the search for meaning within the suffering is what the reflective self needs to grow... (Nerken, 1993, p.18).

Thus, the opportunity for personal growth occurs as the core and reflective selves interact to confront and make sense of the loss. The growth that results is defined by an improved, reflective self with increased stability, security, and self-awareness or authenticity.

Bereavement Outcome Risk Factors

The previous section described theories of coping with grief and loss that attempt to explain the impact and significance of different ways of coping on the bereavement process; while the section primarily discussed successful coping, adaptation, and growth

following bereavement, not all bereaved individuals adjust successfully. In fact, for some individuals, bereavement can trigger long-term mental health issues, including depression (Zisook & Schuchter, 1991), anxiety (Herbert, Dang, & Schulz, 2006), complicated grief syndrome (Prigerson et al., (1996), and Post Traumatic Stress Disorder (Kaltman & Bonanno, 2003; McClatchey & Vonk, 2005). Thus, it is important to identify the factors that place individuals coping with bereavement at an elevated risk for developing negative outcomes. Additionally, the identification of risk factors can be used to empirically test theoretical explanations of the impact of bereavement on health. This section will discuss the risk factors in bereavement outcomes in by categorizing them into three broad categories: individual characteristics, mode of death, and situational/contextual factors following loss.

Individual Characteristics

One would intuitively assume that the older an individual is at the time of bereavement, the higher the risk for poor outcomes. However, the general consensus of the studies appears to support the opposite: younger bereaved individuals are more likely to develop significant negative mental health consequences as a result of their loss (Sanders, 1988; Stroebe & Schut, 2001). This relationship between age and health impairment has been demonstrated in regards to increased mortality rates among younger widows when compared to older widows (Helsing, Szklo, & Comstock, 1981; Kraus, & Lilienfeld, 1959). This pattern is also evident in regards to increased grief symptomatology (Ball, 1977; Sanders, 1981) and increased psychological problems (Parkes & Weiss, 1983). However, increased physical problems were reported by older

widows, when compared to younger widows (Parkes & Weiss, 1983; Sanders, 1988). There are relatively few hypotheses offered to fully explain the impact of age on bereavement outcomes. Some researchers believe that bereavement exacerbates existing problems in the elderly (Sanders, 1988), while others posit that expectedness of death may serve as a mediating variable in the relationship between age and grief reactions/bereavement outcomes (Stroebe & Schut, 2001).

There are mixed results regarding the effect of gender on bereavement outcome. Early studies found no significant differences between widows and widowers in bereavement outcome (Clayton, Halikas, & Robins, 1973; Heyman & Gianturco, 1973); however, these earlier studies lacked non-bereaved control groups. More recent studies indicate that when compared to same-sex, non-bereaved individuals, losing a partner for widowers results in higher mortality rates and higher levels of depression (Goldman, Korenman, & Weinstein, 1995; Joung, 1996; Parkes & Brown, 1972; Rogers, 1995; Stroebe & Stroebe, 1983; Young, Benjamin, & Wallis, 1963). There are some explanations for why widowers fare more poorly than widows, but these explanations have not been empirically tested. Stroebe & Schut (2001) have proposed that the gender differences in bereavement outcome may stem from differential social support received by men and women: widows receive more social support than men. Another explanation they offered was that gender differences in coping styles could impact bereavement outcome. However, while there is evidence regarding gender differences in coping styles -- men appear to prefer problem-focused coping style and women prefer emotion-focused

coping (Folkman & Lazarus, 1980), there is a lack of evidence to support that one type of coping style is more or less effective in coping with grief.

There is a limited amount of research that assesses the impact of personality on bereavement outcomes, primarily because most studies tend to focus on post-morbid characteristics (i.e., grief reactions and associated outcomes) instead of examining pre-morbid characteristics. From this perspective, studies have found that individuals who are insecure, anxious, and fearful (Parkes & Weiss, 1983) as well as those who are prone to depression, and who exhibit intense clinging behavior or excessive pining for the deceased (Parkes, 1975) are at higher risks for poor outcomes. Vachon and her colleagues (1982) found that the individuals who exhibited high levels of distress for a period of two years after bereavement tended to be guilt-prone, apprehensive, worried, highly anxious, and had low ego strength; in contrast, the individuals who showed low distress levels were characterized as emotionally stable, mature, conscientious, conservative, socially precise and displayed high ego strength. Another study found that bereaved individuals with high self-esteem and high internal locus of control had higher levels of adjustment following a sudden loss (Stroebe, Stroebe, & Dommitner, 1987).

Type of Death

The circumstances surrounding the death of a loved one can also affect the course and outcome of bereavement. According to stress, attachment, and bereavement theories, both the abruptness of the loss and the length of time an individual has to prepare for the loss significantly impact the outcome (Sanders, 1988; Stroebe & Schut, 2001). The research indicates that sudden unexpected deaths have deleterious effects on the bereaved

including prolonging grief reactions, producing excessive psychological distress and increased somatic complaints (Herbert et al., 2006; Lundin, 1984; Parkes & Weiss, 1983; Rogers, 1995; Sanders, 1988; Stroebe, et al., 1987). Another study found unexpected losses to be related to higher levels of depression and somatic concerns (Stroebe et al., 1987). Kaltman and Bonanno (2003) found that sudden, violent deaths predicted symptoms of PTSD and depression over time.

It has been suggested that those who survive the loss of a suicide by a family member may experience greater problems of adjustment than those who experience death from other causes (Sanders, 1988; Stroebe & Schut, 2001); however, the research on this topic is very scarce. The few studies that have examined the psychological consequences of bereavements of suicide deaths compared with other types of deaths, have not found any significant differences in the bereavement outcome (Barret & Scott, 1987; Farebow, Gallagher-Thompson, & Thompson, 1992; Shepherd & Barraclough, 1974; Sherkat & Reed, 1992).

Interpersonal and Contextual Factors

An interpersonal and situational factor that moderates the impact of bereavement is the kinship relationship between the deceased and bereaved individual. Investigators suggest that the loss of a child results in increased somatic reactions, greater depression, marriage dissolution, and more feelings of anger, guilt and despair in bereaved parents as compared with individuals who had lost a spouse, parent, or sibling (Cleiren, 1991; Leahy, 1992; Levy, Mattinowski, & Derby, 1994; Miles & Demi, 1984; Nolen-Hoeksema, McBride, & Larson, 1997; Sanders 1979). There are several theories that

attempt to explain why the loss of a child results in poor grief outcomes. According to Sanders (1988) the improbability of surviving their children appears to render parents ill-equipped to cope with the reality of such a painful event. Furthermore, she contends that the strong identification inherent in the parent-child bond, parents feel after a child dies that a part of themselves has died, thereby doubling their grief as they mourn the loss of the child and a part of themselves. Explanations from an evolutionary psychology perspective point to the concepts of inclusive fitness (people care for relatives to the extent that they share their genes), parental investment (the resources parents invest in their children), and reproductive value (the likeliness that an individual's genes will be passed on to future generations) (Archer, 1999). Thus, taken together these three variables would explain why the death of a child results in greater grief intensity than the loss of a sibling, parent, or spouse.

Another risk factor in bereavement outcome is a lack of social support. One study found that social support mediated the impact of bereavement on depressive symptoms (Stroebe et al., 1997). Another study found that widows who had more satisfying interpersonal relationships had better outcomes when compared to those who reported unmet needs in their interpersonal relationships (Maddison & Walker, 1967). Social support has been found to have a positive affect on psychological well-being and appears to serve as a buffer against poor bereavement outcomes (Norris & Murrell, 1990; Sanders, 1983; Schwarzer, 1992; Stroebe & Schut, 1999).

The data presented in this section suggests that bereavement is a complex, multidimensional process that is mediated by physical, psychological and sociological

factors. Several risk factors have been identified and determined to have a significant negative impact on bereaved individuals: sudden and unexpected deaths, parental bereavement, lack of social support, and a lack of ego-strength. However, due to the lack of long-term longitudinal studies, it is difficult to assess all of the long-term health risks associated with bereavement.

Posttraumatic Growth

Although the main focus of this proposal concerns the possibility of growth and positive changes resulting from the struggle with adversity, as noted earlier, it is important to remember that trauma can and does produce significant psychological distress. Traumatic events are profoundly disturbing, yet posttraumatic growth (PTG) can occur concurrently with the attempts to adapt and cope with psychological distress. Thus, the psychological processes that are responsible for managing the disturbances are the same ones that have the potential to incite growth. In this section of the literature review, emphasis is given to describing theoretical and conceptual frameworks for understanding the process of posttraumatic growth. Additionally, the empirical research on PTG will be reviewed, with an emphasis on the role of cognitive processes.

Theoretical Underpinnings of Post-Traumatic Growth

Tedeschi and Calhoun (1995) have proposed a model that explains the process of posttraumatic growth that occurs as a result of successful coping and engagement with loss and trauma. They assert that growth is a possible outcome of trauma, but not necessarily attained by all individuals. A critical principle of this model is that growth does not occur as a direct result of trauma; instead it is the individuals' struggle with the

aftermath of trauma that is crucial in determining the extent to which posttraumatic growth occurs. As in O'Leary and Ickovics' model (1995), growth is contingent upon active engagement (as opposed to disengagement or avoidance) with the loss or trauma.

Several principles of growth underlie Tedeschi and Calhoun's (1995) model. First, following a life challenge or traumatic event, some type of change must occur in the individual's worldviews and/or views of the self. Secondly, this change in view is characterized by a deeper understanding of the self and world. As a result of this deeper understanding, the individual more effectively copes with future distress, engages in activities which she had not previously attempted, or receives previously unattainable benefits. In addition, the losses experienced by the individual as a result of the challenging event are transformed into positive gains in the present and the future. The final principle of growth dictates that all of these changes occur because of *active engagement* with the struggles brought about by the challenge.

According to Tedeschi and Calhoun (1995) posttraumatic growth can best be explained in terms of a self-regulatory system of feedback loops. Their model (See Fig. 1) consists of seven interactive panels in which arrows depict where important effects occur. The first panel represents the individual's pre-existing personality characteristics that are involved in coping with the trauma, and may in turn be changed as result of engagement with trauma. The trauma itself is represented in Panel 2 and is appraised within the perspective of personality characteristics from Panel 2. Panel 3 depicts the individual's initial responses to the traumatic event that are comprised of affect, in which the emotional distress is appraised as unmanageable;

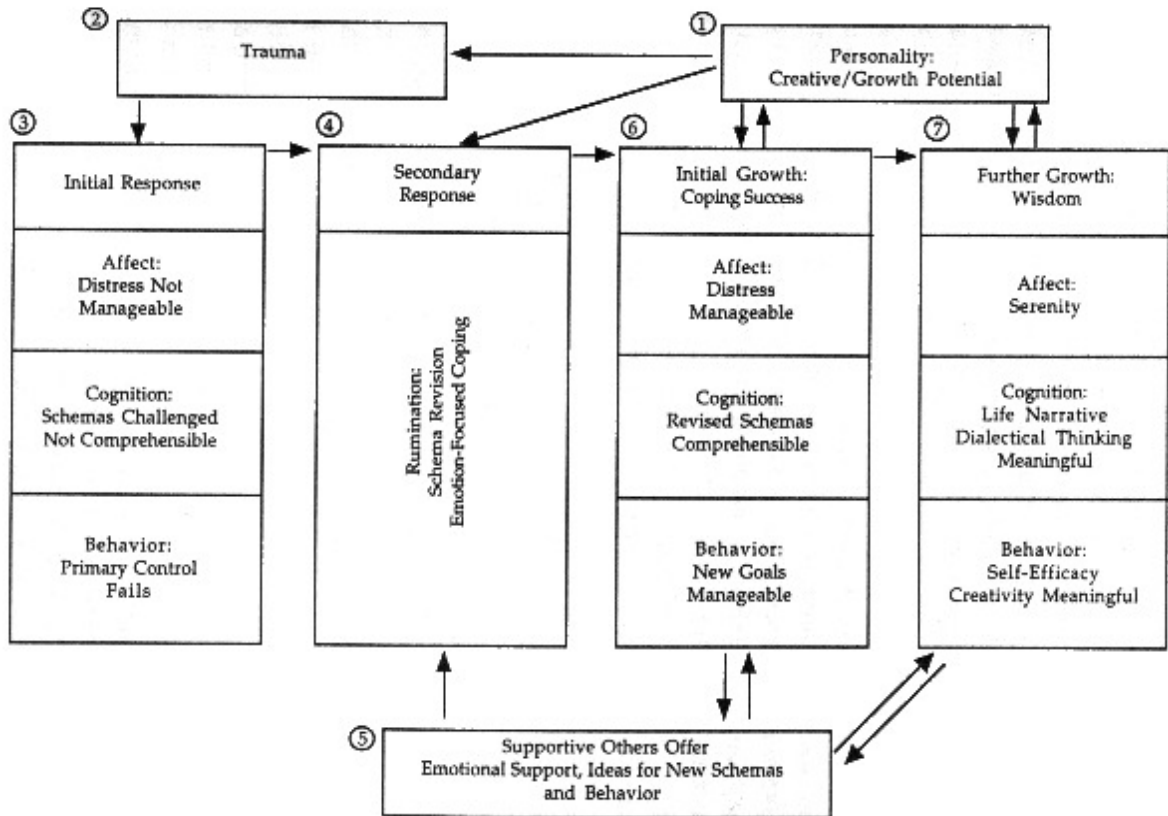


FIG. 1. Trauma and Transformation (Tedeschi & Calhoun, 1995).

cognition, in which existing higher-order schemas are challenged; and *behavior*, in which primary attempts to control the effects of the trauma are unsuccessful. These initial responses then lead to secondary responses (Panel 4) in which rumination and subsequent schema reconstruction (meaning-making) occurs. The social support the individual receives (emotional support and suggestions for new behavior or new interpretations of the event) is represented in Panel 5. This social support may include not only support from family and friends, but also psychotherapeutic services.

The final two panels represent the posttraumatic growth itself (Panel 6 and Panel 7). The initial growth is characterized by successful coping comprised of cognition, affect, and behavior “where the situation is understood, emotional distress decreases, and action is taken to successfully obtain revised goals” (Tedeschi & Calhoun, 1995, p. 90). Thus, it is during this stage that reconstruction occurs. The final stage is characterized by further growth and wisdom that ensues as result of continued cognitive processing. Wisdom is marked by emotional serenity, dialectical thinking and meaningfulness, as well as by self-efficacious or creative behavior. According to Tedeschi and Calhoun (1995), “the meaningfulness of life is deepened when the preciousness of what remains is enhanced by the losses” (p. 91). Thus, meaning, more specifically, meaningfulness, also plays an important role in this phase. During the final stage the positive effects of growth are stabilized and internalized. Cognitive processing has resulted in the creation of new meaning and a new life narrative that encompasses the traumatic event.

Although the end result of this model is positive change, Tedeschi and Calhoun recognize that not all individuals are able to triumph over trauma; furthermore, for those

individuals who do experience growth, their transformation may be concomitant with enduring distress. These researchers believe that this enduring distress may aid in enhancement and maintenance of posttraumatic growth.

Empirical Findings on PTG

In addition to the theoretical literature that conceptualizes and explains the process of personal growth following a traumatic event, there is also a growing body of empirical research focusing on the positive outcomes that may result from successful engagement with a traumatic event. This section will review the empirical literature related to conceptual posttraumatic growth described in the previous section; of particular interest are the contextual factors related to posttraumatic growth, such as personality characteristics and coping styles.

Personality Characteristics

There are various pre-existing personal resources which influence how people cope and adapt to stressors and traumatic events. It appears that the personal characteristics which enhance the possibility of growth following a traumatic event are those that affect the manner in which people process information and develop solutions to problems. The personal characteristics investigated empirically include optimism, hope, complex cognitive style and coping style. Several other personality factors have been suggested by researchers and theorists as possible facilitators of personal growth following a crisis. These factors include an internal locus of control, self-efficacy, a sense of coherence, hardiness, and prior experiences with life crises (O'Leary & Ickovics, 1995; Tedeschi & Calhoun, 1995; Tennen & Affleck, 1998). However, at this time there

is a limited number of empirical studies that examine these personality characteristics and their relationship to posttraumatic growth.

Optimism. Optimism is defined as the generalized expectancy for positive outcomes (Scheier & Carver, 1985). Studies indicate that when compared to pessimists, optimistic individuals are more likely to extract a sense of benefit from adversity, usually from a positive interpretation of the present. For example, Curbow et al. (1993) found that for individuals who received and recovered from bone marrow transplants, personal growth was correlated with greater levels of optimism. Similarly, other researchers have found that optimistic individuals are more likely to employ positive reframing as a coping strategy (Carver, Pozo, & Harris., 1993; Fontaine, Manstead, & Wagner, 1993). Other studies using the *Life Orientation Test* (Scheier & Carver, 1985) of dispositional optimism have found that perceived growth and benefit finding are correlated with optimism (Schaeffer & Moos, 1992; Tennen et al., 1992).

Hope. Hope may also play an important role in facilitating personal growth following a crisis. Hope involves flexibility, activity and openness which engenders an open response to the stress of the trauma as the individual revises goals, perspective and behaviors (Tedeschi & Calhoun, 1995). Hope differs from optimism in that “it encompasses not only one’s expectancy that desired goals can be achieved but one’s ability to imagine avenues for goal attainment” (Snyder, Irving, & Anderson, 1991, p. 289). Tennen and Affleck (1998) have found that individuals living with fibromyalgia who have high levels of hope are more likely to report benefits of living with their chronic pain.

Cognitive complexity. Cognitive complexity refers to the ability to pursue and obtain personal goals despite the obstacles imposed by stressful events (Tedeschi & Calhoun, 1995). Individuals who demonstrate cognitive complexity are able to find alternate ways of achieving their goals and aspirations. Morgan and Janoff-Bulman (1994) found that this cognitive-complexity can be applied to positive self-representations which enable individuals to think constructively and minimize distress; their study revealed that psychological adjustment to trauma was superior among those individuals who had displayed high levels of cognitive complexity. In a study by Linville (1987) individuals who demonstrated high levels of self-complexity were able to adapt better to adversity because they were able to organize self-schemas based on a greater number of discrete roles and identities.

Cognitive Coping Styles

In addition to the aforementioned personality characteristics associated with posttraumatic growth, cognitive appraisal styles and coping styles are also processes which have been theoretically and empirically linked to post-traumatic growth (Tedeschi & Calhoun, 1996; O'Leary & Ickovics, 1995). An individual's evaluation and appraisal of a traumatic event undoubtedly impacts the degree of distress it produces. For example, if the traumatic event is appraised as threatening one's well-being, it will produce more distress than an event that is evaluated as relatively harmless. Likewise, if the event is appraised as incongruent with the individual's existing cognitive schema, the result is a shattered schema and its associated distress.

Active engagement. Empirical evidence exists to show that individuals who actively cope with the problems brought about by traumatic events are more likely to experience growth as result of such experience (Aldwin, 1994; Carver et al., 1993; Folkman & Lazarus 1980; Schaeffer & Moos, 1998.) Active coping styles, by definition, require active engagement efforts in order to cope with the traumatic experience or loss; these coping styles contrast with other approaches to coping that involve avoidance coping strategies, or disengagement efforts. Empirical research shows that people who respond to stressors with active coping strategies display higher levels of adaptation, lower levels of distress, and higher levels of psychological well-being than those who utilize avoidance coping efforts (Moos & Schaefer, 1993; Friedman et al., 1992); Grummon, Rigby, Orr, & Procidano, 1994; Schwartzberg, 1994). Additionally, cognitive coping strategies, such as positive re-appraisals and meaning-making, may enable individuals to perceive more benefits or positive outcomes from adversity (Tedeschi & Calhoun, 1996). Cognitive coping strategies include reattribution and re-appraisal, benefit-finding, the search for meaning, and rumination.

Reattribution and re-appraisals. The cognitive coping process of reattribution and re-appraisal refers to changing or revising the meaning of the event so that it becomes either 1.) less threatening, 2.) congruent with the cognitive schema prior to the event, or 3.) assimilated into a new cognitive schema. Reattribution may involve changing the interpretation of one's personal responsibility or contribution in the occurrence of the traumatic event, or re-examining the cause of the event (Park & Folkman, 1997). For example, it is not uncommon for survivors of sexual assaults to

blame themselves in some aspects for their victimization; likewise, bereaved individuals may initially blame themselves for not having done more to aid the deceased individual prior to their death.

Similarly, re-appraisal can also entail altering the meaning of an event so as to reduce its negative impact. For example, re-appraisals may involve an assessment of the impact the traumatic event had on one's life, as the individual attempts to answer the question, What significance does this event have in my life? Through re-appraisal processes, the individual may change their perception of the event itself thereby diminishing the disparity between the pre-event cognitive schema and the post-event shattered schema. Alternately, the re-appraisal of the event may involve a change of existing beliefs and values so as to accommodate the reality of the event; these new beliefs and values then become part of a new cognitive schema. The process of positive re-appraisals has been found to be associated with successful adjustment to loss (Stein, Folkman, Trabasso, & Christopher-Richards, 1997) whereas negative appraisals have been associated with increased grief (Capps & Bonanno, (2000).

Additionally, a traumatic event may interfere with an individual's previous life goals. For example, a bereaved individual's goal may have entailed building a family with their deceased partner. The death of the individual now makes this goal unattainable; as such, through the re-appraisal process the individual can appraise which goals she must relinquish and those which she can revise in light of their current situation. Thus, through the reattribution and re-appraisal processes, the individual makes sense of or finds meaning in the event to the extent to which they are able to revise their perceptions

of the event to make them congruent with their pre-event schemas, or to construct new schemas based on new values and goals.

Benefit-finding. Another cognitive coping strategy that may be employed is that of benefit-finding. Most traumas are by definition largely negative experiences; however, some individuals are able to discover positive outcomes that result from the trauma. Benefit-finding involves finding the positive implications that the traumatic event has for the survivor. This may be referred to as the “silver lining” to adversity (Davis et al., 1998). There is empirical research to show that benefit-finding is strongly associated with adjustment to bereavement (Davis et al., 1998). One benefit may include viewing the event as a challenge that creates an opportunity for growth. Similarly, the individual may recognize the positive outcomes which posttraumatic growth encompasses (e.g., creation of value and meaning, increased existential awareness, etc.) as potential benefits of the traumatic event.

Rumination. In contrast with the aforementioned cognitive coping strategies related to growth and adaptation, rumination is a cognitive coping strategy which appears to be maladaptive and have negative consequences. Rumination is defined as “passively and repetitively focusing on one’s symptoms of distress and circumstances surrounding those symptoms” (Nolen-Hoeksema et al., 1997, p. 855). Ruminations have been positively correlated with increased levels of distress and poorer adjustment following loss and trauma (Lyubomirsky & Nolen-Hoeksema, 1993; Nolen-Hoeksema, McBride, & Larson, 1997; Tait & Silver, 1989). Nolen-Hoeksema and his colleagues (1997) have described pathways whereby ruminative coping may exacerbate the impact

of loss in bereaved individuals: (1) by intensifying the effects of depressed mood on thinking; (2) by interfering with daily behavior instrumental in functioning through decreased motivation; (3) by interfering with effective problem-solving since the individual is instead thinking negatively about themselves and their lives; and (4) by decreasing social support.

Rumination can manifest itself in various ways in the experience of coping loss and trauma. Rumination on the negative impact of a traumatic event (such as focusing on the loss associated with bereavement) increases distress and interferes with adjustment. In addition, rumination also results when an individual is unable to make sense of the event. The individual may become stuck in the cycle of re-appraisal and reattribution, neither able to create congruence between their appraisals and attributions and their pre-event schemas, nor able to construct new cognitive schemas. Finally, if an individual is unable to find answers as they search for meaning, they can fall into a cycle of ruminating on the answers without subsequent resolution and thus reinitiate a search for meaning. Thus, moving out of ruminations appears to be critical for posttraumatic growth to occur.

Meaning-making. Finally, the search for meaning and process of meaning-making are also cognitive coping mechanisms. As previously discussed, shattered schemas become the source for a lack of meaning and purpose in an individual's life, as well as a sense of incomprehensibility of how the world operates. Thus, the individual may engage in a search for meaning and purpose to his or her life. This search for meaning may entail seeking answers to the questions, What is meaningful in my life? and What does this

event mean for me?. This search for meaning may also give rise to deeper existential questions, such as What is the meaning or purpose of my existence? This is particularly true in individuals coping with bereavement; as other authors have described (Calhoun & Tedeschi, 1990; Tedeschi, Park, & Calhoun, 1998; Schwartzberg & Janoff-Bulman 1991; Yalom & Lieberman, 1991) facing the death of a loved one may cause an individual to confront their own mortality and physical impermanence, thereby resulting in an increased existential awareness. As the increased existential awareness reminds individuals of the brevity of their existence, it may also serve as an impetus to examine their priorities and to reflect upon that which they value (Tedeschi et al., 1998; Schwartzberg & Janoff-Bulman, 1989; 1991).

Thus, shattered schemas brought about by a traumatic event lead to many questions centered on meaning, meaningfulness, and purpose. As individuals search for meaning, the answers to these questions may be congruent with their cognitive schemas prior to event; in this case, they would be assimilated into their existing schemas and thereby rebuilding them. On the other hand, the search for meaning may result in answers that are incompatible with their previous schemas; in this case, the individual uses their new sense of meaning to revise their existing schemas. Furthermore, the search for meaning and the subsequent resolution may also become the catalyst for the establishment of new goals based on that which the individual deems as meaningful or purposeful.

Summary of Posttraumatic Growth Process

According to Tedeschi and Calhoun's (1995; 2004) conceptualization of posttraumatic growth, the process begins with the occurrence of a major life crisis, traumatic event, or loss that significantly challenges and possibly destroys the individual's views of the world and of his or her life in general. Various personal characteristics (such as openness to experience, optimism, etc.) may serve to facilitate the process of growth. The individual must engage in coping responses in order to manage the overwhelming emotions as well as engage in cognitive processing of the challenging circumstances that arise. A central element of PTG appears to be the level of cognitive engagement with the traumatic event. Additionally, an individual's social system appears to play a critical role in the general process of growth. PTG is manifested in various ways, including an increased appreciation of life, more meaningful interpersonal relationships, an increased sense of personal strength, changed priorities, and a richer existential or spiritual life.

The Dual Role of Meaning in Trauma and Growth

The literature discussed in the previous sections indicates that various factors operate to bring about growth in individuals facing trauma and loss. Cognitive coping efforts, such as positive re-appraisal and meaning-making, appear to play critical roles in the process of adjustment following trauma in general, but also specifically during the experience of bereavement. Indeed, in the last two decades, there has been a growing body of empirical and theoretical literature that point to meaning and its related constructs as critical components of adaptive coping (Aldwin, 1994; Davis et al., 1998;

Janoff-Bulman, 1992; Janoff-Bulman & McPherson, 1997; Neimeyer, 2001; Schaeffer & Moos, 1992; Tedeschi & Calhoun, 1995; Thompson, 1998; Wortman & Silver, 2001).

The conceptual and operational formulations employed by these theorists and researchers vary greatly. Most have different conceptualizations of meaning and related constructs such as meaningfulness, meaning-making, and meaning reconstruction. Further, some of the literature in this field focuses on meaning as a coping activity or process (e.g., meaning-making or meaning reconstruction), while other research examines meaning as an outcome of the process of adjustment (e.g., meaningfulness or increased existential awareness). In this section, the role of meaning in coping with stressful events (particularly in the context of bereavement) will be discussed, first as a coping mechanism with the process of adjustment and PTG, and then as an outcome of successful adjustment.

Meaning as a Coping Process

Park and Folkman (1997) present a transactional model of coping with aversive life events which integrates the empirical and theoretical literature on meaning. Their model delineates the functions of meaning in the processes through which people cope with aversive or stressful events. They distinguish between two types of meaning: global and situational. Global meaning refers to an abstract and generalized form of meaning comprised of an individual's enduring beliefs and valued goals. It involves beliefs regarding order and purpose. Alternately, situational meaning denotes a more specific type of meaning created through the interaction between a given situation and the individual's global meaning. Situational meaning is comprised of appraisal of meaning,

the search for meaning, and meaning as an outcome. Park and Folkman (1997) believe unexpected events and mild stressors in everyday life are appraised and assimilated into an individual's global belief system. In contrast, "traumatic events are by definition, too vivid and too emotionally powerful to ignore or easily discount . . . [and] lead people to question the viability of their world and self views" (1997, p. 123). Thus, the search for meaning refers to an actual coping process employed during stressful situations, particularly those in which a loss occurs, such as bereavement. The fundamental function of the meaning-making process entails re-appraisal of meaning in which an individual attempts to diminish the disparity between the situational meaning of an event and the existing global meaning. Park and Folkman cite empirical support for this component of their model which primarily arises from the bereavement research (Horowitz, 1982, 1991; Janoff-Bulman & Frieze, 1983). During bereavement, individuals review their existing schemas and memories of the deceased person as they attempt to discern what is fantasy and what is reality. They continue this until their beliefs are congruent with reality, which often entails a change of situational or global beliefs.

Successful meaning-making is defined as achieving congruence between situational and global meaning. The cognitive strategies employed to change situational meaning include attribution processes, compensatory self-enhancement, downward comparisons, and developing a new perspective on the situation. Likewise, individuals may change their global meaning by either revising their global beliefs or by altering their fundamental goals. Rumination occurs if the re-appraisal of meaning does not result in a diminishment of incongruence between situational and global meaning; the person

may become fixated in this cognitive cycle of re-appraisal as they continuously struggle to reconcile the incongruence.

Similar to Park and Folkman's construct of meaning-making in the context of coping with traumatic events, Thompson and Janigan (1988) also present a framework for understanding the role of meaning in coping with negative life events that is based on their concept of life schemes. A life scheme refers to an individual's cognitive representation of his or her life, comprised of views about oneself and of the world, and goals (both those already achieved and those which they want to attain). Life schemes serve two important functions: to organize events into a coherent and understandable form and to foster creation or attainment of goals. In this sense, "life schemes integrate the two sides of what is meant by meaningfulness: order, provided by a stable world and self view, and purposes, provided by the possession of goals and some likelihood they can be obtained" (Thompson & Janigan, 1988).

In their view, negative events have three elements that make them likely to disrupt an individual's life scheme and thus serve as a catalyst for the search for meaning. First, people generally hold positive expectations for their lives and positive assumptions about the world; these optimistic views may become difficult to reconcile with highly negative events. Second, the consequences of the negative event may impede the individual from achieving previously set goals, thereby invalidating plans which once imbued their lives with purpose. Finally, the negative life experience may cause the individual to examine his or her mortality; thus, an individual's assumptions about the world and the self may change as they are confronted with the finality of their existence. Once life schemes are

disrupted due a negative event, the individual embarks on a search for meaning to restore a sense of order and purpose. Thompson and Janigan (1988) delineate two ways by which an individual can find meaning: either changing their current life scheme so that it is congruent with their appraisal of the experience and its consequences, or changing the appraisal of the negative event. This is similar to Park and Folkman's (1997) notion of changing either the situational or global meaning of a stressful event. Janoff-Bulman and her colleagues (Janoff-Bulman, 1989; Janoff-Bulman & Frieze, 1983; Janoff-Bulman & McPherson, 1997) have proposed a heuristic model of coping with traumatic events based on people's assumptive worlds in which meaning and meaningfulness play a central role. What lies at the core of this model is the construct of assumptive worlds: a conceptual system of schemas comprised of an individual's assumptions or beliefs about themselves and the world. Such assumptions enable individuals to create expectations for both themselves and the world. They are necessary for individuals to function effectively, as they not only afford individuals a sense of security and safety, but also provide stability and coherence in their conceptual systems.

Though Janoff-Bulman's original model of assumptive worlds describes coping with various types traumatic events, Schwartzberg and Janoff-Bulman (1991) specifically applied their model to bereavement. Since bereavement is a psychosocial transition, it often causes upheaval in people's life and requires many changes. Further, bereavement often contradicts an individual's assumptive world, shattering it and rendering it useless. Lacking a sense of stability and safety, the bereaved individual may be filled with a sense of vulnerability, as he or she is confronted with the meaninglessness of the world.

According to Janoff-Bulman and McPherson (1997), individuals faced with a traumatic event including bereavement “can no longer assume that their own self-worth and precautionary behaviors will protect them, for randomness and arbitrariness now characterize the workings of the universe” (p. 95). Thus, coping with bereavement entails the reconstruction of assumptive worlds.

In an effort to reduce the horror of a meaningless universe and a state of disequilibrium created by shattered assumptions, bereaved individuals search for meaning (Janoff-Bulman & McPherson, 1997; Schwartzberg & Janoff-Bulman, 1991). This search typically begins as survivors examine their possible contribution to the outcome, often asking “Why me?” This may result in self-blame as trauma survivors analyze how their behaviors or actions might have contributed to an event; they may deduce that if there were something they could have done differently, then they may be able to reduce the meaningless implications of the experience. In this way, the process of searching for and making meaning begins.

Eventually, bereaved individuals’ attempts to answer the “why me?” questions fade and give rise to questions of value and significance: “is my life meaningful?” The meaning-making process now focuses on finding value and worth in daily existence. Janoff-Bulman and McPherson (1997) suggest that this existential type of meaning-making may be the result of an awareness of vulnerability and mortality brought about by bereavement. Meaning-making entails examining aspects of value in one’s life and reestablishing priorities. There are various domains that may become more meaningful for individuals: relationships with family and friends may be valued more, their

involvement in altruistic causes may increase, and they may experience heightened spiritual awareness (Janoff-Bulman & McPherson, 1997). Through these experiences, bereaved individuals are motivated to live more meaningful lives.

In the Dual Process Model of bereavement (DPM), Stroebe and Schut (1999, 2001) provide an analytic framework of the cognitive processes that occur in coping with bereavement in which meaning-making plays a critical role. The model is comprised of two structural components of coping: loss-orientated and restoration-oriented coping. Loss-oriented coping refers to managing aspects of the loss experience itself. In contrast, restoration-oriented coping includes secondary stressors that follow from bereavement, such as assuming new social roles or identities or managing tasks that the bereaved individual had undertaken. Loss-oriented and restoration-oriented coping each have specific types of cognitions or “meanings” associated with them. For example, loss oriented coping might consist of meanings and cognitions such as “I miss my partner terribly.” In contrast, “I am now the breadwinner for the family” would be a type of restoration-oriented meaning.

A regulatory mechanism, oscillation, describes the dynamic process by which an individual moves back and forth not only between loss-oriented and restoration-oriented coping, but also between coping with stressors (confrontation) versus not coping at all (avoidance) (Stroebe & Schut, 1999, 2001.) According to the DPM model of bereavement, confrontation and avoidance are not necessarily adaptive and maladaptive (respectively), instead, the oscillation between the two is an adaptive process that is essential for successful coping. Another critical component of the coping process entails

oscillation between positive and negative re-appraisals and meaning re-construction in both loss- and restoration-oriented coping. According to Stroebe and Schut, “persistent negative affect intensifies grief, yet working through grief, which includes rumination, is the essence of coming to terms with bereavement; positive reappraisals, on the other hand, sustain coping effort, yet if positive psychological states are maintained relentlessly, grieving is neglected” (1999, p. 67).

Tedeschi and Calhoun’s (1995) model of posttraumatic growth was reviewed above. Their model describes the process by which individuals experience positive changes, or posttraumatic growth as result of coping with a major loss or trauma. A critical component of the growth process is cognitive processing which includes finding meaning in the trauma and its aftermath. Traumas that involve loss, such as bereavement, the individual often experiences a sense of loss of their identity, their goals, or their preexisting view of the world. Thus, the cognitive processing consists of an initial processing of the loss or grief work. This type of processing tends to be automatic and largely ruminative.

However, according to Calhoun and Tedeschi, “for posttraumatic growth to occur, something must replace the goals and beliefs from which a survivor of trauma and loss has necessarily disengaged” (2001, p.165). Thus, following the initial grief work, the bereaved individual may then engage in a deliberate type of growth-oriented cognitive reconstruction. Those individuals who successfully engage in the deliberate cognitive processing or search for meaning who may be more likely to experience posttraumatic growth (Calhoun & Tedeschi 2001; Tedeschi, Park & Calhoun, 1998). Therefore, for

bereaved individuals finding meaning may be a crucial determinant of posttraumatic growth.

Meaning-Making as a Posttraumatic Growth Outcome

In addition to describing meaning-making as a coping process, the conceptual literature also describes the role of meaning within the outcome of posttraumatic growth. For example, Park and Folkman's model (1997) describes changes in meaning as part of the outcome of successfully coping with trauma. According to Park and Folkman, an individual's psychological adjustment to a stressful event is contingent upon successful integration of their situational meaning of a stressful event with their pre-existing global meaning. As individuals reduce the discrepancies between their situational meaning and their global beliefs, the search for meaning engenders new global meaning characterized by changes in the individual's general beliefs and world-views. These changes in global meaning can lead to both negative and positive outcomes. Positive outcomes are described in terms of personal growth in various domains such as increased existential awareness, enhanced social resources, enhanced personal resources, the development of new coping skills, and positive changes in religious beliefs or philosophical ideologies (Park & Folkman, 1997). Negative outcomes that result from changes in global meaning include negative life changes such as, feelings of vulnerability and helplessness, a diminished sense of control, and uncertainty about the future.

Similarly, Janoff-Bulman and her colleagues also contend that meaning plays a critical role in the outcome of coping with a stressful event (Janoff-Bulman, 1989; Janoff-Bulman & Berg, 1998; Janoff-Bulman & McPherson 1997; Schwartzberg & Janoff-

Bulman, 1991). As described in the previous section, victimization shatters an individual's existing assumptions of the world; these shattered assumptions leave individuals feeling disillusioned as they now experience the world as malevolent, meaningless, and their self-worth as low. Thus, a major cognitive task of victims of traumatic events involves the assimilation of the trauma in order for them to rebuild their assumptive worlds. Furthermore, traumatic events, such as bereavement, often serve to remind individuals of their own mortality and impermanence; thus, a heightened awareness of the inevitability of death becomes the impetus for individuals to value and appreciate life. Finally, meaning-making or finding meaning is also the mechanism by which an individual rebuilds his assumptive worlds, in which the target outcome is the creation of value and meaning in his life. A meaningful life is marked by existential gains such as a newfound appreciation for life and the consequent reordering of priorities. Janoff-Bulman and her colleagues view creating a meaningful life as essential for successful adjustment to trauma and subsequent personal growth.

Additionally, Tedeschi and Calhoun also describe the role of meaning as part of the outcome in posttraumatic growth (Calhoun & Tedeschi, 2001; Tedeschi & Calhoun, 1995; Tedeschi, Park & Calhoun, 1998). There are numerous ways in which individuals may manifest posttraumatic growth outcome including changes in three broad areas: perceptions of self, interpersonal relationships, and philosophy of life (Tedeschi & Calhoun, 1995). It is in the last category, philosophy of life, in which meaning plays a crucial role. Philosophy of life changes refer to cognitive changes which address questions about the importance of life and meaningfulness of life. Changes in life

priorities may occur as individuals faced with traumatic experiences develop a sense of vulnerability and consequently gain an appreciation for the preciousness of life. This newfound appreciation for life often leads to an evaluation of priorities, as individuals examine what meaningful is and important in their lives, as they may fear or loath wasting their resources on trivial matters.

Traumatic events, particularly the loss of a loved one, can create an opportunity to examine existential themes of vulnerability and transience. These themes include questioning the meaning and purpose of life and coming to terms with one's inevitable mortality. For some individuals, this heightened existential awareness may give rise to a sense that life is worthwhile and purposeful as well as to enhanced spirituality or religiosity.

Summary of Dual Roles of Meaning

Making sense or meaning of one's experiences and maintaining coherence between one's worldviews and one's experiences are fundamental features of human functioning and adaptation. The previous section focused on concepts of meaning relevant to the process of coping with trauma and loss. A growing body of literature indicates that there are two aspects of meaning that may be critical in context of stress, coping, and posttraumatic growth: meaning-making as a mechanism through which people appraise and cope with stress and trauma, and meaning as an outcome that reflects the enduring changes that result from the process of confronting stress and trauma. Although these dual roles of meaning appear to play important functions in the process of coping with trauma, there have been surprisingly few empirical investigations examining

meaning in context of posttraumatic growth following bereavement. Thus, role of meaning as both a coping-mechanism and as an outcome within the context of trauma and PTG deserves further exploration.

Unresolved Issues in the Literature

The literature reviewed thus far describes theoretical and empirical literature related to posttraumatic growth, coping with bereavement and meaning-making. While there are numerous aspects of PTG and bereavement about which reliable data exists, there are still many areas that require further clarification and empirical validation. This section will discuss the various issues related to PTG, bereavement, and meaning-making that remain in need of further inquiry.

Individual Differences

Some individuals who experience traumatic events and losses can benefit or grow from their struggle in adversity resulting in more effective or satisfying subsequent functioning. However, clearly not every individual who experiences trauma and loss develops such positive experiences. In fact, for some individuals traumatic events can result in debilitating or chronic psychological distress as well as an increased vulnerability to subsequent distress (Aldwin, 1994). The vital question is then, if some individuals are weakened in their responses to adversity while others respond instead with growth, what variables differentiate these two sets of people? Numerous individual differences seem to be related to the likelihood that posttraumatic growth can result from the struggle with loss and trauma. These personal variables include personality qualities, gender, age, and coping styles.

Personality Differences

There is evidence that individuals who are extraverted, open to their own subjective experiences, and who have complex belief systems may be better able to cope with loss and to experience growth resulting from their struggle (Calhoun & Tedeschi, 2001). Additionally, ego resiliency, optimism, and an easy-going disposition are also personal resources that have been linked to people's ability to adapt and confront adversity (Schaefer & Moos, 1998; Tedeschi & Calhoun, 1995). Similarly, there is evidence that personality constructs related to continuing coping efforts versus giving up (such as self-mastery, hopelessness, hope, hardiness, and self-efficacy) have been found to predict resilience (Carver, 1998), but there is sparse evidence that explains their relation to PTG. An issue that needs further clarification concerns the nature of the relationship between these personality factors and PTG. More specifically, at one end of the spectrum are individuals who may lack these resilient traits and are more likely to be overwhelmed by a traumatic stressor and unable to experience growth; and the other end of the spectrum are individuals who may be very resilient and are able to cope with profound trauma and loss with minimal effort resulting in an insufficient challenge and limited, if any, growth. Thus, there may exist a curvilinear relationship between personality characteristics and PTG whereby the individuals most likely to grow from their struggle with adversity are those who have sufficient personal resources to successfully cope and adapt, and yet still seem to have room to grow. More research is needed to fully elucidate this relationship.

Gender Differences

The existing research on posttraumatic growth suggests that there is a difference in how men and women respond to adversity. Specifically, women have been found to experience higher levels of PTG than men (Park et al., 1996; Schaeffer & Moos, 1998; Tedeschi & Calhoun, 1996). However, it remains unclear what accounts for these gender differences. Some researchers posit that some losses may remove social constraints on women thereby facilitating growth through independence. For example, in Tedeschi and Calhoun's (1996) study of PTG following the loss of a spouse, widows reported positive gains following the loss of their husbands in terms of increased self-reliance and self-dependency. Other researchers posit that differential coping styles employed by men and women may contribute to gender differences in PTG outcomes (Tennen & Affleck, 1998), while others hypothesize that specific elements of PTG (such as increased social support and intimacy in relationships) may be more accessible to women than they traditionally are for men (Tedeschi & Calhoun, 1996). Finally, another theory that attempts to explain the gender differences concerns the differential level of psychological distress that a particular event produces in men and women. One study found that men experienced less psychological distress and lower levels of growth following an earthquake as compared to women (Carr, et al., 1995). It is possible that since the traumatic event was less psychologically distressing to men, it was thereby less traumatic and challenging to men. The experience was thereby less likely to produce PTG. Thus, more research is needed that compares the effects of various stressors on men and women and its relation to growth.

Age

An additional area that needs further clarification is the developmental aspect of PTG and the impact of age. Growth following loss and trauma has been found across various age groups including adolescents, adults and the elderly (Tedeschi et al., 1998). While resilience has been well documented in children, it is not known whether children can experience PTG or if there is a minimum level of psychological maturity that is needed before the process of PTG can occur. It is also possible that for children and adolescents some aspects of growth might require years before they become evident. Furthermore, it is possible that because children are less resilient than adults, severe stressors experienced during childhood are less likely to produce PTG.

There also appears to be a difference in adaptation to a crisis that is dependent on age. A review of the literature on coping with breast cancer revealed that older women coped more successfully with breast cancer than younger women (Northouse, 1994). The author speculated that younger women had special concerns regarding children and intimate relationships that complicated their distress. In another study examining growth following a divorce, Wallerstein (1986) found that women in their 20's and 30's reported higher levels of growth than women in their 40's and 50's. The researcher hypothesized that the younger women had more educational and vocational resources available to them than the older women. Finally, experiences with prior crises have been associated with increased levels of self-efficacy, resilience, and PTG (Rutter, 1990; Schaeffer & Moos, 1998; Tedeschi & Calhoun, 1996). It seems likely that the longer an individual has been alive, the more likely they are to have experienced previous losses and traumatic experiences; thus age could promote development of increased coping skills by virtue of

experience, thereby resulting in increased likelihood for PTG. More research is needed examining the impact of age across various stressors in order to understand its relationship to PTG.

Coping Styles

Another individual difference that has been associated with PTG concerns the coping styles that individuals employ when confronted with adversity. Empirical evidence suggests that active engagement efforts which include problem-focused coping, positive reframing, meaning-making, and acceptance of the reality of the trauma are linked to successful adaptation and growth following adversity (Aldwin, 1994; Carver et al., 1993; Friedman et al., 1992, Grummon et al., 1994; Folkman & Lazarus, 1980; Moos & Schaefer, 1993; Schwartzberg, 1994). While this research links active coping efforts with adaptation (resilience), there remain unanswered empirical questions regarding the effect of active engagement and disengagement coping responses to trauma and PTG. For example, little is known about specific types of active coping responses (re-attribution and re-appraisal, meaning-making, benefit finding, positive re-appraisals, etc.) and their relation to PTG. Are some active cognitive coping strategies more likely than others to facilitate or promote PTG? There is a growing body of research that suggests that one cognitive coping style, rumination, may be maladaptive and actually impede adjustment (Nolen-Hoeksema, McBride, & Larson, 1997; Tait & Silver, 1989; Lyubomirsky & Nolen-Hoeksema, 1993), and thus it is likely that rumination can impede growth if individuals do not utilize other coping efforts. However, to date the exact relationship between rumination and PTG has not been tested empirically.

Contextual Factors

Type and Magnitude of Stressors

Posttraumatic growth has been examined across a variety of stressors and populations including coping with serious medical illness such as cancer or HIV/AIDS (Bonanno, 2004; Collins, Taylor, & Skokan, 1990; Curbow, Legro, Baker, Wingard, & Somerfield, 1993; O'Leary & Ickovics, 1995; Sigel & Schrimshaw, 2000), military combat (Aldwin, Levenson, & Spiro, 1994; Sledge, Boydstun, & Rabe, 1980), sexual assault survivors (Veronen & Kilpatrick, 1983), survivors of natural disasters (Coffman, 1994; Miles, Demi, & Mostyn-Aker, 1984; Saylor, Swenson, & Powell, 1992), adult children of alcoholics (Palmer, 1997; Robitschek & Kashubeck, 1999), and bereaved individuals (Lehman et al., 1993; Lund, Caserta, & Dimond, 1992; Tedeschi & Calhoun, 1995). The general consensus is that a variety of stressors and types of loss can result in PTG for some individuals. However, it is unclear how PTG outcomes may vary as a function of the type of crisis experienced. For example, are certain traumas more likely to result in positive gains regarding increased satisfaction in interpersonal relationships and social support whereas other stressors may be more likely to produce gains in terms of increased self-confidence and self-efficacy?

Furthermore, unanswered questions remain regarding the magnitude of the trauma under study. Specifically, what relationship exists between the magnitude of the loss and trauma, and the experience of growth? Is there a minimum amount of stress that an individual must undergo in order for that event to serve as an impetus for growth? Likewise, is there a maximum amount of stress an individual can bear before becoming

too overwhelmed to cope with the pain and distress and thereby unable to pursue possible growth?

Time Course of PTG

Another unresolved issue regarding posttraumatic growth is the timeframe for the assessment and measurement of PTG. More specifically, at what point should stress-related growth be measured – weeks, months, or years after the trauma or loss? PTG is usually viewed as a developmental process that follows an initial period of distress and disorganization when coping mechanisms are employed to manage the distress. Individuals must have sufficient time to process and cope with their experience. Thus, weeks, months and years might be necessary before an individual can find meaning in their suffering and grow from their experiences. However, it is also possible that if too much time elapses between the traumatic event and the measurement of growth, the positive changes that result from grappling with the traumatic experience could become fully integrated into an individual's sense of self and current adaptation, thereby resulting in a limited or diminished capacity to accurately recollect the positive effects stemming from the trauma.

It appears that the timeframe for the assessment of PTG largely depends on the researcher's conceptualization of PTG that is usually determined by the nature of the crisis, the characteristics of the participants, and the specific growth-related variables that are to be assessed. Some specific positive changes may be observable weeks after the trauma or loss has occurred, such as increased social support; however, other changes, such as change in life philosophy might not occur until months or years have elapsed.

The empirical literature suggests that the most common timeframe for the assessment of PTG is typically years, even decades, after the occurrence of loss or trauma. For example, the perceived benefits of childhood sexual abuse have been assessed approximately 20 years after the experience (Silver, Boon, & Stones, 1983). Lehman et al. (1993) assessed stress-related growth in bereaved spouses and parents five years after a fatal accident. Joseph, Williams, and Yule, (1993) interviewed survivors of a sinking ship 18 months after their experience. Moreover, studies assessing positive consequences associated with coping with cancer were conducted approximately 2 to 4 years post-diagnosis (Collins et al., 1990; Curbow et al. 1993; Zemore & Shepel, 1989). On the other hand, a few researchers have successfully measured stress-related growth weeks after the occurrence of a crisis (Affleck, Tennen, & Croog, 1987; Park et al., 1996). Thus, time-since-loss is a topic that merits further investigation.

Conceptual and Methodological Issues

Because PTG is a relatively new construct, the conceptualization of growth-related processes is neither consensual nor clearly explicated. Indeed, there is not a unified definition or theory of growth-related processes following adversity, as there exist numerous terms and definitions based on their respective underlying theoretical models and conceptualizations. Additionally, there are specific aspects inherent in the process of PTG that in and of themselves give rise to conceptual issues and challenges.

Furthermore, the empirical literature on PTG is still in its infancy, and the paucity of research of available contains methodological issues and validity concerns.

Definitional Issues

The topic under study concerns the positive changes that individuals experience following adversity; these positive changes have been labeled post-traumatic growth, adversarial growth, stress-related growth, perceived benefits, blessings, positive by-products, positive adjustment and positive adaptation (Linley & Joseph, 2004). All of these terms differ from resilience in that they describe more homeostatic health maintenance, as they focus on the process of growth characterized by a positive change in experience towards more optimal functioning. While there is some overlap between resilience and PTG, these terms should not be used interchangeably as they have been (erroneously) in some of the literature (Carver, 1998; Linley & Joseph, 2004). Some definitional issues could be minimized by simply reserving the concept of resilience to describe the ability to maintain homeostasis or return to baseline functioning after an experience of loss or trauma, and posttraumatic growth can be reserved for use as a descriptor of the additive process whereby the individual increases functioning beyond their pre-trauma functioning level. Furthermore, because there are numerous ways to construe and conceptualize the process of growth following adversity, each can have different implications in regards to the subsequent gains and changes that may result (such as increased skills in knowledge, enhanced recovery potential, or the development of protective factors). Thus, there is need for a unified theory of stress-related growth in order to fully understand and empirically validate the various factors associated with stress-related growth.

Disentangling Coping Strategies and Outcomes

A similar issue arises regarding the overlap between coping strategies employed in the process of PTG and the outcome of PTG. More specifically, meaning-making can be regarded as an outcome, a coping skill, or a subset of the general concept of adjustment and adaptation. The choice largely depends on the researcher's preferred paradigm, but it can have important methodological implications when examining the antecedents, correlates, and determinants of the outcome growth responses. For example, the ability to perceive benefits and growth following a traumatic experience may be part of a broader cognitive coping style (Scheier & Carver, 1985; McCrae, 1989; Park et al., 1996). Both optimism and positive reinterpretation coping have been related to increased levels of adjustment (Carver et al., 1993; Tennen & Affleck, 1998) and they have also been found to predict the amount of PTG that individuals perceive and report (Park, Cohen, & Murch, 1996). Thus, individuals who are more optimistic, open to experience, and inclined to use complex cognitive coping styles (such as meaning-making and benefit-finding) may be more likely to experience and perceive PTG in their lives.

Another way of looking at the relationship between coping strategies and outcomes is in terms of adjustment. Reported growth following adversity may enhance adjustment by enabling individuals to make or find meaning in their traumatic experiences. This paradigm begins with the assumption that individuals cope with traumatic experiences by re-evaluating the meaningfulness of the event. Cognitive coping then involves finding meaning in the trauma and its aftermath. Horowitz (1982) believes that cognitive processing ensues after individuals come to realize that their beliefs about

how the world operates are no longer coherent and the meaning of life is no longer clear. Thus, the individuals must deliberately engage in the struggle to make sense of their loss or trauma and recreate new world views and life goals (Tedeschi & Calhoun, 1995). Janoff-Bulman (1992) contends that over time, individuals come to value traumatic events, viewing them as worthwhile and powerful aspects of life. As events are reframed in a positive light, they may lose their negative associations which would thereby result in decreased psychological distress. As individuals recover and adjust from traumatic events and resolve questions of meaningfulness, they become more likely to perceive growth from their struggles to cope with their trauma or loss. In this paradigm, meaning-making is both part of the coping and part of the outcome.

The ability to make the distinction between PTG as an outcome versus PTG as cognitive reinterpretation of coping is critical to the validity of PTG. Given that some researchers and theorists describe cognitive coping strategies as distinct from PTG outcomes, while others view coping strategies such as meaning-making as both part of the process and the outcome of PTG, how can we determine which paradigm best fits the variables under investigation? Furthermore, how can researchers disentangle coping processes from outcomes when there is considerable overlap? Attempts to disentangle PTG outcomes from coping may need to be event-specific, relying on pre-established norms and data concerning the typical course of crisis and the sequence of coping strategies. Perhaps various methodological approaches can be utilized to understand these conceptual issues, such as the inclusion of both quantitative and qualitative methods.

PTG and Maladjustment

Similarly, there are some conceptual issues that need to be clarified regarding the relationship between posttraumatic growth and adjustment/maladjustment. It is clear that major life traumas and losses produce significant levels of psychological distress and psychological impairment, and may even result in severe psychopathology (Aldwin, 1994; Hodgkinson & Stewart, 1996). It is also clear the major life traumas can produce growth. What is not clear is what relationship exists between PTG and psychological well-being, as well as between PTG and psychological distress. By definition, a minimum threshold of distress must be breached for an event to be traumatic. As previously discussed, there must also be a minimum threshold of distress in order for an event to serve as a catalyst for growth. It is unclear under what conditions and to what extent does psychological distress impair or promote PTG. There are mixed findings in research examining PTG and levels of psychological and physiological adjustment as separate entities. Some studies have found correlations between PTG and psychological adjustment in regards to increased levels of self-esteem (McMillen, Zuravin, & Rideout, 1995), decreased levels of psychological symptoms such as PTSD (Aldwin, 1994), and anxiety and depression (Taylor & Brown, 1988), increased levels of social adjustment and emotional adjustment (Zemore & Shepel, 1989), increased existential awareness (Yalom & Liberman, 1991), and decreased global distress (Affleck et al., 1987). Other studies failed to find any relationship between PTG and mental health outcomes in the domain of depression (Videka-Sherman, 1982), daily mood, (Tennen et al., 1992), and psychological adjustment (Lehman et al., 1993). This data suggests that PTG may not co-

vary with decreased psychological distress or increased psychological well-being. When studies demonstrate mixed results regarding the PTG and adjustment, what are the possible explanations? One possibility is that time and the level of distress may be important mediating variables in this relationship. It could be that PTG only occurs when it is preceded by a significant period of psychological distress; or it could be possible that PTG occurs simultaneously with psychological distress. Finally, it is also possible that individuals may simultaneously experience positive changes in some areas of their lives and negative changes in others.

Validity Issues

Another area that merits further clarification involves the validity of the positives changes and the experience of growth that characterizes PTG. Researchers recognize that the experience of growth is largely subjective since it involves an individual's perception and understanding of his own transformation. Keeping with this fact, a vast majority of the empirical research on PTG, trauma, and bereavement utilizes self-report measures completed by survivors of trauma. However, the validity of survivors' self-reports has been called into question because of possible biases due to defensive denial and self-impression management (Shedler, Mayman, & Manis, 1993). Additionally, the effects of positive illusions (unrealistic positive self-evaluations, unrealistic perceptions of control, and unrealistic optimism about the future) could significantly impact the validity of self-reports of PTG (Taylor & Brown, 1988). How then can an individual's experience be corroborated by external criteria and through what means? One researcher utilized corroborating reports of the survivors' significant others (Park et al., 1996). However,

corroboration methods may also provide unclear findings: if there are high levels of agreement between the survivors or self-reports, does this represent an actual validation of PTG or simply that survivors influenced significant others through previous verbal discussions of their growth?

Perhaps a combination of quantitative approaches and qualitative approaches can be used to examine PTG both objectively and phenomenologically. For example, variables for which external criteria are neither available nor appropriate, such as one's interpretation of changed life philosophy, could be better addressed using qualitative measures. Whereas quantitative approaches could be employed for the assessment of variables for which external and objective criteria are appropriate, such as behavioral changes..

Justification for Current Study

Trauma and loss affect everyone, but unequally. The central question is why do some individuals experience posttraumatic growth following loss and trauma while others do not? The theoretical and empirical literature included in this review describe numerous personal characteristics, social resources, and cognitive processes related to posttraumatic growth and bereavement, that attempt to explain why some individuals may adjust to trauma and loss more successfully than others. The purpose of the present study is to provide data that can fill in the missing gaps by addressing several questions that remain unanswered. This study may aid researchers and clinicians to further understand the relationship between cognitive coping styles and PTG in bereaved individuals, particularly in regards to engagement versus disengagement of coping styles and their

impact on adjustment and growth. Additionally, the role of meaning-making as a coping process and as part of the outcome needs further clarification. Thus, this study uses quantitative and qualitative methods to understand the complex role that meaning-making processes may have in experience of PTG and bereavement. There are several individual characteristics that impact PTG and bereavement but the data thus far in these domains has yielded inconclusive results. Thus, the present study was designed to provide more information on the impact of age and gender coping on posttraumatic growth and bereavement.. Finally, this study provides valuable information regarding the impact of time on PTG by studying bereaved individuals who have experienced the loss of a loved one within the last 12 to 48 months. The data collected in this study may serve as information targeted at developing a better understanding of a few of the many unresolved issues in the domains of coping, PTG, and bereavement. In turn, this information can be applied in the practice of psychology to help individuals struggling with effects of loss and trauma. In this way, perhaps the disparity between individuals who are debilitated by adversity versus those who grow from adversity can be diminished.

CHAPTER III. METHODS

The purpose of this study was to investigate the relationship between meaning-making coping efforts and the experiences of posttraumatic growth in bereaved individuals. The primary research questions under investigation sought to determine whether a relationship existed between a bereaved individual's ability to make sense of their loss, their ability to search for personal meaning, and their ability to use a cognitive coping style, and their subsequent experience of posttraumatic growth. Additionally, this study also examined whether potential moderating variables such as time elapsed since the loss, the type of death, or gender of bereaved individual were significantly related to meaning-making and an individual's experience of posttraumatic growth following bereavement.

Participants

A total of 134 adults participated in this study. The participants in this study consisted of volunteers elicited from one of several bereavement support mailing lists on the internet. Volunteers who reported that they had lost a loved one (a close family member or friend) within the last 12 to 48 months due to natural causes, accidental death, illness, violence, or suicide were invited to participate. This timeframe was determined based on previous research (Cohen, et al., 1998) on the possibility that longer time intervals (usually years) between the traumatic event and the assessment of posttraumatic

growth might be necessary in order for growth to become apparent. Participants ranged in age from 19 to 75 years of age. Of the 138 participants, 120 were women (89.6%) and 14 were men (10.4%). According to the self-reported demographic data, 1 (0.7%) identified herself as African-American, 1 (0.7%) as Asian/Pacific-Islander, 6 (4.5%) as Hispanics/Latinos, 2 (1.5%) as Native Americans, and 2 participants self-reported their ethnicity as “other.” Participation in the study was voluntary and anonymous.

Procedure

This study utilized an internet survey format to gather data. This research was reviewed and approved by the Auburn University Institutional Review Board for the Use of Human Subjects in Research (AU IRB). After receiving approval, this investigator contacted via email moderators of 10 bereavement support mailing lists from Yahoo Groups and MSN Groups. The emails provided the moderator a copy of the approved AU IRB form, and an explanation of the study, including the target population, methodology, procedures, purpose of the research, and plans for analysis. Once this investigator received approval from the moderators, she emailed the respective members of the mailing lists an introductory letter that summarized the nature and purpose of the present study (see Appendix A). The letter included an invitation to participate and a URL address for a website that contained the survey. Contact information for this investigator, her primary faculty advisor, and Auburn University IRB was also provided. Participants were encouraged to contact the investigator with any questions, comments, or concerns. Participants who followed the link to the survey, were directed to a website hosted by the company, PsychData, in which the introductory page

contained the informed consent form (see Appendix B). Following the completion of the informed consent form, the participants were presented with demographic questions and the measurement instruments (see Appendices C through I): *the Post-Traumatic Growth Inventory* (Tedeschi & Calhoun, 1996), *Sense of Coherence scale* (Antonovsky, 1987), *Purpose-in-Life test* (Crumbaugh & Maholick, 1969), *Seeking of Noetic Goals test* (Crumbaugh, 1977), *Cognitive Emotional Regulation Questionnaire* (Garnefski, Kraaij, & Spinhoven, 2001), and a qualitative questionnaire. The information entered by the participants was collected in the secure PsychData database and then stored as a spreadsheet that was then analyzed using SPSS.

Measures

Posttraumatic Growth

Post-Traumatic Growth Inventory

In order to measure PTG or the growth that may have occurred after a traumatic experience (bereavement) the Post-Traumatic Growth Inventory (PTGI) developed by Tedeschi and Calhoun (1996) was administered. This instrument consists of 21 items that describe positive changes likely to emerge following a traumatic event. The response choices are on a 6-point scale that corresponds to the degree to which the individual experienced the change as a result of bereavement (i.e., 0= “I did not experience this change as a result of my crisis”; 3 = “I experienced this change to a moderate degree as a result of my crisis”; 5 = “I experienced this change to a very great degree as a result of my crisis”). The words “my crisis” were replaced with “their death” in the present study

to focus on the experience of bereavement. Total scores range from 0 to 105, with the larger the number, the greater perception of personal growth.

Research on the PTGI has reported strong internal consistency (.90), and modest test-retest reliability over a 2-month interval (.71) (Tedeschi & Calhoun, 1996). A recent study conducted by Bates, Trajstman, and Jackson (2004) yielded similar findings for the internal consistency and test-retest reliability of the inventory. In regards to concurrent validity, overall scores are modestly correlated with scores on Scheier and Carver's (1985) Life Orientation Test (.23) and to factors of the Neo Personality Inventory (Costa & McCrea, 1985): the *Extraversion* (.29), *Openness to Experience* (.21), *Agreeableness* (.18) and *Conscientiousness* (.16).

This measure has been widely used in studies measuring growth following loss, trauma, or adversity (Cohen, Hettler, & Pane, 1998; Cordova et al., 2001; Joseph, Williams, & Yule, 1993; McGrath & Linley, 2006; Polatinsky & Esprey, 2000; Powell, Rosner, Butollo, Tedeschi, & Calhoun, 2003; Tedeschi & Calhoun, 1996; 2004; Weinrib, Rothrock, Johnsen, & Lutgendorf, 2006; Weiss, 2002). The PTGI is widely accepted as an efficient, reliable, and valid way to identify post traumatic growth or PTG (Cohen, Cimboric, et al., 1998; Cohen, Hettler, & Pane, 1998; Linley & Joseph, 2004; Tedeschi & Calhoun, 2004).

Meaning

Sense of Coherence Scale

In order to examine meaning-making as a coping mechanism whereby the individual makes sense of their experience, the *Sense of Coherence Scale* (SOC)

developed by Antonovsky, (1987) was utilized. The SOC, also known as the Orientation to Life Questionnaire, examines coping style characterized by an “enduring tendency to see one’s life space as more or less ordered, predictable, and manageable” (Antonovsky, 1993, p. 725). The 29-item scale assesses the domains of comprehensibility, manageability, and meaningfulness. The total scores range from 29 to 203 with higher scores indicating a stronger sense of coherence.

The SOC has an excellent internal consistency, with the Cronbach’s alpha measure of internal consistency ranging from .82 to .95 based on 26 studies (Antonovsky, 1993). The test-retest reliability is only minimally adequate however (.54 at two years). The criterion validity of the SOC has also been established in numerous investigations by the presence of significant correlation with health and well-being (Antonovsky, 1993). The SOC is widely used as a valid and reliable measure of an individual’s sense of coherence and has been used in over 458 scientific publications and 13 doctoral theses; furthermore, the SOC questionnaire has been used in at least 33 languages in 32 countries with at least 15 different versions of the questionnaire (Eriksson & Lindström, 2005).

Purpose-in-Life Test

In order to assess an individual’s sense of meaning and purpose in life, the *Purpose-in-Life test* (PIL; Crumbaugh & Maholick, 1969) was used. The PIL indicates the degree to which meaning and purpose in life have been found. The PIL consists of 20 statements rated on a 7-point scale with a high score (6 to 7) indicative of clear meaning and purpose, and a low score (1 to 2) indicative of a lack of clear meaning and purpose in life. Examples of typical PIL items include “I have discovered... (rated from “1 - no

mission or purpose in life” to “7 - clear-cut goals and a satisfying life purpose”) and “My personal existence is...(rated from “1 - utterly meaningless without purpose” to “7- very purposeful and meaningful.)”

The split-half reliability of the PIL has been estimated at .81, with a Spearman-Bowman correction producing a .90 estimate (Crumbaugh & Maholick, 1969). There were norms that were developed for the PIL, but these norms were obtained and published over 30 years ago and have not been updated since (Crumbaugh & Maholick, 1969; Crumbaugh, 1977.)

Coping Style

Cognitive Emotion Regulation Questionnaire

In order to measure the type of cognitive coping strategies that individuals employ following a traumatic experience, the *Cognitive Emotion Regulation Questionnaire* (CERQ; Garnefski et al., 2001) was utilized. The CERQ is a self-report questionnaire designed to evaluate nine different cognitive aspects of coping and emotion regulation that individuals tend to employ following negative life experiences. The instrument contains nine conceptually distinct subscales each consisting of four items, for a total of 36 items. The nine cognitive dimensions measured include self-blame, blaming others, acceptance, refocus planning, positive refocusing, rumination, positive re-appraisal, putting into perspective, and catastrophizing. The items that are rated on a 5-point Likert scale ranging from 1 (almost never) to 5 (almost always).

The CERQ has been found to have sound psychometric properties. The reliabilities of the scales are good, with Cronbach’s alpha reliability coefficients

exceeding .80 for all the subscales (Garnefski et al., 2001). Test-retest reliability coefficients of the subscales at 5-month follow-up ranged from weak to modest with values ranging from .41 to .59 (Garnefski et al., 2001). These test-retest reliabilities suggest that cognitive coping strategies are relatively stable. Evidence of convergent and discriminant validity has been provided through relationships with depression and anxiety (Garnefski et al., 2001, Garnefski et al., 2002, and Kraaij , Gaernefski, & Van Gerwen, 2004)

Additional Measures

Meaning-Making and Growth Questionnaire

In addition to the aforementioned quantitative measures of meaning-making, coping, and posttraumatic growth, a brief qualitative questionnaire was used to supplement the quantitative data (see Appendix G). The researcher designed a questionnaire with five questions to further explore meaning-making and posttraumatic growth through the phenomenological perspective of the participant. Two of the five questions are open-ended and allowed the participant to describe his or her experience of searching for meaning and post-traumatic growth in their own words. The remaining three questions required the participant to respond with either a yes/no response or a response on a 5-point scale.

Demographic questionnaire

The demographic questionnaire elicited the participants' age, gender, and ethnicity/race origin, time elapsed since loss, and type of death: expected (the result of a terminal illness or a natural cause) or unexpected (due to sudden unnatural causes, illness,

violence, accident, etc.). Ethnicity and information was only used to describe the participant sample.

Data Analyses

Null Hypotheses Examined by this Study

1. There will be no statistically significant relationship between the bereaved individual's ability to make sense of the loss, as measured by the Sense of Coherence Scale, (Antonovsky, 1987) and the experience of posttraumatic growth following bereavement, as measured by the Posttraumatic Growth Inventory, (Tedeschi & Calhoun, 1996).
2. There will be no statistically significant relationship between the bereaved individual's existential meaning and purpose as measured by the Purpose-in-Life test (Crumbaugh & Maholick, 1969) and the experience of posttraumatic growth following bereavement as measured by the Posttraumatic Growth Inventory (Tedeschi & Calhoun, 1996).
3. There will be no statistically significant relationship between the type of cognitive coping strategies employed by bereaved individuals as measured by the Cognitive Emotion Regulation Questionnaire (Garnefski et al., 2001) and the experience of posttraumatic growth following bereavement as measured by the Posttraumatic Growth Inventory (Tedeschi & Calhoun, 1996).
4. The type of death (expected or unexpected) will not serve as a moderator in the relationship between meaning-making and the experience of posttraumatic growth

following bereavement as measured by the Posttraumatic Growth Inventory (Tedeschi & Calhoun, 1996).

5. Time elapsed since death of a loved one will not serve as a moderator in the relationship between meaning-making and the experience of posttraumatic growth following bereavement as measured by the Posttraumatic Growth Inventory (Tedeschi & Calhoun, 1996).

CHAPTER IV: RESULTS

In this section, results of the data analysis used to assess the research questions of this study are presented. Descriptive statistics are presented summarizing the demographics of the participants and their responses to the surveys administered. The analyses applied and results obtained are then detailed along with a discussion of their relationship to the hypotheses.

Participants

There were 134 participants in this study, and each responded to four assessment instruments: Post-Traumatic Growth Inventory (PTGI), Sense of Coherence Scale (SOC), Purpose-in-Life Test (PIL), and Cognitive Emotion Regulation Questionnaire (CERQ). The participants were a fairly homogeneous group: 122 (91.0%) of the 134 participants were Caucasian, and 120 (89.6%) of the participants were female. The participants also included 1 (0.7%) African-American, 1 (0.7%) Asian/Pacific-Islander, 6 (4.5%) Hispanics/Latinos, 2 (1.5%) Native Americans, and 2 self-reporting their ethnicity as “other”. All of these participants had experienced the loss of a loved one in the recent past, the most recent of which was 12 months prior to completing the survey. On average, participants had lost their loved ones 27 months before, with a standard deviation of a little less than 18 months. In 103 cases, the death was unexpected. Of the other 31 cases, 30 of the deaths were expected, and one participant did not report. These demographics are summarized in Table 1.

Table 1

Demographics of Survey Participants

	<i>n</i>	<i>%</i>
<i>Age (years)</i>		
18-25	8	6.0
26-35	24	17.9
36-45	35	26.1
46-55	49	36.6
56-65	15	11.2
66-75	3	2.2
<i>Gender</i>		
Female	120	89.6
Male	14	10.4
<i>Ethnicity</i>		
African American	1	0.7
Asian/Pacific Islander	1	0.7
Caucasian	122	91.0
Hispanic/Latino	6	4.5
Native American	2	1.5
Other	2	1.5
N	134	

Summary of Instruments and Scoring Methods

In this section, the instruments used will be briefly reviewed along with an explanation of their respective scoring methods and score ranges. The means and standard deviations of the scores obtained on these instruments by the sample in this current study are presented in Table 2.

Table 2

Descriptive Statistics of Scores

Instrument	N	Minimum	Maximum	Mean	Std. Deviation
PTGI	134	0	105	52.70	23.76
PIL	134	67	96	80.44	6.81
SOC	134	56	175	110.73	25.02
CERQ	134	59	166	104.18	15.54
SelfBlame	134	4	20	10.37	4.19
Acceptance	134	7	20	14.51	3.22
Rumination	134	6	20	13.63	3.83
PosRefocus	134	4	20	9.89	3.74
PosReappraisal	134	4	20	11.96	4.35
RefocusPlan	134	4	20	12.21	3.71
Perspective	134	4	20	10.62	4.22
Catastrophize	134	4	20	12.49	4.62
Blame	134	4	20	8.51	4.20

Post-Traumatic Growth Inventory (PTGI); Sense of Coherence Scale (SOC); Purpose-in-Life Test (PIL); and Cognitive Emotion Regulation Questionnaire (CERQ).

The Post-Traumatic Growth Inventory (PTGI; Tedeschi & Calhoun, 1996)

consists of 21 items that measures positive changes likely to emerge following a traumatic event. The response choices are on a 6-point scale (from 0 to 5) that corresponds to the degree to which the individual experienced the change as a result of bereavement. The total scores can range from 0 to 105, with the larger the number, the greater perception of personal growth. The sample in the present study produced a mean score of 52.60 (SD =23.76).

The *Sense of Coherence* Scale (SOC; Antonovsky, 1987) is a 29-item scale that assesses the domains of comprehensibility, manageability, and meaningfulness. While the

SOC taps into three different domains of meaning, it does not yield individual subscale scores, only total scores. The total scores can range from 29 to 203 with higher scores indicating a stronger sense of coherence. The sample in the present study produced a mean score of 110.73 (SD =25.02).

The *Purpose in Life Test* (PIL; Crumbaugh & Maholick, 1969) measures the degree to which meaning and purpose in life have been found. The PIL consists of 20 statements rated on a 7-point scale with a high score (6 to 7) indicative of clear meaning and purpose, and a low score (1 to 2) indicative of a lack of clear meaning and purpose in life. The total scores for the PIL can range from 7 to 140. The sample in the present study produced a mean PIL score of 80.44 (SD=23.76).

The *Cognitive Emotion Regulation Questionnaire* (CERQ; Garnefski et al., 2001) is a self-report questionnaire that evaluates nine different cognitive aspects of coping and emotion regulation that individuals tend to employ following negative life experiences. The 36-question CERQ is broken down into 9 four-question subscales, which are reported individually in this study. Of the 4 items included in a subscale a sum score is made which can range from 4 (never used) to 20 (often used cognitive coping strategy). The sample in the present study produced a total mean score of 104.18 (SD =15.54).

Analysis of Research Questions

In this section, the results are presented detailing analyses of the hypotheses, namely the effect of SOC, CERQ, and PIL scores and demographic data on PTGI scores. Individual hypotheses were tested via regression analyses, and a stepwise regression was performed to determine the most important factors in determining PTGI scores.

Furthermore, to assess the correlations among the variables used in this study, a correlation analysis was employed examining the SOC, CERQ, and PIL scores, and presented in Table 3.

Table 3

Correlations Among Posttraumatic Growth, Meaning-Making, and Coping Strategies Variables

	1	2	3	4	5	6	7	8.	9	10	11
1. PTGI											
2. SOC	.349**										
3. PIL	.246**	.477**									
4. CERQ: Self Blame	.062	-.378**	-.181*								
5. CERQ: Acceptance	.231**	.073	.048	.051							
6. CERQ: Rumination	.022	-.461**	-.169	.517**	.016						
7. CERQ: Pos. Refocus	.325**	.521**	.223*	-.216*	.122	-.265**					
8. CERQ: Pos. Reapp.	.376**	.593**	.201*	-.122	.222**	-.237**	.516**				
9. CERQ: Refocus	.298**	.527**	.291**	-.121	.109	-.145	.577**	.720**			
10. CERQ: Perspective	.197*	.513**	.111	-.025	.118	-.301**	.442**	.749**	.567**		
11. CERQ: Catastrophize	.058	-.429**	-.105	.259**	.088	.584**	-.103	.322**	-.174*	-.510**	
12. CERQ: Blame	-.109	-.259**	-.252**	.194*	-.210*	.289**	-.089	-.197*	-.065	-.126	.186*

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Relationship between SOC and PTGI.

The first null hypothesis stated that there would be no statistically significant relationship between the bereaved individual's ability to make sense of the loss, as measured by the *Sense of Coherence Scale* (SOC), and the experience of posttraumatic growth following bereavement, as measured by the *Posttraumatic Growth Inventory*

(PTGI). This question was examined by a regression analysis of SOC versus PTGI. The regression model was significant ($R^2=0.122$, $p<0.0005$), and the coefficient of SOC in the model was also significant ($B=0.331$, $p<0.0005$). Hence the null hypothesis was rejected, and we conclude there is a statistically significant relationship between an individual's ability to make sense of their loss (SOC) and the experience of posttraumatic growth following bereavement (PTGI). This model, including a 95% confidence interval for the coefficients, is displayed in Table 4.

Table 4

Regression Analysis of SOC vs. PTGI

	Unstandardized Coefficients		t	Sig.	95% Confidence Interval for B	
	B	Std. Error			Lower Bound	Upper Bound
(Constant)	16.03	8.79	1.82	.07	-1.35	33.42
SOC	.33	.08	4.28	.00	.18	.48

Relationship between PIL and PTGI

The second null hypothesis posited that there would be no statistically significant relationship between the bereaved individual's sense of existential meaning and purpose as measured by the *Purpose-in-Life (PIL) Test* and the experience of posttraumatic growth following bereavement as measured by the PTGI. Similarly, this relationship was analyzed via regression analysis. Again, both the model ($R^2=0.061$, $p=0.006$), and the coefficient of PIL in the model ($B=0.840$, $p=0.006$) were significant. While these results are significant enough to reject the null hypothesis, changes in PIL scores only explained 6.1% of the variation in PTGI. These results indicate that there is a statistically

significant relationship between the bereaved individual's existential meaning and purpose and the experience of posttraumatic growth following bereavement, but the small value of R^2 indicates that this model would not be a very good predictor of PTGI scores because the PIL scores accounted for so little of the variance. This model is summarized in Table 5.

Table 5

Regression Analysis of PIL vs. PTGI

	Unstandardized Coefficients		t	Sig.	95% Confidence Interval for B	
	B	Std. Error			Lower Bound	Upper Bound
(Constant)	-15.71	24.26	-.65	.518	-63.75	32.31
PIL	.84	.30	2.80	.006	.25	1.44

Additionally, the first and second hypotheses were also analyzed together by conducting a multiple regression analysis which contained both predictor variables, the SOC and PIL. As can be gleaned from Table 6, SOC and PIL jointly explained 10.2% of the variability in PTGI. The overall model was significant ($F(2,120) = 6.82, p = .002$). The coefficient for SOC was positive and significant ($b = 0.22, p = .02$), suggesting that each unit increase in SOC was associated to a .22-unit increase in PTGI. In contrast, the coefficient for PIL was not significant, suggesting that there was either no association between PIL and PTGI, or that any association between the PIL and PTGI was already explained by the association between the SOC and the PTGI (i.e., the variance in the PTGI explained by the SOC overlapped with any variance explained by the PIL). Overlapping variance between the PIL and the SOC is likely the reason that, when

examined individually, each of these measures significantly predicted PTGI scores, but when examined together only one (the SOC) remained significant.

Table 6

Regression of PTGI on SOC and PIL

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B	
	B	Std. Error	Beta			Lower	Upper
(Constant)	-9.663	23.952		-.403	.687	-57.087	37.760
SOC	.220	.093	.232	2.354	.020	.035	.405
PIL	.463	.336	.136	1.380	.170	-.201	1.128

F(2,120) = 6.82, p = .002
R² = .102

Relationship between CERQ and PTGI

In hypothesis 3, the relationship between the type of cognitive coping strategies employed by bereaved individuals as measured by the *Cognitive Emotion Regulation Questionnaire* (CERQ) is compared to *Post Traumatic Growth Inventory* (PTGI). The null hypothesis tested posited that there would be no relationship between the two. Moreover, since the CERQ is broken into 9 four-question subtests, this hypothesis was tested using a stepwise regression model in order to isolate the relevant and significant subscales of cognitive coping.

The stepwise regression model used is backward moving; that is, all of the independent variables (subscales of CERQ) are initially included in the model, and the least significant subscales were removed from the model at each step until any remaining coefficients were nonzero with at least 95% confidence. The model returned was significant (R²=0.210, p<0.0005), and though the CERQ total score did not have a

significantly nonzero coefficient in the model, four of its subscales did: Self Blame (B=0.92, p=0.05), Positive Refocusing (B=1.465, p=0.02), Positive Reappraisal (B=2.52, p<0.005), and Putting into Perspective (B= -1.382, p=0.04). This indicates that PTGI increases as scores on the Self Blame, Positive Refocusing, and Positive Reappraisal sections of CERQ increased, and declines as scores on the Putting into Perspective section of CERQ increased. A description of the final model from this regression appears in Table 7.

Table 7

Regression Analysis of CERQ subscales vs. PTGI

	Unstandardized Coefficients		t	Sig.	95% Confidence Interval for B	
	B	Std. Error			Lower Bound	Upper Bound
(Constant)	13.31	8.42	1.58	.12	-3.345	29.97
CERQ: SelfBlame	.92	.46	2.00	.05	.01	1.82
CERQ: PosRefocus	1.46	.59	2.47	.02	.29	2.64
CERQ: PosReapprais	2.512	.68	3.69	.00	1.17	3.86
CERQ: Perspective	-1.38	.67	-2.05	.04	-2.71	-.05

Relationship between Demographic Data and the Effect of Meaning-Making on PTGI

In this section, hypotheses 4 and 5 are addressed. Namely, the null hypotheses that the type of death (expected or unexpected) will not serve as a moderator in the relationship between meaning-making and the PTGI scores, and time elapsed since death of a loved one is not a moderator in the relationship between meaning-making and the PTGI scores were tested. Here, meaning-making is measured by participants' responses to the question "Have you found yourself searching to make sense of or find some

meaning in your loved one’s death?” which had responses on a 5-point Likert scale, with 1 being “Never” and 5 being “Constantly”.

To address the null hypothesis 4, a regression analysis was performed. The dependent variable was posttraumatic growth as measured by the PTGI, and the independents were type (type of death: expected or unexpected), meaning-making, and their product (the interaction of meaning-making and type of death). Their product is included to measure the effect of their interaction. Though the score on the meaning-making had a significant relationship to PTGI score, neither type of death, nor their product were statistically significant, as shown in Table 8. Therefore Null Hypothesis 4 cannot be rejected as this data did not provide evidence to support an effect of type of death on the relationship between meaning-making and PTGI.

Table 8

Regression Analysis of Type of Death, Meaning-Making, and PTGI Scores

	Unstandardized Coefficients		t	Sig.	95% Confidence Interval for B	
	B	Std. Error			Lower Bound	Upper Bound
(Constant)	19.54	16.12	1.21	.23	-12.35	51.42
Type of Death	16.65	11.75	1.42	.16	-6.59	39.89
Meaning-Making	4.33	1.55	2.80	.01	1.27	7.39
Interaction of Meaning-Making and Type of Death	-4.08	3.19	-1.28	.20	-10.39	2.23

To test Null Hypothesis 5, PTGI scores were tested against time (number of months elapsed since death) and meaning-making. An analysis of covariance

(ANCOVA) was performed with PTGI as the dependent, meaning making as a fixed factor, and time since death as a covariate. The model produced a small R^2 value of 0.06, and time-elapsed was not significant at the 0.05 level. Hence, Null Hypothesis 5 cannot be rejected, and as the data does not suggest that time elapsed since the death of a loved one impacts the relationship between meaning-making and PTGI scores. These results are summarized in Table 9.

Table 9

Analysis of Covariance: PTGI vs. Time Since Death and Meaning-Making

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	4748.57	5	949.71	1.73	.13
Intercept	81764.43	1	81764.43	148.87	.00
TimeElapsed	8.01	1	8.01	.015	.90
Meaning-Making	4743.74	4	1185.94	2.16	.08
Error	70301.49	128	549.23		
Total	447228.00	134			
Corrected Total	75050.06	133			

Summary and Overall Analysis

The results suggest that certain scores, such as those of Sense of Coherence (SOC), Purpose in Life, (PIL), and some subscales the of Cognitive Emotional Regulation Questionnaire (CERQ) (Self-Blame, Acceptance, Positive Refocusing, Putting into Perspective, and Positive Reappraisals) are correlated with Post Traumatic Growth Inventory (PTGI) scores of bereaved individuals. Moreover, results of the data analysis suggest that other subscales of CERQ (Rumination, Refocus on Planning,

Catastrophizing, and Other-Blame) , whether the death was expected or unexpected, and the time elapsed since the death were not correlated with PTGI scores. To assess which scores were most related to the PTGI scores, a backward stepwise regression analysis was conducted over all of the independent factors to examine which were most significant. The results of the final model obtained by the regression appear in Table 10.

The regression results indicate that there are significant relationships between PTGI and meaning-making, PIL, CERQ (Acceptance Subscale), CERQ (Positive Refocusing), and CERQ (Positive Reappraisal). The model has an R^2 of 0.266 at significance < 0.0005 .

Table 10

Stepwise Regression Analysis of PTGI vs. all Scores in this Study

	Unstandardized Coefficients		t	Sig.	95% Confidence Interval for B	
	B	Std. Error			Lower Bound	Upper Bound
(Constant)	-54.05	24.67	-2.19	.03	-102.923	-5.18
Meaning-Making	2.43	1.22	1.99	.05	.01	4.84
PIL	.561	.28	1.96	.05	.00	1.12
CERQ:SelfBlame	.88	.45	1.95	.05	-.02	1.77
CERQ:Acceptance	1.34	.56	2.28	.02	.18	2.50
CERQ:PosRefocus	1.19	.58	2.06	.04	.04	2.33
CERQ:PosReappraisal	1.01	.50	2.01	.05	.02	2.00

Ancillary Findings

In addition to the quantitative data that was collected and statistically analyzed, this study also collected qualitative data in response to two open-ended questions. This

qualitative data was collected in an effort to gain greater depth of information regarding the experiences of meaning-making and posttraumatic growth. The participant responses to the two open-ended questions were analyzed by searching for emergent themes.

The first question queried participants who indicated they had found meaning or had made sense of the death of their loved one: “Can you please explain how you were able to make sense of the death?” Ninety participants responded to this question, and there were five primary themes that arose in the responses. First, 38% of the participants cited that they were still searching for meaning as indicated by responses such as “I am still searching [for meaning] and have not found any yet,” and “I have yet to be able to make sense of his death, but I am still searching for something that makes sense.”

There were 22% of responses which expressed religious or spiritual explanations for the death of their loved one such as: “the way I make sense of my husband's death is that I nor him had any control over it. I truly believe that God has a plan, and, there is a reason for everything under the heaven and so there is a reason for my husband's death, ” “maybe he was meant to be an angel, God had a special purpose for him,” and “it was all part of God's plan and he has a purpose for it.” Other responses (15%) appeared to make sense of the death by looking at the death as means of ending the deceased individual’s suffering: “I feel that he had suffered enough in this life and God took him home,” “their death brought them peace and ended their suffering,” and “they are in Heaven, happy and they are no longer in pain.”

A fourth theme exhibited in 9% of participants’ responses centered on making sense of the loss by explaining the loss through a utilitarian perspective (in terms of the

greater good): “We have become active in the drug awareness community, so maybe our son died to save others,” “It was my husband’s way of giving our daughter and me a better life,” and “I feel that my loved one was taken to show others that you must live your life before it is too late.” Finally, 6% of the participants reported that they had concluded there was no meaning or no sense to the loss of their loved one. They appear to have terminated their search of meaning or attempts to make sense.

The second question sought to examine an individual’s perception of their posttraumatic growth by asking participants “Do you feel that you have grown (emotionally, psychologically, etc.) from this experience? If yes, can you please describe this growth?” The responses to these questions all appeared to fall under one of the four primary domains of posttraumatic growth posited by literature: an increased sense of personal strength or resilience; improved interpersonal or relational dynamics; heightened spiritual awareness or spiritual development; and positive changes in life philosophies (Linley & Joseph, 2004; O’Leary & Ickovics, 1995; Tedeschi & Calhoun, 1995).

There were 37% of the responses which described PTG in regards to increased sense of personal strength or resilience. Examples of these responses include: “I’m emotionally stronger [and] I now find so many, many things I *can* do on my own,” “emotionally, able to handle more than I thought,” “I found a strength I never knew I had,” and “ I am able to face and handle situations better.”

Positive changes in interpersonal dynamics were also reported by 31% of the participants. Examples of these responses of increased empathy or compassion for others include: “I have more compassion for people who are suffering, “I have more empathy,”

and “I am also more alert of other peoples feelings as they experience things in their lives.” Examples of responses describing improved relationships include: “I have learned to accept help from others and be more trusting of others,” “[I] value remaining family members more,” and “I have better relationships with my friends and family.”

Additionally, 20% of the participants also reported positive changes related to life philosophies and to existential concerns: “I can see more of the big picture of life,” “I have learned to be more accepting and I have put things in perspective,” “I believe that I have a higher purpose and a sacred contract for my life on Earth,” “I have learned lessons about what is really important in this life,” and “this death forced me to take stock in my own life, and try to live it to the fullest by going for my dreams.

Other participants (14%) also expressed a growth and positive changes regarding their spirituality; examples of these responses include: “my spiritual level is deeper than at any other time in my life,” “I have grown in that I am building a better relationship with God,” “Spiritually I have had to draw on the strength of the Lord” and “I've grown spiritually in that I have more compassion.” Finally, 4% of participants indicated that though they have perceived some posttraumatic growth, it was too soon for them to articulate or to identify in what ways they had grown.

CHAPTER V: DISCUSSION

Overview

The purpose of this study was to investigate the relationship between meaning-making coping efforts and the experiences of posttraumatic growth in bereaved individuals. More specifically, the aim of this study was to determine whether a relationship existed between a bereaved individual's ability to make sense of their loss, their ability to search for personal meaning, their ability to employ specific cognitive coping styles, and their subsequent experience of posttraumatic growth. In addition, this study also investigated whether variables such as time elapsed since the loss, the type of death experienced (expected or unexpected), or the gender of bereaved individual would be significant moderating variables related to meaning-making and an individual's experience of posttraumatic growth following bereavement.

The hypotheses developed were based on previous theoretical and empirical literature in the fields of posttraumatic growth, bereavement, and meaning-making. The Null hypotheses developed and tested were as follows:

1. There will be no statistically significant relationship between the bereaved individual's ability to make sense of the loss, as measured by the *Sense of Coherence Scale*, (Antonovsky, 1987) and the experience of posttraumatic growth following bereavement, as measured by the *Posttraumatic Growth Inventory*, (Tedeschi & Calhoun, 1996).

2. There will be no statistically significant relationship between the bereaved individual's existential meaning and purpose in life as measured by the *Purpose-in-Life* test (Crumbaugh & Maholick, 1969) and the experience of posttraumatic growth following bereavement as measured by the *Posttraumatic Growth Inventory* (Tedeschi & Calhoun, 1996).
3. There will be no statistically significant relationship between the type of cognitive coping strategies employed by bereaved individuals as measured by the *Cognitive Emotion Regulation Questionnaire* (Garnefski et al., 2001) and the experience of posttraumatic growth following bereavement as measured by the *Posttraumatic Growth Inventory* (Tedeschi & Calhoun, 1996).
4. The type of death (expected or unexpected) will not serve as a moderator in the relationship between meaning-making and the experience of posttraumatic growth following bereavement as measured by the *Posttraumatic Growth Inventory* (Tedeschi & Calhoun, 1996).
5. Time elapsed since death of a loved one will not serve as a moderator in the relationship between meaning-making and the experience of posttraumatic growth following bereavement as measured by the *Posttraumatic Growth Inventory* (Tedeschi & Calhoun, 1996).

In this final chapter, the meaning of the statistical findings and their implications will be discussed with a focus on how these findings fit within the current research on posttraumatic growth. The limitations from this study will be reviewed and

recommendations for future research will be offered. Finally the implications of this study for psychologists and other mental health professionals will be discussed.

Meaning and Interpretation of Results

Findings Related to Posttraumatic Growth

The findings indicated that a bereaved individual's ability to make sense of their life experiences including the loss of a loved one as measured by the *Sense of Coherence Scale* (SOC) was significantly related to their experience of posttraumatic growth (PTG) following bereavement such that as individuals experienced higher levels of meaningfulness, manageability, and coherence in their lives they also experienced higher levels of posttraumatic growth. Similarly, the findings of this study also suggested that a bereaved individual's sense of purpose in life as measured by the *Purpose in Life* (PIL) instrument may be related to their experience of PTG, in that, as individuals experienced a greater sense of purpose in life they also appeared to experience higher levels of posttraumatic growth; the potential relationship between the PIL and PTG was not as strong as the relationship between the SOC and PTG. However, these findings taken together lend support to the previous theoretical literature which suggests that meaning-making or constructs related to meaning-making, such as sense of coherence, meaningfulness, and purpose in life are central to adaptive coping or growth following loss or trauma (Aldwin, 1994; Davis et. al., 1998; Janoff-Bulman, 1992; O'Leary & Ickovics, 1995; Park & Folkman, 1997; Schaefer & Moos, 1992; Tedeschi & Calhoun, 1995; Thompson, 1998; Wortman & Silver, 2001).

Although based on the results of this current study a relationship appears to exist between meaning-related constructs such as sense of coherence, meaningfulness, and purpose in life and the process of posttraumatic growth, assertions cannot be made from these results regarding a causal relationship between these two processes. One possible interpretation is that there may exist a bidirectional process in which individuals with higher levels of meaning and purpose in their lives were more likely to engage in meaning-making coping and experience posttraumatic growth, and thus, subsequently experienced a greater sense of meaning, coherence, and purpose in life as a result of sense of mastery associated with successfully coping and thriving following the loss of a loved one. This bidirectional process is similar to the feedback models of Schaefer and Moos (1992), and Tedeschi and Calhoun (1995).

Another interpretation of these results is that it could be that the process of coping with a traumatic experience, in this case bereavement, may force individuals to construct or find the meaning of not only the loss of a loved one, but meaning or purpose in life in general, which then facilitates the process of posttraumatic growth. This explanation would begin with the premise that bereavement is a psychosocial process that causes distress and upheaval in people's lives; such a highly negative event could significantly threaten or disrupt an individual's assumptions, beliefs, and expectations about the world that have previously guided their sense of understanding, self-identity, hopes for the future, life goals, and even their general purpose and meaning of their existence. At this point, cognitive processing would ensue after individuals come to realize that their beliefs about how the world operates may no longer be functional. Thus, the individual would

then deliberately engage in a search for meaning in order to recreate new assumptions and beliefs about the world and himself, establish life goals, and sense of purpose and meaning in life. As individuals adjust to the loss of a loved one and resolve questions of meaning and purpose, they are able to establish new life goals and purpose in life as well as to create new schemas that incorporate the realities of their loss. They may become more resistant to being disrupted in the future; these results would be perceived as growth and transformation. In this way, meaning-making becomes an inherent part of the cognitive processes related to coping with loss and trauma, as well as one of the various positive changes that constitute an outcome of posttraumatic growth.

In both of these explanations, sense of coherence and purpose in life are part of both meaning-making coping efforts and part of the outcome of posttraumatic growth. It remains for future research to determine if there is a causal relationship between meaning-making and PTG, or between purpose in life and PTG. However, it seems that it may be critical for future researchers to find ways to disentangle meaning from coping processes and the outcome of trauma in order to fully elucidate the causal relationship between meaning and PTG.

It is important to note that while the results of this study indicated there was a statistically significant relationship between individuals' levels of existential meaning or purpose in life and experiences of PTG, and also a statistically significant relationship between sense of coherence and the experience of PTG following bereavement, the scores on both PIL and SOC only explained 12.2% and 6.1% of the variation in PTGI scores. Thus, neither the sense of purpose in life nor the sense of coherence alone are

very strong predictors of the experience of posttraumatic growth. These findings are consistent with the existing literature which suggests the experience of posttraumatic growth is a complex and dynamic process that entails a variety of mechanisms including individual characteristics, social resources, and more centrally, significant cognitive processes (Linley & Joseph, 2004; O’Leary & Ickovics, 1995; Tedeschi & Calhoun, 1995; 2004). While sense of coherence and meaning in life appeared to be related to PTG following bereavement, additional processes are needed to adequately predict the experience of PTG. Thus, future research is necessary to determine what combination of personal characteristics, social resources, and cognitive processes best predict the experience of PTG.

Findings Related to Coping Strategies

As noted in the preceding section, cognitive processing is a critical component in the process of PTG. Thus, hypothesis three focused on cognitive coping strategies employed by bereaved individuals and their relation to PTG. In order to isolate which of the nine subscales of *Cognitive Emotional Regulation Questionnaire* (CERQ) was most significantly correlated with scores on the PTGI, backward moving stepwise regression analysis was employed. The findings indicated that the three cognitive coping strategies positively correlated with experience of posttraumatic growth were Self Blame, Positive Refocusing, and Positive Reappraisal; there was an inverse correlation between the experience of posttraumatic growth and coping strategies falling under the rubric Putting Into Perspective. There were no significant correlations between PTGI scores and scores

on the remaining five subscales measuring coping strategies involving Rumination, Blaming Others, Acceptance, Refocus Planning, and Catastrophizing.

The correlation between cognitive coping strategies involving Positive Appraisals and PTG was consistent with previous research that had indicated the coping strategies involving reappraisals, positive appraisals, and benefit-finding are associated with successful adaptations or adjustment to loss (Capps & Bonanno, 2000; Stein, et al., 1997) and are closely linked to the experience of growth and transformation following trauma (Horowitz, 1982, 1991; Janoff-Bulman & Frieze, 1983; Park & Folkman, 1997; O'Leary & Ickovics, 1995; Tedeschi & Calhoun, 1996; 2004). Furthermore, cognitive coping strategies involving appraisal are closely tied to the construct of meaning-making: the Positive Appraisal subscale measures an individual's use of strategies that result in a mental attribution of a positive meaning to an event, perceptions that the traumatic event or loss makes the person stronger, and to attempts to find the positive aspects of the event (Garnefski et al., 2001). Thus, these previous findings on appraisal coping strategies which are closely linked to meaning and meaning-making are in line with the findings of this current study which suggested there was a relationship between the general construct of meaning (as it relates to sense of coherence and purpose in life) and PTG.

While at first glance the positive relationship between Self-Blame coping strategies and the experience of PTG may seem surprising, this relationship also affirms existing theoretical literature regarding meaning-making and coping with bereavement. In order for bereaved individuals to reconcile the confusion and distress arising from their loss (i.e., coping with a meaningless universe, shattered assumptions, lack of coherence,

and lack of purpose in life) they must engage in a search for meaning (Janoff-Bulman & McPherson, 1997; Schwartzberg & Janoff-Bulman, 1991; Tedeschi & Calhoun, 1996). This search for meaning may entail bereaved individuals' attempt to examine who or what is to be held responsible for what happened; as they look internally for possible explanations, individuals grapple with questions such as Why me? or What have I done to deserve this? The responses and conclusions to these questions may result in self-blame as individuals analyze how their behaviors or actions may have contributed to the event. Such responses are consistent with items on the CERQ items comprising the Self-Blame subscale such as "I think that basically the cause must lie within myself," "I think about the mistakes I have made in this matter," and "I feel that I am the one who is responsible for what has happened." In this sense, the relationship between self-blame strategies may be helpful in assisting individuals to finding meaning in their experience of loss and trauma, which in turn is related to the outcome of PTG.

Future research is needed to answers other questions related to relationship between self-blaming strategies, meaning-making, and PTG. One question that arises from these findings is how much self-blame is adaptive in coping with loss and trauma, and at what point would the self-blame become maladaptive. It appears that excessively high levels of self-blame would not be helpful. Indeed, research suggests that selective attributions involving self-blame are not adaptive as they may result in feelings of helplessness, self-anger, and tendency towards passivity (Brickman & Bulman, 1977; Gibbons & Gerrad, 1991). Other studies have shown that self-blame attributional styles are related to depression and other forms of psychological distress (Anderson, Miller,

Riger, Dill, & Sedikides, 1994). One could speculate that self-blame may be most helpful during the initial stages of coping with loss and trauma, in that it could serve as the impetus for meaning-making; however, the question that remains is what happens to those individuals for whom self-blaming strategies are not results of attempts to find meaning or make sense of their experience over time?

One unexpected finding was that there was a positive correlation between positive refocusing strategies and the experience of PTG. Positive Refocusing subscale includes strategies related to thinking about other pleasant matters instead of the event in question. In general, research has shown that this strategy in itself may have a positive effect on people's wellbeing in that it may serve to lower psychological distress through diversion or distraction (Endler & Parker, 1990; Garnefski et al., 2001). This finding is unexpected in that cognitive engagement with a traumatic event and active coping strategies are critical mechanisms necessary for posttraumatic growth to occur (Janoff-Bulman & McPherson, 1997; Schwartzberg & Janoff-Bulman, 1991; Tedeschi & Calhoun, 1996). Positive refocusing strategies constitute an intentional cognitive disengagement with the event and fall under the rubric of passive or avoidance coping strategies, both of which are antithetical to PTG.

One possible explanation for these findings is that positive refocusing strategies are likely to be only one of many coping styles that bereaved individuals employ to cope with their psychological distress; thus, if this positive refocusing is used along with or alternated with more active coping strategies such as meaning-making, positive appraisals, and benefit-finding, the mechanisms necessary for PTG to occur would still be

present. One example of how these mechanisms could conceivably operate together might be that during times when an individual must function effectively (such as in occupational, academic, or public settings) and cannot afford to default to the psychological distress that is caused by actively thinking about the death of a loved one, she may employ positive refocusing strategies in an effort to distract herself from her grief and distress; however in situations where she is able to have time to grieve and reflect on her experience, she may be more likely to employ active coping strategies which facilitate the process of PTG. Future research is needed to elucidate the relationships between combinations of specific cognitive coping strategies, the frequency with which specific strategies are employed, and their relationships to process of PTG.

Another unexpected finding was that there was an inverse relationship between Putting into Perspective coping strategies and the experience of posttraumatic growth. The Putting into Perspective subscale of the CERQ measures cognitive strategies related to playing down the seriousness of the event when compared to other events. The items of this subscale include statements such as “I think that it hasn’t been too bad as compared to other things,” “I think that it all could have been much worse,” and “I tell myself that there are worse things in life.”

Intuitively one might assume that an ability to put traumatic events into perspective would be related to increased levels of adaptation and growth: as opposed to catastrophizing or magnifying the effects of loss or trauma, putting into perspective suggests an ability for an individual to have a more realistic perception of a traumatic event by putting it into the context of the larger picture. Thus, one explanation for this

finding is that for some participants in this study, the death of a loved one was not a traumatic event; for these individuals putting into perspective could have been an adaptive coping strategy that helped them cope with their grief and loss, which while painful, may not have been traumatic. Since these individuals did not experience the event as traumatic, there was no opportunity for posttraumatic growth to occur.

Finally, another finding that was surprising was that there was no relationship between Rumination coping subscale and the process of PTG. Rumination refers to strategies of passively and repetitively focusing on one's distress and the negative event(s) surrounding the distress (Nolen-Hoeksema et al., 1997). Rumination has been positively correlated with increased levels of distress and poorer adjustment following loss and trauma (Lyubomirsky & Nolen-Hoeksema, 1993; Nolen-Hoeksema, McBride, & Larson, 1997; Tait & Silver, 1989). Nolen-Hoeksema and his colleagues (1997) suggest that ruminative coping may exacerbate the impact of loss in bereaved individuals: (1) by intensifying the effects of depressed mood on thinking; (2) by interfering with daily behavior instrumental in functioning through decreased motivation; (3) by interfering with effective problem-solving since the individual is instead thinking negatively about themselves and their lives; and (4) by decreasing social support. Tedeschi and Calhoun (1996) also theorize that rumination plays a critical role in PTG: if an individual is unable to find answers as they search for meaning following loss and trauma, they can fall into a cycle of ruminating on their questions and concerns without subsequent resolution; if the individuals are unable to move out of the cycle of rumination, they would be unable to experience PTG. Thus, while no specific predictions were made in

the hypothesis regarding rumination and PTG, based on the review of the literature, an inverse relationship between rumination and PTG would have been expected. One explanation for this finding is that there were insufficient measures of rumination; in this research design only a subscale comprised of 4 items was used to measure ruminative coping. Thus, more substantial measures may be needed in future investigations in order to fully elucidate the relationship between the process of rumination and the process PTG.

Findings Related to Hypotheses 4 and 5

In order to investigate if the type of death (expected or unexpected) experienced by the bereaved individual moderated the relationship between meaning-making and PTG, a regression analysis was performed. The findings of this analysis indicated that there was not enough evidence that type of death was a moderator in the relationship between meaning-making and PTG. The bereavement literature suggests that both the abruptness of the death and the length of time an individual has to prepare for the death significantly impact the outcome of adjustment (Sanders, 1988; Stroebe & Schut, 2001). Other studies indicate that sudden unexpected deaths have negative effects on the bereaved including prolonging grief reactions, producing excessive psychological distress, producing higher levels of depression and PTSD, and increased somatic complaints (Herbert et al., 2006; Kaltman & Bonanno, 2003; Lundin, 1984; Parkes & Weiss, 1983; Rogers, 1995; Sanders, 1988; Stroebe, et al., 1987).

One possible explanation for this finding is that bereaved individuals experienced higher levels of distress and psychopathology associated with unexpected deaths, but

were still able to experience PTG as an outcome of their loss. This explanation is consistent with the previous research that has failed to find a clear relationship between PTG and psychological distress. It is unclear under what conditions and to what extent psychological distress impairs or promotes PTG. Previous studies have also failed to find any relationship between PTG and mental health outcomes in the domain of depression (Videka-Sherman, 1982), daily mood, (Tennen et al., 1992), and psychological adjustment (Lehman et al., 1993). The results of the current study and previous research suggest that PTG may not co-vary with decreased psychological distress or increased psychological well-being. One possible explanation for these findings is that time and the level of distress may be mediating variables in this relationship; it may be that PTG only occurs when it is preceded by a significant period of psychological distress; or it could be possible that PTG occurs simultaneously with psychological distress. Thus, while bereaved individuals coping with an unexpected death may experience higher levels of distress and psychological impairment as compared to bereaved individuals coping with a death that was expected may coexist with growth and transformation. Another explanation is that the higher levels of distress and psychological impairment associated with unexpected deaths may serve as the impetus for growth and transformation for bereaved individuals. These findings should be interpreted with caution given the low sample size of individuals who experienced an expected death. Of the 134 participants, 30 reported the death of their loved one was expected and 104 reported the death was unexpected.

In regards to hypothesis five, the findings did not indicate that time elapsed since the death was a moderator in the relationship between meaning-making and PTG. There is a lack of research that has specifically investigated the relationship between time elapsed since the trauma and experience of PTG. However, the theoretical literature suggests that there must be a sufficient amount of time to elapse in order the experience of growth and transformation to develop (Linley & Joseph, 2004; Tedeschi & Calhoun, 1995; 2004). Some specific positive changes may be observable weeks after the trauma or loss has occurred, such as increased social support; however, other changes, such as change in life philosophy might not occur until months or years have elapsed. However, the literature also suggests that if too much time passes between experience of trauma and measurement of PTG, individuals may underreport PTG; this may occur because overtime individuals may integrate their growth into their cognitive schemas and life narratives and the positive changes and growth they experienced may no longer be as salient in their lives. Furthermore, as time elapses individuals may no longer directly attribute positive changes and growth as occurring as a result of their successful adaptation to loss and trauma. Given these complex relationships between time elapsed and PTG, it is not surprising that this current study did not yield any significant results in this domain. Future research may benefit from employing longitudinal methodology in order to fully understand the relationship between time and PTG.

Findings related to Ancillary Analysis

The qualitative responses discussed in the previous chapter are congruent with the previous literature on meaning-making and posttraumatic growth. The open-ended

questions allowed individuals to explain how they made meaning or sense of traumatic experiences and to explain their perceived growth and transformation without having to fit them into pre-established categories. Future research could benefit from analyzing the qualitative data collected in this study through formal qualitative methods, such as content analysis or narrative analyses in order to more fully understand the complex relationship between meaning-making and posttraumatic growth.

Implications for Counseling and Clinicians

The results of this study have several important clinical implications for counselors. It is imperative that clinicians be made aware of the possibility for growth that exists for survivors of loss and trauma. Trauma survivors are not necessarily aware that they are searching for meaning or attempting to construct benefits from their experience. In fact, for many of them the effort of attempting to survive or contemplating survival is even worthwhile. Thus, trauma survivors who seek counseling to address their psychological distress following loss and trauma may enter counseling with an implicit or explicit goal of being able to return to their prior levels of functioning or wellness. However it is critical that both the client and the therapist be aware that a potential of growth and transformation exists; this is important so that the therapist can help identify and highlight this growth as the transformation becomes evident. Thus, it is important that clinicians be educated and informed about the process of growth following loss and trauma not only so that it can inform their clinical work, but also so that they can educate their clients about the possible outcomes following loss and trauma. At the same time, it is important that clinicians not view trauma survivors who do not experience PTG as

having failed to manage trauma constructively or successfully (Tedeschi & Calhoun, 1995). PTG is a gift, that while not uncommon, is also not a universal experience.

Given that traumatic experiences disrupt and shatter an individual's cognitive schemas that serve as their foundation for understanding the world and themselves, it seems likely that the distress and confusion brought about by these shattered schemas be brought up in counseling sessions. Therefore, a goal of therapy might be to facilitate the exploration and creation of new cognitive schemas. Therapists can facilitate the process of meaning-making with their clients using interventions targeted at finding meaning and purpose in life through a variety of existential techniques (Yalom, 1980).

Clinicians should also be multiculturally sensitive and support cultural differences regarding trauma and growth. They should understand that different persons experiencing PTG may have different perspectives and explanations for their experiences.

Limitations

The results of this study should be interpreted with caution due to several limitations of this study. One glaring limitation of this study resided in the sample. Although there was diversity across age range (the sample approximated a normal distribution), the sample represented a rather homogenous group comprised of mostly White females. Given the lack of diversity of the sample, the generalizability of the study is limited.

Another limitation with the sample in this study is that this investigation utilized Internet participants and Internet surveys. Thus, the online nature of this study limited participation of this study to those who had computer access. Furthermore, there are

demographic differences between Internet users and nonusers; for example, “Internet users are more likely to be White and young and to have children than the nation as a whole” (Kraut, Olson, Banajai, Bruckman, Cohen, & Couper, 2004). However, despite these limitations, research suggests that Internet-based research findings do not differ from those obtained with other methods (Kraut et al. 2004).

Still another limitation with the sample in this study was the relatively small group of individuals whose death of a loved one was expected (30), compared to the larger group of individuals who reported the death of a loved one was unexpected (104). While the statistical analyses employed accounted for the robustness of group sizes, the findings suggested that the type of death experienced by an individual was not a moderator in the relationship between meaning-making and posttraumatic growth. This finding should be interpreted with caution as the results of this study may have been different had there been a larger sample size of individuals who experienced an expected death. Given the theoretical and empirical research on bereavement and posttraumatic growth, it seems likely that there may be some relationship between type of death experienced (unexpected versus expected) and the experience of posttraumatic growth. The review of the literature suggests that the relationships between type of death and posttraumatic growth could likely be positive or negative (or even both if there exists a curvilinear relationship). Thus, further studies are needed to examine the nature of relationship between posttraumatic growth and type of death experienced.

Similarly, another limitation of this study was the restricted range of time that elapsed since the participants experienced the death of a loved one. In this study the range

used was 12 to 48 months, based on the recommendations of previous literature. However, one would suspect that if different range was used, it would be possible that different relationships that may emerge between time elapsed since death of a loved one and the experienced of PTG. This relationship could benefit by explored further in future studies utilizing a longitudinal study.

Another limitation related to the sample used in this study is that bereavement support groups were the only groups targeted for participant recruitment. Thus, it could be that individuals who seek out and join support groups are not representative of the general population; these individuals may be more apt to seek out and utilize social support to cope with their distress, which may suggest they have more adaptive coping skills as compared to the general population. Furthermore since this sample of participants may have higher levels of social resources as compared with the general population, this may suggest these individuals were more apt to experience PTG given that access and utilization of social resources is a critical determinant of PTG.

The methodology of this study also has a number of limitations that may have impacted the validity of the findings. Only self-report measures were used in this study. As with all self-report instruments, the effect of social desirability may have biased the way participants responded to the study. However, there is no reason to believe that the participants of this study would exhibit more response bias than any other groups in general.

Recommendations for Future Research

This study investigated the relationship between meaning-making coping efforts and the experiences of posttraumatic growth in bereaved individuals. It is this investigator's hope that future research studies address the limitations and expand on the findings of this research. Future research could also benefit from exploring the questions that arose from this study, particularly those related to type of death experienced and their relationship to meaning-making and PTG. Future researchers could further investigate the questions surrounding the effect of time elapsed on the process of PTG, as well as relative stability of PTG over time.

While this study only focused on one possible determinant of posttraumatic growth, meaning-making, it is important that future empirical research examine other variables that have been suggested to facilitate PTG in the domains of individual characteristics, coping processes, and social resources. A longitudinal study could also provide many answers regarding relationships between individual characteristics, coping strategies, social resources, and the posttraumatic growth. It seems that prospective longitudinal pre-post research designs could provide a wealth of information that would increase our understanding of PTG.

The overlap between meaning-making coping strategies and meaning as an outcome of PTG calls into question the distinction between the two constructs. These

constructs are difficult to untangle, but perhaps using a multitrait-multi-method assessment procedure could help tease the two constructs apart (Linley & Joseph, 2004).

Furthermore, future research could benefit from exploring the experience of PTG from multicultural perspective. It would be interesting to see if and how the experience of PTG varies across cultures, as well as how the factors that facilitate or predict PTG vary depending on one's cultural background.

This study could not yield any findings related to gender difference given the small sample size of men as compared to women (120 females, 14 males). Further research is needed to understand the gender differences in the process of coping with loss and trauma and the experience of PTG.

This study was correlational in nature, which at best could only predict relationships between meaning, meaning-making, coping strategies, and posttraumatic growth. For this reason, cause and effect relationships could not be determined on the basis of this investigation. Although one cannot contend that increased sense of purpose in life, or meaning-making caused posttraumatic growth, one can argue that higher levels of purpose in life, sense of coherence, and meaning-making coping strategies serve as predictors of increased levels of PTG. More controlled empirical studies are needed to further understand the specific variables related to individual characteristics, coping strategies, and social resources that are determinants of posttraumatic growth.

REFERENCES

- Abraido-Lanza, A.F., Guier, C., & Colon, R.M. (1998). Psychological thriving among Latinas with chronic illness. *Journal of Social Issues, 54*, 405-424.
- Affleck, G., Tennen, H., & Croog, S. (1987). Causal attribution, perceived benefits, and comorbidity after a heart attack: An 8-year study. *Journal of Consulting & Clinical Psychology, 55*, 29-35.
- Aldwin, C. M. (1994). *Stress, coping, and development*. New York: Guilford.
- Aldwin, C. M., Levenson, M. R., & Spiro, A. (1994). Vulnerability and resilience to combat exposure: Can stress have life-long effects? *Psychology & Aging, 9*, 34- 44.
- Aldwin, C. M., Sutton, K., & Lachman, M. (1996). The development of coping resources in adulthood. *Journal of Personality, 64*, 837-871.
- Anderson, C. A., Miller, R. S., Riger, A. L., Dill, J. C., & Sedikides, C. (1994). Behavioral and characterological styles as predictors of depression and loneliness: review, refinement, and test. *Journal of Personality and Social Psychology, 66*, 549-558.
- Antonovsky, A. (1987). *Unraveling the mystery of health*. San Francisco: Jossey-Bass.
- Antonovsky, A. (1993). The structure and properties of the Sense of Coherence Scale. *Social Science & Medicine, 36*, 725-733.
- Archer, J. (1999). *The nature of grief*. London: Routledge.

- Armeli, S., Gunthert, K.C., & Cohen, L.H. (2001). Stressor appraisal, coping, and post-event outcomes: The dimensionality and antecedents of stress-related growth. *Journal of Social and Clinical Psychology, 20*, 366-395.
- Ball, L. E (1977). Widow's grief: The impact of age and mode of death. *Omega, 7*, 307-333.
- Barret, T. W., & Scott, T. B. (1987). Suicide vs. other bereavement recovery patterns. Paper presented at the joint meeting of the American Association of Suicidology and the International Association for Suicide Prevention, San Francisco.
- Bates, G., Trajstman, S., & Jackson, C. (2004). Internal consistency, test-retest reliability and sex differences on *The Posttraumatic Growth Inventory* in an Australian sample with trauma. *Psychological Reports, 94*, 793-794.
- Bonanno, G.A. (2004). Loss, trauma, and human resilience: Have we underestimated the human capacity to thrive after extremely aversive events. *American Psychologist, 59(1)*, 20-28.
- Brickman, P., & Bulman, R. J. (1977). Pleasure in pain in social comparisons. In J. M. Suls & R.M. Miller (Eds.) *Social comparison processes: Theoretical and empirical perspectives* (pp.149-186). Washington, DC: Hemisphere.
- Burt, M. R., & Katz, B. L. (1987). Dimensions of recovery from rape: Focus on growth outcomes. *Journal of Interpersonal Violence, 2*, 57-81.
- Calhoun, L.G., Cann, A., Tedeschi, R.G., & McMillan, J. (2000). A correlational test of the relationship between posttraumatic growth, religion, and cognitive processing. *Journal of Traumatic Stress, 13*, 521-527.

- Calhoun, L. G., & Tedeschi, R. G. (1990). Positive aspects of critical life problems: Recollections of grief. *Omega, 20*, 265-272.
- Calhoun, L. G., & Tedeschi, R. G. (2001). Posttraumatic growth: The positive lessons of love. In R.A. Neimeyer (Ed.), *Meaning reconstruction and the experience of loss* (pp. 157-171). Washington, DC: American Psychological Association.
- Capps, L., & Bonanno, G. A. (2000). Narrating bereavement: Thematic and grammatical predictors of adjustment to loss. *Discourse Processes, 30*, 1-25.
- Carr, V.J., Lewin, T. J., Webster, R.A., Hazell, P.L., Kenardy, J. A., & Carter, G. (1995). Psychological sequelae of the 1989 Newcastle earthquake. *Psychological Medicine, 27*, 539-555.
- Carver, C. S. (1998). Resilience and thriving: Issues, models and linkages. *Journal of Social Issues, 54*, 245-261.
- Carver, C.S., Pozo, C., & Harris, S. (1993). How coping mediates the effect of optimism on distress: A study of women with early stage breast cancer. *Journal of Personality and Social Psychology, 65*, 375-390.
- Clayton, P., Halikas, J. A., & Robins, E. (1973). Anticipatory grief and widowhood. *British Journal of Psychiatry, 122*, 47-51.
- Cleiren, M. P. H. D. (1991). *Adaptation after bereavement*. Leiden, The Netherlands: DSWO Press.
- Coffman, S. (1994). Children describe life after Hurricane Andrew. *Pediatric Nursing, 20*, 363-385.

- Cohen, L., Cimboric, K., Ameli, S., & Hettler, T. (1998). Quantitative assessment of thriving. *Journal of Social Issues, 54*, 323-331.
- Cohen, L. H., Hettler, T., & Pane, N. (1998). Assessment of post-traumatic growth. In R. Tedeschi, C. Park, & L. Calhoun (Eds.). *Post-traumatic growth: Theory and research in change in the aftermath of crisis* (pp. 23-42). Mahwah, NJ: Lawrence Erlbaum.
- Cohler, B., Scott, F.M., & Musick, J.S. (1995). Adversity, vulnerability, and resilience: Cultural and developmental perspectives. In D. Cicchetti and D.J. Cohen (Eds.), *Developmental psychopathology, Vol. 2, Risk, disorder, and adaptation* (pp. 753-800). NY: John Wiley.
- Collins, R. L., Taylor, S. E., & Skokan, L. A. (1990). A better world or a shattered vision? Changes in life perspectives following victimization. *Social Cognition, 8*, 263-285.
- Cordova, M.J., Cunningham, L.L.C., Carlson, C.R., & Andrykowski, M. (2001). Posttraumatic growth following breast cancer: A controlled comparison study. *Health Psychology, 20*, 176-185.
- Costa, P. T., Jr., & McCrae, R. R. (1985). *NEO Personality Inventory Manual*. Odessa, FL: Psychological Assessment Resources.
- Curbow, B., Legro, M. W., Baker, F., Wingard, J. R., & Somerfield, M. R. (1993). Loss and recovery themes of long-term survivors of bone marrow transplants. *Journal of Psychosocial Oncology, 10*, 1-20.

- Crumbaugh, J.C. (1977). *The Seeking of Noetic Goals Test manual*. Huntsville, AL: Psychometric Associates.
- Crumbaugh, J.C., & Henrion, R. (1988). The PIL test: Administration, interpretation, uses, theory, and critique. *The International Forum for Logotherapy, 11*, 76-88.
- Crumbaugh, J.C., & Maholick, L. T. (1969). *Manual of instruction for the Purpose in Life test*. Munster, IN: Psychometric Affiliate.
- Davis, C. G., & Nolen-Hoeksema, S. (2001) Loss and meaning: How do people make sense of loss? *American Behavioral Scientist, 44*, 726-741.
- Davis, C. G., Nolen-Hoeksema, S., & Larson, J. (1998). Making sense of loss and benefiting from the experience: Two construals of meaning. *Journal of Personality & Social Psychology, 73*, 561-574.
- Eriksson, M., & Lindström, B. (2005). Validity of Antonovsky's sense of coherence scale: A systematic review. *Journal of Epidemiology & Community Health, 59*(6), 460-466.
- Evers, A.W.M., Kraaimaat, F.W., van Lankveld, W., Jongen, P.J.H., Jacobs, J.W.G., & Bijlsma, J.W.J. (2001). Beyond unfavourable thinking: The Illness Cognition Questionnaire for chronic diseases. *Journal of Consulting and Clinical Psychology, 69*, 1026-1036.
- Farebow, N. L., Gallagher-Thompson, D., Gilewski, M., & Thompson, L. (1992). Changes in grief and mental health of bereaved spouses of older suicides. *Journal of Gerontology, 47*, 357-366.

- Folkman, S., & Lazarus, R. (1980). An analysis of coping in a middle-aged community sample. *Journal of Health and Social Behavior, 2*, 219-239.
- Fontaine, K., Manstead, A., & Wagner, H. (1993) Optimism, perceived control over stress, and coping. *European Journal of Personality, 27*, 267-281.
- Frankl, V. E. (1984). *Man's search for meaning*. New York: Simon and Schuster.
- Friedman, L. C., Nelson, D.V., Baer, P. E., Lane, M., Smith, F., & Dworkin, R. (1992). The relationship of dispositional optimism, daily life stress, and domestic environment to coping methods use by cancer patients. *Journal of Behavioral Medicine, 15*, 127-141.
- Fromm, K., Andrykowski, M. A., & Hunt, J. (1996). Positive and negative psychological sequelae of bone marrow transplantation: Implications for quality of life assessment. *Journal of Behavioral Medicine, 19*, 221-240.
- Garnefski, N., Boon, S., & Kraaij, V. (2003). Relationship between cognitive strategies of adolescents and depressive symptomatology across different types of life events, *Journal of Youth and Adolescence, 32*, 401–408.
- Garnefski, N., Kraaij, V., & Spinhoven, P. (2001). Negative life events, cognitive emotion regulation, and emotional problems. *Personality and Individual Differences, 30*, 1311-1327.
- Garnefski, N., Van Den Kommer, T., Kraaij, V., Teerds, J., Legerstee, J., & Onstein, E. (2002). The relationship between cognitive emotion regulation strategies and emotional problems, Comparison between a clinical and non-clinical sample, *European Journal of Personality, 16*, 403–420.

- Gaskins, S., & Brown, K. (1992). Psychosocial responses among individuals with human immunodeficiency virus infection. *Applied Nursing Research, 5*, 111-121.
- Gibbons, F.X. & Gerrard, M. (1991). Downward comparisons and coping with threat. *Psychological Bulletin, 102*-379-395.
- Gilbert, K. R. (2002). Taking a narrative approach to grief research: Finding meaning in stories. *Death Studies, 26*, 223-239.
- Goldman, N., Korenman, S., & Weinstein, R. (1995). Marital status and health among the elderly. *Social Science and Medicine, 40*, 1717-1730.
- Gosling, S. D., Srivastava, S., & John, O. P. (2004). Should we trust web-based studies? *American Psychologist, 59*, 93-104.
- Grummon, K., Rigby, E.D., Orr, D., & Procidano, M. (1994). Psychosocial variables that affect the psychological adjustment of IVU patients with AIDS. *Journal of Clinical Psychology, 50*, 488-502.
- Hager, D. L. (1992). Chaos & growth. *Psychotherapy, 29*, 378-384.
- Helsing, K.J., Szklo, M., & Comstock, G.W. (1981). Factors associated with mortality after widowhood. *American Journal of Public Health, 71*, 802-809.
- Herbert, R.S., Dang, Q., & Schulz, R. (2006). Preparedness for the death of a loved one and mental health in bereaved caregivers of patients with dementia. *Journal of Palliative Medicine, 9*, 683-693.
- Heyman, D. K., & Gianturco, D. T. (1973). Long term adaptation by the elderly in bereavement. *Journal of Gerontology, 28*, 359-362.

- Hodgkinson, P. E., & Stewart, A.E. (1996). *Coping with catastrophe*. London: Routledge Press.
- Hogan, N., Morse, J. M., & Tason, M. (1996). Toward an experiential theory of bereavement. *Omega*, 33, 43-65.
- Horowitz, M. J. (1982). Stress response syndromes and their treatment. In L. Goldberger & S. Breznitz (Eds.), *Handbook of Stress*, (pp.711-732.). New York: Free Press.
- Horowitz, M. J. (1991). Person schemas. In M. Horowitz (Ed.), *Person schemas and maladaptive interpersonal pattern*, (pp. 13-31). Chicago: University of Chicago Press.
- Janoff-Bulman, R. (1989). Assumptive worlds and the stress of traumatic events: Applications of the schema construct. *Social Cognition*, 7, 113-136.
- Janoff-Bulman, R. (1992). *Shattered assumptions: Toward a new psychology of trauma*. New York: Free Press.
- Janoff-Bulman, R., & Berg, M. (1998). Disillusionment and the creation of value: From traumatic losses to existential gain. In J. Harvey (Ed.), *Perspectives on Loss: A sourcebook*. (pp. 34-47). Philadelphia: Brunner/Mazel.
- Janoff-Bulman, R., & Frieze, I. H. (1983). A theoretical perspective for understanding reactions to victimization. *Journal of Social Issues*, 39, 1-17.
- Janoff-Bulman, R., & McPherson, F. (1997). The impact of trauma on meaning: From meaningless world to meaningful life. In M. Power & C. Brewin (Eds.), *The transformation of meaning in psychological therapies* (pp. 91-106). London: John Wiley.

- Joseph, S., Linley, P., & Harris, G. J. (2005). Understanding positive change following trauma and adversity: Structural clarification. *Journal of Loss and Trauma, 10*, 83-96.
- Joseph, S., Williams, R., & Yule, W. (1993). Changes in outlook following disaster: The preliminary development of a measure to assess positive and negative responses. *Journal of Traumatic Stress, 6*, 271-279.
- Joseph, S., Williams, R., & Yule, W. (1997). *Understanding post-traumatic stress: A psychosocial perspective on PTSD and treatment*. Wiley: Chichester.
- Joung, L. (1996). Marital status and health: Descriptive and explanatory studies. Unpublished Dissertation, Erasmus University, Rotterdam.
- Kaltman, S., & Bonanno, G. A. (2003). Trauma and bereavement: Examining the impact of sudden and violent deaths. *Anxiety Disorders, 17*, 131-147.
- Kessler, B. G. (1987) Bereavement and personal growth. *Journal of Humanistic Psychology, 27*, 447-477.
- Koenig, H.G., Pargament, K.I., & Nielsen, J. (1998). Religious coping and health status in medically ill hospitalized older adults. *Journal of Nervous and Mental Diseases, 186*, 513-521.
- Kraaij, V., Garnefski, N., & Van Gerwen, L. (2004). Cognitive coping and anxiety symptoms among people who seek help for fear of flying, *Aviation, Space, & Environmental Medicine, 74*, 273-277.

- Kraus, A. S., & Lilienfeld, A. M. (1959). Some epidemiological aspects of the high mortality rate in the young widowed group. *Journal of Chronic Diseases*, *10*, 207-217.
- Kraut, R., Olson, J., Banaji, M., Bruckman, A., Cohen, J., & Couper, M. (2004). Psychological research online. *American Psychologist*, *59*, 105-117.
- Kristjanson, L. J., & Ashcroft, T. (1994). The family's cancer journey: A literature review. *Cancer Nursing*, *8*, 1-17.
- Leahy, J. M. (1992). A comparison of depression in women bereaved of a spouse, child, or a parent. *Omega*, *26*, 207-218.
- Lehman, D.R., Davis, C. G., DeLongis, A., Wortman, C., Bluck, S., Mander, D., & Ellard, J. (1993). Positive and negative life changes following bereavement and their relations to adjustment. *Journal of Social & Clinical Psychology*, *12*, 90-122.
- Lerner, M. J. (1980). *The belief in a just world*. New York: Plenum.
- Levy, L. H., Mattinowski, K. S., & Derby, J. F. (1994). Differences in patterns of adaptation in conjugal bereavement: Their sources and potential significance. *Omega*, *29*, 71-87.
- Linley, P.A., & Joseph, S. (2004). Positive change following trauma and adversity: A review. *Journal of Traumatic Stress*, *17*, 11-21.
- Linville, P. W. (1987). Self-complexity as a cognitive buffer against stress related illness and depression. *Journal of Personality and Social Psychology*, *52*, 663-676.

- Lund, D.A., Caserta, M.S., & Dimond, M.F. (1992). The course of spousal bereavement in later life. In M. S. Stroebe, W. Stroebe, & R. O. Hansson (Eds.), *Handbook of bereavement research: Theory, research, and intervention*, (240-254). New York: Cambridge University Press.
- Lundin, T. (1984). Morbidity following sudden and unexpected bereavement, *British Journal of Psychiatry*, *144*, 84-88.
- Lyubomirsky, S., & Nolen-Hoeksema, S. (1993). Self-perpetuating properties of dysphoric rumination. *Journal of Personality and Social Psychology*, *65*, 339-349.
- Maddison, D. C., & Walker, W. L. (1967). Factors affecting the outcome of conjugal bereavement. *British Journal of Psychiatry*, *113*, 1057-1067.
- Masten, A.S., Best, K.M., & Garmezy, N. (1990). Resilience and development: contributions from the study of children who overcome adversity. *Development and Psychopathology*, *2*, 425-444.
- McClatchey, R.S., & Vonk, M.E. (2005). An exploratory study of Post-Traumatic Stress Disorder symptoms among bereaved children. *Omega*, *51*, 285-300.
- McCrae, R. (1989). More reasons to adopt the five-factor model. *American Psychologist*, *44*, 451-462.
- McGrath, J., & Linley, P. (2006). Post-traumatic growth in acquired brain injury: A preliminary small scale study. *Brain Injury*, *20*, 767-773.
- McMillen, C., Zuravin, S., & Rideout, G. (1995). Perceiving benefits from child sexual abuse. *Journal of Consulting & Clinical Psychology*, *63*, 1037-1043.

- Miles, M. S., & Crandall, E. K. (1983). The search for meaning: its potential for affecting growth in bereaved parents. *Health Values, 7*, 19-23.
- Miles, M. S., Demi, A. S., & Mostyn-Aker, P. (1984). Rescue workers' reactions following the Hyatt Hotel disaster. *Death Education, 8*, 315-331.
- Miller, W. R., & C' debaca, J. (1994). Quantum change: Toward a psychology of transformation. In T.F. Heatherton & J. L. Weinberger (Eds.), *Can Personality Change?* (pp. 253-281). Washington, DC: American Psychological Association.
- Moos, R., & Schaefer, J. A. (1993). Coping resources & processes. In L. Goldberger, & S. Breznits (Eds.) *Handbook of Stress: Theoretical and Clinical Aspect* (pp. 234-257). New York: The Free Press.
- Morgan, H., & Janoff-Bulman, R. (1994). Positive and negative self-complexity: Patterns of adjustment following traumatic versus non-traumatic life experiences. *Journal of Social and Clinical Psychology, 13*, 63-85.
- Murphy, S. A., Johnson, L.C., & Lohan, J. (2003). Finding meaning in a child's violent death: A five year prospective analysis of parents' personal narratives and empirical data. *Death Studies, 27*, 381-404.
- Neimeyer, R.A., (Ed.). (2001). *Meaning reconstruction and the experience of loss*. Washington, DC: American Psychological Association.
- Nerken, I. R. (1993). Grief and the reflective self: Toward a clearer model of loss resolution and growth. *Death Studies, 17*, 1-26.

- Nolen-Hoeksema, S., McBride, A., & Larson, J. (1997). Rumination and psychological distress among bereaved parents. *Journal of Personality and Social Psychology*, 72, 855-862.
- Northouse, L. L. (1994). Breast cancer in younger women: Effects on interpersonal and family relations. *Journal of the National Cancer Institute Monographs*, 16, 183-190.
- Norris, F. H., & Murrell, S. A. (1990). Social support, life events, and stress as modifiers of adjustment to bereavement in older adults. *Psychology and Aging*, 5, 429-436.
- O'Connor, A. P., Wicker, C. A., & Germino, B. B. (1990). Understanding the cancer patient's search for meaning. *Cancer Nursing*, 13, 167-175.
- O'Leary, V.E. (1998). Strength in the face of adversity: Individual and social thriving. *Journal of Social Issues*, 54(2), 425-446.
- O'Leary, V.E., & Ickovics, J.R. (1995). Resilience and thriving in response to challenge: An opportunity for a paradigm shift in women's health. *Women's Health: Research on Gender, Behavior, and Policy*, 1, 121-142.
- Ozer, E. J., Best, S. R., Lipsey, T. L., & Weiss, D. S. (2003). Predictors of posttraumatic stress disorder and symptoms in adults: A meta-analysis. *Psychological Bulletin*, 129, 52-73.
- Palmer, N. (1997). Resilience in adult children of alcoholics: A nonpathological approach to social work practice. *Health & Social Work*, 22 (3), 201-209.

- Parapully, J., Rosenbaum, R., van den Deale, L., & Nzewi, E. (2002). Thriving after trauma: The experience of parents of murdered children. *Journal of Humanistic Psychology, 42*, 33-70.
- Park, C. L., Cohen, L. H., & Murch, R. L. (1996). Assessment and prediction of stress-related growth. *Journal of Personality, 64*, 71-105.
- Park, C. L., & Folkman, S. (1997). Meaning in the context of stress and coping. *Review of General Psychiatry, 1*, 115-144.
- Parkes, C. M. (1975). Unexpected and untimely bereavement: A statistical study of young Boston widows and widowers. In B. Schoenberg, J. Gerber, A. Wiener, D. Kutscher, D. Peretz, & A. Cam (Eds.), *Bereavement: Its Psychological Aspects* (pp. 119-138). New York: Columbia University Press.
- Parkes, C. M. (1998). *Bereavement: studies of grief in adult life*. Madison, CT: International Universities Press.
- Parkes, C.M., & Brown, R. (1972). Health after bereavement: A controlled study of young Boston widows and widowers. *Psychosomatic Medicine, 34*, 449-461.
- Parkes, C. M., & Weiss, R. S. (1983). *Recovery from bereavement*. New York: International Universities Press.
- Polatinsky, S., & Esprey, Y. (2000). An assessment of gender differences in the perception of benefit resulting from the loss of a child. *Journal of Traumatic Stress, 13*, 709-718.

- Powell, S., Rosner, R., Butollo, W., Tedeschi, R. G., & Calhoun, L. G. (2003). Posttraumatic growth after war: A study with former refugees and displaced people in Sarajevo. *Journal of Clinical Psychology, 59*, 71–83.
- Prigerson, H.G., Bierhals, A.J., Kasl, S. V., Reynolds, C. F., Shear, M.K., Newsom, J. T., & Jacobs, S. (1996). Complicated grief as a disorder distinct from bereavement-related depression and anxiety: A replication study. *American Journal of Psychiatry, 153*, 1484-1486.
- PTSD Alliance. (2005). *About PTSD*. Retrieved March 9, 2005, from http://www.ptsdalliance.org/about_what.html
- Reker, G.T. (1992). *Manual of the Life Attitude Profile-Revised*. Peterborough, ON: Student Psychologists Press.
- Reker, G. T. (2005). Meaning in life of young, middle-aged, and older adults: Factorial validity, age, and gender invariance of the Personal Meaning Index (PMI). *Personality and Individual Differences, 38(1)*, 71-85.
- Reker, G.T., & Chamberlain, K. (2000). *Exploring existential meaning: Optimizing human development across the life span*. Thousand Oaks, CA: Sage.
- Rieker, P. P., Edbril, S. D., & Garnick, M. B. (1985). Curative testis cancer therapy: Psychological sequelae. *Journal of Clinical Oncology, 3*, 1117-1126.
- Robinson, J. P., Neustadt, A., & Kestenbaum, M. (2002, May). Why public opinion polls are inherently biased: Public opinion differences among Internet users and non-users. Paper presented at the annual meeting of the American Association for Public Opinion Research, St. Petersburg Beach, FL.

- Robitschek, C., & Kashubeck, S. (1999). A structural model of parental alcoholism, family functioning, and psychological health: The mediating effects of hardiness and personal growth orientation. *Journal of Counseling Psychology, 46* (2), 159-172.
- Rogers, R. G. (1995). Marriage, sex, and mortality. *Journal of Marriage and the Family, 57*, 515-26.
- Rosenthal, M. K., & Levy-Shiff, R. (1993). Threat of missile attacks in the gulf war: Mothers' perceptions of young children's reactions. *American Journal of Orthopsychiatry, 63*, 241-254.
- Rubonis, A. V., & Bickman, L. (1991). Psychological impairment in the wake of disaster: The disaster-psychopathology relationship. *Psychological Bulletin, 109*, 384-399.
- Rutter, M. (1990). Psychosocial resilience and protective mechanisms. In J. Rolf, A. Masten, D. Cicchetti, K. Nuechterlein, & S. Weintraub (Eds.), *Risk and protective factors in the development of psychopathology* (pp. 181-214). New York: Cambridge University Press.
- Sanders, C. M. (1979). A comparison of adult bereavement in the death of a spouse, child, and parent. *Omega, 10*, 303-322.
- Sanders, C. M. (1981). Comparison of younger and older spouses in bereavement outcome. *Omega, 11*, 217-231.
- Sanders, C. M. (1983). Effects of sudden versus chronic illness death on bereavement outcome. *Omega, 13*, 227-241.

- Sanders, C. M. (1988). Risk factors in bereavement outcome. *Journal of Science Issues*, 44, 97-111.
- Saylor, C. F., Swenson, C. C., & Powell, P. (1992). Hurricane Hugo blows down the broccoli: Preschoolers' post-disaster play and adjustment. *Child Psychiatry and Human Development*, 22, 139-149.
- Schaeffer, J.A., & Moos, R.H. (1992). Life crisis and personal growth. In B.N. Carpenter (Ed.), *Personal coping: Theory research and application*. (pg. 149-170). Westport, CT: Praeger.
- Schaeffer, J. A., & Moos, R. H. (1998). The context for posttraumatic growth: Life crises, individual and social resources, and coping. In R. G. Tedeschi, C. L. Parkes, & L. G. Calhoun (Eds.). *Posttraumatic growth: Positive changes in the aftermath of crises* (pp. 99-125). Mahwah, NJ: Erlbaum.
- Schaeffer, J. A., & Moos, R. H. (2001). Bereavement experiences and personal growth. In M. S. Stroebe, R. O. Hansson, W. Stroebe, & H. Shut. (Eds.), *Handbook of bereavement research: Consequences, coping, and care* (pp. 145-167). Washington, DC: American Psychological Association.
- Scheier, M. F., & Carver, C. S. (1985) Optimism, coping and health: Assessment and implications of generalized outcome expectancies. *Health Psychology*, 4, 219-247.
- Schwartzberg, S. S. (1994). Vitality and growth in HIV-infected gay men. *Social Science and Medicine*, 38, 593-692.

- Schwartzberg, S.S., & Janoff-Bulman, R. (1991). Grief and search of meaning: Exploring the assumptive worlds of bereaved college students. *Journal of Social and Clinical Psychology, 10*, 270-288.
- Schwarzer, C. (1992). Bereavement, received social support, and anxiety in the elderly: A longitudinal analysis. *Anxiety Research, 4*, 287 - 296.
- Shedler, J., Mayman, M., & Manis, M. (1993). The illusion of mental health. *American Psychologist, 48*, 1117-1131.
- Shepherd, D., & Barraclough, B. M. (1974). The aftermath of suicide. *British Medical Journal, 2*, 600-603.
- Sherkat, D. W., & Reed, M. D. (1992). The effects of religion and social support on self-esteem and depression among the suddenly bereaved. *Social Indicators Research, 26*, 259-275.
- Sigel, K., & Schrimshaw, E. W. (2000). Perceiving benefits in adversity: Stress-related growth in women living with HIV/AIDS. *Social Science and Medicine, 51*, 1543-1554.
- Silver, R. L., Boon, C., & Stones, M. (1983). Searching for meaning in misfortune: Making sense of incest. *Journal of Social Issues, 39*, 81-102.
- Simon, L., & Drantell, J. J. (1998) *A music I no longer heard: The early death of a parent*. New York: Simon & Schuster.
- Sledge, W.H., Boydston, J.A., & Rabe, A.J. (1980). Self-concept changes related to war captivity. *Archives of General Psychiatry, 37*, 430-443.

- Snape, M.C. (1997). Reactions to a traumatic event: The good, the bad, and the ugly? *Psychology, Healthy, & Medicine*, 2, 237-242.
- Snyder, C., Irving, L., & Anderson, J. (1991) Hope and health. In C. R. Snyder & D. R. Forsyth (Eds.), *Handbook of social and clinical psychology: The health perspectives* (pp. 285-305). New York: Pergamon Press.
- Stein, N. L., Folkman, S., Trabasso, T., & Christopher-Richards, A. (1997). Appraisal and goal processes as predictors of well-being in bereaved caregivers. *Journal of Personality and Social Psychology*, 72, 863-871.
- Stroebe M. S., Hansson, R. O., Stroebe, W., & Schut, H. (Eds.). (2001). *Handbook of bereavement research: Consequences, coping, and care*. Washington, DC: American Psychological Association.
- Stroebe, M. S., & Schut, H. (1999). The dual process model of coping with bereavement: rationale and description. *Death Studies*, 23, 197-224.
- Stroebe, M. S., & Schut, H. (2001). Meaning-making in the dual process model of coping with bereavement. In R.A. Neimeyer (Ed.), *Meaning reconstruction and the experience of loss* (pp. 55-73). Washington, DC: American Psychological Association.
- Stroebe, M. S., & Stroebe, W. (1983). Who suffers more? Sex differences in health risks of the widowed. *Psychological Bulletin*, 93, 297 -301.
- Stroebe, W., & Schut, H. (2001). Risk factors in bereavement outcome: A methodological and empirical review. In M.S. Stroebe, R.O. Hansson, W. Stroebe, & H. Schut (Eds.), *Handbook of bereavement research: Consequences,*

- coping, and care.* Washington, DC: American Psychological Association, 349-371.
- Stroebe, W., Stroebe, M., Abakoumkin, G., & Schut, H. (1996). The role of loneliness and social support in adjustment to loss: A test of attachment versus stress theory. *Journal of Personality and Social Psychology, 70*, 1241-1249.
- Stroebe, W., Stroebe, M., & Domittner, G. (1987). Kummerbewältigung und Kummereffekt: Psychische und physische Reaktionen von Verwitweten (Coping with grief: Psychological and physical reactions of bereaved). Technical Report, Tübingen.
- Tait, R., & Silver, R. C. (1989). Coming to terms with major negative life events. In J. S. Uleman & J. A. Bargh (Eds.), *Unintended thought* (pp. 351-382). New York: Guilford Press.
- Taylor, S. & Brown, J. (1988). Illusion and well-being: A social psychological perspective on mental health. *Psychological Bulletin, 103*, 193-210.
- Tedeschi, R. G., & Calhoun, L. G. (1995). *Trauma and transformation: Growing in the aftermath of suffering*. Thousand Oaks, CA: Sage.
- Tedeschi, R. G., & Calhoun, L. G. (1996). The Posttraumatic Growth Inventory: Measuring the positive legacy of trauma. *Journal of Traumatic Stress, 9*, 455-472.
- Tedeschi, R. G., & Calhoun, L. G. (2004). Posttraumatic growth: Conceptual foundations and empirical evidence. *Psychological Inquiry, 15*, 1-18.
- Tedeschi, R. G., Park, C. L., & Calhoun, L. G. (Eds.). (1998). *Posttraumatic growth: Positive changes in the aftermath of crisis*. Mahwah, NJ: Erlbaum.

- Tennen, H., & Affleck, G. (1998). Personality and transformation in the face of adversity. In R. Tedeschi, C. L. Park, & L. G. Calhoun (Eds.), *Posttraumatic growth: Positive changes in the aftermath of crisis* (pp. 65-97). Mahwah, NJ: Erlbaum.
- Tennen, H., Affleck, G., Urrows, S., Higgins, P., & Mendola, R. (1992). Perceiving control, construing benefits, and daily processes in rheumatoid arthritis. *Canadian Journal of Behavioral Science, 24*, 186-203.
- Thompson, S.C. (1985). Finding positive meaning in a stressful event and coping. *Basic and Applied Social Psychology, 6*, 279-295.
- Thompson, S. C. (1998). Blockades to finding meaning. In J. Harvey (Ed.), *Perspectives on Loss: A sourcebook*. (pp. 21-34). Philadelphia: Brunner/Mazel.
- Thompson, S. C., & Janigan, A. S. (1988). Life schemes: A framework for understanding the search for meaning. *Journal of Social and Clinical Psychology, 7*, 260-280.
- Ulmer, A., Range, L. M., & Smith, P. G. (1991). Purpose in life: A moderator of recovery from bereavement. *Omega, 23*, 279-289.
- U.S. Department of Commerce. (2002). *A nation online: How Americans are expanding their use of the internet*. Washington, DC: U.S. Government Printing Office.
- Vachon, M. L. S., Rogers, J., Lyall, W. A. L., Rogers, J., Lancee, W. J., Sheldon, A. R., & Freeman, S. J. (1982). Predictors and correlates of adaptation to conjugal bereavement. *American Journal of Psychiatry, 137*, 1380-1384.

- van der Kolk, B.A., McFarlane, A.C., & Weisaeth, L. (Eds.), *Traumatic stress: The effects of overwhelming experience on mind, body, and society*. New York: Guilford Press.
- Veronen, L.J., & Kilpatrick, D.G. (1983). Rape: A precursor of change. In E.J. Callahan & K.A. McCliskey (Eds.), *Life span development psychology: Non-normative events* (pp.167-191). San Diego, CA: Academic Press.
- Videka-Sherman, L. Coping with the death of a child: A study over time. *American Journal of Orthopsychiatry*, 62, 688-698.
- Wallerstein, J. S. (1986). Women after divorce: Preliminary report from a ten-year follow-up. *American Journal of Orthopsychiatry*, 56, 65-77.
- Wallerstein, J. S., & Corbin, S. B. (1989). Women after divorce: Preliminary report from a 10-year follow-up. *American Journal of Orthopsychiatry*, 59, 593-604.
- Weinrib, A., Rothrock, N. E., Johnsen, E. L., & Lutgendorf, S. K. (2006). The assessment and validity of stress-related growth in a community-based sample. *Journal of Consulting and Clinical Psychology*, 74, 851–858.
- Weiss, T. (2002). Posttraumatic growth in women with breast cancer and their husbands: An intersubjective validation study. *Journal of Psychosocial Oncology*, 20, 65–80.
- Welch-McCaffrey, D., Hoffman, B., Leigh, S. S., Loescher, L. J., & Meyskens, F. L., Jr. (1989). Surviving adult cancers. Part 2: Psychosocial implications. *Annals of Internal Medicine*, 111, 517-524.

- Winfield, L.F. (1994). Developing resilience in urban youth. *NCREL Monograph*. Oak Park, IL: North Central Regional Educational Library. Available: <http://www.ncrel.org/sdrs/areas>
- Wortman, C. B., & Silver, R. C. (2001). The myths of coping with loss revisited. In M. S. Stroebe, R. O. Hansson, W. Stroebe, & H. Schut. (Eds.), *Handbook of bereavement research: Consequences, coping, and care* (pp. 405-429). Washington, DC: American Psychological Association.
- Yalom, I. D. (1980). *Existential Psychotherapy*. New York: Basic Books.
- Yalom, I. D., & Lieberman, M. A. (1991). Bereavement and heightened existential awareness. *Psychiatry*, *54*, 334-345.
- Yarom, N. (1983). Facing death in war: An existential crisis. In S. Breznitz (Ed.), *Stress in Israel* (pp.3-38). New York: Van Nostrand Reinhold.
- Young, M., Benjamin, B., & Wallis, B. (1963). The mortality of widowers. *Lancet*, *2*, 254-256.
- Zemore, R., Rinholm, J., Shepel, L. F., & Richards, M. (1989). Some social and emotional consequences of breast cancer and mastectomy: A content analysis of 87 interviews. *Journal of Psychosocial Oncology*, *7*, 33-45.
- Zemore, R., & Shepel, L. F. (1989). Effects of breast cancer and mastectomy on emotional support and adjustment. *Social Science and Medicine*, *28*, 19-27.
- Zisook, S., & Schuchter, S. R. (1991). Depression through the first year after the death of a spouse. *American Journal of Psychiatry*, *148*, 1346-1352.

APPENDICES

APPENDIX A

Invitation for Participation Script

Subject line of email:

Seeking Participants for Bereavement Research Study

Body of email:

Dear Member,

My name is Maria G. Aguirre and I am a doctoral candidate in Counseling Psychology at Auburn University. I am writing to you to request your assistance with my dissertation research investigating factors that facilitate coping with bereavement, with specific attention to meaning-making.

My research has been approved by both my dissertation committee and Auburn University's Institutional Review Board. The study is being hosted on Psychdata.com and I am currently seeking individuals coping with bereavement to participate in my research. You are eligible to participate in this study if you are 19 or over and have lost a close family member or friend within the last 12 to 48 months due to natural causes, illness, accidental death, violence, or suicide.

Participating in this study will involve providing demographic information and responding to survey questions about your experience of coping with bereavement. Total time for completing this study is not expected to exceed 25 minutes.

If you are interested in learning more about the study and possibly participating in my research, please click on the link provided below or copy and paste the URL into your web browser. I thank you for your time.

Sincerely,

Maria Aguirre
Department of Counseling and Counseling Psychology
Auburn University
aguirmg@auburn.edu

APPENDIX B

Informed Consent Form

As described in the introductory email, the purpose of this study is to investigate the factors that facilitate coping with bereavement, with specific attention to meaning-making. This research has been approved by both my dissertation committee and Auburn University's Institutional Review Board. You are eligible to participate in this study if you are 19 years of age or over and have lost a close family member or friend within the last 12 to 48 months due to natural causes, illness, accidental death, violence, or suicide.

Participating in this study will involve providing demographic information and responding to survey questions about your experience of coping with bereavement. Total time for completing this study is not expected to exceed 25 minutes.

If you choose to participate in my study by clicking on the link below, you are stating that you are over 19 years of age and are voluntarily participating in this study. You can withdraw from participation at any time without penalty or prejudice. All of the information obtained through this investigation will remain anonymous. Please be aware that if you provide your information there will be no way to withdraw your data after participation, since there is no way to identify individual information. Information collected through your participation will be used for the purpose of completing my doctoral dissertation and may be published in a professional journal. Any information or direct quotes used as illustrative examples in the course of reporting this research will not include any personally identifiable information.

If you have any questions about this study you may contact me (aguirmg@auburn.edu) or my principal faculty advisor, Dr. John Dagley (daglejc@auburn.edu).

For more information regarding your rights as a research participant you may contact the Office of Human Subjects Research by phone or e-mail. The people to contact there are Executive Director E.N. "Chip" Burson (334) 844-5966 (bursoen@auburn.edu) or IRB chair Dr. Peter Grandjean at (334) 844-1462 (grandpw@auburn.edu).

Having read the above information, you are deciding whether to participate in this research project. If you decide to participate in the study, please click on the link below. If you decide to participate, the data you provide will serve as your voluntary agreement to do so. I sincerely thank you for your time.

APPENDIX C

The Post-Traumatic Growth Inventory

Indicate for each of the statements below the degree to which change occurred in your life as a result of experiencing the death of one or more persons close to you, using the following scale.

- 0 - I did not experience this change as a result of their death(s).
- 1 - I experienced this change to a **very small degree** as a result of their death(s).
- 2 - I experienced this change to a **small degree** as a result of their death(s).
- 3 - I experienced this change to a **moderate degree** as a result of their death(s).
- 4 - I experienced this change to a **great degree** as a result of their death(s).
- 5 - I experienced this change to **very great** degree as a result of their death(s).

1. My priorities about what is important in life.
2. I'm more likely to try to change things which need changing.
3. An appreciation for the value of my own life.
4. A feeling of self-reliance.
5. A better understanding of spiritual matters.
6. Knowing that I can count on people in times of trouble.
7. A sense of closeness with others.
8. Knowing I can handle difficulties.
9. A willingness to express my emotions.
10. Being able to accept the way things work out.
11. Appreciating each day.
12. Having compassion for others.
13. I'm able to do better things with my life.
14. New opportunities are available which wouldn't have been otherwise.
15. Putting effort into my relationships.
16. I have a stronger religious faith.
17. I discovered that I'm stronger than I thought I was.
18. I learned a great deal about how wonderful people are.
19. I developed new interests.
20. I accept needing others.
21. I established a new path for my life.

APPENDIX D

Sense of Coherence Scale

Here is a series of questions relating to various aspects of our lives. Each question has seven possible answers. Please mark the number which expresses your answer, with numbers 1 and 7 being the extreme answers. If the words under 1 are right for you, select 1; if the words under 7 are right for you, select 7. If you feel differently, choose the number which best expresses your feeling. Please give only one answer to each question.

1. When you talk to people, do you have the feeling that they don't understand you?

1	2	3	4	5	6	7
never have this feeling						always have this feeling

2. In the past, when you had to do something which depended upon cooperation with others, did you have the feeling that it:

1	2	3	4	5	6	7
surely wouldn't get done						surely would get done

3. Think of the people with whom you come into contact daily, aside from the ones to whom you feel closest. How well do you know most of them?

1	2	3	4	5	6	7
you feel that they're strangers						you know them very well

4. Do you have the feeling that you don't really care about what goes on around you?

1	2	3	4	5	6	7
very seldom or never						very often

5. Has it happened in the past that you were surprised by the behavior of people whom you thought you knew well?

1	2	3	4	5	6	7
never happened						always happened

6. Has it happened that people whom you counted on disappointed you?

1	2	3	4	5	6	7
never happened						always happened

7. Life is:

1	2	3	4	5	6	7
full of interest						completely routine

8. Until now your life has had:

1	2	3	4	5	6	7
no clear goals or purpose at all						very clear goals and purpose

9. Do you have the feeling that you're being treated unfairly?

1	2	3	4	5	6	7
very seldom or never						very often

10. In the past ten years your life has been:

1	2	3	4	5	6	7
full of changes without your knowing what will happen next						completely consistent and clear

11. Most of the things you do in the future will probably be:

1	2	3	4	5	6	7
completely fascinating						deadly boring

12. Do you have the feeling that you are in an unfamiliar situation and don't know what to do?

1	2	3	4	5	6	7
very often						very seldom or never

13. What best describes how you see life:

1	2	3	4	5	6	7
one can always find a solution to painful things in life						there is no solution to painful things in life

14. When you think about your life, you very often:

1	2	3	4	5	6	7
feel how good it is to be alive						ask yourself why you exist at all

15. When you face a difficult problem, the choice of a solution is:

1	2	3	4	5	6	7
always confusing and hard to find						always completely clear

16. Doing the things you do every day is:

1	2	3	4	5	6	7
a source of deep pleasure and satisfaction						a source of pain and boredom

17. Your life in the future will probably be:

1	2	3	4	5	6	7
full of changes without your knowing what will happen next						completely consistent and clear

18. When something unpleasant happened in the past your tendency was:

1	2	3	4	5	6	7
"to beat yourself up" about it						to say "ok, that's that, I have to live with it," and go on

19. Do you have very mixed-up feelings and ideas?

1	2	3	4	5	6	7
very often						very seldom or never

20. When you do something that gives you a good feeling:

1	2	3	4	5	6	7
it's certain that you'll go on feeling good						it's certain that something will happen to spoil this feeling

21. Does it happen that you have feelings inside you would rather not feel?

1	2	3	4	5	6	7
very often						very seldom or never

22. You anticipate that your personal life in the future will be:

1	2	3	4	5	6	7
totally without meaning or purpose						full of meaning and purpose

23. Do you think that there will always be people whom you'll be able to count on in the future?

1	2	3	4	5	6	7
you're certain						you doubt it

24. Does it happen that you have the feeling that you don't know exactly what's about to happen?

1	2	3	4	5	6	7
very often						very seldom or never

25. Many people-even those with a strong character-sometimes feel like sad sacks (losers) in certain situations. How often have you felt this way in the past?

1	2	3	4	5	6	7
never						very often

26. When something happened, have you generally found that:

1	2	3	4	5	6	7
you over- estimated or under- estimated its importance						you saw things in the right proportion

27. When you think of difficulties you are likely to face in important aspects of your life, do you have the feeling that:

1 2 3 4 5 6 7
you will always you won't
succeed in over- succeed in over-
coming the coming the
difficulties difficulties

28. How often do you have the feeling that there's little meaning in the things you do in your daily life?

1 2 3 4 5 6 7
very often very seldom
or never

29. How often do you have feelings that you're not sure you can keep under control?

1 2 3 4 5 6 7
very often very seldom
or never

APPENDIX E

CERQ

How do you cope with events?

Everyone gets confronted with negative or unpleasant events now and then and everyone responds to them in his or her own way. By the following questions you are asked to indicate what you generally think, when you experience negative or unpleasant events.

	Almost Never		Sometimes		Almost Always
1. I feel that I am the one to blame for it	1	2	3	4	5
2. I think that I have to accept that this has happened	1	2	3	4	5
3. I often think about how I feel about what I have experienced	1	2	3	4	5
4. I think of nicer things than what I have experienced	1	2	3	4	5
5. I think of what I can do best	1	2	3	4	5
6. I think I can learn something from the situation	1	2	3	4	5
7. I think that it all could have been much worse	1	2	3	4	5
8. I often think that what I have experienced is much worse than what others have experienced	1	2	3	4	5
9. I feel that others are to blame for it	1	2	3	4	5
10. I feel that I am the one who is responsible for what has happened	1	2	3	4	5
11. I think that I have to accept the situation	1	2	3	4	5
12. I am preoccupied with what I think and feel about what I have experienced	1	2	3	4	5
13. I think of pleasant things that have nothing to do with it	1	2	3	4	5

14. I think about how I can best cope with the situation	1	2	3	4	5
15. I think that I can become a stronger person as a result of what has happened	1	2	3	4	5
16. I think that other people go through much worse experiences	1	2	3	4	5
17. I keep thinking about how terrible it is what I have experienced	1	2	3	4	5
18. I feel that others are responsible for what has happened	1	2	3	4	5
19. I think about the mistakes I have made in this matter	1	2	3	4	5
20. I think that I cannot change anything about it	1	2	3	4	5
21. I want to understand why I feel the way I do about what I have experienced	1	2	3	4	5
22. I think of something nice instead of what has happened	1	2	3	4	5
23. I think about how to change the situation	1	2	3	4	5
24. I think that the situation also has its positive sides	1	2	3	4	5
25. I think that it hasn't been too bad compared to other things	1	2	3	4	5
26. I often think that what I have experienced is the worst that can happen to a person	1	2	3	4	5
27. I think about the mistakes others have made in this matter	1	2	3	4	5
28. I think that basically the cause must lie within myself	1	2	3	4	5
29. I think that I must learn to live with it	1	2	3	4	5
30. I dwell upon the feelings the situation has evoked in me	1	2	3	4	5
31. I think about pleasant experiences	1	2	3	4	5
32. I think about a plan of what I can do best	1	2	3	4	5
33. I look for the positive sides to the matter	1	2	3	4	5
34. I tell myself that there are worse things in life	1	2	3	4	5
35. I continually think how horrible the situation has been	1	2	3	4	5
36. I feel that basically the cause lies with others	1	2	3	4	5

APPENDIX F

Demographic Questionnaire

1. Age: ____
2. Gender:
 - Male
 - Female
 - Transgender
3. Ethnicity:
 - African American
 - Asian/Pacific Islander
 - Caucasian
 - Hispanic/Latin American
 - Native American
 - Other (please describe) _____
4. How many months have elapsed since the death of your loved one (family member, spouse, close friend, etc.)? ____ months
5. Was this death unexpected or expected?
 - expected
 - unexpected

APPENDIX G

Meaning-Making & Growth Questionnaire

1. Have you found yourself searching to make sense of or find some meaning in your loved one's death?

Never Sometimes Constantly
1 2 3 4 5

2. If yes, have you been able to find any meaning in or make sense of the death of your loved one?

None Somewhat Definitely
1 2 3 4 5

3. If yes, can you please explain how you were able to make sense of the death?

4. Do you feel that you have grown (emotionally, psychologically, etc.) from this experience?

Yes No

5. If yes, can you please describe this growth?

APPENDIX H

Ancillary Findings: Open-Ended Responses to Meaning-Making and Growth Questionnaire

Question 3: Can you please explain how you were able to make sense of the death?

Still Searching:

- Haven't been able to yet
- I am still searching and haven't found it
- I have not yet made sense of his death.
- Haven't been able to yet
- I have not been able to. It was senseless and horrible and unfair and has destroyed my life.
- Actually, I haven't. My soulmate was the best person in the world and if he had to die the only answer might be that 1) death is totally random and without reason or 2) life on earth is meant to be hell & full of suffering.
- I read as much as I could about the causes of suicide and talked to friends and colleagues to try and build up a picture of my brother's state of mind. This didn't give me all the answers but has helped me to find some reasons for his actions.
- I haven't. I have tried, but can't find any sense to it. He was ill for a few months, but was getting better. He should still be here.
- I have not yet made sense of what's happened. All the what ifs of the situation still haunt me and it's difficult for me to accept that I will never know what truly happened that day.
- I have not found any yet, except it brought me closer to God
- I haven't
- I have yet to be able to make sense of his death, but I am still searching for something that makes sense.
- haven't yet
- I still can't make sense of it enough to satisfy myself.
- I can't. How do you make sense of a 46 year old man dying and leaving a wife and 2 kids? He had cancer so I realize medically it was for his best if he could not be made better but that doesn't help me make sense of it.
- I am always trying to make sense of my husband's death and there are times when nothing makes sense and when you experience the loss of your loved ones death by suicide I don't believe that you ever completely make sense of it.
- I still haven't been able to; not with my Mother or my Husband that passed 3 months after her.
- I don't really know if I have any meaning that I have found except to change my diet and get check ups to document any future problems I may have.
- I haven't yet - still searching.
- I still haven't yet
- I haven't been able to make sense of it.
- I have searched for meaning and found none.
- I never found how his death made any sense. Still trying.
- I have tried and the only possible answer is that God does things we do not understand, but He must have a good reason what we don't know about.
- There is no sense for his death. He was only 4 months old.
- Still searching.
- I am still unable to make sense of my loved ones death. But my faith in God and God's plan is the one constant in my life. But I still have questions that will remain unanswered as to why.

- Still trying to make sense of it and still searching for meaning
- I have yet to make sense of it, though I continue to try.
- I haven't. But I tried unsuccessfully for almost two years following our daughter's death.
- Have not made sense of what happened in the death of my two children and never will.
- I do not think I have made sense of my son's death at this time. I know the factors that may have been involved in his death yet I still am having trouble understanding the whole thing
- I haven't

Spiritual/Religious

- The way I make sense of my husband's death is that I nor him had any control over it. I truly believe that God has a plan and regardless how we feel about things, his plan will be play itself out. And, there is a reason for everything under the heaven and so there is a reason for my husband's death.
- That, a Higher Power knows what it is doing, and, some go home quicker than others.
- Knowing that he went to a better place without pain & sickness.
- My daughter was a student at Auburn University in architecture. She was at the Rural Studio and wanted to spend her life helping others. She was 20. I see no sense in it but I know God is in control.
- only thru my faith
- I feel that he had suffered enough in this life and God took him home.
- That it was all part of God's plan and he has a purpose for it.
- It was her time, she was so perfect that God had some bigger purpose for her and she was brought here not to learn anything but to teach those who loved her something. She was 19 days old and died from SIDS.
- I know that God has a purpose/reason for everything, even if I don't know or understand it. I have faith that all things work out for the best. I also believe there are things that you must accept and make the best of a situation no matter how bad it may seem at the time. I don't try to "make sense" of it. I try to learn lessons from whatever the circumstance.
- His pain was over in a short time and then he was free to be with God.
- I had a friend tell me that God lent my Mom to me for this short time and now he needed her back to help with all the children in heaven including an infant sister of mine.
- I don't know that I have "made sense" of losing my mom, however I guess I have just relied on the fact that I believe GOD has a greater plan and I know that she is better off with HIM than suffering with the disease here.
- Everything happens for a reason that we may not understand, and God has his reasons for the way things turn out.
- I have tried and the only possible answer is that God does things we do not understand, but He must have a good reason what we don't know about.
- Through religion, though it doesn't always make sense.
- My grandmother was 93 and she fell and had 4 brain bleeds. I decided that God knew I was never going to be ready to give her up and that she had suffered enough (she had stroke related dementia for 3 years).
- Hated God then understood God's comfort - Prayer Went the psychic medium route - looking for the "other side"
- I tried to look at her short life (9 years) and how positively she impacted others around her. I watched her struggle with a genetic disorder and find the joy in every little moment that others take for granted. I read Conversations With God books and found comfort there.
- God has a plan for everyone; we just have to have faith

Means of Ending Suffering

- He was just too ill to continue to live. He couldn't get past the experiences he had in the Vietnam War and with his Mormon values (upbringing)

- I really didn't make sense of it, other than to feel that it was her time as she was so very ill. It was better for her to not suffer anymore, but I also felt that her death was expedited due to family situations which caused her so much emotional pain.
- The only "sense" I make of my husband's death (1 yr ago) is it relieved him of such lingering pain. Of my mother's death (she 32, me 9) NO sense. Of my step-mother's death (she 48, me 26) again, NO sense.....my faith tells me we'll all meet again. I cling to that.
- By recognizing that my husband's quality of life, would be horrible if he were to continue to live. Cancer had spread to all his organs, there was no hope, no treatment, and he was in horrible, horrible pain.
- That their death brought them peace and ended their suffering.
- He was elderly and in poor health and wanted to stop living.
- My mother's heart was broken twice by the death of her husband (my father) and her grandson (my nephew), her children had lives and partner. She lost the will to live and new where she wanted to be...
- My parents were elderly, suffering from dementia (mother) and CHF/COPD/CA (father). They are in Heaven, happy and with their loved ones. They know who they are and are no longer in pain.
- Maybe he was meant to be an angel, God had a special purpose for him. Also I sometimes wonder if he was spared living on Earth because it is going to get worse.
- They were suffering, and they are in a better place now.
- Think about how unfortunate it is that killing himself seemed like the best available option. he must have been desperate for relief is all i can figure. I've been searching to make sense of it, to make peace with his decision, to lay him to rest in my mind, to find some closure.
- At best, I can be glad that my father is no longer suffering from the disease he had battled for more than seven years. I can see his death as freeing my mother, and the rest of our family, from his constant care, enabling us to "go on with" our lives.

Utilitarian Perspective

- He was a pastor who died of natural causes under the age of 40. His death can be an example that life can end at any time and that monumental choices can't always be put off until another day. I feel that I am to continue to live life and to be an example to fellow Christians to not lose faith. I also feel compelled to reach out to other young widows to let them know that they are not alone.
- I lost a wonderful, young mother. She always thought that she didn't really matter to anyone. When she was sick, her friends came out of the woodwork to help, call or visit. She never realised how much she meant to others. Her illness and death also triggered a reconciliation between my brother and the rest of the family. My brother finally saw my family for how we really were, not as he had perceived us through the eyes of his very negative, nasty ex-wife.
- He had made peace with the people in his life and was ready...i lost 2 family members 30 hours apart...the other wasn't ready and fought to keep going and realized he could not.
- Our son was murdered by his best friend. His "friend" slipped a drug into our son's soft drink and our son had an adverse reaction to the drug and died, but as a result of the investigation into our son's death, many, many murderers and drug dealers were taken off the streets of our community. Our two surviving sons, choose their friends more wisely, and we have become active in the drug awareness community. So maybe our son died to save others.
- It was Tony's way of giving our daughter and me a better life, he was tired could not take any more
- I feel that my loved one was taken to show others that you must live your life before it is too late.
- Since my husband was an alcoholic that died at age 35, I believe his death prevented the injury or death of others in a drunk driving accident.
- I feel that my son's death has helped others through me. I call newly bereaved parents and offer my support, and an ear for them to talk to. I want to be there for those parents. While losing a parent is traumatic, losing a child far more horrible because it is not the order of things. You expect to outlive your parents, grandparents, aunts, uncles. But, when you lose your own child, a part of you dies. Because I have felt such pain, I understand the grief associated with the death of a child. I have helped over 100 parents, just by listening and talking to them.

Other

- My mother took care of everyone, even when she was in no shape to do so. I believe that my mother's spirit needed to rest - And I don't think she would have ever been able to rest on this planet. She talked about wanting just a few days of rest and every time it looked like she would have that rest, something else happened. It's the only sense that I can make of it - The only sense.
- It happens to everyone. No one knows when or how.
- Everyone has their time to die. My husband died of an overdose. He made the decision to use drugs and died because of it. He knew he very well what could happen. It was not my fault and couldn't have been prevented.
- I lost my husband to cancer. I often ask the question "why me" not "why him" I don't really understand why I ask that. I couldn't understand what I did so wrong to have to go through this. Selfish I know. It has been three years and I am a whole new person. A better and a happier person. I would have never thought that at the time. I thought I died the same day he did.
- Jon struggled with addiction, it makes sense that the more you give to drugs and alcohol the more it takes from you and your loved ones
- It was his time to go. He was finished with his time here and had to move on.
- It was their time to go.....death is a part of life...some were spared a lot of pain, some just did not make much sense, except that it is a better place now.
- There is only meaning to life, little meaning to death other than the final nature of it.
- He was old, he was sick, his time was up.
- It was an accident. Accidents happen.

No Sense

- Could not make sense out of it
- I haven't, there is no reason for this to happen
- How do I make sense of his death? HA...I can't...his death was a mystery and I can't seem to find a soul willing to help me find the answers...he can't have been the only human on this earth to die this way...where are the answers? There is no sense to any of this...angry? Smoking mad!
- I question why people think there must be a reason to everything.
- Unfortunately, I can not make any sense of my son's death.

Question 4: Can you please describe this growth?

Resilience/Strength/Independence

- I know now, that even after the worst happens, you can and will go on.
- When you lose a child, you are amazed that you can go on living. I have grown emotionally and psychologically from losing my son because I know that a strong foundation on which a life is based can be crushed by one event. It takes strength and growth to build a new foundation. It takes strength and growth and DESIRE to build a new foundation.
- I have faith that the pain will ease with time and I feel I am stronger in managing the pain and anxiety that I feel daily.
- I would say I am changed. I feel if I can go through this, most things compared are a cake-walk. I recently went through treatment for breast cancer; mastectomy, chemotherapy, etc. Everyone would tell me how terrible this must have been for me...and it was. Just not as bad as having to watch my mother screaming from suffering from so much pain for so long. Nothing even compares.
- I am a better person and have chosen to make the best out of my life. A better mom, a better nurse, a better sister, daughter, a better person
- I feel that I am clearer about what I expect from myself and others. It is important to not waste time trying to please everyone. It may sound selfish, but I feel that looking after myself in both mental, physical and emotional is my main priority.
- I am a stronger but yet more sensitive person.
- I have become very independent. I found myself and I have learned to love myself. I cry different now too. Before they were tears of hurt, scared, poor me. Now they are tears of memories and love.
- I never imagined I could run a household and raise a child on my own. His death forced me into this and I take it day by day... and so far I get by taking care of us
- I'm obviously emotionally strong. Always been a positive person. I now find so many, many things I CAN do on my own, never had to do. But surely not the kind of 'growth' I'd ever ask for, nor wish upon anyone else. The 'getting there' is pure HELL!
- Emotionally, able to handle more than I thought. Spiritually, wanting to build a better relationship with God, because ultimately I know that is what matters.
- I did not think I could cope on my own, always been married from 18 now 45. Found a strength I never knew I had.
- I matured, I know I cannot control things that happen
- I have learned to depend on myself more.
- FORCED to become totally independent.
- Sometimes I feel as if there is nothing that I can't live through if I can make it through this. Other times I feel like a complete basket case.
- I have had to learn to be more self-reliant and more trusting of others.
- I am able to face and handle situations better. I seem to be a little better at getting things done. I am also more alert of other people's feelings as they experience things in their lives.
- Mostly it's strength I didn't know I had, as well as being more empathetic and kinder as a person.
- I have learned I am a stronger person than I thought I was.
- I have had to grow emotionally to be able to handle the death.
- I'm stronger. I am not quick to cry anymore. Maybe harder is a better word. I am putting myself through nursing school which was a goal of mine before my husband's death. I want to help other people!
- I have learned that I can get through great pain.
- My growth has come emotionally I find to be in touch more with my emotions and just opening up when being offered help.
- I have more coping skills than I thought I did
- I can handle more than I thought I could

- That there can be no life without death that is the law of nature. In the end we all must die and to fight that inevitable end is a futile struggle. I we learn to accept this we move along much faster than if we sit around and mourn things we cannot change. So I have grown tremendously in the past couple of years through this at the same time I see so many others who refuse to see this and struggle against this very obvious fact. This has made a much stronger person and much more calm inside of myself.
- I've had to stick it up so that I can continue to go to work to pay the bills and take care of my daughter; I was left with no insurance so I'm still paying on a funeral that will probably take me another 4 years to get rid of along with trying to keep a roof over our head and transportation to get to work; I have to make myself get up and go and work long hours so that I can at least take a break on the weekends to tend to things at home.
- I lost my first real, true, deep love. i think it was that relationship that allowed me to become who i am now, and also able to be in love in a new relationship. he gave me love which equals strength. when time had passed, i realized his gift... and used it.
- I now know I am stronger than I ever thought I was. I am a better person now, even though this is the worst thing that has ever happened to me. I am in touch with so many emotions.
- I am now doing things I never thought I was capable of doing....like writing...poetry...but owe that to the fact I want to honor my Mother and keep her Memory alive.

Interpersonal Relationships

- More empathy
- I have more empathy. I have found that you can cry as much and feel as bad at 4 months as you can at 1 day
- I am aware that people watch me to see how I handle living my life after losing him so suddenly. I can be an "inspiration" and encouragement to other widow/ers, even if they are older than me. I have become more empathetic.
- I thought before that I was open to a world of possibilities. Now I see that world as greater than anything I could have perceived before. The depth of this kind of grief has given me insight into others. I have become very open to alternative healing. My spiritual level is deeper than at any other time in my life. I believe that I have a higher purpose and a sacred contract for my life on Earth, beliefs that I would not have understood before this loss. I have little tolerance for shallow and selfish thought or action. I gravitate toward people who understand life in similar ways.
- I feel that I am clearer about what I expect from myself and others. It is important to not waste time trying to please everyone. It may sound selfish, but I feel that looking after myself in both mental, physical and emotional is my main priority.
- I have learned to accept help from others and that people are willing to go the extra mile to help.
- I think I have more empathy for someone who has lost someone they love.
- I have had to learn to be more self reliant and more trusting of others.
- I am able to face and handle situations better. I seem to be a little better at getting things done. I am also more alert of other peoples feelings as they experience things in their lives.
- I have become more aware of my emotional needs than anything from this experience. I have become more open to expressing my feelings
- My older sister lost her son months before my mum past, as being the middle child i felt like i had to keep the rest of my family (my brother & sister) together and be there emotionally for them...
- I feel that I can help others who may be going through what I went through
- Death reminds me each time that it happens that we are all here for a learning experience, to love one another and to accept each other without prejudice.. The end comes faster than we can even imagine and then we must face our final judgement
- Thought I was sympathetic before, no way compared to now
- I am more understanding of death and can empathize with parents who have lost a child. I want to reach out more and give to others through volunteering.

- I have found family to mean more to me because I will have them till my time comes to take my dirt nap. It has waken me from this slumber I go through on a regular basis. My job keeps me busy so I do not dwell so much on the subject of death. I have found that I get pre- occupied with dying and am more aware of signs to let me know he is still here and their meanings.
- I lost my first real, true, deep love. i think it was that relationship that allowed me to become who i am now, and also able to be in love in a new relationship. he gave me love which equals strength. when time had passed, i realized his gift... and used it.
- Made me value remaining family members more, made me strive to be a better person to have in their lives.
- I have been a little more willing to express myself to others. I try not to keep the emotions bottled up inside because when I do, they come out at the most inopportune times.
- I have a compassion and patience for others since knowing my daughter and living with her for 9 years. I am a teacher and losing my daughter has helped me increase my compassion and connection with my students. I am not afraid of death and am counting the minutes until I can experience seeing my daughter again. I understand that I have a purpose her, as we all do, and that I need to be patient and wait until my journey ends. That doesn't mean I am happy about it. I miss her constantly and feel a physical pain. Little things don't matter as much because I know what something big feels like.
- In some respects. I have more compassion for people who are suffering. I don't dwell on what I consider trivialities. I'm more direct and outspoken.
- I have become less judgemental, more compassionate, and more faithful to God.
- I have a greater sensitivity & empathy for others facing all types of grief & loss. I have gained a new perspective in how compared to the death of a child, most things in life are petty annoyances
- I can understand and relate to others who have experienced deep grief and tragic loss.
- I am more sensitive to the suffering and losses of others.
- I have always been a compassionate person, but after my son was killed, I have found myself reaching out more to others who are grieving.
- My husband and I are definitely more compassionate people. We have stepped out of our box and now feel the need to help others ie: St Judes, blood donation, anything having to do w/helping children, or families who have lost one. Before losing our son, we would have simply said "oh how sad, I feel so bad for them."

Life Philosophies

- I can see more of the big picture of life.
- I have become more calm about life and take a slower pace I have learned to be more accepting. I have learned to take things a bit easier. I have learned to relax more. I have put things in perspective.
- I thought before that I was open to a world of possibilities. Now I see that world as greater than anything I could have perceived before. The depth of this kind of grief has given me insight into others. I have become very open to alternative healing. My spiritual level is deeper than at any other time in my life. I believe that I have a higher purpose and a sacred contract for my life on Earth, beliefs that I would not have understood before this loss. I have little tolerance for shallow and selfish thought or action. I gravitate toward people who understand life in similar ways.
- changed priorities, became more ambitious
- I don't sweat the small stuff
- don't worry about the little things, less tolerant of moral and ethical weakness
- When you are faced with a cancer diagnosis, which also carries a death sentence, you realize how much we are NOT in control of our lives. You learn to appreciate every gift in this life whether it is the gift of health, gift of time, precious relationships, or material belongings, all the blessings of life seem sweeter. You also learn lessons about what is really important in this life. After working all your life for "things", you can't take material possessions with you. Time is more important than money.
- I don't take much for granted and I don't sweat stupid stuff.

- I have learned not to take each day for granted to value others and avoid spending time on people who do not matter.
- I can only say that we have grown. the ways we've grown are crazy in that we never in our worst nightmare ever imagined losing a child. we know that god never would take him from us but we now know Lukas is in his care. WE have all learned that life is so unpredictable and we can be here one moment and gone the next .No one appreciates this like we do now.
- I have a larger appreciation for life, and I have grown emotionally because I learned to cope with feelings I had never felt before.
- I feel that this death forced me to take stock in my own life, and try to live it to the fullest by going for my dreams.
- i don't put up with others' trivial problems and b.s.
- i learned that things happen and you have to move on; you can't be sad all the time and i did have another baby
- more mature outlook on my responsibility to take my own depression and anxiety seriously and not deny or avoid facing difficult issues (either personal or interpersonal) - Also, I think my father's suicide made me feel, deeply, just how much I appreciate how good my life is.
- I have a greater sensitivity & empathy for others facing all types of grief & loss. I have gained a new perspective in how compared to the death of a child, most things in life are petty annoyances
- I have decided to become a clinical psychologist in order to test children for LD. I have a LD myself, and it is sooo misunderstood. I want to test children and then counsel their parents about the results. I am going to pursue this dream now that I can.
- become more spiritual and take less for granted

Spiritual/Religious

- I thought before that I was open to a world of possibilities. Now I see that world as greater than anything I could have perceived before. The depth of this kind of grief has given me insight into others. I have become very open to alternative healing. My spiritual level is deeper than at any other time in my life. I believe that I have a higher purpose and a sacred contract for my life on Earth, beliefs that I would not have understood before this loss. I have little tolerance for shallow and selfish thought or action. I gravitate toward people who understand life in similar ways.
- I just lost my mother and after having lost my daughter it is not as hard to accept as it would have been. I have faith they are together.
- Emotionally, able to handle more than I thought. Spiritually, wanting to build a better relationship with God, because ultimately I know that is what matters.
- I will quote from the Bible "I can do all things through Christ whom strengthens me" Phillipines 3:14
- Spiritually I have matured.
- Spiritually I have had to draw on the strength of the Lord because I have none.
- I've grown spiritually, have more compassion and listen more carefully to what others are saying.
- That there can be no life without death that is the law of nature. In the end we all must die and to fight that inevitable end is a futile struggle. I we learn to accept this we move along much faster than if we sit around and mourn things we cannot change. So I have grown tremendously in the past couple of years through this at the same time I see so many others who refuse to see this and struggle against this very obvious fact. This has made a much stronger person and much more calm inside of myself.
- I don't know if the "emotional growth" is a positive one. I no longer feel emotionally or psychologically "safe". I used to believe that God would take care of my family if I prayed for it everyday. Of course I no longer believe that, and my growth involves a total change in how I feel spiritually, somewhat lost at this time!
- I have become less judgemental, more compassionate, and more faithful to God.

- I have learned that as an American Christian, I subconsciously expected this life to offer more than God has promised--that heaven is NOT for this life, but the next. I have learned that, contrary to American pretence, we are NOT in control of our lives. I have learned to be more accepting of life as it IS.
- In terms of maturity, thinking about the future, spirituality, understanding why things happen the way they have.
- I've become more spiritual and take less for granted

Other

- My husband and I were in our late teens when we married. We grew up together and, were excessively dependent on each other. Suddenly EVERYTHING was my responsibility. And I had NO ONE to talk things and ideas over with as I had always had. I guess one would call it "growth" when one learns that it is possible to exist alone - with my truly complimentary other half lost to me. I can now program the VCR, the DVD, the TV, change light bulbs and even tighten screws and come up with klugey fixes when things are broken. Is this growth? Maybe . .
- With cancer (or long term illness), it is not all about the death, it is about the diagnosis, the care giving, the struggle, the roller coaster, then the death. The growth takes place during that entire time.
- I am aware that people watch me to see how I handle living my life after losing him so suddenly. I can be an "inspiration" and encouragement to other widow/ers, even if they are older than me. I have become more empathetic.
- knowing that he will always be in my heart & I have children that love him
- I am terminally ill and I guess the biggest growth has been accepting there is no cure for my cancer and that I need to make sure that I have said and done those things that are important to me. In That way I have grown a lot.
- I feel more comfortable with ageing and death and with being able to choose when one feels one has lived long enough.

Too Soon

- I can't explain
- Too soon to say
- Sometimes I think I have achieved growth, but slip back into a feeling that it was an illusion, and I had only tricked myself for a short time. Back to the same questions, the pain and the panic.
- Not sure yet, it is far too soon. I can say that how I was before is different than how I am now. If that is growth or change, I don't know. In many respects, who I was before largely died when my wife died. Any change beyond that is probably growth.