

Coping and Growth in Bereavement

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### Abstract

This study included an examination of the relationship between coping and growth in a mixed population of bereaved individuals. Coping was operationalized as the dual process model of coping with bereavement (DPM). Growth was operationalized as posttraumatic growth (PTG). Participants ( $n = 154$ ) completed a modified version of the Inventory of Daily Widowed Life (IDWL-M) and the Posttraumatic Growth Inventory (PTGI) and provided demographic information. The relationship between the IDWL-M Oscillation Scores (Raw and Absolute-Value) and the PTGI Total Score and Factor Scores (1-5) were examined by linear and multiple linear regression analyses. Between samples *t*-tests were used to examine differences in PTG for nature of loss (expected and unexpected) and gender. First, no relationship was found to exist between equality in Loss- and Restoration-Orientation coping using the Absolute-Value Oscillation Score and PTG Total and Factor Scores. Second, a statistically-significant negative relationship was found to exist between the IDWL-M Raw Oscillation Score and PTGI Factor 2 (New Possibilities). Third, individuals with an unexpected loss were found to experience significantly more growth than those with an expected loss. These findings suggest that a increased focus on the issues directly associated with the loss is related to an increased growth in the area of New Possibilities. Also, these results suggest that individuals with a sudden loss experience more growth than do those who are able to anticipate the loss. Posttraumatic growth was shown to be prevalent among these participants.

*Keywords:* loss- and restoration-orientation coping, posttraumatic growth, bereavement, nature of loss, gender

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## Chapter 1

### Literature Review

#### Introduction

Bereavement, the state of having lost a loved one through death, is a universal human experience (Carnelley et al., 2006) widely regarded as a threat to psychological well-being across affective, behavioral, cognitive, and physiological domains (Stroebe et al., 2001a). Grief, the personal experience of bereavement, is wide-ranging and individually expressed (Bonanno, 2001). Though the intensity of grief often diminishes over time, bereaved individuals may experience grief for many years after the loss (Carnelley et al., 2006). Because of the negative aspects of grief, researchers have sought to better understand the experiences that may result from the death of a loved one. The study of grief, therefore, arose as a way to make sense of the consequences of loss, attachment needs, and traumatic responses in the aftermath of loss (Parkes, 2001).

Coping has been regarded by many as a way that individuals may seek to lessen the impact of loss and learn to function in the presence of distress (Stroebe & Schut, 2001). A better understanding of the moderating effects of coping may be helpful for those who seek to support individuals experiencing grief-related distress (Calhoun & Tedeschi, 2013). Theoretical explanations of coping have continued to evolve as research has expanded and diversified. Throughout much of the 20th century, many researchers regarded healthy coping as primarily a process of resolving negative emotions and detaching oneself from the deceased person (Freud, 1957). In light of this, many theoreticians suggested that individuals who worked through the material of loss and

relinquished their emotional investment in the deceased person were coping well, while those people who avoided grief were failing to manage the cognitive, emotional, behavioral, or physical challenges associated with loss. Active resolution and detachment from the significant relationship were thought to be vital for healthy coping. Researchers have increasingly identified the benefits of coping directly and indirectly with the material of loss (Stroebe & Schut, 1999).

Bereavement has been identified by many as one of the most challenging human experiences (Holmes & Rahe, 1967). Consequently, research has often centered on the psychological detriments of trauma. However, in recent years greater attention has been given to the positive aspects of negative life events. Some have noted that negative events—such as the death of a loved one—have been shown to result in positive personal changes for some people (Helgeson et al., 2006; Tedeschi & Calhoun, 1995). This research proposal contains an exploration of coping and growth in bereavement, preceded by a brief examination of the negative consequences of loss.

### **Bereavement and Distress**

Bereavement has been shown to challenge an individual's sense of emotional well-being. It has been linked to peritraumatic distress (fear, helplessness, horror) (Hargrave et al., 2012), depression (Buckley et al., 2009; Ong et al., 2010), yearning or emotional pangs, and intrusive or ruminative thoughts about the deceased (Bonanno et al., 2004). The death of a loved one has been shown to present a greater risk for physiological impairment such as illness (Buckley et al., 2009), disability, hospitalization (Stroebe, 2010), insomnia (Solomon & Shear, 2015), slightly increased rates of mortality

(Christakis & Allison, 2006; Martikainen & Valkonen, 1996; Stroebe, 2010), and suicidality (Johnson et al., 2008; Latham & Prigerson, 2004). In a review of the theoretical and empirical literature on coping and bereavement, Stroebe (2010) noted the well-established connection between bereavement stress and physical harm.

While bereavement presents significant psychological and physical challenges to many people, some individuals may experience a greater duration and severity of grief symptoms, a condition which some have labeled *complicated grief* (Diminich & Bonanno, 2014; Prigerson et al., 1995). The release of the DSM-5 marked a notable change in the diagnosis of depression as the *bereavement exclusion*, which previously prevented clinicians from diagnosing adjustment disorders or depression in recently bereaved individuals, was removed. Some felt that the bereavement exclusion prevented clinicians from pathologizing the universal experience of loss. Wakefield, Schmitz, and Baer (2011) noted the paucity of support in the empirical literature for the clinical utility of the bereavement inclusion. Researchers had acknowledged the possibility of the comorbidity of grief and depression. Thus, they made provision for the diagnosis of an adjustment disorder or major depression in the midst of grief (Wortman & Boerner, 2011).

Houwen et al. (2010) found that bereavement-related factors such as the relationship to the deceased, nature of death, age, education level, religious or spiritual affiliation, and time since loss were unrelated to post-loss health quality and psychological well-being. They noted that only emotional loneliness, associated with partner loss, had been connected to emotional and physical maladjustment following a

loss. Miyabayashi and Jin (2007) noted that sudden unnatural death has a greater impact on emotional well-being than does anticipated death.

Despite the near universality of distress in bereavement, it must be pointed out that not everyone who experiences a loss reports severe psychological detriments (Ong et al., 2010). Some indicated that they saw improvement in their sense of emotional well-being (Bonanno et al., 2004). Thus, factors such as social isolation or expected versus unexpected loss have been shown to have greater impact on the experience of grief than other demographic variables in some individuals.

### **Coping and Bereavement**

The death of a loved one presents universal, yet subjectively unusual circumstances that may challenge an individual's ability to manage the activities of daily living and the cognitive or emotional aspects of loss (Stroebe & Schut, 2001). Consequently, sustaining and developing coping capabilities may be essential for those seeking to manage the adverse effects of loss. An assumption of this research is that the potential benefits of coping are worthwhile even though the experience of grief may present barriers to adjustment.

Folkman (1984) defined coping as the "constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person" (Rice, 2000, p. 223). More recently, Stroebe and Schut (2010) defined coping as the "processes, strategies, or styles of managing (reducing, mastering, tolerating) the situation in which bereavement places the individual" (p. 274). Grief-related coping encompasses the varied ways people seek to

moderate or minimize the cognitive, emotional, and physical aspects of a loss (Stroebe & Schut, 2001).

Certain assumptions have existed both in popular culture and the scientific research in the West about what constitutes healthy coping in the midst of grief (Wortman & Silver, 2001). Due to the universal acceptance of some grief-related assumptions, Wortman and Silver believed that they would uncover empirical foundations for these ideas. In a review of literature they identified five cultural myths: (a) intense distress was expected in recently bereaved individuals, (b) failure to experience distress immediately following a loss was considered problematic, (c) healthy adjustment required an individual to confront and resolve feelings associated with loss, (d) a continuing connection to the deceased person was generally regarded to be maladaptive, and (e) recovery was expected for most people within a couple of years of a loss. While these assertions may have been true for some people, evidence suggested that they are not universal principles.

Many researchers have offered counter arguments to previously held views of coping. For example, not all recently bereaved people experience intense distress (Ong et al., 2010). The absence of trouble may be a solution, rather than a problem. Some have found that avoidance of grief is advantageous, rather than detrimental (Bonanno, 2001; Bonanno et al., 2005). Confrontation and resolution of feelings associated with the loss may be thought to be an ongoing individual process, rather than a time-sensitive event (Stroebe, 2010). Also, a continuing mental and emotional connection with the deceased

may be adaptive and regarded by a bereaved individual as comforting, rather than disruptive (Harvey et al., 2001).

Bereavement has been shown to be the most significant stressor in a person's life (Bonanno et al., 2002; Holmes & Rahe, 1967), yet the majority of bereaved spouses cope well in the wake of a loss (Bisconti et al., 2004). Approximately 20 to 38 percent of bereaved spouses have been shown to experience significant emotional distress immediately following a loss (Mendes de Leon et al., 1996). Much of the research indicates that most people do not experience intense bereavement distress (Wortman & Silver, 2001).

**Grief-work hypothesis.** Freud's grief-work hypothesis set the tone for bereavement theory and practice from his 1917 publication of *Mourning and Melancholia* (Freud, 1957) to the latter half of the 20th-century (Bowlby, 1980; Lindemann, 1994; Stroebe & Schut, 1999). Freud suggested that mourning (the individual's emotional and behavioral response to loss) and depression shared certain features that included:

profoundly painful dejection, cessation of interest in the outside world, loss of capacity to love, inhibition of all activity, and a lowering of self-regarding feelings to a degree that finds utterances in self-reproaches and self-revelings, and culminates in a delusional expectation of punishment (p. 244).

Freud (1957) recommended direct contact with, and resolution of, the psychological material of loss through intentional confrontation. From an analytic framework, he proposed that healthy coping necessitated the withdrawal of libidinal energy from the attachment figure. However, Clewell (2004) noted that Freud later

acknowledged the normalcy of lifelong processing of a loss. In light of this early emphasis, grief has often been viewed as a pathological, rather than an anticipated part of every person's life.

Lindemann (1994) noted common factors of normal grief which included: "(1) somatic distress, (2) preoccupation with the image of the deceased, (3) guilt, (4) hostile reactions, and (5) loss of patterns of conduct" (p. 189). He suggested that normal grief could be resolved to the extent that people participated in the work of grief (i.e., separation from the deceased, reengagement with the context in which the deceased is absent, reinvestment in relationships). Further, he noted that maladaptive grief was characterized by a delayed or distorted grief response.

Rosenblatt (1983), in a survey of 56 bereaved diarists, noted that self-controlled grief was a risk for pathological grief. He suggested that grief work varies in duration and like many early and more recent grief theorists, held the general position that active engagement with grief work is vital to positive grief outcomes. Rosenblatt proposed changes to the grief-work hypothesis that were more respectful of people's need to take breaks from, or avoid, grief. He noted that the diarists in his study frequently reported no greater distress when they disengaged from grief work. He suggested altering the grief-work hypothesis to include the necessity of stepping away from grief at times. He also acknowledged that it was necessary for people to engage with the activities of daily living. He suggested reengagement with grief when an individual's grief-related memories became prominent.



Bowlby (1980), an attachment theorist, appealed to developmental facets of grief to illuminate the process of coping with loss. He indicated that pathological grief was characterized by unconscious yearning, unconscious reproach for the deceased or the self, undue focus on the needs of others, or feeling that the loss had not happened. He suggested that these manifestations were analogous to childhood grief reactions and that adult grief was similar to childhood maternal deprivation (Bowlby, 1982). In keeping with the tone of the grief-work hypothesis, Bowlby encouraged active engagement with grief and discouraging avoidance of the material of loss.

The grief-work hypothesis, set in an analytic framework, had shaped much research and practice throughout the 20th century. However, researchers began to note a lack of empirical support for this theory (Calhoun et al., 2010; Granek, 2010; Richardson, 2010a; Stroebe & Schut, 2001). Though the influence of the grief-work hypothesis has been extensive, it has come to be regarded by researchers as too general to be useful. Rather, researchers have identified particular aspects of people's experiences which may better define grief and loss, such as rumination, dissociation, yearning, and other behavioral indicators (Stroebe et al., 2001b).

Hagman's (Hagman, 2001) treatment of the grief-work hypothesis, recounted by Hogan and Schmidt (2002), highlights some of its inconsistencies. For example, they indicated that Freud lacked clarity and precision about the definition of normal grief. Definitionally, grief has been described as a distressing, yet non-pathological universal human experience (Shear et al., 2011). Indeed, grief may be associated with pathological developments such as depression (Ishii et al., 1998), somatic complaints, or anxiety

(Chiu et al., 2011), yet this is relatively rare. Also, Hagman suggested that the social aspects of grief were not explored by Freud, even though social support is an important part of coping in bereavement. For example, the number of supporters, number of negative influences, and depth of grief-related social support was shown to be related to coping and was an integral part of the experience of loss in a group of 54 African-American individuals bereaved by homicide (Burke et al., 2010).

The need for decathexis (i.e., detachment), put forth in the grief-work hypothesis, was not clearly delineated and supported in early conceptualizations of grief. This framework did not include a description of the need to develop sources of meaning in bereavement. Developing new structures of meaning, such as keeping hope alive (Attig, 2004), relearning the world (Attig, 2010), finding meaning in families (Nadeau, 2001), and identifying aspects of growth or finding satisfaction in the wake of loss (Triplett et al., 2012) has been a topic of exploration and examination in recent years. In the grief-work hypothesis, an unrealistic expectation of the cessation of grief may have been established. Researchers regard grief as a process which may span a person's entire life; therefore, it may not be realistic to expect people to experience complete resolution of grief.

Contrary to the notion that grief is resolved through persistent contact with the psychological material of grief, Stroebe and Schut (1999) noted that coping with grief involves both facing and turning away from grief. They suggested that mourning does not take up all of a bereaved individual's time and that grief occurs in the varied contexts of a person's life. While the need to confront the material of loss (i.e., the classic notion of

doing one's grief work) may be both necessary and inevitable, Stroebe and Schut suggested that it is important for bereaved individuals to focus on the material of loss in "doses" (p. 220).

**Stage theory.** Some theorists have suggested that coping in bereavement is a stage-related process. For example, the *stages of dying* (Kübler-Ross, 2014) and *stages of grief* (Kübler-Ross et al., 2014) popularized by Elizabeth Kübler-Ross have provided an operational definition of the experience of grief that has found utility for some (Pastan, 1977). Kübler-Ross et al. suggested that loss-related adjustments included a combination of denial, anger, bargaining, depression, and acceptance for many individuals. In the aftermath of the Coconut Grove Night Club fire Lindemann (1979) proposed a stage model that included somatic distress, intrusive imagery, guilt, hostile reactions, and conduct disruptions.

Horowitz (2001), in his *model of loss and adaptation*, proposed that bereaved individuals pass through certain stages. He suggested that this process includes such responses as outcry, denial/intrusion, working through, and completion. He indicated that the stages of grief were not predictable or rigid, but flexible pathways for understanding bereavement-related coping. Switzer (1974) proposed four *phases of grief* that involved numbness and denial, yearning for and preoccupation with the deceased, disorganization and despair, and reorganization behavior. Rando (1993) suggested *six r's* of adjustment following loss (recognize, react, recollect and re-experience, relinquish, readjust, and reinvest).

Some have questioned the veracity and applicability of grief stage theory, noting the lack of empirical evidence for such models (Jeffers, 2001; Weisman, 1977). Though these frameworks may have been intended to capture the general tone of grief, rather than being narrowly prescriptive, they may have suggested that grief passes through predictable, universal pathways (Coolican et al., 1994; Neimeyer, 1998). Also, stage theories may suggest that grief is something to be fully resolved or that there is an expected outcome. Words such as resolution, recovery, and closure do not seem to account for periodic resurgences of grief throughout the lifespan; therefore, they may not match the experiences of many bereaved people. It has been suggested that the stages of grief are best used as a heuristic device, rather than strict prescriptions or predictable psychological processes (Kübler-Ross et al., 2014).

**Cognitive stress theory.** Stroebe and Schut (2010) postulated that Lazarus and Folkman's (1984) inquiry into cognitive stress provided a useful framework to view grief as a dual process. Lazarus and Folkman suggested that significant stress was managed in a dual process of both problem- and emotion-focus coping. Where the acute stressor is grief, problem-focused coping may involve such activities as funeral arrangements, finding child care, securing employment, or building a new support network. Emotion-focused coping may include rumination, crying, or finding people who can talk about the deceased person in a supportive manner (Stroebe & Schut, 2010). Lazarus and Folkman indicated that an individual moves between problem- and emotion-focus cognitive states to manage stress-related demands. They found this process at work in an empirical examination of middle-aged individuals (Folkman & Lazarus, 1980). Consequently,

Stroebe and Schut suggested that people may process grief by oscillating attention between the dual realities of loss and restoration.

As an extension of Lazarus and Folkman's (1984) cognitive stress theory, Stroebe and Schut (1999) indicated that the primary stressor in grief is the reality of having lost a loved one through death. From the standpoint of cognitive stress theory, secondary stressors in grief may include attachment, physical, emotional, cognitive, relational, or behavioral factors that challenge an individual's ability to cope. Within the context of coping with grief Stroebe and Schut did not discriminate in importance between secondary stress factors, indicating that each element may present challenges to coping (1999).

With cognitive stress theory as a backdrop, Stroebe and Schut (1999) developed the dual process model of coping with bereavement (DPM). In light of the realities of psychological trauma, they suggested that bereaved individuals also frequently manifest symptoms of intrusion and avoidance described in Horowitz's theory of the *stress response syndrome* (Horowitz et al., 1991). The difference between Horowitz's orientation to intrusion-avoidance in a trauma context and similar symptoms within the dual process framework is that while "Horowitz seeks to understand the *causes* of (extreme) intrusion-avoidance, we seek to understand the effects of processes of confrontation and avoidance" (Stroebe & Schut, 1999, p. 207). Stroebe and Schut indicated that they wanted to know how intrusion and avoidance contributed to the process of coping with grief. Additionally, they suggested that intrusion and avoidance was a reasonable and perhaps healthy way for people to cope with grief. Stroebe and

Schut's (1999) model of coping involves a framework inclusive of the dynamic relationship that may exist between attention and inattention to loss-related content in bereavement.

Coping in the aftermath of loss is complicated. Aldwin and Revenson (1987) showed a bidirectional connection between instrumental action- and negotiation-coping and mental health, indicating that there was correlational, rather than causal relationship between these factors. They found that action and negotiation coping strategies both increased, rather than diminished, distress. They suggested that this may have been due to the high level of effort that is necessary to engage in coping strategies. They noted that coping efforts that involved minimal effort were the most effective.

### **Dual Process Model of Coping with Bereavement**

Stroebe and Schut (1999) argued that the dynamic relationship between loss- and restoration-orientation coping helped people process grief-related stress. They suggested that oscillation between the realities of loss and restoration is how bereaved individuals process and accommodate the death of a loved one.

**Loss-orientation.** Loss-orientation (LO) coping encompasses those strategies individuals may use to manage loss-related tasks or stressors associated with loss (Carr, 2010). LO coping comprises both problem- and emotion-focused strategies for coping with grief. Where the acute stressor is grief, problem-focused coping may involve making funeral arrangements, finding child care, securing employment, or building a new support network. Emotion-focused coping may include rumination, intrusions, denial/avoidance, crying, or talking about the

deceased person with supportive individuals (Stroebe & Schut, 1999; Stroebe & Schut, 2010).

Theoretically, the authors of the DPM suggested that LO dominates the early experiences of grief. They indicated that bereaved individuals would typically develop increasing flexibility managing the psychological material of loss, becoming better able to shift their attention away from grief as they gain experience and understanding of particular grief-related needs (Stroebe & Schut, 1999).

**Restoration-orientation.** Restoration-orientation (RO) coping involves reinvestment strategies individuals may employ to deal with the many adjustments that may accompany bereavement. RO may include picking up tasks that the deceased had carried out, working to forge a new identity (Stroebe & Schut, 1999), experiencing happiness (Lund et al., 2008) or involving oneself in the activities of daily living (Caserta & Lund, 2007). Therefore, RO coping involves dealing with secondary stressors and placing one's attention on non-grief-related tasks (Carr, 2010). Though Stroebe and Schut stated that RO coping increases in prominence over time, it has also been shown to exist early in the grief process (Lund et al., 2010). Avoidant coping has been demonstrated to be a predictor of growth, suggesting that taking time off from grief may be a sound strategy (Pooley et al., 2013).

The ability to express positive emotion in novel experiences has been shown to be related to improved mood in bereavement (Coifman &

Bonanno, 2010), with women showing greater benefit than men (Guinther et al., 2003). Features of LO (i.e., verbal expressions, crying, memorializing) and RO (i.e., avoidance, education, caring for children) coping were shown to be present in a study of 397 bereaved adults approximately 13 months after a loss (Frantz et al., 2010). As a result of findings such as these, these researchers hypothesized that individuals who fare best may be those who both “embrace and avoid grief” (p. 205).

Thus, it may be helpful for bereaved people to think about developing flexibility in moving between grief and the activities of daily living (Lund et al., 2004). This departure from Freud’s grief-work hypothesis and Bowlby’s attachment theory of loss (i.e., the emphasis upon stage theory and the rearrangement of attachment) was confirmed in the literature describing the experience of loss (Pooley et al., 2013, Stroebe & Schut, 2001).

**Oscillation.** Stroebe and Schut (1999) called the interaction between LO and RO coping *oscillation*. The DPM is, therefore, a dynamic model of coping in which bereaved individuals are thought to oscillate between loss- and restoration-related stress. There are moments when bereaved individuals may focus on loss-related material and moments when they focus on restoration-related material. Within the DPM framework, therefore, movement between attending to and avoiding grief is seen as adaptive rather than maladaptive.

Stroebe and Schut (1999) said, “At times the bereaved will be confronted by their loss, at other times they will avoid memories, be distracted, or seek relief



by concentration on other things” (p. 215). They suggested that this “oscillation is necessary for optimal adjustment over time” (p. 216). Therefore, the DPM is to be understood as a model of coping, rather than a set of bereavement outcomes. In a study of 298 bereaved men and women targeting DPM processes, the LO and RO group showed a modest positive advantage over the LO control (Lund et al., 2010). Equal engagement in RO and LO activities showed modest advantage over the LO group.

The DPM was designed to frame coping in spousal bereavement (Caserta & Lund, 2007). It has been examined in the empirical literature in a number of contexts (Bennett et al., 2010; Caserta et al., 2014; Lund et al., 2010; Richardson, 2010b). Lund et al. (2010) indicated that a clinically-useful operational definition of oscillation remained underdeveloped. Yet, they showed that focused, individually customized interventions provide better clinical conditions for facilitating RO coping. Also, research showed that oscillation favoring RO was associated with superior adjustment after loss (Caserta & Lund, 2007).

### **Posttraumatic Growth in Bereavement**

People have searched for meaning in the midst of suffering throughout recorded human history. Indeed, the idea of overcoming pain has been identified in many of the world’s religions. This is a theme that has been explored and articulated by philosophers and theologians (Tedeschi & Calhoun, 1995). Victor Frankl, who endured four Nazi prison camps wrote, “If there is a meaning in life at all, then there must be a meaning in suffering” (2006, p. 67).

Positive changes that accompany bereavement have garnered greater attention in the scientific literature in recent years (Tedeschi et al., 1998a). They have been described as personal growth (Bray, 2011), thriving (Park, 1998), resilience (Bonanno, 2004), benefit-finding (Lichtenthal et al., 2010), positive life change (Lehman et al., 1993), stress-related growth (Aldwin & Levenson, 2004; Caserta et al., 2009), meaning reconstruction (Gerrish et al., 2009; Neimeyer, 2010), and posttraumatic growth (PTG) (Tedeschi & Calhoun, 1996). Shaw, Joseph, and Linley (2005) indicated that PTG is the term most often used in the literature to describe positive changes that arise in the wake of traumatic experiences.

Despite the potential desirability of returning to pre-loss levels of functioning some people report that they are unable to go back to who they once were. A bereaved woman who was interviewed by Neimeyer (2006) said, “More than anything, I keep thinking, I have to get a new life” (p. 227). Significant changes may occur in the wake of loss. In light of this, Attig (1996) said that finding one’s way after a loss “is not a matter of learning information about the world but learning how to be and act in the world differently in light of our loss” (p. 107). Rather than framing positive changes in bereavement as recovery or resolution, some researchers have identified a significant reshaping of some aspects of people’s lives in the wake of loss. Bereaved individuals may experience positive personal transformation as a result of the loss of a significant person.

Wortman (2004) questioned the definitional veracity of positive changes that are said to occur in the wake of trauma. She indicated that the survivor’s

social network might “pull” (p. 83) declarations of positive changes due to the emotionally taxing nature of loss. She also suggested that assertions of benefit-finding might be indicative of pathological defensive illusions.

The inability some individuals feel to return to life as it used to be may provide conditions for transformation. They may feel a need to create new meaning or see themselves differently when old understandings become unappealing or indefensible. Most people report experiencing distress in the wake of loss and many have observed positive changes (Cadell et al., 2003; Engelkemeyer & Marwit, 2008; Wagner et al., 2007). Emerging positive qualities have been described as compassion, wisdom, accepting paradox, living life more fully, maturity, enhanced self-esteem, patience, tolerance, empathy, courage, becoming more spiritual or religious, or having greater existential awareness (Gerrish et al., 2009).

Tedeschi and Calhoun (1995) regarded PTG as transformative. Consequently, PTG is preceded by challenges significant enough to precipitate fundamental changes in a person’s worldview. Yet, what constitutes monumental change may be different from person to person (Tedeschi & Calhoun, 1996). Research suggests that the more profound a traumatic experience, the greater possibility of self-reported growth (Cann et al., 2010; Solomon & Dekel, 2007; Tedeschi & Calhoun, 1996). Other researchers also have indicated that higher levels of stress predict more growth (Pooley et al., 2013).

Rather than merely coping with the negative consequences of death by returning to pre-loss levels of functioning, Calhoun, Tedeschi, Cann, and Hanks (2010) suggested that a loss may lead to the positive transformation of bereaved people. They defined PTG as “positive change that the individual experiences as a result of the struggle with a traumatic event” (Calhoun & Tedeschi, 1999, p. 11). They sought to operationalize the deepening of human understanding in the wake of trauma and to obtain a better knowledge of how, and in what circumstances, wisdom develops (Tedeschi & Calhoun, 1995).

Posttraumatic growth was shown to occur in bereavement among first- and second-degree relatives and non-related friends in a mixed population of grievors (Armstrong & Shakespeare-Finch, 2011) and bereaved parents (Riley et al., 2007; Engelkemeyer & Marwit, 2008). This research suggests that bereaved individuals go beyond merely coping with particular challenges associated with their experience to experience personal transformation. It has also been shown to emerge in significant numbers within in children, spouses, parental and heterogeneously bereaved populations (Tedeschi & Calhoun, 1995; Calhoun & Tedeschi, 2001). A variety of factors may lead to the development of PTG such as personality differences (i.e., optimism and extraversion), self-enhancing reappraisals (real or perceived), and a favorable or secure self-image. Assessing personal assumptions may lead clinicians to better understand whether people will respond pathologically or grow in the wake a loss (Gerrish et al., 2009).

Studies have often shown that women are more expressive in grief than men. Women have been shown to be more expressive than men across cultural boundaries (Parkes, 2001). A study of Taiwanese bereaved females were shown to be more likely to experience depression after the loss of a partner (Chiu et al., 2011). Additionally, women tend to report PTG at a greater rate than men, though these results were derived from largely heterogeneous populations (Calhoun & Tedeschi, 2001). Elderly individuals report less severe grief response than do younger people. Researchers suggested that older people are better equipped to deal with a loss because they possess greater life experience. Also, losses experienced by elderly individuals are more likely to be anticipated, rather than sudden (Parkes, 2001).

In one study, positive changes occurred in 30 to 70% of bereaved individuals (Linley & Joseph, 2004). Regarding potential adverse changes in bereavement, studies by Baker, Kelly, Calhoun, Cann, & Tedeschi (2008) and Cann, Calhoun, & Tedeschi (2010) showed that participants reported very low levels of negative changes.

**Posttraumatic growth and subjective experience.** That every person has a complex set of personal core beliefs is a central assumption in this research. *Core beliefs, worldview, or a priori* beliefs (Mancini & Bonanno, 2009), have been discussed extensively in the literature. A sample of the terminology used to describe the subjective nature of human experience follows as a means to shed light on this phenomenon.

At times, bereaved individuals are thrust into situations that cause them to question previously held views because of the significant challenge to these core beliefs. They may begin to rebuild new systems of belief that are coherent and that account for the new problems and cognitive realities that exist in bereavement. By grappling with dissonant cognitive material bereaved individuals may develop new assumptions about the world.

The struggle with the content of loss, contrasted with previously held beliefs, may lead to the development of new assumptions that provide organization and stability in a person's worldview (Beder, 2005; Janoff-Bulman, 1992). In a theoretical work Stroebe et al. (2007a) suggested that active cognitive confrontation, exposure to the reality of the loss, and action planning is more clinically useful than passive forms of reflection or rumination (2001).

Tolman (1948) coined the phrase *cognitive map* to describe mental images that may define the parameters of a person's thoughts and actions. Piaget, Cook, and Norton (1952), in their research on childhood development and intelligence, defined cognitive structures as *schemas*. The authors indicated that cognitive schemas might help people organize and interpret information. Bowlby (1980) operationalized personal experience as a *working model* that allowed people to understand their environment and function in the world. Kelly (1963) indicated that the patterns by which people interpret human experience are called *personal constructs*. He said that every individual, "formulates in his own way constructs through which he views the world of events" (p. 12). Cognitive maps, schemas, and personal constructs describe the frameworks within which people

hold, organize, and interpret information. Bereaved individuals may arrange and explain the diverse meanings of loss within such cognitive structures. Coping and growth may occur within, and as a result, of these processes.

Parkes (1971) indicated that personal beliefs constitute the *assumptive world*. Janoff-Bulman (1992) defined a set of personal beliefs as “a conceptual system, developed over time, that provides us with expectations about the world and ourselves” (p. 5). Beder (2005) noted that a person’s assumptive world comprises those beliefs which ground individuals in reality and give them meaning. Ecker, Ticic, and Hulley (2012) called varying core beliefs *coherent emotional learnings*. They indicated that these beliefs are assumptions which may arise from individual experience and motivate “behavior, mood, emotion, or thought” (p. 6).

As the death of a loved one presents significant challenges to a person’s worldview, bereaved individuals may struggle to find new ways of thinking about themselves and the world in which they live. In the midst of the intensity of grief, some people may begin to reexamine and reconstruct their previously held assumptions about the world (Michael & Cooper, 2013). Attig (2010) called this process of active discovery *meaning finding*. Nadeau (2001) called this process “*coincidancing*” which he regarded as the interactive process of assigning meaning to loss-related events in a social context.

Neimeyer (2010) regarded the discovery of personal truth in the wake of loss as *meaning reconstruction*. Meaning reconstruction is a process by which a person constructs new personal narratives or core beliefs that emerge directly from the struggle

with the nature and meaning of loss. Within this theoretical framework, some individuals are thought to develop new meaning or new aspects of their identity in the wake of a loss.

The core beliefs of some bereaved people may be challenged, or even shattered, in the aftermath of loss. Janoff-Bulman (1992) postulated, in her *world theory*, that significant loss may challenge previously stable, enduring, and foundational beliefs about the self and the world. She suggested that unexpected traumatic events may be the catalyst for a change in a person's core beliefs. Shattered world assumptions may provide a framework to understand the development of PTG in some bereaved people (Calhoun et al., 2010; Calhoun & Tedeschi, 2001).

An examination of challenges to core beliefs is included in the empirical research. In a study on PTG and posttraumatic depreciation, Cann, Calhoun, & Tedeschi (2010) stated, "it is the shaking of the assumptive world, not the inherent stressfulness of the event, that begins the processes that ultimately result in PTG" (p. 159). Thus, the challenge to a person's foundational beliefs may cause them to see the world differently or to begin to behave differently than they did before.

The authors of another study suggested that individuals who reported making greater sense or finding benefit from the experience of a loss reported less complicated grief than did those who engaged in less meaning making (Holland et al., 2006). Additionally, a strong positive correlation was found between *sense-making* and *benefit-finding*. The researchers suggested that sense-making is a better predictor of grief outcomes than benefit-finding. They indicated that the relationship between sense-making and benefit-finding remained constant regardless of the nature of the loss.



**Posttraumatic growth and cognitive processing.** Implicit in the development of PTG is a process of cognitive assessment involving examination of pre-loss beliefs in light of the loss. Cognitive appraisal is regarded as a precursor to growth and a necessary ingredient in the development of new personal understandings (Park, 1998). Researchers defined PTG as a process that occurs in the wake of loss and the presence of distress (Tedeschi & Calhoun, 1995). Definitionally, PTG includes the notion of a challenge to core assumptions. Consequently, when a loss falls outside of an individual's assumptive worldview, (i.e., the death of a child vs. an aged acquaintance) growth may be more likely to occur (Calhoun & Tedeschi, 1999).

Neimeyer (2006) regarded grief as a process of reconstruction, rebuilding, or relearning the world of meaning after cognitive foundations have been shaken or shattered. He (Neimeyer et al., 2010) noted that bereaved individuals may make meaning through the assimilation of loss material into pre-loss belief systems. This was previously theorized by others (Janoff-Bulman, 1992; Park & Folkman, 1997) who suggested that individuals who were significantly challenged by loss-related material made an effort to accommodate the loss by "reorganizing, deepening, or expanding their beliefs and self-narrative to embrace the reality of loss" (Neimeyer et al., 2010, p. 74).

In a study of cognitive processing, rumination, and posttraumatic growth, Stockton, Hunt, and Joseph (2011) reported that purposeful rumination was positively associated with PTG. They indicated that both reflective pondering and deliberate rumination is positively correlated with PTG, suggesting that intentional interaction with

aspects of meaning in the wake of trauma has a stronger relationship to growth than does intrusive or passive rumination.

Neutral or positive rumination and PTG were shown to be related in the context of a major life crisis (Calhoun et al., 2000). In this study, individuals who practiced neutral or positive rumination soon after a crisis are more likely to experience growth than those who did not. When characterized by rumination about, and exploration of, personal meaning, people were more liable to experience growth. In one study, deliberate rumination was shown to be positively correlated with PTG. Posttraumatic depreciation, or negative changes in the aftermath of a loss, were associated with negative intrusive rumination. This study revealed no correlation between initial deliberate rumination and posttraumatic depreciation (Cann et al., 2010).

**Posttraumatic growth is distinct from resilience.** Tedeschi and Calhoun (2004) suggested that PTG occurs only in the presence of a significant challenge to a person's core beliefs. However, Aldwin and Levenson (2004) argued that growth has been shown to occur in the midst of routine stressful events. They maintained that the term *stress-related growth* better reflects how growth occurs both in the wake of trauma and in everyday events such as "childbirth, marriage, or profound religious experiences" (p. 20). Aldwin and Levenson postulated that events of this nature are developmental and resilience-building.

Lepore and Revenson (2006), in a summary of the research on coping, indicated that resilience was characterized as either an outcome or coping process. They suggested

that it should be clearly defined as either an outcome or coping process to avoid confusion. According to Lepore and Revenson, resilience may be one of three things. First, resilience may be recovery, or a return to pre-trauma levels of functioning. Second, resilience may be resistance, or a continuation of life as it was before, during, and after the traumatic event. Third, resilience may be characterized by reconfiguration, which involves a change to the fundamental nature of the individual so that they may better respond to stressful events or traumas in the future. The distinction between the first two definitions of resilience and the third is vital. The final form of resilience, as it was presented in the scientific literature, involves some form of transformation. The theoretical difference between PTG and resilience is found in the presence or absence of transformation. For the purposes of this study, therefore, resilience is seen as part of the process of coping with a loss, rather than an outcome of coping. PTG will be seen as transformation that results from the process of coping with loss.

Calhoun and Tedeschi maintained that PTG is distinct from resilience, representing outcome factors of coping, and a fundamental shift in core beliefs, rather than a coping response (Calhoun & Tedeschi, 2006). For example, it would be unlikely for anyone in an intense state of psychological distress to report the development of PTG, though Tedeschi and Calhoun (1995; Calhoun & Tedeschi, 2006) acknowledged that some coping is necessary for the development of PTG. They postulated that individuals with significant psychological vulnerability and those who were psychologically stable or who coped well would be less likely to report growth in the wake of trauma.

**Posttraumatic growth in context.** Tedeschi and Calhoun (1995) suggested that PTG is the result of a struggle with loss and an outcome of cognitive processing that is distinct from a process of coping. Posttraumatic growth may emerge in bereaved individuals as they assign meaning to their experience in the context of post-loss reflection (Calhoun & Tedeschi, 1999).

PTG does not emerge from unremarkable experiences. Rather, PTG develops in the aftermath of experiences in which a person's core beliefs have been deeply challenged (Calhoun & Tedeschi, 2001; Calhoun & Tedeschi, 2004; Cann et al., 2010). In such situations, a bereaved individual can no longer rely upon their relationship with the deceased person (Calhoun & Tedeschi, 1999).

This challenge to core beliefs is thought to initiate a cognitive process that may lead a person to report significant changes in the way they think about themselves and the world around them (Cann et al., 2010; Calhoun & Tedeschi, 2006). Altmaier (2013) observed that deep heartache and life-altering positive change might co-exist in trauma. For example, an individual may consider the twin realities of "who I was before" and "who I was after" their loss (Calhoun & Tedeschi, 2001). Therefore, the search for new meaning may be a significant factor in the development of PTG.

The potential for positive changes in the wake of loss may provide hope to people in circumstances that they regard as entirely negative. In light of this, it must be noted that there is a significant risk of misunderstanding the idea of growth in the wake of suffering (Tedeschi & Calhoun, 1995). Therefore, to correctly understand transformation

in the aftermath of a loss, it is vital to point out certain ideas that PTG was not intended to communicate.

*Not intended to minimize negative aspects of grief.* Discussing growth in the wake of loss may have the unintended consequence of being seen as an attempt to minimize the negative impact of a loved one's death (Janoff-Bulman, 2006). The devastating pain experienced in bereavement is not to be underestimated or discounted. In light of this, examination of aspects of growth following bereavement are not to be seen as an attempt to "put a bow on misery" or dismiss suffering. An exploration and discussion of certain positive aspects which may emerge in the wake of loss is not intended to explain away or minimize the adverse aspects of grief (Calhoun et al., 2010).

*Not universally experienced.* Not every bereaved person reports transformational growth or positive psychological effects due to the death of a loved one (Calhoun & Tedeschi, 2001). The majority of bereaved people experience little to no distress despite the apparent risks associated with bereavement (Bonanno, 2004).

*Does not imply an improvement in psychological well-being.* Though the concept of PTG includes the possibility that people will experience improvement in their psychological well-being, not all bereavement-related changes in self-perception are positive. Growth may accompany some emotional detriments (Cadell et al., 2003). The perception of mental well-being and PTG have been shown to be inversely correlated in some studies (Caserta et al., 2009; Engelkemeyer & Marwit, 2008). For example, some people may experience shame, guilt, or helplessness as a result of their loss (Barr, 2012). Tedeschi and Calhoun (2001) suggested that the presence of distress is required to sustain

growth. In the context of bereavement distress, therefore, resurgences of grief may provide the context for continued growth.

Other studies have shown a correlation between distress and posttraumatic growth, while others have suggested that as pain subsides, growth increases. Due to the variable relationship between distress and growth, Calhoun, Tedeschi, Cann and Hanks (2010) suggested that suffering is independent of growth. Additionally, Golden and Dalglish (2012) indicated that people are unlikely to blame themselves in light of the universal nature of death. Pooley, Cohen, O'Connor, and Taylor (2013) indicated that stress and emotional coping predicted growth in the context of disaster. These researchers suggested that avoidant coping in particular, and emotion-focused coping in general, are predictors of growth.

Emotional distress and depression were linked in bereavement (Coifman & Bonanno, 2010; Kessler, 1997). Indeed, stressful life events are related to pathological emotional responses (Hammen, 2005). The experience of loss profoundly impacts many people, yet most people can move forward in life without becoming permanently debilitated (Wortman & Boerner, 2011).

***Does not imply recovery or resolution.*** Growth in the wake of loss is not likely to be characterized by grieving individuals as recovery or resolution (Tedeschi & Calhoun, 2008). Neither would a grieving person be likely to describe the experience of bereavement-related growth as welcome or desirable. This reality is what has been called the paradox of PTG: Positive outcomes may emerge from negative or undesirable events (Calhoun & Tedeschi, 2001; Calhoun & Tedeschi, 2006).

Because PTG occurs in the context of distress, it should not be viewed as a correlate of resolution or closure (Calhoun & Tedeschi, 2006). Growth that occurs in the context of bereavement distress is a neutral process of change, neither positive or negative. Negative events such as bereavement are often seen as undesirable, yet their presence does not rule out the potential for positive outcomes (Frantz et al., 2010).

*Not a direct result of a loss.* PTG is an aftereffect of the struggle with grief, rather than a direct benefit arising from the death of a loved one. Grieving individuals would likely balk at the idea that anything good has come from a loss. Indeed, the concept that good may arise directly from the death of a loved, or the idea that loss is in any way desirable, seems contrary to the foundations of human attachment. So the struggle with the content of loss, rather than the loss itself, is to be seen as the genesis of growth (Calhoun & Tedeschi, 2001).

**Factors of posttraumatic growth.** Calhoun and Tedeschi suggested that changes in the wake of loss were observed in three domains: perception of self, relationships, and philosophy of life (2001, 1995). Changes in perception of self may include seeing oneself as a survivor rather than a victim, becoming more self-reliant, and feeling vulnerable. Variations in the way people relate to others may lead to greater self-disclosure, emotional-expressiveness, compassion, and generosity. A change in philosophy of life could find expression in different priorities, appreciation for life, a sense of new meaning for life, spiritual development, or deepening wisdom (Tedeschi et al., 1998b). These domains were operationalized along five factors that included Relating to Others,

New Possibilities, Personal Strength, Spiritual Change, and Appreciation for Life (Calhoun & Tedeschi, 2006; Calhoun et al., 2010; Tedeschi & Calhoun, 1996).

***Relating to others.*** Bereaved individuals have often reported a deepening in their relationships (Calhoun & Tedeschi, 1989) and increased empathy and connection to others (Tedeschi & Calhoun, 1995). Franz, Farrell, and Trolley (2010) found that one-third of their subjects reported a closer bond with family and friends. The authors suggested that in bereavement difficult experiences bring people together.

Many bereaved people have reported an increase in self-disclosure which was associated with psychological well-being and social connection in the literature (Calhoun & Tedeschi, 2001). Though intimacy has been shown to increase for some people, bereavement presents a risk for greater isolation (Calhoun & Tedeschi, 2001).

***New possibilities.*** Some bereaved people have reported new independence, participation in a broader range of activities, doing more things for themselves (Calhoun & Tedeschi, 1989), and accessing skills they did not think they possessed (Tedeschi & Calhoun, 2008). Growth in new possibilities suggests transformation in self-image and expectation for oneself. It may also imply greater openness to alternative directions (Punamäki, 2010). An examination of PTG in Australian paramedics revealed that positive coping strategies such as cognitive reframing and emotional expression were associated with growth in new possibilities (Shakespeare-Finch & Morris, 2010).

***Personal strength.*** Changes in self-perception are likely to occur in bereaved individuals as they seek to become familiar with the unfamiliar world of grief



(Attig, 2004). Attig (1996) suggested that these people experience a process of identity transformation through meaning-finding following a loss.

People may, as Calhoun, Tedeschi, Cann, and Hanks (2010) suggested, see that they are “more vulnerable, yet stronger” (p. 127), gaining what these researchers called “Personal Strength.” Bereaved people may feel that they are stronger than they thought (Frantz et al., 2010). They may feel that they can rely on subtle strengths or that they have become experts in their own experience (Calhoun & Tedeschi, 1999). They may find that they are more competent and mature than in the past (Calhoun & Tedeschi, 1989; Frantz et al.).

*Spiritual change.* In a theoretical integration of PTG and Stanislav and Grof’s model of psycho-spiritual transformation, Bray (2011) suggested that spiritual crisis in the wake of loss may create conditions for personal growth. Balk (1999) theorized that spiritual changes occur in bereavement as a result of a number of factors. He indicated spiritual change may occur in the process of making meaning after a time of reflection. It may occur in the permeating influence of loss in a person’s life. It also may emerge within the context of the psychological and spiritual disequilibrium that follows significant loss. Spiritual changes were described by Batten and Oltjenbruns (1999) as a result of a quest for new meaning in light of bereavement-associated changes.

A spiritual struggle in the wake of loss was shown to be related to PTSD symptoms and depression as well as greater life satisfaction in a group of 140 undergraduate students, 35% of whom reported a loss through death (Wortmann et al., 2012). The results of this study indicated that life satisfaction did not moderate negative

emotions. However, the authors reported that spiritual or religious struggles were associated with greater levels of distress than when spiritual distress was absent.

Researchers who have explored bereavement and spirituality have examined subjects such as spirituality as a coping mechanism (Fallot, 1997) and spirituality as a correlate of meaning making (Emmons et al., 1998; Park, 2005). There have been few studies that have examined spiritual changes resulting from PTG; however, the literature shows that spiritual changes are an aspect of growth arising from the struggle with grief in adults (Caserta et al., 2009; Cowchock et al., 2011) and adolescents (Batten & Oltjenbruns, 1999).

Some people reported that their existential, spiritual, or religious beliefs were strengthened and confirmed as a result of the struggle with a loss (Frantz et al., 2010). Openness to religious change and early rumination about the meaning of a traumatic event was shown to be related to the development of PTG in a group of 54 young adults (Calhoun et al., 2000).

However, not every bereaved person reports positive spiritual changes (Calhoun & Tedeschi, 2001). Some have reported having developed resentment toward God or faith as a result of traumatic experiences, perhaps thinking that God should have protected them from tragedies of this kind (Exline, Park, Smyth, & Carey, 2011). A potential weakness of the Spiritual Change subscale of the PTGI (Tedeschi & Calhoun, 1996) is that it does not account for possible differences in the meaning of religion and spirituality (Bray, 2011).

*Appreciation for life.* Another outcome of the struggle with loss may be the development of a greater appreciation for life (Calhoun et al., 2010). Some individuals reported that they were more appreciative of the things they had previously taken for granted (Frantz et al., 2010). Appreciation for life was recognized as a concept with universal cultural applicability (Weiss & Berger, 2010).

### **Rationale for This Study**

Bereavement presents significant risks to psychological and physical well-being (Houwen et al., 2010; Stroebe et al., 2007b). Despite the difficulty that grief may present in psychological and physical domains, posttraumatic growth has been shown to occur in the presence of distress (Solomon & Dekel, 2007). Tedeschi and Calhoun (2004) suggested that the struggle with grief is part of the mechanism of growth and that growth may not occur without some level of pain. However, some have suggested that distress is independent of growth (Joseph et al., 1993).

There may be a principle of diminishing returns with distress. There may be a point where people may not feel capable of deriving meaning from the struggle with a loss because his or her ability to cope has diminished by the distressing nature of loss. Aldwin (1994) suggested that those who find ways to manage traumatic experiences earlier than others may be more likely to experience growth than those who are initially overwhelmed. The ability some may have to accommodate a loss over time (i.e., to cope) may have some connection to the development of PTG (Tedeschi & Calhoun, 2004).

The comprehensive necessity of coping in every individual's life seems to suggest that an equal oscillation between LO and RO coping may be related to the development

of PTG. An equal oscillation between LO and RO coping may provide a context in which people are able to process a loss and derive meaning from the experience. Alternatively, bereaved people who have greater levels of either LO or RO may be less able to process what has happened to them in the wake of loss. In other words, being wholly focused on either the loss (LO) or distraction (RO) may be detrimental to the development of meaning.

The struggle with distressing aspects of a loss, rather than the loss itself, may produce positive changes that may not have otherwise occurred (Cadell et al., 2003). The search for cognitive and emotional homeostasis through oscillating contact with the material of loss may be associated with perceived changes in self, a changed sense of relationships with others, and a changed philosophy of life (Tedeschi & Calhoun, 1996). The relationship between the dual process model of coping with bereavement and posttraumatic growth was the central theme of this study.

This study was important because of the pervasive influence of the grief-work hypothesis (Freud, 1957) in research and practice, despite the fact that this central hypothesis was shown to insufficiently account for bereavement processes (Hagman, 2001; Hogan & Schmidt, 2002). This study was also important because it would be helpful to grieving individuals to better understand the relationship between coping and transformative growth.

In the dual process model of bereavement, Stroebe and Schut (1999) outlined a model for coping with loss that acknowledged the reality and necessity of Loss- and Restoration-Oriented coping. Tedeschi and Calhoun (1996) delineated a model of

interpreting loss-related material that highlighted the possibility of growth in the wake of traumatic experiences. The purpose of this study was to find out what connections might exist between these operational definitions of coping and growth.

## **Chapter 2**

### **Methods**

The present study was designed to examine the relationship between posttraumatic growth and the dual process model of coping with bereavement among a mixed population of bereaved individuals.

#### **Hypotheses Examined in This Study**

1. There will be a negative relationship between the Oscillation Score of Loss- and Restoration-Orientation coping and the Total Score of the Posttraumatic Growth Inventory.
2. There will be a negative relationship between the Oscillation Score of Loss- and Restoration-Orientation coping and each factor of the Posttraumatic Growth Inventory (Relating to Others, New Possibilities, Personal Strength, Spiritual Change, and Appreciation for Life).
3. Individuals with an expected loss (expected natural) will report higher levels of posttraumatic growth than individuals with an unexpected loss (unexpected natural, accidental, or suicide).
4. Women will report higher levels of posttraumatic growth than men.

#### **Participants and Demographics**

Participants ( $n = 154$ ) were recruited by convenience sampling at a hospice organization in Western Washington and an online forum. The bereavement support staff at Hospice of the Northwest, based in Mt. Vernon, Washington, facilitated data collection among a population of bereaved individuals who receive grief-support mailings. A total

of 1765 individuals were invited to participate by mailing. David Hayward, the owner of The Lasting Supper, an online network for individuals seeking support and connection, published a request for participants on social media. The number of individuals who were invited to participate through The Lasting Supper could not be determined.

Participants included a heterogeneous group of bereaved individuals who have experienced a loss through death. Criteria for inclusion in the study comprised individuals who were: (a) at least 18 years of age, (b) able to read and speak English, (c) able to complete a physical or digital questionnaire, and (d) experienced the loss of a loved one. Participation in this study was voluntary and anonymous. Participants were not financially compensated. Researchers have emphasized the need for contextual information in coping and bereavement research (Folkman, 2001; Stroebe, 2010); therefore, the role of demographic factors was explored.

Demographic information included: Age, gender (male, female), relationship with the deceased (parent, sibling, child, spouse/partner, grandparent, aunt/uncle, cousin, or other family), time since death (years and months), hospice and non-hospice, and the nature of death (accidental death, unexpected natural death, expected natural death, suicide) (Appendix C).

A total of 175 individuals responded to the survey (172 online, 3 physical copies). Surveys with greater than 6 incomplete answers were not included in the analyses of data. A total of 154 participants remained (118 women, 32 men, 4 with no gender response,  $M_{\text{age}} = 62.64$ , age range: 34-93. There were 2 African-American, 145 Caucasian, 4 Hispanic/Latino, 2 other, and one with no response.

## **Materials and Procedures**

All participants were invited to complete a physical or digital questionnaire which included consent and confidentiality (Appendix A), non-personally identifiable demographic information (Appendix C), the Inventory of Daily Widowed Life (Modified; Appendix D), and the Posttraumatic Growth Inventory (Appendix E).

### **The Inventory of Daily Widowed Life**

A modified version of the Inventory of Daily Widowed Life (IDWL) was used to examine the oscillation between Loss- and Restoration-Oriented coping (Caserta & Lund, 2007). Loss-Oriented and Restoration-Oriented items were measured with a Likert-type scale between “1” and “4.” There were 11 Loss-Oriented items with a possible range of 11-44 and 11 restoration items with a possible range of 11-44. Oscillation *balance*, an indication of process equivalency, is measured by subtracting the LO score from the RO score. The possible range of oscillation (balance between Loss- and Restoration-Oriented) falls between -33 and +33.

Permission was granted by Michael to adapt the IDWL for a mixed population of bereaved individuals (M. Caserta, personal communication, November 11, 2013; Appendix D). Where the IDWL says “spouse/partner” the questionnaire was changed to read “loved one” to encompass a heterogeneous range of relationships to the deceased. The IDWL will be referred to as the Inventory of Daily Widowed Life-Modified (IDWL-M) to denote that this questionnaire was modified for use in this study.



### **Posttraumatic Growth Inventory**

The Posttraumatic Growth Inventory (PTGI) (Appendix E) is a 5-factor measure of perceived consequences of traumatic experiences. Factors measured by the PTGI include: Relating to Others (7 items with a range of 0-35), New Possibilities (5 items with a range of 0-25), Personal Strength (4 items with a range of 0-20), Spiritual Change (2 items with a range of 0-10), and Appreciation for Life (3 items with a range of 0-15). The PTGI was found to have high internal consistency ( $\alpha = .90$ ). Test-retest reliability for the complete measure was found to be at an acceptable  $r = .71$  and ranged from  $r = .65$  to  $r = .74$  among factors (Tedeschi & Calhoun, 1996).

The PTGI was found to be distinct from social desirability (i.e., participants did not select items because they were appealing). Personality factors such as optimism, religiosity, extraversion, and openness to experience were found to be correlated with certain factors of the the PTGI. Women reported more benefits than men on every factor but New Possibilities. There was no statistical relationship between age and time since the loss and the results of the PTGI (Tedeschi & Calhoun, 1996). The validity of the PTGI questionnaire was corroborated by a strong and significant correlation in a study of 61 paired significant others (Shakespeare-Finch & Enders, 2008).

Permission was granted by the authors of the PTGI (Tedeschi & Calhoun, 1996) for use in this study (Appendix E). Where the authors of this measure used the language, “as a result of your crisis,” the present study will say, “as a result of your loss,” in the instructions portion of the questionnaire. The use of this language specifies that the event in question is their loss.

### **Statistical Model**

The present study was correlational. A linear regression model, multiple linear regression model, and independent samples *t*-tests were used to examine raw data in the Statistical Package for the Social Sciences (SPSS). A linear regression model was used to examine the relationship between the Raw and Absolute-Values of the IDWL-M Oscillation Score and the PTGI Total Score. A multiple linear regression model was used to examine the relationship between the Raw and Absolute-Values of the IDWL-M Oscillation Score and the PTGI Factors (1-5; Relating to Others, New Possibilities, Personal Strength, Spiritual Change, and Appreciation for Life). Gender and nature of loss were included as categorical covariates in each of the regression analyses. The between-group differences of gender (male or female) and the nature of loss (expected or unexpected) were examined by independent samples *t*-tests.

### **Summary**

The goal of the present study was to examine the relationship between the dual process model of coping with bereavement and posttraumatic growth in a mixed population of bereaved individuals.

Bereavement may present significant challenges to an individual's cognitive, emotional, and behavioral resources. Bereaved individuals moderate the psychological effects of a loss through coping. The notion that an individual must do his or her "grief work" through direct contact with the material of loss was commonplace until fairly recently. Avoidance of the material of loss was thought to be counter-productive to healthy mourning (Stroebe, 1992). Freud (1957) indicated, in his grief-work hypothesis,

that in order to resolve the negative consequences of grief people needed to withdraw emotional energy from the deceased. Until recently, the grief-work hypothesis dominated research and practice. However, it has been suggested that coping with grief also involves processes which fall outside direct contact with the material of loss.

Stroebe and Schut (1999) outlined a model for coping in the wake of loss in which bereaved individuals may oscillate between a loss- and restoration-focus. They suggested that a dual process of coping gives place for both the material of loss and engagement with the activities of daily living and other diversions. Working through grief, by maintaining constant contact with the material of loss, failed to account for the need to take breaks from the pain of loss and to engage with the activities of daily living (Stroebe & Schut, 2010). Grief is highly demanding and distracted intervals may be both welcome and needed for people who are in the midst of the pain of grief. Therefore, the dual process model of coping with bereavement provides a context in which to understand the varied and variable ways people cope with loss in a way that honors aspects of the experience of loss which may have been previously overlooked.

Tedeschi and Calhoun (1995) suggested that positive changes that occur in the wake of crisis is an ancient idea, rooted in many of the world's religions (Tedeschi et al., 1998a). Features of PTG have been identified in many people who have lost a loved one, particularly those who may experience severe traumatic events (Tedeschi & Calhoun, 1996). Not every bereaved person experiences growth in the wake of loss. However, some people experience changes in their outlook which emerge as a result of the struggle with grief.

### Chapter 3

#### Results

The purpose of this study was to examine the relationship between posttraumatic growth and the dual process model of coping with bereavement among a mixed population of bereaved individuals. This chapter is organized into the following sections: (a) Data Analysis, which includes the pre-analysis data treatment, descriptions of the participant characteristics and descriptions of the analyses used; (b) Findings, which presents the results of the analyses; and (c) Summary, which summarizes the chapter and provides a transition to the next chapter.

#### Data Analysis

**Pre-analysis data cleaning.** There were 175 responses to this survey, 154 of which were examined in the analysis. Those who did not complete both the IDWL-M and the PTGI were not included in this analysis (with no greater than 6 incomplete responses). Mean scores were included for incomplete responses so as not to interfere with these analyses.

Prior to analysis, the data were assessed for outliers using the following guidelines, as outlined by Tabachnick and Fidell (2013); first, standardized scores were created for the study variables. Next, these standardized scores were examined for any values greater than 3.29 standard deviations from the mean, which would be considered outliers. Using these criteria, no outliers were discovered, and thus the sample size of 154 cases was retained.

**Reliability.** In order to be used in the analysis, composite scores needed to be created for the following variables: Loss-Orientation, Restoration-Orientation, Posttraumatic Growth Inventory (PTGI; Total Score) as well as PTGI Factors 1-5. These were created by summing the relevant survey items together and then dividing by the total number of items used, to create a mean score.

Cronbach's alpha was used to assess the reliability of Loss-Orientation, Restoration-Orientation, PTGI Total Score, as well as PTGI Factors 1-5. Reliability coefficients were assessed using the guidelines suggested by George and Mallery (2010) where  $> .9$  Excellent,  $> .8$  Good,  $> .7$  Acceptable,  $> .6$  Questionable,  $> .5$  Poor, and  $< .5$  Unacceptable. The reliability for all of the variables ranged from good ( $\alpha > .80$ ) to excellent ( $\alpha > .90$ ). See Table 1 for the results of the reliability test.

Table 1

*Cronbach's Alphas for Composite Scores*

Composite Score	$\alpha$	No. of Items
Loss-Orientation	.88	11
Restoration-Orientation	.80	11
Posttraumatic Growth Factors:		
Factor 1	.92	7
Factor 2	.88	5
Factor 3	.90	4
Factor 4	.83	2
Factor 5	.84	3
Total	.96	21

**Descriptive statistics.** Of the 154 participants, the majority were female ( $n = 118$ , 76.60%), and White/Caucasian ( $n = 144$ , 93.50%), with an average age of 62.64 years ( $SD = 11.40$ ). Most had lost a child ( $n = 51$ , 33.10%) or a spouse/partner

( $n = 48$ , 31.20%) of expected, natural causes ( $n = 102$ , 66.20%). The majority had their loved ones receive hospice care ( $n = 111$ , 72.10%). The average time since their loss was 35.70 months ( $SD = 78.66$ ). The average Inventory of Daily Widowed Life (modified; IDWL-M) Oscillation Score among participants was -6.03 ( $SD = 8.53$ ). The average Absolute-Value Oscillation Score among participants was 8.36 ( $SD = 6.26$ ). The average PTGI Total Score was 68.12 ( $SD = 27.41$ ). Table 2 displays the frequencies and percentages for the categorical variables and Table 3 displays the means and standard deviations for the continuous variables.

Table 2

*Frequencies and Percentages of Categorical Variables*

Variable	<i>n</i>	%
Ethnicity		
Black/African American	3	1.90
White/Caucasian	144	93.50
Hispanic/Latino	1	0.60
Gender		
Male	32	20.80
Female	118	76.60
Relationship with Deceased		
Spouse/partner	48	31.20
Parent	28	18.20
Sibling	7	4.50
Child	51	33.10
Other	16	10.40
Nature of Death		
Expected Natural	102	66.20
Unexpected Natural	38	24.70
Accidental	4	2.60
Suicide	3	1.90
Hospice Care Received		
Yes	111	72.10
No	40	26.00

Table 3

*Means and Standard Deviations of Continuous Variables*

Variable	Min	Max	<i>M</i>	<i>SD</i>
Age	34.00	93.00	62.64	11.80
Time since loss (in months)	0.00	720.00	35.40	78.66
Oscillation Score (Raw)	-28.00	19.00	-6.03	8.53
Oscillation Score (Absolute-Value)	0.00	28.00	8.36	6.26
Posttraumatic Growth Factors:				
Total	21.00	124.00	68.12	27.41
Factor 1	7.00	42.00	23.21	9.50
Factor 2	5.00	30.00	14.64	6.89
Factor 3	4.00	24.00	13.71	6.27
Factor 4	2.00	12.00	5.74	3.43
Factor 5	3.00	18.00	10.82	4.52

**Description of hypotheses and analyses.**

Hypothesis 1: “There will be a negative relationship between the Oscillation Score of Loss- and Restoration-Orientation coping in the dual process model of coping with bereavement and the Total Score of the Posttraumatic Growth Inventory.” This question was analyzed using two multiple linear regressions: one predicting the Raw Oscillation Score and one predicting the Absolute-Value Oscillation Score. For each analysis, the predictor variables were PTGI Total Score, gender, and nature of death. Prior to analysis, the assumptions of normality, homoscedasticity, and absence of multicollinearity were examined. Normality assumes that the regression residuals are normally distributed, and homoscedasticity assumes that the variance is similar for all scores of the predictor. These assumptions were assessed by examination of a normal P-P Plot and a scatterplot, respectively (Stevens, 2009). The absence of multicollinearity implies that the predictor variables were not related. This was assessed using Variance

Inflation Factors (VIF). Stevens suggested that VIF values over 10 indicate the presence of multicollinearity.

Hypothesis 2: “There will be a negative relationship between the Oscillation Score of Loss-and Restoration-Orientation coping and each factor of the Posttraumatic Growth Inventory (Relating to Others, New Possibilities, Personal Strength, Spiritual Change, and Appreciation for Life).” To address this question, two multiple linear regressions were again performed, with one predicting the Raw Oscillation Score and one predicting the Absolute-Value Oscillation Score. For each analysis, the predictor variables were the scores for the PTGI Factors 1-5, as well as gender and nature of death. Prior to analysis, the assumptions of normality, homoscedasticity, and absence of multicollinearity were examined as described above.

Hypothesis 3: “Individuals with an expected loss (expected natural) will report higher levels of posttraumatic growth than individuals with an unexpected loss (unexpected natural, accidental, or suicide).” An independent samples *t*-test was performed to examine this question. The dependent variable in this analysis was PTGI Total Score. The independent variable was the nature of death (expected versus unexpected). Prior to analysis, the assumptions of normality and homogeneity of variance were assessed. Normality suggests that the dependent variable was normally distributed. This was assessed with a Kolmogorov-Smirnov test; if the result of this test is significant, the assumption is violated (Cramer, 1998). Homogeneity of variance assumes that both groups have equal error variances. This was assessed using Levene’s test; if Levene’s test is significant, the assumption is violated (Brace et al., 2012).



Hypothesis 4: “Women will report higher levels of posttraumatic growth than men.” A second independent samples *t*-test was conducted to address this question. The dependent variable in this analysis was the PTGI Total Score. The independent variable was gender. The assumptions of normality and homogeneity of variance were examined as described previously.

## **Findings**

**Hypothesis 1:** “There will be a negative relationship between the Raw Oscillation Score of Loss- and Restoration-Oriented coping in the dual process model of coping with bereavement and the Total Score of the Posttraumatic Growth Inventory.”

Each assumption was met for this analysis. Normal P-P plots for both regression models showed that the regression residuals were normally distributed (see Figures 1 and 2). Figures 3 and 4 show that the data were equally distributed around zero, indicating that the assumption of homoscedasticity was met. Additionally, there were no VIF values over 10, indicating that the assumption of absence of multicollinearity was met (See Tables 4 and 5).

The first regression performed used the PTGI Total Score, gender, and nature of death as predictor of the Raw Oscillation Score. The results of the overall regression model were not significant ( $F(3, 142) = 0.50, p = .684, R^2 = .01$ ). This suggests that PTGI Total Score, gender, and nature of death were not significantly related to the Raw Oscillation Score. As the overall regression model was not significant, the individual coefficients were not examined further. See Table 4 for the full results of this regression.

Table 4

*Regression Predicting Oscillation (Hypothesis 1)*

Variable	<i>B</i>	<i>SE</i>	$\beta$	<i>t</i>	<i>p</i>	VIF
Total Posttraumatic Growth	0.03	0.03	.09	0.97	.332	1.10
Gender	0.30	1.77	.01	0.17	.865	1.02
Nature of Death	0.73	1.61	.40	0.46	.648	1.08

Note:  $F(3, 142) = 0.50, p = .684, R^2 = .01$ .

The second regression was performed using the same predictor variables as in the first regression, yet used the Absolute-Value Oscillation Score as the dependent variable. The overall model for this regression was also not significant ( $F(3, 142) = 1.60, p = .193, R^2 = .03$ ), indicating that PTGI Total Score, gender, and nature of death were not significantly related to Absolute-Value Oscillation Score. As such, no further examination of the individual predictors was performed. See Table 5 for the full results of the regression. Since there was not a significant relationship between these predictors and either the Absolute-Value or Raw Oscillation Scores, Hypothesis 1 was not supported.

Table 5

*Regression Predicting Absolute-Value Oscillation (Hypothesis 1)*

Variable	<i>B</i>	<i>SE</i>	$\beta$	<i>t</i>	<i>p</i>	VIF
Total Posttraumatic Growth	-0.03	.02	-.14	-1.64	.104	1.10
Gender	-1.60	1.30	-.10	-1.23	.220	1.02
Nature of Death	-0.72	1.18	-.05	-0.61	.544	1.08

Note:  $F(3, 142) = 1.60, p = .193, R^2 = .03$ .

**Hypothesis 2:** “There will be a negative relationship between the Oscillation Score of Loss-and Restoration-Orientation coping and each factor of the Posttraumatic Growth Inventory (Relating to Others, New Possibilities, Personal Strength, Spiritual Change, and Appreciation for Life).

Each assumption was met for this analysis. Normal P-P plots for both regression models showed that the regression residuals were normally distributed (see Figures 5 and 6). Figures 7 and 8 show that the data were equally distributed around zero, indicating that the assumption of homoscedasticity was met. Additionally, there were no VIF values over 10, indicating that the assumption of absence of multicollinearity was met (See Tables 6 and 7).

The first regression performed in order to examine Hypothesis 2 used each PTGI Factor (1-5), gender, and nature of death as predictors of the Raw Oscillation Score. The overall regression for this model was significant ( $F(7, 138) = 2.14, p = .044, R^2 = .10$ ), indicating that collectively, the PTGI Factors (1-5), gender, and nature of death were significantly related to the Raw Oscillation Score. These variables together account for 10% of the variability in the Raw Oscillation Score, as indicated by the coefficient of determination ( $R^2$ ). As the overall model was significant, the individual predictors were further examined. The only individually significant predictor variable was PTGI Factor 2 (New Possibilities;  $B = -0.56, t = -3.22, p = .002$ ). This suggested that as scores on the PTGI Factor 2 increased by 1 unit, Oscillation Scores decreased by 0.56 units. See Table 6 for the full results of the regression.

Table 6

*Regression Predicting Oscillation (Hypothesis 2)*

Variable	<i>B</i>	<i>SE</i>	$\beta$	<i>t</i>	<i>p</i>	VIF
Posttraumatic Growth:						
Factor 1	0.15	0.14	.17	1.12	.266	3.57
Factor 2	-0.56	0.17	-.45	-3.22	.002	3.01
Factor 3	-0.02	0.26	-.02	-0.08	.936	5.57
Factor 4	0.45	0.30	.18	1.18	.141	2.16
Factor 5	0.52	0.30	.22	1.10	.163	3.83
Gender	0.61	1.72	.03	0.36	.723	1.03
Nature of Death	1.39	1.58	.08	0.88	.378	1.11

Note:  $F(7, 138) = 2.14, p = .044, R^2 = .10$ .

The second regression was performed using the same predictor variables as in the first regression, yet used the Absolute-Value Oscillation Score as the dependent variable. The results of this regression were not significant ( $F(7, 138) = 1.57, p = .148, R^2 = .07$ ), indicating that the posttraumatic growth factors, gender, and nature of death were not significantly related to Absolute-Value Oscillation Score. See Table 7 for the full results of this regression. As the first regression indicated a significant relationship, but the second did not, Hypothesis 2 was partially supported.

Table 7

*Regression Predicting Absolute-Value Oscillation (Hypothesis 2)*

Variable	<i>B</i>	<i>SE</i>	$\beta$	<i>t</i>	<i>p</i>	VIF
Posttraumatic Growth:						
Factor 1	-0.12	0.10	-.19	-1.20	.231	3.57
Factor 2	0.28	0.13	.31	2.15	.033	3.01
Factor 3	-0.15	0.19	-.15	-0.76	.447	5.57
Factor 4	-0.10	0.23	-.05	-0.42	.679	2.16
Factor 5	-0.09	0.22	-.06	-0.39	.694	3.83
Gender	-1.72	1.29	-.11	-1.34	.184	1.03
Nature of Death	-1.15	1.18	-.08	-0.97	.335	1.11

Note:  $F(7, 138) = 1.57, p = .148, R^2 = .07$ .

**Hypothesis 3:** “Individuals with an expected loss (expected natural) will report higher levels of posttraumatic growth than individuals with an unexpected loss (unexpected natural, accidental, or suicide).”

This hypothesis was assessed using an independent samples *t*-test, with nature of death as the independent variable and PTGI Total Score as the dependent variable. The assumption of normality was not met, as the Kolmogorov-Smirnov (KS) test was significant ( $p < .001$ ). However, the *t*-test is considered robust against violations of normality when the sample size exceeds 30 (Morgan et al., 2012), so the analysis was continued. The assumption of homogeneity of variance was met, as Levene’s Test was not significant ( $p = .326$ ). The results of the *t*-test were significant ( $t(145) = -3.32, p = .001$ ), suggesting that there was a significant difference in posttraumatic growth between individuals with an expected versus an unexpected loss. Examination of the means revealed that, contrary to the hypothesis, those who suffered an unexpected loss had, on average, higher posttraumatic growth ( $M = 78.60, SD = 26.15$ ) versus those who

suffered an expected loss ( $M = 62.72$ ,  $SD = 27.01$ ). Thus, Hypothesis 3 was not supported.

**Hypothesis 4:** “Women will report higher levels of posttraumatic growth than men.”

This hypothesis was assessed using an independent samples *t*-test, with gender as the independent variable and the PTGI Total Score as the dependent variable. The assumption of normality was not met, as the KS test was significant ( $p < .001$ ). However, as stated previously, the *t*-test is considered robust against violations of normality when the sample size exceeds 30 (Morgan et al., 2012), so the analysis was continued. The assumption of homogeneity of variance was met, as Levene’s Test was not significant ( $p = .219$ ). The results of this examination were not significant ( $t(148) = 1.72$ ,  $p = .088$ ), suggesting that there was not a significant difference in posttraumatic growth between men and women. As such, Hypothesis 4 was not supported.

### Summary

This chapter began with a restatement of the research purpose, and then provided descriptions of the data analysis and research findings. The findings for Hypothesis 1 suggested that there was not a significant relationship between the PTGI Total Scores and IDWL-M Oscillation Scores. Therefore, Hypothesis 1 was not supported. The findings for Hypothesis 2 suggested a significant relationship between the posttraumatic growth factors, gender, nature of death, and oscillation, but not between those predictors and the Absolute-Value Oscillation Score. Of the individual predictors, only Factor 2 was a significant predictor. Therefore, Hypothesis 2 was partially supported. Results for

Hypothesis 3 suggested that those who suffered an unexpected loss had higher average PTGI Total Scores versus those who suffered an expected loss. As this was contrary to the direction of Hypothesis 3, the hypothesis was not supported. Finally, the results for Hypothesis 4 indicated that there was no significant difference in posttraumatic growth scores between men and women. Therefore, Hypothesis 4 was not supported. The next chapter will discuss these results in terms of the extant literature, along with a discussion of the strengths and limitations of this study. Directions for future research will also be provided.

## **Chapter 4**

### **Discussion**

This chapter begins with a restatement of the research problem and review of the methods utilized in this study. The principal sections of this chapter include: (a) a brief introduction to the background of this research, (b) interpretation of the data, (c) integration of the present findings into the literature, (d) exploration of the shortcomings of this study and questions for further exploration, and (e) conclusions.

### **Introduction**

The purpose of this study was to examine the relationship between coping and growth in mixed population of bereaved individuals, with special attention to the demographic factors of nature of death and gender. Bereavement, a universal human experience (Carnelley et al., 2006), may challenge a person's sense of psychological and physical well-being (Stroebe et al., 2001a) in diverse and individually-determined ways (Bonanno, 2001). Due to the variety of challenges and distress that are often associated with bereavement, coping was examined. Coping was defined as the varied ways people manage the challenges associated with bereavement (Stroebe & Schut, 2001).

For this study, coping was operationalized as the dual process model of coping with bereavement (DPM) (Stroebe & Schut, 1999) and assessed with a modified version of the Inventory of Daily Widowed Life (IDWL-M) (Caserta & Lund, 2007). The Oscillation Score of Loss- (LO) and Restoration-Oriented (RO) coping indicated the degree to which each form of coping was present. Growth was operationalized as posttraumatic growth (PTG) (Tedeschi et al., 1998b; Tedeschi et al., 1998a; Calhoun &



Tedeschi, 2001) and assessed with the Posttraumatic Growth Inventory (PTGI) (Tedeschi & Calhoun, 1996). The PTGI Total Score and Factor Scores 1-5 were examined. This research comprised an exploration of the relationship between coping and growth in bereavement. An examination of between-group differences in nature of loss and gender was also completed.

### **Interpretation**

**Hypothesis 1.** The IDWL-M Oscillation Score operationalized the balance between LO and RO coping in bereavement. LO coping represented the varied tasks associated with bereavement (i.e., funeral plans, talking about the loved one, yearning, looking at photos, engaging in fond or happy memories). RO represented the varied ways that people engage in reinvestment activities (i.e., visiting or participating in activities with others, attending to legal matters, focusing on other things besides grieving). The PTGI Total Score (the sum of the Factor Scores) represented the degree to which a bereaved person reported personal transformation as a result of having lost a loved one.

Two linear regression analyses were used to examine the relationship between the PTGI Total Score, nature of death, and gender as predictors of the IDWL-M Raw and Absolute-Value Oscillation Scores. The data revealed a non-significant relationship between all predictor scores and the PTGI Total Score in this analysis. Thus, there was a lack of evidence to show a relationship between LO and RO oscillation, nature of death, and gender, and the PTG Total Score. Contrary to Hypothesis 1 and 2, no relationship was shown to exist between a balanced oscillation between LO and RO coping and the

PTGI Total Score in this population. Equal oscillation between LO and RO were not associated with PTG.

**Hypothesis 2.** For Hypothesis 2, two multiple linear regression analyses were used to determine the relationship between the PTGI factors 1-5, nature of death, and gender as predictors of the IDWL-M Raw and Absolute-Value Oscillation Scores. PTGI Factor Scores 1-5 represented the degree to which a bereaved person reported personal transformation as a result of having lost a loved one in the five domains listed in the hypothesis.

Hypothesis 2 was only partially supported. The data revealed a statistically non-significant relationship between PTG factors 1-5 and the categorical covariates (nature of death and gender), and the Absolute-Value Oscillation Score. Similar to Hypothesis 2, the results of this analysis suggested that equal LO and RO oscillation coping was not related to growth among this population of bereaved individuals.

The model summary revealed that a significant relationship existed between the Factor Scores 1-5, nature of death, and gender as predictors of the IDWL-M Raw Oscillation Score ( $F(7,138) = 2.14, p = .044, R^2 = .10$ ). The predictors (PTGI factors 1-5, nature of loss, and gender) accounted for 10% of the variance in the Raw Oscillation Score. Examination of the correlations revealed that a significant negative correlational relationship ( $B = -0.56, t = -3.22, p = .002$ ) existed between PTGI Factor 2 (New Possibilities) and the IDWL-M Raw Oscillation Score. As scores on PTGI Factor 2 increased by 1 unit, Raw Oscillation Scores decreased by 0.56 units. The result of this part of the analysis suggested that as RO coping moved in an ordinal fashion toward LO

coping (decreasing in numerical value), New Possibilities growth increased. As this data is correlational, the directionality of a relationship between factors cannot be determined.

**Hypothesis 3.** Expected and unexpected loss were included as categorical covariates in two linear regressions measuring the relationship between the PTGI Total Score and IDWL-M Raw and Absolute-Value Oscillation Scores. Expected and unexpected loss were also included in two multiple linear regressions measuring the relationship between the PTGI Factor Scores and the IDWL-M Raw and Absolute-Value Oscillation Scores. Regression analyses were used to determine if there was a difference in the strength of the relationship between coping and growth, when controlling for nature of loss. No statistically-significant relationship was found to exist between nature of loss, and coping and growth in the linear or multiple linear regressions.

Nature of loss and PTG was also examined in a between samples *t*-test to see if there was a variation in the mean scores. As noted in chapter 3, examination of the means revealed that those who suffered an unexpected loss displayed higher PTG ( $M = 78.60$ ,  $SD = 26.15$ ) than those who suffered an expected loss ( $M = 62.72$ ,  $SD = 27.01$ ).

Individuals with unexpected loss were more likely to report growth than were those with expected loss.

This result was contrary to what was expressed in Hypothesis 3. Prior to the examination of this hypothesis, the researcher presumed that individuals with expected loss would display increased PTG due to the potential stabilizing influence of coping evident in linear and multiple linear regressions. This was not the case. When nature of loss and PTG were isolated in a between samples *t*-test it became apparent that the

unexpected-loss group displayed higher levels of growth in New Possibilities. This outcome may be attributable to the increased distress present in the unexpected loss group. It may also suggest that unexpected loss is more likely to disrupt a person's pre-loss belief system, which was shown to be correlated with PTG. This finding will be compared and contrasted with the literature in the "Integration" section of this chapter.

**Hypothesis 4.** Female and male were included in two linear regression analyses as categorical covariates to determine the relationship between gender, and coping and growth. Gender was also included in two multiple linear regressions measuring the relationship between the IDWL-M Raw and Absolute-Value Oscillation Scores and the PTGI Factor Scores. Regression analyses were utilized to determine the strength of relationship between gender groups. Gender was included in an independent samples *t*-test to determine if a difference existed between the mean scores for growth.

No statistically-significant relationship was found to exist between nature of loss and coping or growth in the linear or multiple linear regressions. No statistically-significant relationship was found in the independent samples *t*-test between the female or male groups. Thus, there was a lack of evidence to substantiate this hypothesis.

### **Integration**

There were two notable findings in this study. First, PTG Factor 2 (New Possibilities) was shown to be negatively correlated with the IDWL-M Raw Oscillation Score. Second, the unexpected-loss group reported higher levels of growth than the expected-loss group. The study design was intended to reveal if a relationship existed between an equal oscillation of LO and RO coping, and increased PTG in bereavement.

The IDWL-M Absolute-Value Oscillation Score reflected the degree of equilibrium in LO and RO coping in this population of bereaved individuals. Thus, part of the analysis revealed whether equal LO and RO coping (represented by the Absolute-Value Oscillation Score) was associated with more growth. A relationship between these factors was not found.

The analysis also included an examination of the Raw Oscillation Score and PTG. A relationship emerged between growth in New Possibilities and the LO and RO Raw Oscillation Score. Disconfirmation of the relationship between the Absolute-Value Oscillation Score, and the PTGI Total Score and Factor Scores 1-5 is notable. This appeared to suggest that greater equality of RO and LO oscillation and increased PTG were not a part of the same process in bereavement for this population.

Coping strategies such as benefit finding, meaning making, and marital support were found to be connected to growth in the midst of trauma (Rajandram et al., 2011). Forms of growth like, “positive reframing, religious coping, positive affectivity, active and adaptive coping, rumination, positive attention bias, and problem solving coping” (p. 587) were found. Rajandram et al. suggested that positive coping processes that address an individual’s belief system are useful in promoting PTG.

As was suggested in a study of coping in bereavement (Richardson, 2006), there was likely a great deal of variability in coping among this group of bereaved individuals. It is possible, therefore, that the lack of linearity in the examination of equal oscillation and growth arises from the diversity in coping strategies among this group. As a construct, oscillation in LO and RO coping are too general to suggest a correlation

between particular coping strategies and growth. This is not to say that the IDWL-M was not a useful measure of LO and RO oscillation. It only means that DPM coping and PTG were unrelated in these analyses.

Another possibility for the lack of linearity in these results was that the coping needs of these participants may have changed over time. Stroebe and Schut (1999) suggested that Loss-Orientation coping may distinguish the early experiences of grief, with individuals developing increasing ability to experience RO over time. Some research indicated that the intensity grief is variable (Diminich & Bonanno, 2014) and that it diminishes over time (Carnelley et al., 2006; Clements et al., 2004; Feigelman et al., 2008; Harris & Winokuer, 2015).

Richardson (2006) found that particular coping strategies were helpful in promoting well-being early in bereavement such as attending religious services and visiting the cemetery. Caserta, Utz, Lund, Swenson, and de Vries (2014) found that participants moved in the direction of RO coping over time. The researchers indicated that this positive linear relationship between time since death and RO coping occurred with or without intervention.

**Coping.** The DPM is a theoretical framework intended to provide context for the variability of bereavement-related experiences. Early in bereavement research and practice, there was an emphasis on the necessity of maintaining contact with the thoughts, feelings, and behaviors associated with loss (Freud, 1957). It was suggested that loss could be resolved by doing one's *griefwork*, or withdrawing libidinal energy from the attachment figure (Clewell, 2004; Stroebe, 1992; Stroebe & Stroebe, 1991). Researchers

began to identify that the notion of doing one's grief work did not capture all of the intricacies of bereavement. Stroebe and Schut (1999) suggested that it was important to attend to both LO and RO tasks, further broadening the theoretical understanding of coping in the midst of grief.

The IDWL-M is a unique measure of coping, in that it may capture oscillation between many different subjectively understood coping strategies reflected in the LO and RO Oscillation Score. Therefore, the IDWL-M does not reveal the presence of specific coping processes in themselves. The results of the IDWL-M are to be understood as the degree to which there is equality of LO and RO coping strategies in bereavement.

A sampling of the questions used to assessed for LO coping in this study are: (a) Imagining how my loved one would react to my behavior, (b) imagining how my loved one would react to the way I handled tasks or problems I faced, (c) engaging in fond or happy memories about my loved one, and (d) feeling a bond with my loved one. The 11 questions assessing for LO coping were intended to capture participants' focus on the material of loss. In the context of this research, an increase in focus on the loss was associated with greater self-reported growth.

***Coping and stress management.*** The negative relationship between LO and New Possibilities growth may suggest the presence of greater distress. Distress is extremely common in grief and loss has been shown to be one of life's greatest stressors (Bonanno et al., 2002; Holmes & Rahe, 1967). As such, it may be possible that distress, which was not measured in this study, played some role in the negative relationship between LO and growth in New Possibilities.

Lazarus and Folkman's (1984) work in cognitive stress theory provided a framework for the development of the DPM. They suggested that coping with cognitive stress requires both problem- and emotion-focus coping. Implicit in the model is the idea that people shift between problem- and emotion-focused coping, and that both serve a function in resolving mental stress. Stroebe and Schut's (1999; 2010) model of coping with bereavement reflected an emphasis on the relationship between problem- and emotion-focused coping, yet operationalized coping with grief along a LO and RO continuum. They suggested that individuals coping with bereavement would normally move back and forth between focus on the loss and focus on their life in an oscillating manner.

The DPM provides a framework for the ways in which people may manage bereavement-related stress. Grief is an intensely challenging and exhausting experience for many people and the DPM may provide language for the way in which people manage grief in doses (Stroebe & Schut, 2010). The results of the present research did not suggest that equal LO and RO oscillation is associated with growth, nor that they moderate or influence levels of psychological well-being. These findings did show a negative relationship between the Oscillation Score of LO and RO coping and growth in New Possibilities.

***Coping and cognitive disruption.*** Just as emotional distress may have played a part in the negative relationship between LO and growth in New Possibilities, it is possible that the disruption to preexisting belief systems was reflected in these results. Many have suggested that significant changes occur in people's thinking in the wake of a



trauma (Cann et al., 2010; Gerrish et al., 2009; Neimeyer, 2006; Stockton, Hunt, and Joseph, 2011).

Popper (1963) suggested that people may strongly resist changes in their self-concept, seeking to maintain cognitive, emotional, and behavioral stability, particularly in the midst of bereavement-related distress. Janoff-Bulman (1992) argued that *cognitive conservatism*—the wish to maintain cognitive schemas even when they have been challenged by new realities—may be beneficial. The human ability to preserve psychological homeostasis may enable them to avoid unsettling transformations to their cognitive maps.

It may be that equal LO and RO oscillation is unrelated to growth. For example, there may be little need for PTG when an individual displays resiliency (Westphal & Bonanno, 2007). Equal oscillation growth was shown to be associated with greater psychological well-being (Lund et al., 2010). Individuals who engaged in equal oscillation fared slightly better than those who displayed an imbalanced LO and RO oscillation. Caserta and Lund (2007) found that those who trended toward RO reported greater psychological well-being than those who did not.

Coping has been described as having an influence on the process of adaptation to loss (Stroebe & Schut, 2010). People who are able to confront and abstain from grief may fare better than those who lack flexibility in bereavement (Frantz et al., 2010). Yet, faring better in bereavement does not imply transformation. Those who are able to maintain equilibrium in the midst of grief may be more likely to display comparatively better psychological well-being.

Indeed, studies have shown that perceptions of well-being are negatively correlated with PTG (Caserta et al., 2009; Engelkemeyer & Marwit, 2008). Though this study did not include an examination of bereavement-related distress, it is possible that the negative correlation between the Oscillation Score and New Possibilities growth is suggestive of the presence of greater levels of distress associated with growth (Calhoun & Tedeschi, 2001). Wetphal and Bonanno (2007) suggested that individual differences, which were not examined in this study, had the greatest impact on outcomes in trauma.

The present research did not reveal that balanced LO and RO oscillation is related to the development of PTG. The results of this analysis suggested that coping which trends in the direction of LO seems most advantageous in the development of New Possibilities growth. Bennett, Gibbons, and Mackenzie-Smith (2010) found that individuals who fared better in bereavement were oriented to stressors such as new roles/identities/relationships and intrusions of grief significantly more than were those oriented to stressors such as denial/avoidance of restoration changes and distraction/avoidance of grief. This seems to parallel the results of this study. Individuals who had greater orientation toward LO coping reported more New Possibilities growth than those who did not. Focus on the loss has been shown to be associated with greater levels of psychological distress. Thus, the results of this study may confirm that mental stress is associated with greater growth. Park and Fenster (2004) found that painful, intrusive thoughts were related to growth which gave credence to the idea that PTG arises from the mental struggle with trauma-related material (Tedeschi et al., 1998a). Additionally, the

effort given by people dealing with loss-related stressors accounted for most of the variance in growth (Park and Fenster).

Contrary to the findings of the present study, Caserta, Lund, Utz, and de Vries (2009) found that RO coping was associated with stress-related growth. These researchers measured growth using the Stress-Related Growth Scale - Short Form (Cohen et al., 1998). They utilized the IDWL to measure LO and RO coping, the same measure utilized in the present study. However, when they controlled for other factors, they found, “greater engagement in loss-orientation was associated with higher levels of growth” (p. 471). Caserta et al. suggested that rumination and experiencing the feelings associated with the loss were part of the same process of growth. Whether through direct rumination, interaction with the distressing aspects of loss, or by another unknown process, the results of the present findings seem to fit with other findings in this area.

**Growth.** Posttraumatic growth has received greater attention in recent years. It has been defined as personal transformation that occurs as the result of a psychological trauma (Tedeschi et al., 1998a) or positive changes that occur as a result of major life crisis (Calhoun et al., 2010; Tedeschi & Calhoun, 1995). However, this must be understood in the context of the possible severity of grief.

Tedeschi and Calhoun (1995) noted the importance of understanding the meaning of PTG. For respectful dialogue to occur, positive changes resulting from bereavement need to be understood in context. As was discussed in the review of literature, the presence of PTG: (a) is not intended to minimize the negative aspects of loss, (b) is not universally experienced, (c) does not imply an improvement in psychological well-being,

(d) does not imply recovery or resolution, and (e) is not a direct result of a loss. A respectful posture toward the development of growth is warranted, given the potential pitfalls in addressing bereavement-related issues.

As was previously stated, a negative, statistically-significant relationship was found between growth in New Possibilities and the IDWL-M Raw Oscillation Score. Factor 2 was comprised of five questions that included: (a) “I’m more likely to try to change things which need changing,” (b) “I’m able to do better things with my life,” (c) “New opportunities are available which wouldn’t have been otherwise,” (d) “I developed new interests,” and (e) “I established a new path for my life.”

Some people may feel that Factor 2, New Possibilities is an unusual way to express positive outcomes in bereavement because a loss signals the end of a relationship without the possibility of future interaction with the deceased. Calhoun, Tedeschi, Cann, and Hanks (2010) indicated that some bereaved people may assume the roles or functions of the deceased person. They indicated that even though taking on new roles may be difficult, particularly in the midst of grief, it may open the person to new relationships and possibilities in life. Indeed, these roles may provide a comforting connection to the deceased as well as opportunities for investment in new things.

There are many reasons why increased growth occurred in the presence of LO coping in this study. It may be that growth, in the context of LO focus, is the result of reflection on ideas such as: (a) the events of the loss, (b) existential questions (i.e., human mortality, meaning or purpose of life), or (c) post-loss life changes (e.g., “feeling that life will never be the same”).

*Growth resulting from cognitive disruption.* A traumatic event, such as the unexpected death of a loved one, is associated with certain initial cognitive reactions such as shock, disbelief, or psychological numbness. Other reactions may include intrusive thoughts or images associated with the death or somatic responses (Tedeschi & Calhoun, 2004). Bereaved individuals may not be able to return to life as it was before the trauma (Janoff-Bulman, 1992). Janoff-Bulman noted that the common term “recovery” may not accurately describe the reality of a trauma survivor. Rather, individuals may be thought to discover “effective functioning” within a new world of meaning after the seismic event such as a loss (Calhoun & Tedeschi, 1999).

In a clinical treatment of posttraumatic growth, Tedeschi and Calhoun (2013) suggested that the death of a loved one may cause cognitive-emotional disruption. This “seismic event” (p. 68) may disrupt previously held beliefs and lead to what Janoff-Bulman (1992) called a shattering of assumptions. These authors suggested that disruption to previous assumptions may begin a process of deliberate rumination around issues of meaning. Kleim and Ehlers (2009) indicated that those who attach positive meaning to the trauma-related event report more growth.

Gillies and Neimeyer (2006) suggested that differences in an individual’s grief response may be attributable to divergent views of loss. In other words, individuals who believe that their pre-loss assumptions provide sufficient answers for the experience of loss, are unlikely to search for new meaning. Yet, those who believe that pre-loss assumptions provide insufficient answers for the experienced of loss may begin to search

for new ways of ordering their thoughts. In the context of this research, New Possibilities growth was correlated with increased focus on the psychological material of loss.

The correlation between cognitive challenges in trauma and growth has been observed in individuals across cultures. The challenge to core beliefs, that are associated with traumatic experiences, have been found to be a precursor of growth for some. The literature indicated that growth is more prevalent than psychiatric disorders in the context of psychological trauma. Additionally, research suggested that greater challenges are associated with greater degrees of growth (Weiss & Berger, 2010). The wife of a Palestinian political prisoner said, "If this ordeal does not break me, nothing does" (Punamäki, 2010, p. 37). According to Punamäki, growth in New Possibilities has caused some to rethink old values and ways of life.

New Possibilities growth may be associated with increased personal agency. Brewin and Holmes (2003) indicated that control, or even the illusion of control, was one of the main predictors of well-being in the wake of trauma. Growth in New Possibilities seems to suggest a feeling of greater personal control. For example, one of the questions that loaded into New Possibilities in the PTGI was, "I established a new path for my life." Positive states of mind were found to be associated with growth in another study (Park & Fenster, 2004). In contrast, Wortman (2004) suggested that growth could take place without active rumination on the death. Park and Fenster (2004) found that cognitive processing played a part in the development of PTG. They indicated that intrusive thoughts were more related to growth than avoidance.

It was suggested that individuals who focus primarily on negative grief-related thoughts and emotions display less emotional well-being than those who take action to focus on other thoughts and activities (Nolen-Hoeksema, 2001). Richardson (2006) found that individuals who ruminated about the events of their spouse's death displayed lower well-being than did those who did not.

***Growth and distress.*** As was discussed in the review of literature, bereavement is associated with many potential psychological and physiological detriments (Bonanno et al., 2004; Buckley et al., 2009; Solomon & Shear, 2015; Christakis & Allison, 2006; Hargrave et al., 2012; Johnson et al., 2008; Latham & Prigerson, 2004; Martikainen & Valkonen, 1996; Ong et al., 2010; Stroebe, 2010), though not every bereaved person is harmed by loss (Ong et al., 2010) and some report improvement in their sense of well-being (Bonanno et al., 2004).

Others have suggested a moderately negative relationship between PTG and distress (Engelkemeyer & Marwit, 2008; Gamino et al., 2000; Hogan & Schmidt, 2002). Sudden unnatural death was found to have a greater impact on emotional well-being than anticipated death (Miyabayashi, 2007). Cadell, Regehr, and Hemsworth (2003) found that stressors were positively correlated with growth in bereaved HIV/AIDS caregivers and psychological pain was been linked with growth across cultures (Weiss & Berger, 2010).

It is noteworthy that, taken together, this population of participants reported growth in the PTGI Total Score ( $M = 68.12$ ,  $SD = 27.41$ ). Understanding the commonality of self-reported PTG may be helpful for clinicians who naturally focus on

the psychological detriments of a loss. Also, awareness of the pervasiveness of PTG may provide hope for individuals who have experienced loss.

As such, it may be beneficial for clinicians to assess for growth in bereavement (Relating to Others, New Possibilities, Personal Strength, Spiritual Change, Appreciation for Life) to better understand individual expressions of grief. Calhoun and Tedeschi (2013) noted that PTG often occurs naturally, rather than resulting from direct clinical intervention (Weiss & Berger, 2010). Rather, they suggested the term *expert companionship* to embody the posture that clinicians can take to foster conditions necessary for latent processes of growth to take place. They suggested that constructivist approaches may be useful in this regard, in that the clinician may seek to: (a) listen first, (b) notice the apparent potential for growth, (c) label growth when it emerges, (d) inquire about the possibility of growth, and (e) choose the right words (with reference to the need to not violate the contextual factors of growth).

***Growth and nature of loss.*** Due to the potential stabilizing influence of balanced LO and RO coping, it was hypothesized that balanced coping would be associated with greater levels of growth. There was not a statistically-significant between-group effect in expected versus unexpected loss. There was, however, a significant difference between expected and unexpected loss groups, with those with an unexpected loss reporting more growth than did those with an expected loss. This is contrary to what was stated in Hypothesis 3.

Bereaved individuals have been thought to be at greater risk for psychological (Bonanno et al., 2004; Buckley et al., 2009; Hargrave et al., 2012; Ong et al., 2010) and



physiological (Buckley et al., 2009; Solomon & Shear, 2015; Christakis & Allison, 2006; Martikainen & Valkonen, 1996; Johnson et al., 2008; Latham & Prigerson, 2004; Stroebe, 2010) detriments. Some have found that the nature of a loss was important in adjustment to bereavement (Richardson, 2006). Miyabayashi and Jin (2007) noted that sudden unnatural death has a greater impact on emotional well-being than does anticipated death. A study by Cadell, Regehr, and Hemsworth (2003) noted a connection between greater levels of distress and growth.

Caserta, Lund, Utz, and de Vries (2009) found that stress-related growth was more likely for those with expected partner loss, which may be suggestive of the intensity of intimate-partner loss. This is not intended to diminish the impact of an expected loss (Sanderson et al., 2013). Feigelman, Jordan, and Gorman (2008) found that there was little variability in the nature of loss between groups, though survivors of suicide were found to have experienced the most distress in the Feigelman et al. study.

The unexpected-loss group may have experienced more growth as a consequence of the psychological shock associated with sudden loss (Janoff-Bulman, 1992), or that the presence of an unexpected loss caused an individual to search for new meaning because the loss (Heatherton & Nichols, 1994). The literature suggests that the nature of death (homicide, suicide, accidental, natural, and undetermined) play a role in an individual's grief response (Clements et al., 2004).

Again, it could not be determined whether or not individuals who reported unexpected loss experienced greater distress than those who reported expected loss. The discussion of these literatures rests on the assumption that LO coping and unexpected

loss may be related to greater distress. Some suggested a principle of diminishing returns where distress is concerned. Intense distress may lead to a diminishment of growth (Aldwin, 1994). Kleim and Ehlers (2009) found a curvilinear relationship between PTSD and growth in assault survivors. Their findings suggested that those who reported few PTSD and depressive symptoms, reported more growth.

### **Exploration**

There are a number of limitations common in research of this kind. The questionnaires utilized in this study were retrospective measures, which rely on self-reported memories of bereaved individuals. Therefore, responses may not accurately reflect actual participant experiences. Respondents may have presented an unrealistically positive picture of their experience of distress (Stroebe & Schut, 2010; Wortman, 2004).

The present study was largely ethnically homogeneous, comprised predominantly of Caucasians (94%). As such, the participants of this study may reflect the values and cultural biases of this population. This data includes a very small sample of self-selecting respondents who completed a physical survey (2%) as the majority of participants completed the survey online. Some individuals may have declined to participate due to the high volume of surveys requested of the average person. There was no trained interviewer present to explain or clarify questions; therefore, the reliability of the data may be in question. This study was correlational in nature; as such, the directionality of this data could not have been determined.

This study was limited in that the relationship between growth and specific coping strategies such as social support (Canevello et al., 2016; Herth, 1990; Lepore, 2001; Shoji

et al., 2014) and religious attitudes (Cowchock et al., 2010; Kelley, M. & Chan, T., 2012) have been shown to moderate grief-related distress. This study did not include an examination of particular coping strategies as the IDWL-M Oscillation Score (with its focus on equality of LO/RO oscillation) does not capture the nuanced, individually-determined aspects of grief.

A discussion of the potential effects of distress was included in this study. However, this study did not include any assessment or analysis of the relationship of coping and growth to distress. As has been previously discussed, bereavement has been shown to present significant psychological distress (Cann et al., 2010; Pooley et al., 2013; Solomon & Dekel, 2007; Tedeschi & Calhoun, 1996). An understanding of grief-related stress was shown to provide explanatory power for the development of PTG in some studies (Aldwin & Levenson, 2004; Caserta et al., 2009). Also, it is possible that there was insufficient time between the loss and assessment of coping and growth to allow for the development of self-reported growth.

### **Future Directions**

It has been suggested that PTG arises independently of intervention (Weiss & Berger, 2010). In the context of the present research, it would be helpful to understand the directionality of LO coping and growth in New Possibilities. Theoretically, the DPM is framed as a process of coping and PTG is seen as an outcome of coping. Research would benefit from understanding if growth in New Possibilities can be fostered through direct intervention in LO coping.

It may also be helpful to differentiate between LO focus, distress, and growth in New Possibilities. This shortcoming could be addressed with the inclusion of a measure of distress in further research. It may be worthwhile to examine whether equal-oscillation coping provides an advantage (in emotional well-being or increased growth) for those experiencing severe distress. Additionally, further exploration of demographic features such as time since loss and participant age may be helpful in better understanding how the relationship between coping and growth.

### **Conclusions**

This research was intended to examine the relationship between coping and growth. No relationship between equal LO and RO oscillation coping and growth was revealed in this study. However, a negative statistically-significant relationship was found to exist between LO coping and growth in New Possibilities. LO coping, a factor of the dual process model of coping with bereavement, and growth in New Possibilities, a factor of posttraumatic growth, were shown to be correlated. Also, those who experienced an unexpected loss displayed more growth than those who reported an expected loss. These findings suggest that orientation to the material of loss is related to growth and that a typically more distressing loss, unexpected, is linked to growth.

In closing, this study revealed that no relationship existed between equality of LO and RO oscillation and PTG in this population of bereaved individuals. However, PTG was shown to be prevalent in this study. These findings also show a significant connection between increased LO coping and growth in New Possibilities.

Finally, this study adds to the existing literature describing greater levels of growth in individuals reporting an unexpected loss.

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Appendix A

Consent to Participate in Research

Bereavement Experience Questionnaire  
Consent Form  
*Doctoral Dissertation, Northwest University*  
*Jeffrey Smith*

You are invited to participate in a research study conducted by Jeffrey Smith. The study is being conducted as part of a doctoral dissertation. The purpose of this study is to examine the relationship between coping and growth in bereavement.

If you agree to participate in the study you will complete three short questionnaires that include non-personally identifiable demographic information, coping, and growth.

There are minimal risks associated with participation. Some individuals may be uncomfortable answering personal questions. You may choose not to participate in this research study. The benefit of taking part in this study is the opportunity to participate in the research process as a research subject. The brief questionnaires in this study will provide an opportunity for you to reflect on your experience of loss. There may be benefits and risks associated with thinking about your loss. Because each person deals with loss in a different ways, we cannot predict what you will feel if you choose to participate. Please be aware of your own experience and take good care of yourself based on what you feel right now.

Participation in this study is voluntary. You may choose not to participate in this study at any time and for any reason. There will not be any negative consequences for you if you refuse to participate. You may refuse to answer any questions asked. All responses are anonymous; therefore it is important that you DO NOT put your name on your response sheet. You may keep this consent form for your records. By turning in this demographic information, the Inventory of Daily Widowed Life (Modified) and the Posttraumatic Growth Inventory, you are giving permission to use your responses in this research study.

The results from this study will be presented to Jeffrey Smith's dissertation committee at Northwest University, to Hospice of the Northwest and Whatcom Hospice, and it may be published to an academic journal and later in book form. All data forms will be destroyed by June 1, 2016.

If you have any questions about this study, contact Jeffrey Smith at (360) 918-2152 or [jeffrey.smith@northwestu.edu](mailto:jeffrey.smith@northwestu.edu). If you have further questions, please contact my faculty advisor Dr. Larry Bailey at [larry.bailey@northwestu.edu](mailto:larry.bailey@northwestu.edu). You may also contact the Chair of the Northwest University IRB, Professor Suzanne Barsness, at [suzanne.barsness@northwestu.edu](mailto:suzanne.barsness@northwestu.edu) or 425-889-5763.

Thank you for your consideration of this request.

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Appendix B

Permission to Conduct Research





SurveyMonkey Inc.  
www.surveymonkey.com

For questions, visit our Help Center  
help.surveymonkey.com

**Re: Permission to Conduct Research Using SurveyMonkey**

To whom it may concern:

This letter is being produced in response to a request by a student at your institution who wishes to conduct a survey using SurveyMonkey in order to support their research. The student has indicated that they require a letter from SurveyMonkey granting them permission to do this. Please accept this letter as evidence of such permission. Students are permitted to conduct research via the SurveyMonkey platform provided that they abide by our Terms of Use, a copy of which is available on our website.

SurveyMonkey is a self-serve survey platform on which our users can, by themselves, create, deploy and analyze surveys through an online interface. We have users in many different industries who use surveys for many different purposes. One of our most common use cases is students and other types of researchers using our online tools to conduct academic research.

If you have any questions about this letter, please contact us through our Help Center at [help.surveymonkey.com](http://help.surveymonkey.com).

Sincerely,

**SurveyMonkey Inc.**



Appendix C

Demographic Questions

## Demographic Questions

1. What is your gender? (Male or female)
2. What is your age?
3. What is your ethnicity? (Black/African American, Asian, Caucasian, Hispanic/Latino, Native American/Alaska Native, Native Hawaiian/Pacific Islander, Other [please specify], or I would rather not say)
4. What was your relationship to the deceased? (Spouse/partner, parent, sibling, child, or other [please specify])
5. Time since death? (Months and years)
6. Nature of death? (Expected natural, unexpected natural, accidental, or suicide)
7. My loved one was cared for at Hospice of the Northwest. Y/N?

Appendix D

Inventory of Daily Widowed Life (Modified)

From: **Mike Caserta** Michael.Caserta@nurs.utah.edu  
Subject: RE: Dual Process research  
Date: November 11, 2013 at 8:31 PM  
To: Jeffrey Smith jeffrey.smith@northwestu.edu

Hello Jeff:

We have modified the scale a bit by tweaking the wording on a couple of items and also have added some more items to be asked along with the scale but not added together with the scale items as part of the total. The scale and the accompanying items are attached. We welcome all sorts of work with the IDWL including its use on different populations aside from spousal bereaved. We only ask that our work is cited appropriately in all reports, presentations, and papers and also request you share with us any relevant findings on the samples in your study. We are always interested in the scale's applicability in a variety of contexts, including any modifications that are made.

Best wishes for success in your research.

Mike

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See More from Jeff Smith

## INVENTORY OF DAILY BEREAVED LIFE (MODIFIED)

Below is a list of activities, tasks, or issues that those who have lost a loved one sometimes need to confront or do in their daily lives. For each item, please indicate how frequently you have done it **during the past week**.

	<b>Rarely or not at all</b>	<b>Once in a while</b>	<b>Fairly often</b>	<b>Almost always</b>
1. Thinking about how much I miss my loved one.	1	2	3	4
2. Thinking about the circumstances or events associated with my loved one's death.	1	2	3	4
3. Yearning for my loved one.	1	2	3	4
4. Looking at old photographs and other reminders of my loved one.	1	2	3	4
5. Imagining how my loved one would react to my behavior.	1	2	3	4
6. Imagining how my loved one would react to the way I handled tasks or problems I faced.	1	2	3	4
7. Crying or feeling sad about the death of my loved one.	1	2	3	4
8. Being preoccupied with my situation.	1	2	3	4
9. Engaging in fond or happy memories about my loved one.	1	2	3	4
10. Feeling a bond with my loved one.	1	2	3	4
11. Dealing with feeling lonely.	1	2	3	4
12. Visiting or doing things with others.	1	2	3	4
13. Finding ways to keep busy or occupied.	1	2	3	4
14. Dealing with financial matters.	1	2	3	4
15. Engaging in leisure activities (hobbies, recreation, physical activity, etc.).	1	2	3	4
16. Attending to my own health related needs	1	2	3	4
17. Engaging in employment or volunteer work.	1	2	3	4
18. Watching TV, listening to music, listening to the radio, reading.	1	2	3	4
19. Attending to legal, insurance, or property matters.	1	2	3	4
20. Attending to the maintenance of my household or automobile.	1	2	3	4
21. Focusing on other things besides grieving.	1	2	3	4
22. Learning to do new things.	1	2	3	4

Appendix E

Posttraumatic Growth Inventory

Posttraumatic Growth Research Group  
at University of North Carolina Charlotte

#### ASSISTANCE TO PTG RESEARCHERS

We provide to researchers this information about the measures we have published in relation to posttraumatic growth (PTG). You may note that the PTGI was first published and the term first used by us (Tedeschi & Calhoun) in the 1995 book *Trauma and Transformation*. However, the version we have used was published with a revised response format in *Journal of Traumatic Stress* in 1996. Other measures have been published since then in order to research PTG in children, and to provide a measure of both positive and negative outcomes on the aftermath of trauma, and to assess other variables that are central to our model of PTG processes. That model is also reproduced here. The references that follow are a selected list that includes some work with researchers outside our department with whom we collaborate, and our students in our research lab.

#### In Reciprocation

There is no charge for the PTGI and these other measures, and there is no charge for the reproduction of the scale for use in research.

We welcome the use of our scales in not-for-profit research. However, these inventories are not to be reproduced for any kind of general distribution and may not be used in for-profit enterprises.

In reciprocation, we would like you to send us a gratis copy of any manuscripts, theses, dissertations, research reports, preprints, and publications you prepare in which our materials, or any version of them, is used. Both R. G. Tedeschi and L.G. Calhoun can be contacted at: Department of Psychology - UNC Charlotte - Charlotte, NC 28223 USA. Email to [rtedesch@uncc.edu](mailto:rtedesch@uncc.edu).



## THE POSTTRAUMATIC GROWTH INVENTORY

Please indicate for each of the statements below the degree to which this change occurred in your life as a result of your loss, using the following scale.

**1 = I did not experience this change as a result of my crisis.**

**2 = I experienced this change to a very small degree as a result of my crisis.**

**3 = I experienced this change to a small degree as a result of my crisis.**

**4 = I experienced this change to a moderate degree as a result of my crisis.**

**5 = I experienced this change to a great degree as a result of my crisis.**

**6 = I experienced this change to a very great degree as a result of my crisis.**

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

Appendix F

Figures

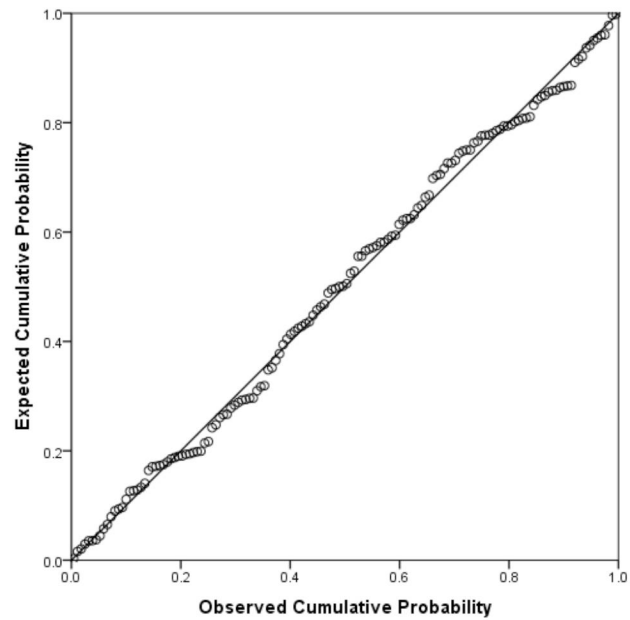


Figure 1. Normal P-P Plot Hypothesis 1 (Oscillation Score).

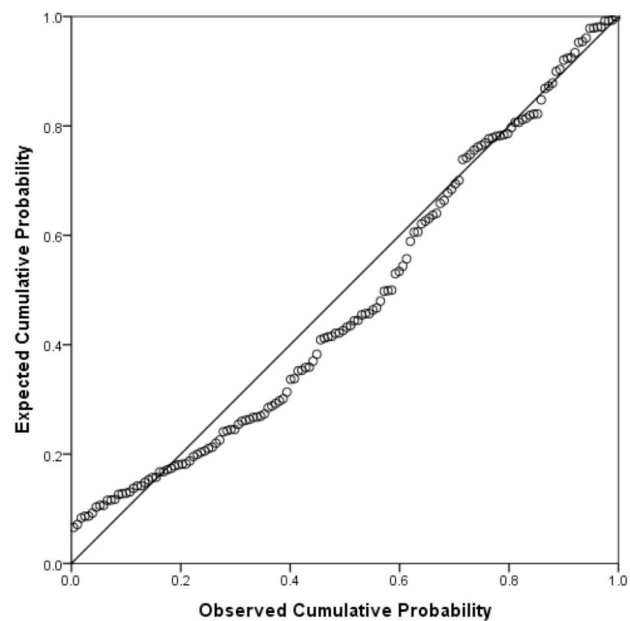


Figure 2. Normal P-P Plot for Hypothesis 1 (Absolute-Value Oscillation Score).

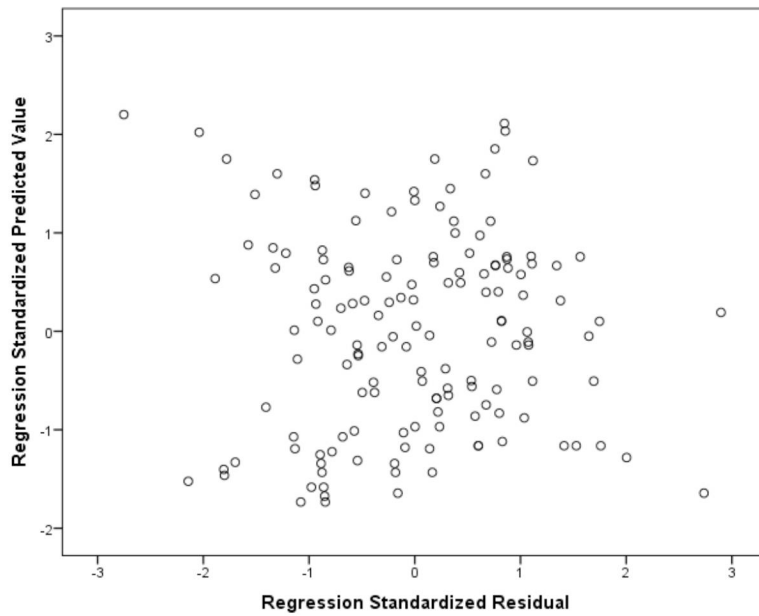


Figure 3. Scatterplot for Hypothesis 1 (Oscillation Score).

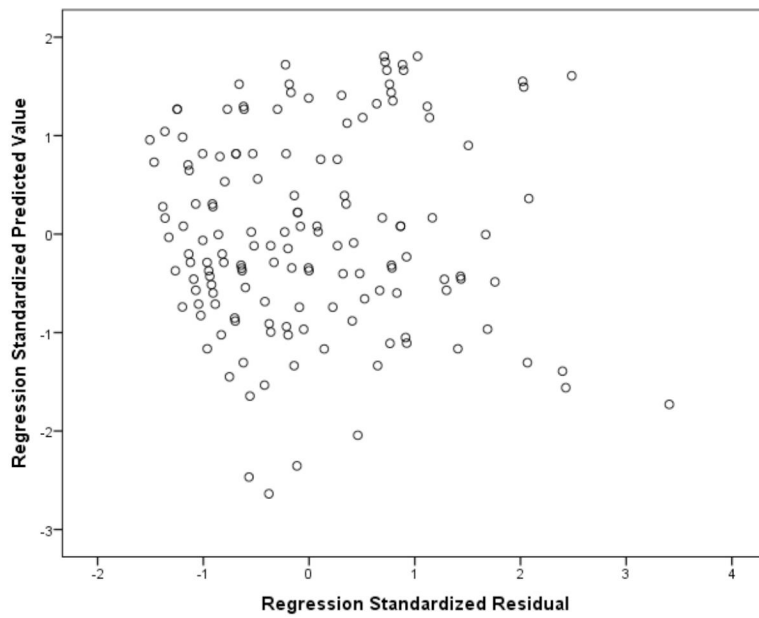


Figure 4. Scatterplot for Hypothesis 1 (Absolute-Value Oscillation Score).

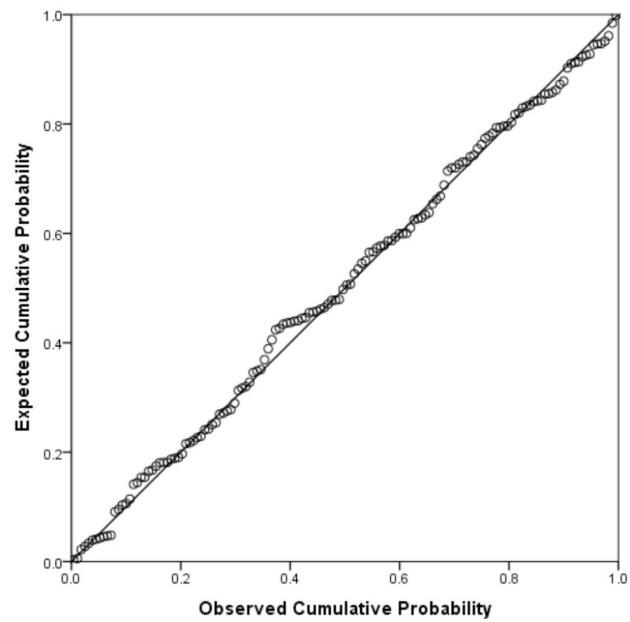


Figure 5. Normal P-P Plot for Hypothesis 2 (Oscillation Score).

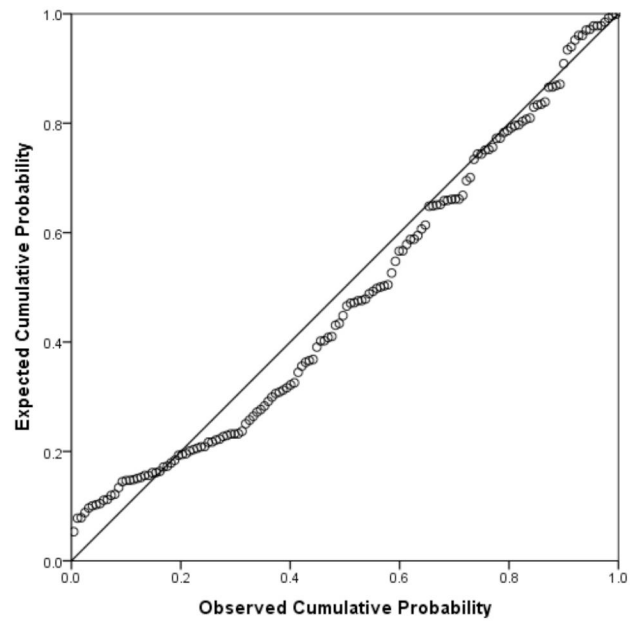


Figure 6. Normal P-P Plot for Hypothesis 2 (Absolute-Value Oscillation Score).

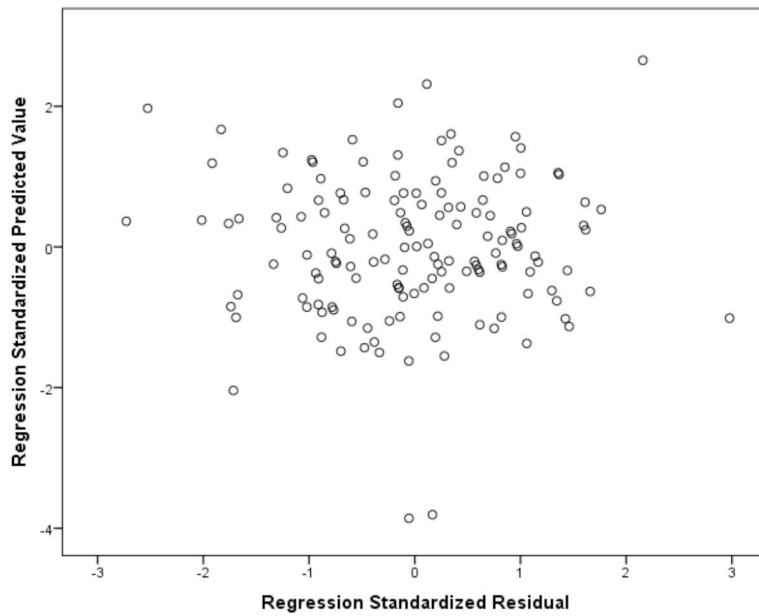


Figure 7. Scatterplot for Hypothesis 2 (Oscillation Score).

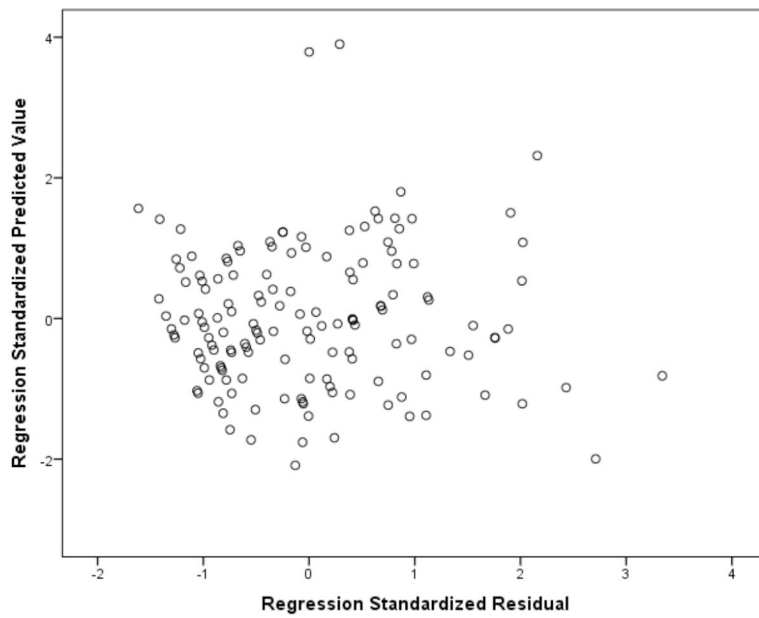


Figure 8. Scatterplot for Hypothesis 2 (Absolute-Value Oscillation Score).