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Posttraumatic Growth among Parent Survivors of Suicide

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By

Melinda Marie Moore

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Posttraumatic Growth Among Parent Survivors of Suicide

Melinda Marie Moore, PhD

Director: David A. Jobes, PhD

Despite the burden of suicide in the United States and anecdotal clinical opinion that this cause of death creates a unique form of grief among those left behind, there is a dearth of research on those who are bereaved by suicide. There is some limited evidence that “suicide survivors” may be at higher risk for posttraumatic stress disorder or prolonged grief. Growing theory in the positive psychology literature suggests that trauma, such as suicide bereavement, may also promote growth within the confines of distress, referred to as posttraumatic growth. Posttraumatic growth is a construct of positive psychological change that occurs over five domains: relating to others, new possibilities, personal strength, spiritual change, and appreciation of life. Previous research has suggested that reflective rumination predicts posttraumatic growth and that it occurs closer to the traumatic event than farther away. However, posttraumatic growth and variables that may contribute to or undermine it, such as demographic variables, rumination subtypes, prolonged grief, resilience, personality factors, and mood states have not been previously studied in survivors of suicide. The present study investigated posttraumatic growth and these variables among a convenience sample of 154 parents bereaved by the suicide death of their child within two years. Multiple regression analyses revealed that resilience inversely predicted posttraumatic growth scores. Resilience also inversely predicted posttraumatic growth factors of relating to others and new possibilities. Contrary to

predictions, neither reflective rumination nor prolonged grief predicted higher posttraumatic growth scores. Additionally, posttraumatic growth did not correlate with any of the variables assessed. Additionally, there were not any significant differences in posttraumatic growth scores for those who met criteria for prolonged grief and those who did not. The overall posttraumatic growth scores of the parents in the present study are also low compared to parents bereaved by other causes of death, suggesting that posttraumatic growth may occur later in the course of suicide bereavement. Implications for future research are discussed.

This dissertation by Melinda Marie Moore fulfills the dissertation requirement for the doctoral degree in Psychology approved by David A. Jobes, PhD, as Director, and by Martin Safer, PhD, and Marjan G. Holloway, PhD, as Readers.

David A. Jobes, Ph.D., Director

Martin Safer, Ph.D., Reader

Marjan G. Holloway, Ph.D., Reader

Dedication

This dissertation represents both the ending and the beginning of a journey. On that road, I have encountered many individuals to whom I owe everything. Parents come in many forms. Such is the love and support I received from my uncle and aunt, Bill and Ilene Moore. They modeled faith and determination at times of great tragedy and uncertainty which helped to sustain my own growth potential. Without them this research would not have been possible. The same could be said of Anne Cronin Tyson and Kristen Spexarth, who buoyed me and helped to illuminate each step of a path that I found uncomfortable in its continual uncovering. My mentors and teachers have been both literal and figurative on this journey. Using what I know and applying it would never have occurred to me had it not been for David Jobes, Ali Mattu, and Tara Kraft. I thank them for having more faith in my understanding of this journey than I ever appreciated. I especially thank David Jobes for having confidence in my abilities and generously opening up new professional thoroughfares for which I will always be deeply appreciative. I am equally grateful for my CUA family of friends who held my hand through it all, including Stephen O'Connor, Enith Hickman, Amy Conrad, and Mira Brancu. Even though we were strangers before I ventured down this path, I am forever grateful to Julie Cerel, Michelle Linn-Gust, Jack Jordan, John McIntosh, William Feigelman, Myfanwy Maple, Ann Mitchell, and my colleagues in the world of suicide postvention who literally helped me do battle in order to gain permission to do this research. Lastly, I want to thank Frank Campbell and the Baton Rouge Crisis Intervention Center Foundation for walking the talk and funding

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TABLE OF CONTENTS

DEDICATION	iii
LIST OF TABLES AND FIGURES.....	vi
CHAPTER	
1. INTRODUCTION	1
The Course of Bereavement among Suicide Survivors	2
Theoretical Framework	5
Prolonged Grief	8
Thematic Differences	9
Posttraumatic Growth	10
The Model of Posttraumatic Growth	17
Posttraumatic Growth among Parent Survivors of Suicide Study	22
2. METHODOLOGY	24
Participants.....	24
Measures	25
Research Questions	29
3. RESULTS	30
Demographics	30
Hypothesis Tests	32
Resilience.....	35
Posttraumatic Growth and Domains of Posttraumatic Growth.....	37
4. DISCUSSION	40
Research Questions	40
Hypothesis 1.....	40
Hypothesis 2.....	40
Hypothesis 3.....	43
Resilience.....	43
Significant Factor Findings.....	45
Factor One: Relating to Others	45
Factor Two: New Possibilities	46
Special Considerations.....	46
Limitations	48
Future Directions	51
APPENDIX	
A: INFORMED CONSENT.....	52

B:	DEMOGRAPHIC QUESTIONNAIRE	55
C:	NEUROTICISM, EXTRAVERSION, AND OPENNESS OF THE NEO-FFI.....	57
D:	THE POSITIVE AND NEGATIVE AFFECT SCHEDULE	59
E:	POSTTRAUMATIC GROWTH INVENTORY	61
F:	PROLONGED GRIEF DISORDER -13	62
G:	RUMINATIVE RESPONSE SCALE	64
H:	THE 14-ITEM RESILIENCE SCALE	65
I:	LIFE ORIENTATION TEST	66
REFERENCES		67

LIST OF TABLES AND FIGURES

Figure 1. Posttraumatic Growth Model as applied to Suicide Bereavement	20
Table 1. Demographic Characteristics of Parents Bereaved by Suicide.....	31
Table 2. Results of Multiple Regression Predicting Posttraumatic Growth (PTG).....	33
Table 3. Pearson Correlations among Study Variables	34
Table 4. Results of Multiple Regression Predicting Resilience.....	36
Table 5. Results of Multiple Regression Predicting Factor One	38
Table 6. Results of Multiple Regression Predicting Factor Two.....	40

Chapter 1

Introduction

In his seminal work, *Man's Search for Meaning*, Viktor Frankl, recounts his search for meaning in the suffering he experienced and witnessed while interred at Auschwitz during the Holocaust. He wrote that "even the helpless victim of a hopeless situation, facing a fate he cannot change, may rise above himself, may grow beyond himself, and by so doing change himself. He may turn a personal tragedy into a triumph" (2006, p. 146). Years before Lawrence Calhoun and Richard Tedeschi pioneered the concept of "posttraumatic growth" (1995; 1996), Frankl described a process of personal transformation inspired by internal processes initiated under unfair and unjust circumstances. The idea that an individual can experience significant positive changes in the presence of suffering and loss is an ancient theme echoed by several writers in the modern era, including Frankl (Tedeschi & Calhoun, 1995). To a person who loses a loved one to suicide, there can be no greater injustice and experience of loss. It is also thought to be a cause of death that creates a more problematic bereavement trajectory than other sudden causes of death because of greater feelings of guilt, responsibility, blame, rejection, and abandonment (Jordan, 2001). For these reasons, it may be a cause of death that makes personal growth more difficult and unlikely to achieve.

Suicide is an event that occurs more frequently than expected. Every 14.6 minutes an individual in the United States dies by suicide (McIntosh, 2011), leaving behind in the wake of this tragic death loved ones, family, and friends known as "suicide survivors" (Knieper, 1999), also known as the "suicide bereaved." It is estimated that for every death by suicide, there are six individuals profoundly affected (McIntosh, 2011). Others

place the number as high as ten (Mitchell, Kim, Prigerson, Mortimer-Stephens, 2004). Some have suggested that as many as twenty-eight individuals may be touched directly by a suicide death (Knieper, 1999). While it is difficult to calculate the actual number affected directly, when extrapolating from suicide death records from 1984 to 2008 and using the more conservative approach to approximate the number of suicide survivor, it is estimated that 4.68 million Americans have been personally impacted by suicide over this 25 year period. In 2008, the year for which we have the latest data, that number grew by 216,210 individuals (McIntosh, 2011). While epidemiological research is still forthcoming in order to answer this question accurately, a study by Crosby and Sacks (2002), which drew from a telephone survey of American households, suggests that 7% of the U.S. population or 21 million Americans were acquainted with someone who died by suicide in the previous year. More than 1% of the respondents or 3.3 million Americans indicated that they had a family member die by suicide. Given these results and using 14 as the number of individuals profoundly affected by this manner of death, the authors suggest that there are roughly 450,000 new suicide survivors every year.

The Course of Bereavement among Suicide Survivors

While clinicians who work with survivors of suicide agree that the grief process for suicide survivors is different and more difficult than for those mourning a loved one through other causes of death (Jordan, 2001), questions about the nature of suicide bereavement still exist. Historical methodological issues, including small sample sizes, lack of comparison or control groups and sufficient power to be statistically robust have undermined the integrity of the small amount of research on suicide bereavement (Bailey, Kral, & Dunham, 1999; Ellenbogen and Gratton, 2001). In *Grief After Suicide*:

Understanding the Consequences and Caring for the Survivors, a compendium of the existing research, Jordan and McIntosh (2011) argue that more research and clinical attention is needed in order to increase our general understanding of the effects of suicide bereavement, but more importantly, to be able to assist survivors in the aftermath of this devastating loss.

Bereavement from suicide has been associated with psychiatric disorders such as Posttraumatic Stress Disorder (PTSD) and Prolonged Grief Disorder (PG) (Mitchell et al., 2004; Latham & Prigerson, 2004). Investigations of emotional memory for trauma reconceptualize the sequelae of traumatic events, such as suicide bereavement, as memory for an event that becomes central to the bereaved's identity and personal narrative (Berntsen & Rubin, 2006). It is the appraisal of the memory that causes pathological symptom profiles, such as PTSD (Berntsen & Rubin, 2006), and grief reactions associated with continued preoccupation with the decedent (Safer, Bonanno, & Field, 2001). Rumination over traumatic negative experiences, as well as personality characteristics, may contribute to this progression, but have yet to be investigated (Berntsen & Rubin, 2006). Newer investigations of "cognitive scarring" that may be associated with identity level "trait hopelessness" in suicide survivors are also possible outcomes of suicide bereavement (Rudd, 2009), but have yet to be investigated.

The advent of positive psychology, which has been characterized by an emphasis on personal strengths, "positive emotions, positive character traits, and enabling institutions" (Seligman & Steen, 2005, p. 410), has been an appropriate backdrop for the reconceptualization of the bereavement trajectory in general. There have been many theories postulated over the years about the course of "normal" bereavement. Both

Kubler-Ross (1969) and Bowlby (1960) characterized it as a linear process beginning with shock and numbness, followed by yearning, protest, disorganization, and ultimately ending with reorganization (Rudestam, 1992). Following these stages has generally been considered “normal” bereavement, and moving through these universal phases or completing these tasks for recovery was accepted by most bereavement experts (Neimeyer, 2001). However, when an individual experiences grief in longer duration or does not experience certain emotions, it has been hypothesized that they are experiencing “pathological grief.” Excessively grieving or not adjusting after a loss has been considered to be a failure to complete the “grief work” (Stroebe & Stroebe, 1991). Additionally, the absence of grief after a significant loss was seen as a form of denial or grief inhibition (Bonanno et al, 2002). Severing the attachment with the deceased through grief work has been the dominant goal for bereavement theorists. Bonanno and Kaltman (1999) point out that, beginning in the 1980s, literature reviews noted a surprising absence of empirical support for this perspective. There was a lack of scientific findings in support of any discernible sequence of emotional phases of adaption to loss (Neimeyer, 2001). In recent years, bereavement theorists have shifted from the belief that there is one certain pattern of grief that is adaptive and, instead, recognize that people react to loss in a variety of ways.

George Bonanno’s research has been instrumental in challenging our collective assumption that the bereaved necessarily move through the five stages of grief made popular by Elizabeth Kubler-Ross (1969), including denial, anger, bargaining, depression, and acceptance. This “stage model” of grief has been upended by Bonanno’s compelling research on a model that favors resilience in the wake of “potentially

traumatic events” (Bonanno & Kaltman, 1999; Bonanno, 2004; Bonanno, Galea, Bucciarelli, & Vlahov, 2006). This would also include those bereaved by suicide (Bonanno, 2011). While Bonanno accounts for individual differences, Bonanno’s research has developed a research foundation for resilience as an adaptive process that occurs in the wake of a traumatic event to be able to maintain “healthy levels of psychological and physiological functioning . . . as well as the capacity for generative experiences and positive emotions” (2004, pp. 20-21). From this perspective, resilience is not the absence of psychopathology, such as PTSD or PG, as the bereaved may experience transient moments of preoccupation or restless sleep, but the bereaved generally exhibit healthy functioning across time (Bonanno, 2004). Additionally, resilience may provide a link between adaptation and personal growth that is worthy of further investigation (Westphal & Bonanno, 2007).

Theoretical Framework

Early suicide bereavement research concluded that suicide survivors tended to experience more guilt, less social support, and were compelled to understand why the death occurred when compared to those bereaved by more natural deaths (Calhoun, Selby, & Selby, 1982). More recent investigations have cast doubt on empirical differences and suggest more similarities between survivors of suicide and those surviving the loss of loved ones to other causes of death (Clark & Goldney, 2000). In a review of those studies that did contain a control or comparison group, McIntosh (1993) found six general conclusions about the course of suicide bereavement: 1) The bereavement experience is generally nonpathological; 2) There are more similarities than differences compared with those mourning losses due to other modes of death; 3) There

may be aspects of grieving that characterize a “survivor syndrome,” but they have yet to be defined; 4) The course of suicide survivorship may differ over time, however, 5) after the two year mark, differences in grief from other forms of bereavement may appear minimal; and 6) relationship to and closeness with the decedent, as well as time passed since the death, may be important factors in the course of bereavement.

Ellenbogen and Gratton (2001) argue that the differences between those bereaved by suicide and other causes of death may be attributable to psychosocial difficulties experienced by the suicide survivor that predispose them to poorer bereavement outcomes. These include difficult family relations, higher prevalence of psychiatric disorders in the family, and discordant relationships with the deceased (Clark & Goldney, 2000). Even if the family functioning may have been within normal range prior to the suicide, there is evidence that a suicide within a family may create dysfunctional family patterns and contribute to psychiatric disorders in family members (Jordan, 2001). Cerel and colleagues (2002) suggest that there are three types of families in which the suicide of a parent has occurred: *functional* families, where there is no evidence of preexisting conflict or psychopathology and the suicide likely occurred as the result of chronic illness; *encapsulated* families, where psychopathology was only observed in the deceased; and *chaotic* families, where there is clear evidence of psychopathology and turmoil in multiple family members. Regardless of the type of family in which the suicide occurred, several controlled studies have found significant distress and psychopathology in survivors. One study comparing suicide bereaved spouses to spouses bereaved by natural causes and married individuals found no significant differences on measures of grief and depression between the bereaved groups at two months post loss, but significant

differences at six months and one year after the death (Farberow, Gallagher, Gilewski, & Thompson, 1992a). In a controlled study of the impact of adolescent suicide on peers, siblings, and parents, Brent and colleagues (1996) found higher rates of depression in survivor siblings and mothers than in controls at six months after the death. The mothers continued to have elevated rates of depression at one year after the death, as did the siblings at both 12 and 37 months after the death.

Teasing apart predisposing factors that may complicate the suicide survivors' experience of loss becomes more problematic when examining the feedback that survivors may be receiving from their social networks. Seguin, Kiely, & Lesage (1994) suggest that the constellation of psychological and social factors may leave suicide survivors vulnerable to perceptions of being punished and rejected. This intersection and interaction of negative opinion may actually interfere with the support process after a suicide (Van Dongen, 1993). Depending upon the individual personalities and attitudes toward suicide by the survivor and their network, social support may frequently be different and more difficult (Jordan, 2001). The loss of social support due to the stigmatized nature of suicide, which may bleed over onto the bereaved family members, may account for both the social isolation and withdraw from social interaction and comfort. There is considerable evidence that survivors feel more isolated and stigmatized than other mourners (Mitchell, Gale, Garand, & Wesner, 2003). Survivors may also preemptively "self-stigmatize" and reject the awkward offerings of help and support from individuals who genuinely wish to help but are uncomfortable and uncertain about how to proceed. Instead, the survivor perceives their discomfort and uncertainty as rejection. Survivors may also mirror negative cultural attitudes toward suicide, which then causes

them to either fear or assume that others are judging them. Either approach may deprive the survivor of much needed support and understanding from their social network (Jordan, 2001).

Prolonged Grief

As the field of suicide bereavement research has progressed, most researchers in this field have formulated an interest in investigating pathological grief or “complicated grief,” a psychiatric disorder that occurs in response to a significant loss through death. Some researchers suggest that the symptoms experienced by some suicide survivors, children and adult alike, are more like “complicated grief,” a distinct subcategory of bereavement separate from normal grief, bereavement-related depression, and anxiety disorders (Mitchell et al., 2004). Prigerson et al. (2008) have recently reconceptualized and renamed this construct “prolonged grief.” Recent findings suggest that suicide survivors may also be at risk for major depression, anxiety disorders, and posttraumatic stress disorder (PTSD) as well (Mitchell et al., 2004; Sethi & Bhargava, 2003), which place them at elevated risk for suicide (Latham & Prigerson, 2004). While suicide bereavement may not currently differ empirically from other forms of bereavement, suicide bereavement does put them at risk for this reconceptualized “complicated grief” or prolonged grief (Rando, 1993; Jordan, 2001), which may be where the difference lies (Jordan, 2001; Mitchell et al., 2004). The bereavement itself may not place individuals at risk for developing adverse psychosocial and physical health consequences, but the sequelae, specifically prolonged grief, may determine which bereaved individual will experience long-term negative health outcomes (Mitchell et al., 2004).

Thematic Differences

Despite the lack of empirical support that the grief process is different or more difficult in the wake of a suicide death, most suicide researchers still point to the considerable evidence that suggests important qualitative or thematic aspects of those individuals bereaved by suicide than other forms of death. Jordan (2001) conceptualizes qualitative differences that have been ignored by researchers looking at quantitative measures, which fail to capture a complete picture, may be too global, and are insensitive to important differences. He asserts that special themes of suicide bereavement manifest themselves in three broad areas of grief response: 1) survivors of suicide may experience “agonizing questioning” about why the death occurred, what were the motives and frame of mind of the deceased, and what was the meaning of the death; 2) survivors also experience higher levels of feelings of guilt, blame, responsibility, and either blame themselves for the death, due to mistreatment or abandonment, or not being able to anticipate the death; and 3) lastly, survivors experience heightened feelings of rejection or abandonment by the decedent, as well as anger toward the deceased (p.92). These qualitative, thematic differences are supported by a large sample study that found convincing evidence for differences in suicide survivors and those bereaved by accidental, expected, and unexpected natural modes of death (Bailey et al., 1999). In this study, survivors displayed more frequent feelings of responsibility, rejection, higher overall levels of grief, perceived stigmatization, and a sense of shame and embarrassment following the death. A recent qualitative analysis of forty-one suicide bereavement studies indicate that survivors may experience higher levels of overall grief distress,

shame and stigma, desire to conceal the means, and feelings of blame (Sveen & Walby, 2008).

Posttraumatic Growth

While the limited research and literature on suicide bereavement has focused on the psychopathology associated with this experience of loss, a new area of positive psychology offers another vehicle for inspecting the consequences of this experience by investigating the possibilities for personal growth within the context of this distressing and traumatic event. Calhoun and Tedeschi (2006) pioneered the concept of posttraumatic growth (PTG), a construct of positive psychological change that occurs as the result of one's struggle with a highly challenging, stressful, and traumatic "seismic" event. While others have suggested that growth is possible in the midst of crisis (Tedeschi & Calhoun, 2004), Calhoun and Tedeschi (2006) posit that while growth is possible, it is not necessarily probable. What increases the likelihood, according to their theory, is one's cognitive engagement with the traumatic event in its aftermath or one's ability to reflectively engage or "ruminate" over elements of the event in order to repair and restructure one's understanding of the world. Rumination subtypes of "brooding" and "reflective" have been differentiated and may predict outcomes of engagement with traumatic events (Treynor, Gonzalez, & Nolen-Hoeksema, 2003) with "reflective" being associated with PTG (Tedeschi & Calhoun, 2004).

Rumination as defined by Nolen-Hoeksema (2004, p.62) is described as "persistent thoughts about one's symptoms of distress and the possible causes and consequences of those symptoms" and is a construct closely associated and predictive of depressive symptoms and dysphoria (Nolen-Hoeksema & Morrow, 1991; Nolen-

Hoeksema, 2000; Nolan, Roberts, & Gottlib, 1998). Tedeschi and Calhoun adopt Martin and Tesser's (1996) definition of rumination as thinking that revolves around resolving discrepancies and making sense of one's previous goals and self and one's current reality (Calhoun & Tedeschi, 2006). While the term "rumination" has acquired a negative connotation within the confines of social and behavioral research due to its association with depression (Calhoun & Tedeschi, 2006), posttraumatic growth theory uses this more neutral definition to define the function of rumination. It also distinguishes between an earlier more intrusive, involuntary style of rumination and a later, more reflective, deliberate rumination that is associated with posttraumatic growth. While the first kind of rumination may be associated with early sense-making of an untoward event, the second kind of rumination may be conceptualized as a form of cognitive processing in the aftermath of a crisis that leads to recognition that changes experienced are deeply profound and building of a kind of wisdom. This can manifest itself in several ways, including an increased appreciation for life, better interpersonal relationships, changed priorities, an increased sense of personal strength, and a deeper spiritual life and existential journey (Tedeschi & Calhoun, 2004).

The fruits of this cognitive engagement, PTG, may also provide a preparedness or "resilience" for future events that may otherwise be traumatic (Calhoun & Tedeschi, 2006; Meichenbaum, 2006). Some researchers speculate that PTG is a kind of resilience, while others suggest that resilience plays an important role in the development of PTG (Lepore and Revenson, 2006). Calhoun and Tedeschi (2006) describe a complicated relationship between PTG and resilience. While closely related, they are very distinct constructs (Nelson, 2011). Studies have shown an inverse relationship between PTG and

resilience where highly resilient people experience less PTG than less resilient people do (Tedeschi & McNally, 2011). Highly resilient individuals may have stronger coping skills and are less likely to struggle with the psychological consequences of trauma, but are also less likely to experience as many opportunities for change that proceed from the emotional wrestling with trauma. Resilient individuals may not perceive their experience of trauma as a crisis and, therefore, may not undergo the psychological challenges that those who are less resilient must undergo in the face of a similar event (Lechner, Antoni, Carver, Weaver, & Phillips, 2006). Growth is not necessary for those who are resilient because they do not undergo the “shattering” of their assumptive world view and need to reconstruct or make meaning out of the event (Westphal & Bonanno, 2007). Resilience is described as the adaptive ability to “bounce back” to one’s previous level of psychological and physical functioning and PTG is a rebuilding process. While Masten and Reed (2002) conceptualize resilience as a dynamic and slow-moving process, which may not be evident for many years after the stressful event or trauma, Calhoun and Tedeschi (2006) describe PTG as a process that occurs closer to the traumatic event than one might expect. Resilience defined as “resistance to stressors” may also be seen as a capacity to “recover from stressors,” changing oneself through time and through an adaptation process, reconfiguring thoughts, beliefs, and behaviors (Lepore & Revenson, 2006, p. 29). From this perspective, resilience is a kind of “reconfiguration,” as is PTG; however, PTG is only one possible outcome from this reconfiguration process. How these links operate and the bridge between adaptation and PTG possibly created by the degree of resilience is still unclear and fodder for future research (Westphal & Bonanno, 2007).

The issue of timing is a critical component in the conceptualization of PTG.

Calhoun and Tedeschi (2006) argue that posttraumatic growth occurs closer to the “seismic” event causing the trauma rather than farther away from the event. Some researchers have suggested that early reports of growth may be less valid reports of growth or psychological well-being than later reports of growth or well-being (King & Raspin, 2004; Tomich & Helgeson, 2004). Some have suggested that early coping efforts or euphoria over having survived the event interferes with valid reports of growth (Park & Lepore, 2006). Others have demonstrated minimal support for the perspective that growth and its antecedent cognitive processes occur farther away from event (Lechner & Zakowski, 2001; Miller & C’de Baca, 2001; Tennen & Affleck, 2002). In fact, several studies found growth occurring earlier in the process of adjustment to the event, including one longitudinal study showing stability of growth scores through time for heart attack patients assessed for the first time at seven weeks after the heart attack and then a second time at eight years after the event (Affleck, Tennen, Croog, & Levine, 1987). Carver and Antoni (2004) found that benefit-finding in the first year after a breast cancer diagnosis predicted better quality of life, more positive emotion, and lower distress and depression at follow-up five to eight years after the diagnosis.

Posttraumatic growth has been studied in a variety of traumatic experiences, populations, and age ranges (Nelson, 2011). It has been studied and identified in interpersonal violence, health crises (breast cancer; HIV/AIDS), war (Vietnam Veterans), natural and environmental disasters, terrorist attacks (9/11; Madrid Train bombing), and after loss, such as bereavement and divorce. In one study of the impact of 9/11 terrorist attacks on personal growth and mental health, participants indicated that they felt a closer

relationship to others, increased empathy and compassion, and a deeper appreciation for life (Ai, Cascio, Santangelo, & Evans-Campbell, 2005). Another study found that among 9/11 and Madrid Train bombing survivors, meaning in life was associated with greater growth (Steger, Frazier, & Zacchanini, 2008). In a study of Vietnam POWs, PTG, especially appreciation of life and personal strength, were strongly related to the POWs' duration of captivity and their own personal characteristic of optimism (Feder et al, 2008).

The posttraumatic growth theory model is contingent upon certain fundamental elements that influence posttraumatic growth. Some of the key elements include characteristics of the individual. Personality characteristics, such as hope and optimism, may play a central role in how an individual manages the interruption of one's life goals or plans through a personal crisis or a trauma (Tedeschi & Calhoun, 2004). Other demographic variables, including gender and socioeconomic status, may also influence this process (Calhoun & Tedeschi, 2006). Females tend to report higher levels of PTG than males following a traumatic event (Swickert & Hittner, 2009; Zwahlen, Hagenbuch, Carley, Jenewein, & Buchi, 2009). In studies of Madrid Train Bombing victims (Val & Linley, 2006) and emergency service workers (Shakespeare-Finch, Gow, & Smith, 2005), women scored statistically significantly higher than men on measures of PTG. In several cancer studies, women of higher income (Bower et al., 2005; Carpenter, Brockopp, & Andrykowski, 1999; Cordova, Cunningham, Carlson, & Andrykowski, 2001) or women of higher education level (Sears, Stanton, Danoff-Burg, 2003) demonstrated a relationship between higher PTG and SES status. Several studies underpinned the relationship of marriage and social support with PTG, but these findings are less

consistent. What may be more consistent is the relationship between PTG and one's broader social context, such as marital support, people with whom they can talk, and positive modeling in one's life. These variables seemed to demonstrate a more stable association with PTG (Stanton, Bower, and Low, 2006).

Personality characteristics may also play a significant role in the development of PTG. Positive emotions may be especially helpful as one copes with difficult life events (Calhoun and Tedeschi, 2006). Dispositional optimism, extraversion, and openness to experience have all demonstrated a strong relationship with PTG (Shakespeare-Finch, Gow, & Smith, 2005; Stanton, Bower, and Low, 2006; Tedeschi & Calhoun, 1995, Tedeschi & Calhoun, 1996; Val & Linley, 2006). While temporary positive affective states may also be critical to the process of PTG, it may be that trait-like characteristics are more important (Calhoun & Tedeschi, 2006). Therefore, stable traits, such as extraversion, which has been found to correlate with PTG (Linley & Joseph, 2004) and has been characterized as "dispositional positive affectivity" (Calhoun and Tedeschi, 2006 p. 18), may prove to be especially important to the process of PTG. Dispositional optimism may also be especially important in the development of PTG. Not only are optimists predisposed to the expectancy of good things in life and positive future outcomes, even through adversity, but they are proven workhorses, social networkers, and have a tendency to use approach-oriented, problem-focused strategies to meet their ends. Optimists also have the tendency to know when to disengage from a goal, appraising it as unachievable, but appraising others as achievable, thereby redirecting goals and aspirations with greater flexibility. All of these processes may be critical strategies in the cultivation of PTG (Lepore & Revenson, 2006).

Alongside positive character traits, positive affective states may also play a significant role in the process of PTG (Fredrickson, Tugade, Waugh, & Larkin, 2003). In a longitudinal study of women with breast cancer, Bower and colleagues (2005) found a significant relationship between women who reported positive changes in outlook and priorities five years after their diagnosis with increased level of positive affect at both five and ten years after their diagnosis. Carver and Antoni (2004) also demonstrated a relationship between finding benefit in having cancer or “benefit-finding” and positive affect and lower depression in a longitudinal study of breast cancer patients. Conversely, negative affective states and personality constructs, may suggest difficulty in marshaling positive personal resources in the process of PTG (Stanton, Bower, & Low, 2006). As a result, the personality trait of neuroticism, which is the tendency to experience negative emotional states, has demonstrated a weak negative relationship with PTG (Calhoun & Tedeschi, 2006) and may, intuitively, provide a contrast when examining the interaction between predisposing personality constructs and how one adapts and responds to a traumatic event.

What is certain in this model is that the individual is exposed to an event that presents a significant degree of threat to their “assumptive world” view (Calhoun & Tedeschi, 2004, 2006; Janoff-Bulman, 1992). One determinate of whether an event is “traumatic” enough or not is to consider the way in which it disrupts the personal narrative. That is, if the individual characterizes the event as a sentinel moment and their life is divided into a “before” and “after” the traumatic event (Calhoun & Tedeschi, 2006). There is some evidence that the relationship between the “dose” of the traumatic event and the experience of growth is curvilinear (Fontana & Rosenheck, 1998; Linley &

Joseph, 2004). There may be a minimum level of exposure that is necessary to experience growth and extremely high levels may not result in any increase in experienced growth (Calhoun & Tedeschi, 2006).

Posttraumatic growth theory does not suggest that there is an absence of suffering as wisdom builds, but rather that appreciable growth occurs within the context of pain and loss. In fact, some measure of significant distress may be necessary for growth to occur, although too much distress may impair the bereaved and render them unable to engage in the growth process (Butler et al., 2005). Solomon and Dekel (2007) found both linear and curvilinear relationships between PTG and PTSD in their study of Israeli ex-POWs. Their research demonstrated that higher PTG is linearly associated with PTSD, suggesting that the disruption caused by the trauma is significant enough to create psychiatric symptoms and “shattering” enough to the “assumptive world view” to generate growth (Janoff-Bulman, 1992). A curvilinear relationship was also found in this same study with participants who had moderate levels of PTSD experiencing the most PTG. A possible explanation for this mechanism is that not enough distress creates too little cognitive dissonance for PTG and too much distress overwhelms the individual to the point of being unable to engage in the cognitive process leading to growth (Butler et al., 2005; Nelson, 2011). As well, investigations measuring other negative posttraumatic responses, such as prolonged grief, may contribute to the understanding of the process of PTG but have yet to be investigated (Calhoun & Tedeschi, 2006).

The Model of Posttraumatic Growth

According to Calhoun & Tedeschi’s comprehensive model of posttraumatic growth that is relative to bereavement (Calhoun, Tedeschi, Cann, & Hanks, 2010, see

Figure 1) and has been tailored to suicide in particular, in the immediate aftermath of the seismic event there are challenges to an individual's management of emotional distress, beliefs and goals, and life narrative. The individual experiences a "shattering" of their "assumptive world beliefs." Some deaths may present greater psychological challenges than others (Calhoun, Tedeschi, Cann, & Hanks, 2010). In the event of a suicide, which may be both shocking, because it is unexpected, and anathema to essential survival instincts and core beliefs, this challenging of the world view may be cataclysmic. The suicide bereaved may be feeling high levels of distress and also confusion about how to incorporate the reality of their loved one's destructive act. Suicide challenges "guiding principles" about how the world is assumed to work. In order to make sense of this, the individual is led to engage in a ruminative process in the immediate aftermath of the suicide. This form of rumination may be characterized as a more "brooding" form of rumination. This process is a more intrusive, automatic way of processing information in order to make sense of the event and make it more comprehensible. As the bereaved makes sense of their immediate experience and continues to ruminate on their experience, they are better able to manage their emotional distress. This ability to manage their distress may precipitate a reexamination of their core beliefs and a disengagement or reassessment of their previous goals, which were congruent with their previous assumptive world view. This reduction in emotional distress also allows them to convert their "brooding" rumination to a more deliberate and constructive "reflective" rumination. Brooding rumination is only associated with growth when it occurs early in the process after the traumatic event, soon after the event, and does not persist (Calhoun et al., 2010). Having made sense of the immediate aftermath of their experience, this

“reflective” rumination marks a shift toward reconstruction and schema changes. The bereaved’s personal narrative may undergo a revision, as they begin to observe a changed “world view,” and adopt new goals and life narratives. When brooding rumination persists unabated or emerges later in the overall ruminative process, it is possible that there has been a failed attempt at reconstructing assumptive world beliefs (Calhoun et al., 2010). This shift toward the more deliberate act of rumination in reflection is critical to the rebuilding of the “new” beliefs and the new assumptive world view. The suicide bereaved becomes more congruent in their beliefs and their experiences and have been potentially been broadened in the process. Ultimately, this process leads to posttraumatic growth, which may encapsulate a more complex narrative and wisdom, resulting in increased well-being and adjustment.

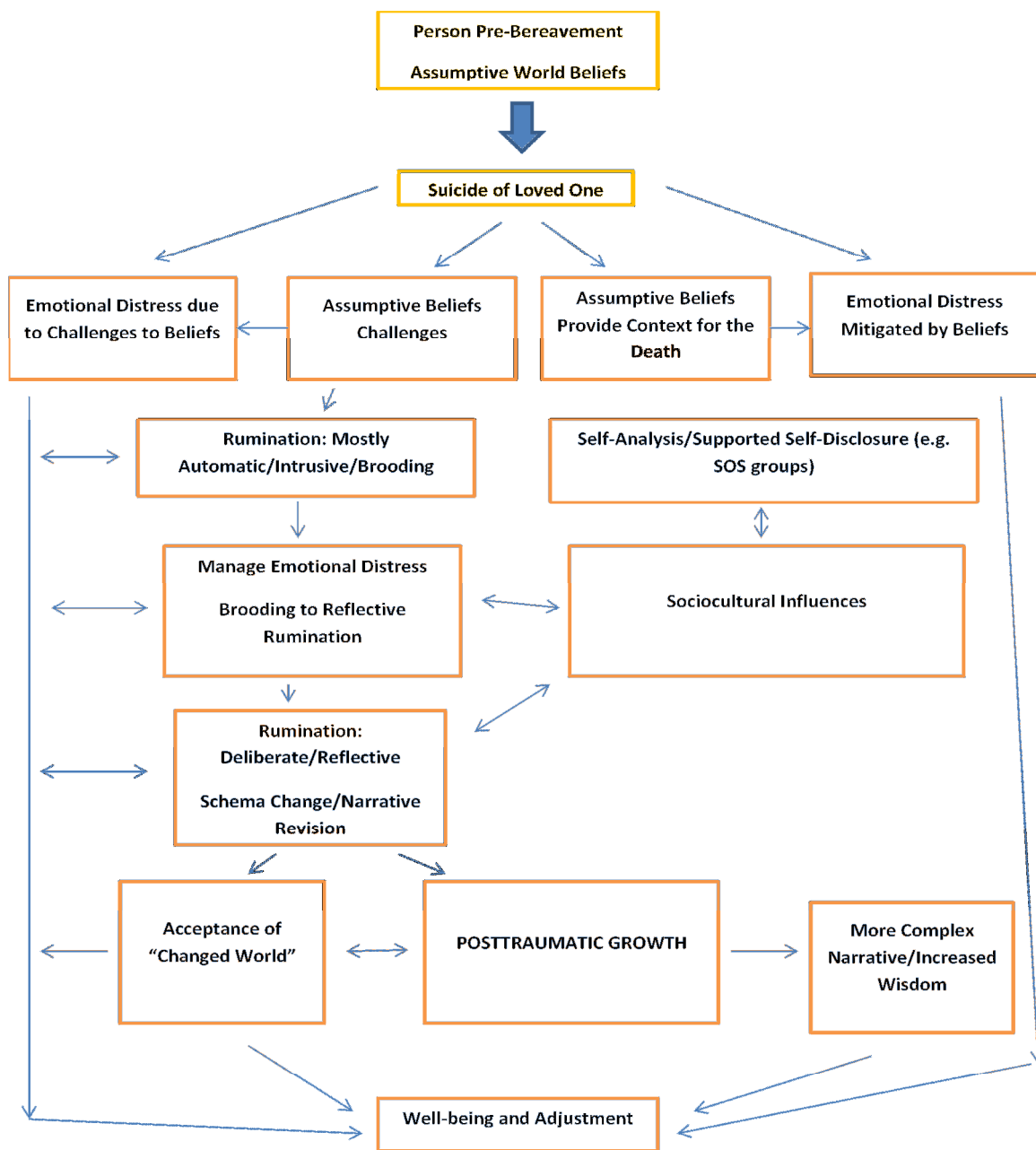


Figure 1. Posttraumatic growth model as applied to suicide bereavement

This model suggests that significant cognitive engagement with elements of the suicide and the cognitive processing of the content in this more “reflective” mode may be necessary to yield posttraumatic growth. It also suggests that the level of disruption of core beliefs, which leads to a reexamining of one’s beliefs, is an essential predictor of PTG. Deaths that do not lead to significant reexamination of core beliefs should result in less reported growth (Calhoun et al., 2010, p. 132). Reflective rumination is reparative and helps reconstruct a belief system in the aftermath. Sociocultural influences are also critical in this process. Research has demonstrated that knowing someone who has gone through a similar experience and has experienced growth is facilitative of growth (Cobb, Tedeschi, Calhoun, & Cann, 2006). Broader influences through support and culturally-accepted rituals may provide a context for understanding the incomprehensible, such as suicide (Bonanno, Papa, Lalande, Zhang, & Noll, 2005). Conversely, when individuals who die by suicide are not treated in the same manner as individuals who have died by other causes, and the suicide bereaved experience the stigma and rejection as a result, the bereaved may experience a form of “disenfranchised grief” (Doka, 1999, 2008). Whether or not this retards reflective rumination, reconstruction of new beliefs, and ultimately growth is unknown.

Growth is conceptualized as having five domains or factors within the overall PTG construct. These five factors include Relating to Others (greater intimacy and compassion for others), New Possibilities (new roles and new people), Personal Strength (feeling personally stronger), Spiritual Change (being more connected spiritually), and a deeper Appreciation of Life (Tedeschi & Calhoun, 2004). This growth is measured by the Posttraumatic Growth Inventory (PTGI; Tedeschi & Calhoun, 1996), a 21-item

instrument for assessing positive outcomes in people who have experienced traumatic events. The five domains or factors are contained within the larger construct of PTG and are measured on subscales within the PTGI. Data collected over a number of years and across multiple studies suggest that bereavement differs from other potentially traumatic events in eventual PTG subscale scores (Calhoun et al., 2010). A comparison of those reporting a death (n=233) as opposed to those experiencing other traumatic events (n=571) demonstrates differences and greater growth for the bereaved in the areas of Relating to Others, Spiritual Change, and Appreciation of Life. Less growth is reported by the bereaved in the areas of Personal Strengths and New Possibilities.

Posttraumatic Growth among Parent Survivors of Suicide Study

Understanding posttraumatic growth and factors that may be associated with PTG or contribute to PTG, such as demographics, resilience, rumination style, personality, and mood have not been studied in survivors of suicide. Posttraumatic Growth among Parent Survivors of Suicide study seeks to investigate these variables within the context of potential sequelae such as prolonged grief. Additionally, all participants will have experienced their loss within two years of participating in the study in order to test Calhoun and Tedeschi's (2006) theory that growth and the antecedent cognitive processes occur closer to the traumatic event rather than farther away from it. There is considerable clinical applicability of the results of this study. Understanding the process of one who is bereaved by suicide may help mental health professionals better identify patterns of this experience as well as identify points of entry for therapeutic interventions for these individuals in order to optimize long-term growth outcomes. Based upon the literature and hypotheses generated by this study, it was predicted that there are significant

differences between those who engage in more reflective rumination as opposed to brooding rumination and these differences will predict outcomes of posttraumatic growth with participants who signal more reflective rumination as having greater growth. It is also expected that female gender, personality factors such as optimism, extraversion, and openness to experience, as well as positive affective states, and higher resilience will also be associated with greater growth after the death of the child. It is expected that personality traits such as neuroticism and negative affect states will be associated with lower growth. Lastly, it is predicted that individuals who meet criteria for prolonged grief will have lower posttraumatic growth.

Chapter 2

Methodology

The Posttraumatic Growth among Parent Survivors of Suicide study used a non-experimental research design that employed an online survey with convenience and snowball sampling. The number of participants was based on Soper (2009). A power analysis was conducted and determined that at an alpha level of .05, a target power of .80, and a medium effect size, the study sample should consist of at least 113 participants.

Participants

In order to be eligible to participate, an individual had to be a parent or stepparent of an individual, of any age, who died by suicide within two years. The participants were recruited through two suicide bereavement organizations, Friends for Survival, Inc., a Sacramento, California based group that distributes a newsletter to more than 4,000 individuals internationally, and Parents of Suicide, a Chattanooga, Tennessee based online survivor support community. Recruitment also occurred through an international Suicidology listserv (SUICIDOLOGY@LISTS.APA.ORG). Participants were directed to the website www.posttraumaticgrowth.com which acted as a portal for secure online data collection through The Catholic University of America servers. Participants were encouraged to invite others they knew to participate in this study as well. Unique identifiers for each participant were given to each respondent and used as their data was collected on a secure server. Participants were informed through both the website introductory letter and the consent form that they may stop participating in this study if

they became uncomfortable or distressed. A “quick close button” was added to each page of the survey, in case the respondent wished to end participation quickly. As well, if they became distressed and needed to speak to a crisis counselor at any time of the day or night, seven days a week, they were directed to The National Lifeline Network, a national toll-free crisis line, 1-800-273- TALK (8255). The National Lifeline Network is the state of the art in crisis intervention, dedicated to individuals who are distressed by suicide, actively suicidal or individuals who have been left behind in the wake of a suicide. If participants wished to speak to someone in their geographic vicinity, they were also directed to a survivor support group in their state from the American Association of Suicidology’s website at www.suicidology.org by clicking on a tab at the top titled “Suicide Loss Support” then clicking on the link to the support group directory to the left. Participants were also provided contact information for Dr. David Jobes and Melinda Moore, Principal Investigator of the study.

Measures

Participants’ level of optimism was measured by the Life-Orientation Test Revised (LOT-R; Scheier et al., 1994). The LOT-R is a ten item self-report measure that assesses one level of dispositional optimism by asking an individual to endorse his or her level of agreement with a statement on a 5-point Likert scale. The scale is anchored with 0 “strongly agree” and 4 “strongly disagree” and it contains 3 positively and 3 negatively worded items (which are reverse scored) and 4 filler items. Participants score can range from 0 - 24, with higher scores indicating greater degrees of dispositional optimism. The

LOT-R has good internal consistency (Cronbach's alpha runs in the high .70s to low .80s) and is quite stable over time.

The personality traits of neuroticism, extraversion, and openness to experience were measured using the Neuroticism Extraversion Openness Five-Factor Inventory (NEO-FFI; Costa & McCrae, 1989, 1992) which measures five domains of adult personality. The NEO-FFI is a shortened version of the NEO-PI-R. This study used 3 subscales of the NEO-FFI in order to assess for the personality traits of neuroticism, extraversion, and openness to experience. These subscales have 12 items each with a total of 36 items rated on a 5-point scale. Alpha coefficients are reliable, ranging from 0.77 to 0.94 (Costa & McCrae, 1992).

The Positive Affect and Negative Schedule (PANAS; Watson, Clark, & Tellegen, 1988) measures two broad, general factors that have emerged as the dominant dimensions of emotional experience, Positive Affect and Negative Affect. Each PANAS scale comprises ten specific mood-related adjectives, rated on five-point scales, of frequency over a two-week period. Internal consistency coefficients range from .84 to .90. Test-retest reliabilities range from .39 to .71, with the higher coefficients reported for the longer durations.

Participants' level of posttraumatic growth was measured by the Posttraumatic Growth Inventory (PTGI; Tedeschi & Calhoun, 1996). The PTGI is a 21-item instrument for assessing positive outcomes in people who have experienced traumatic events. The PTGI is comprised of five subscales (Relating to Others, New Possibilities, Personal Strength, Spiritual Change, Appreciation of Life) and a total post-traumatic growth score.

The items of the scale are a series of positively worded statements and participants are asked to use the statements to indicate the degree to which change occurred in their life as a result of their crisis. Participants respond to each of the 21 items on a six-point Likert-type scale, ranging from 0 (“I did not experience this change as a result of my experience”) to 5 (“I experienced this change to a very great degree”). The PTGI total score ranges from 0 to 105 with higher scores indicating greater amount of posttraumatic growth. Calhoun and Tedeschi have not developed cut-off scores to describe low, medium, and high growth (2006, p. 15), but Feder and colleagues (2008) characterized mean total PTGI scores equaling exceeding 60 representing “moderate positive life change” and scores equaling 80 or above indicating “great or a very great degree of positive life change.” In the literature, mean total PTGI scores ranged from $M=41.2$ ($SD=22.6$) for Japanese motor vehicle accident survivors (Nishi, Matsuoka, & Kim, 2010) to $M=51$ ($SD=28$) for cancer patients (Steel, Gamblin, & Carr, 2008) to $M=62.31$ ($SD=24.64$) for caregivers bereaved by the death of a loved one to HIV/AIDS (Cadell & Sullivan, 2006). The instrument has been used widely across different populations and has demonstrated good reliability and adequate construct validity (Tedeschi & Calhoun, 1996).

To determine if a participant met criteria for Prolonged Grief Disorder (PG-13; Prigerson, Vanderwerker, Maciejewski, 2008), the PG-13 was used. The PG-13 was developed to assess symptoms of grief known to predict long-term functional impairments formerly characterized as “complicated grief.” The PG-13 is a 13-item self-report measure that requires 12 responses on a five-point Likert scale and a single item

yes/no response. Internal consistency is good ($\alpha = .82$) and the PG-13 has demonstrated predictive and criterion validity.

The new Ruminative Response Scale (RSS; Treynor, Gonzalez, & Nolen-Hoeksema, 2003) is a 10-item subscale of the 22-item of the RSS with two subscales demonstrating the “Brooding” and “Reflection” components of the rumination construct. Respondents are required to indicate the extent to which they agree with each of the items on a 4-point rating scale ranging from 1 (almost never) to 4 (almost always). This new scale was pared down from the earlier RSS (Nolen-Hoeksema & Morrow, 1991), a 22-item scale that assesses individuals’ tendency to ruminate in response to depressed mood and which showed significant overlap with the Beck Depression Inventory (BDI; Beck, Ward, Mendelson, Mock, Erbaugh, 1961). This new scale demonstrated that the concept of rumination was no longer a single construct but the outcome of two independent processes, Brooding and Reflection.

Participants’ level of resilience was assessed by the Resilience Scale (RS-14; Wagnild & Young, 2009). The RS-14 is a shortened, authorized version of the 25-item Resilience Scale (Wagnild & Young, 1993) that assesses adults’ trait of resilience on a 7-point Likert-type scale. For the purposes of this study, the 7-point Likert scale was converted to a 5-point Likert scale. The internal consistency of the RS has been found to range from .76 to .91. Test-retest reliability has been reported range between .67 and .84. Wagnild and Young (1983) tested the concurrent validity of the RS by correlating it with theoretically relevant constructs such as stress adaptation. Results showed that relationships between resilience and adaptation indicators were significant in the

expected directions. Resilience scores were positively related to scores of morale, life satisfaction, and physical health. Additionally, higher levels of resilience were related to lower levels of depression.

A self-report questionnaire was developed to gather demographic variables to be used in the study. The variables included questions about gender, education, income, and marital status.

Research Questions

Hypothesis 1: Multiple regression analysis will be used to demonstrate that those who engage in more reflective rumination as opposed to brooding rumination will predict outcomes of growth as measured by the PTGI.

Hypothesis 2: Bivariate statistical analysis for continuous variables using Pearson Product Moment correlations will demonstrate a statistically significant positive relationship between posttraumatic growth and female gender, personality traits of optimism, extraversion, and openness to experience, the personality state of positive affect, reflective rumination, and resilience. Multiple regression analysis will demonstrate that female gender, dispositional optimism, extraversion, openness to experience, positive affect, and resilience will predict higher scores on the PTGI. Conversely, multiple regression will demonstrate that the personality trait of neuroticism and negative affect will predict lower PTGI scores.

Hypothesis 3: Multiple regression analysis will demonstrate that individuals who meet criteria for Prolonged Grief Disorder will have lower PTGI scores.

Chapter 3

Results

A total of 284 individuals proceeded to the online informed consent page of the survey and indicated that they wished to participate in the study. Initial data collection occurred between January and March, 2010. Of the initial data collection, 201 individuals proceeded to the online informed consent page of the survey and indicated they wished to participate in the study. Pre-analysis screening indicated that a significant number of items had missing values. In the second data collection period, which occurred between July and September, 2010, 83 individuals proceeded to the online informed consent page of the survey and indicated they wished to participate in the study. The statistical package Mplus (Muthen & Muthen, 2007) was used for statistical analysis because it uses full information maximum likelihood estimation and can keep participants in the analysis even if they have missing data. The final sample that was used for data analysis consisted of 154 (54%) parents bereaved by suicide.

Demographics

Of the 154 participants, 15 (9.9%) were male and 137 (90.1%) were female (see Table 1). Two participants did not register a gender. Ninety-nine respondents (65.1%) were married and 37 (24.3%) were divorced. A nearly equal number of the rest were either never married (3.3%), widowed (3.9%), or had an unmarried partner (3.3%). In terms of education, 1 participant (.7%) had completed at least 9 years of education; 17 participants (11.1%) had a high school education or equivalent; 51 participants (33.3%)

Table 1*Demographic Characteristics of Parents Bereaved by Suicide*

Variable	N	%
Gender (n=152)		
Male	15	9.9
Female	137	90.1
Marital Status (n=152)		
Married (together)	99	65.1
Divorced	37	24.3
Widowed	6	3.9
Never married	5	3.3
Unmarried partner	5	3.3
Education (n=153)		
9 th – 12 th grade	1	.7
HS grad/GED	17	11.1
Some college	51	33.3
AA	19	12.4
BA	33	21.6
Graduate/Professional	32	20.9
Income (n=148)		
Less than 10k	1	.7
\$10,000 - 14,999	0	0
\$15,000 - 24,999	11	7.4
\$25,000 - 34,999	9	6.1
\$35,000 - 49,999	25	16.9
\$50,000 - 74,999	36	24.3
\$75,000 - 99,999	22	14.9
\$100,000 - 149,999	28	18.9
\$150,000 - 199,999	7	4.7
200k or more	9	6.1

had attended college; 19 (12.4%) had an Associate degree; 33 participants (21.6%) had a Bachelor's degree; and 32 (20.9%) had a graduate or professional degree. In terms of income, 1 participant (.7%) reported earning less than \$10,000 annually; 11 (7.4%) between \$15,000 and \$24,999; 9 (6.1%) between \$25,000 and \$34,999 annually; 25 (16.9%) between \$35,000 and \$49,000 each year; 36 (24.3%) between \$50,000 and \$74,999; 22 (14.9%) between \$75,000 and \$99,999; 28 (18.9%) between 100,000 and \$149,999; 7 (4.7%) between \$150,000 and \$199,999; and 9 (6.1%) reported 200,000 or more per year.

Hypothesis Tests

To examine hypothesis 1, multiple regression analysis was conducted to investigate whether the variable of reflective rumination predicted higher posttraumatic growth scores as measured on the PTGI. Contrary to the hypothesis and prediction, reflective rumination did not predict higher posttraumatic growth scores as measured on the PTGI (see Table 2).

To examine hypothesis 2, correlations using Pearson Product Moment Correlational analysis was conducted between the dependent variable of PTG and demographic factors (i.e., gender, education, and marital status), personality traits (i.e., openness to experience, extraversion, neuroticism, and dispositional optimism), personality states (i.e., positive and negative affect), subtypes of rumination (i.e., reflective and brooding), prolonged grief, and resilience to examine significant relationships (see Table 3). There were not any significant correlations between PTG and the demographic variables, personality trait or state variables, rumination subtypes, prolonged grief, or resilience. There were significant correlations between other study

Table 2*Results of Multiple Regression Predicting Posttraumatic Growth (PTG)*

Variable	Unstandardized Coefficient (Standard Error)		Standardized Coefficient
Gender	-2.38	(6.34)	-0.02
Openness	0.45	(0.38)	0.12
Extraversion	0.10	(0.41)	0.03
Neuroticism	-0.54	(0.43)	-0.20
Optimism	-0.77	(0.49)	-0.19
Positive Affect	0.26	(0.39)	0.09
Negative Affect	-0.08	(0.33)	-0.03
Brooding	-0.36	(1.08)	-0.05
Reflection	-0.20	(0.90)	-0.20
PG	7.62	(6.32)	0.12
Resilience	-0.71	(0.31)*	-0.29

Note: PG = Prolonged Grief. $N = 154$.

$R^2 = .08$. * $p < .05$

Table 3

Pearson Correlations among Study Variables

	2	3	4	5	6	7	8	9	10	11	12	13	14
1. PTG	-01	-.10	.02	.04	-.14	.03	-.12	-.05	.00	-.02	-.06	.05	-.15
2. Gender	1.00	-.31	.13	-.02	-.16	.24**	-.19	-.33**	.17*	.19*	.20*	.13	-.19*
3. Education	1.00	-.05	.40**	.14	-.19*	.27**	.24**	-.13	-.07	.11	-.11	.26**	
4. Marital		1.00	.10	-.00	-.06	-.05	-.01	-.06	.05	.09	.06	-.11	
5. Openness			1.00	.12	-.24**	.33**	.20*	-.21*	-.22	.20*	-.22*	.32**	
6. Extraversion					1.00	-.34**	.45**	.53**	-.32**	-.17	-.19*	-.20*	.61**
7. Neuroticism						1.00	-.62**	-.53**	.68**	.63**	.37**	.33**	-.65**
8. Optimism							.53**	-.54**	-.54**	-.19*	-.32**	.59**	
9. Positive Affect							1.00	-.53**	-.34**	-.32**	-.15	.64**	
10. Negative Affect								1.00	.59**	.28**	.42**	-.48**	
11. Brooding									1.00	.46**	.36**	-.38**	
12. Reflection										1.00	.28*	-.11	
13. PG											1.00	-.24**	
14. Resilience												1.00	

Note. PG = Prolonged Grief; PTG = Posttraumatic Growth.

*p < .05 **p < .01

variables to note. There was a moderately positive correlation between the brooding and the reflective subtypes of rumination ($r = .46, p < .01$), as well as a moderately positive correlation between brooding subtype of rumination and prolonged grief ($r = .36, p < .01$) and strong positive correlation between brooding and negative affect ($r = .59, p < .01$). There was a modest positive correlation between the reflective subtype of rumination and prolonged grief ($r = .36, p < .01$) and neuroticism ($r = .37, p < .01$).

Multiple regression analysis was conducted to investigate whether gender, personality traits (i.e., openness to experience, extraversion, neuroticism, and dispositional optimism), personality states (i.e., positive and negative affect), prolonged grief, and resilience predicted posttraumatic growth (see Table 2). Resilience was the only variable that significantly predicted posttraumatic growth ($\beta = -0.29, p < .05$) with an $R^2 = .08$.

To examine hypothesis 3, an independent samples t-test was conducted to compare prolonged grief scores among those who did and did not meet criteria for Prolonged Grief Disorder. There was not a significant difference in the scores for those who did not meet criteria for Prolonged Grief Disorder ($M = 44.52, SD = 23.33$) and those who did meet criteria for Prolonged Grief Disorder ($M = 47.46, SD = 26.30$); $t(124) = -.572, p = .333$. Multiple regression analysis was conducted to investigate whether prolonged grief predicted posttraumatic growth. Prolonged grief did not predict PTG.

Resilience

Given the lack of significant results other than resilience predicting posttraumatic growth in this population, an exploratory multiple regression was conducted in order to investigate what variables might predict the construct of resilience (see Table 4).

Table 4*Results of Multiple Regression Predicting Resilience*

Variable	Unstandardized Coefficient (Standard Error)		Standardized Coefficient
Gender	-0.46	(1.46)	-0.01
Openness	0.03	(0.09)	0.02
Extraversion	0.45	(0.10)*	0.33
Neuroticism	-0.50	(0.10)*	-0.45
Optimism	0.07	(0.14)	0.04
Positive Affect	0.35	(0.10)*	0.29
Negative Affect	0.13	(0.10)	0.12
Brooding	-0.24	(0.20)	-0.08
Reflection	0.68	(0.26)*	0.20
PG	-0.38	(1.68)	-0.01

Note. $N = 154$; PG = Prolonged Grief.

$R^2 = .67$. * $p < .05$

Extraversion ($\beta = 0.33$, $p < .05$), neuroticism ($\beta = -0.45$, $p < .05$), positive affect ($\beta = 0.29$, $p < .05$), and the rumination subtype reflection ($\beta = 0.20$, $p < .05$) predicted resilience with an $R^2 = .67$.

Posttraumatic Growth and Domains of Posttraumatic Growth

The suicide bereaved parents' mean total PTGI score ($M = 46.26$, $SD = 24.83$), indicated a lower degree of posttraumatic growth for the group as a whole. In order to gain some understanding of the domains of growth that were achieved, the factor scores were also analyzed. These domains include: 1) Relating to Others, 2) New Possibilities, 3) Personal Strength, 4) Spiritual Change, and 5) Appreciation of Life. Mean factor scores equal to or above a 3 on a scale of 0 to 6 represented "at least moderate growth" (Feder et al, 2008, p. 363). For the group as a whole, the items endorsed most strongly on the PTGI corresponded to the first factor, Relating to Others (40%), followed by the fourth factor, Spiritual Change (34%), and the fifth factor, Appreciation of Life (33%). Much lower percentages of factor scores demonstrating at least moderate growth were signaled on the second factor, New Possibilities (18%), and the third factor, Personal Strength (19%).

A multiple regression was conducted between each of the individual domains or factors of posttraumatic growth and the study variables in order to investigate what variables predicted the domains of posttraumatic growth. Resilience was the only predictor of the PTG first domain, Relating to Others ($\beta = -0.35$, $p < .05$) with an $R^2 = .06$ (see Table 5).

Factor two, New Possibilities, was predicted by several study variables. Factor two was predicted by the personality traits of openness to experience ($\beta = 0.21$, $p < .05$),

Table 5*Results of Multiple Regression Predicting Factor One*

Variable	Unstandardized Coefficient (Standard Error)		Standardized Coefficient
Gender	0.10	(2.68)	0.00
Openness	0.08	(0.13)	0.06
Extraversion	0.09	(0.14)	0.07
Neuroticism	-0.15	(0.15)	-0.15
Optimism	-0.11	(0.16)	-0.07
Positive Affect	0.06	(0.13)	0.06
Negative Affect	0.01	(0.12)	0.01
Brooding	-0.28	(0.36)	-0.11
Reflection	-0.02	(0.30)	-0.00
PG	1.86	(2.11)	0.08
Resilience	-0.31	(0.11)*	-0.35

Note. $N = 154$; PG = Prolonged Grief.

$R^2 = .06$. * $p < .05$

neuroticism ($\beta = -0.31$, $p < .05$), and resilience ($\beta = -0.30$, $p < .05$) with an $R^2 = .12$ (see Table 6).

Table 6*Results of Multiple Regression Predicting Factor Two*

Variable	Unstandardized Coefficient (Standard Error)		Standardized Coefficient
Gender	0.73	(1.90)	0.03
Openness	0.21	(0.09)*	0.21
Extraversion	0.07	(0.09)	0.07
Neuroticism	-0.23	(0.10)*	-0.31
Optimism	-0.23	(0.13)	-0.21
Positive Affect	0.11	(0.10)	0.14
Negative Affect	0.00	(0.08)	0.00
Brooding	0.06	(0.26)	0.03
Reflection	-0.15	(0.23)	-0.07
PG	2.81	(1.56)	0.16
Resilience	-0.20	(0.07)*	-0.30

Note. $N = 154$; PG = Prolonged Grief.

$R^2 = .12$. * $p < .05$

Chapter 4

Discussion

Research Questions

Hypothesis 1

The first hypothesis examined the relationships between posttraumatic growth and the subtypes of rumination, brooding rumination and reflective rumination. A concept central to the mechanism of posttraumatic growth is the theory that reflective rumination is critical to success in rebuilding beliefs and assumptions that are shattered by the suicide death of a loved one. Reflective rumination or “deliberate rumination” is consistently associated with posttraumatic growth (Calhoun et al., 2010). Brooding rumination is associated with earlier, more intrusive thoughts. While earlier intrusive thoughts are associated with growth if they occur early after the death and then abate leading to reflective rumination, persistent or recent brooding ruminations are associated with a failed attempt at reconstruction of a new assumptive world and posttraumatic depreciation (Calhoun et al., 2010, p. 134). The finding that neither brooding rumination nor reflective rumination was predictive of posttraumatic growth is inconsistent with what is found in the literature. This may be explained by the fact that these parent survivors were engaging in brooding and reflective rumination concurrently or their emotional upsetness interfered with these cognitive processes.

Hypothesis 2

The second hypothesis examined the relationship between PTG and demographic,

personality, affective, and cognitive factors that have demonstrated a relationship with PTG in other studied populations. Additionally, PTG and its relationship with prolonged grief and resilience were also examined. Prolonged grief has only been examined in two previous suicide bereavement studies (Jordan & McIntosh, 2011) and is not present in the posttraumatic growth literature. Examination of the results of the correlational analysis demonstrates no significant relationships between PTG and these variables, although notable correlations exist between study variables.

There were significant correlations between the brooding and the reflective subtypes of rumination, which suggests that the ruminative process among this population is not linear but co-occurring. Since others studies have demonstrated growth and its antecedent cognitive processes occurring closer to the traumatic event, rather than farther away from it, this finding is contrary to theories proffered on the temporal nature of growth by Calhoun and Tedeschi (2006) and the antecedent processes to that growth. Additionally, moderate positive correlations between both the brooding and reflective subtypes of rumination and prolonged grief may indicate an ongoing experience of cognitive sense-making and meaning-making in the bereavement trajectory of those experiencing prolonged grief symptoms. Holly Prigerson (personal communication January 9, 2010) describes “a kind-of emotional stuckness . . . stuckness in their grief” that those who are bereaved encounter when experiencing prolonged grief. Brooding rumination suggests a high degree of early sense-making of an event, but not necessarily “meaning-making,” which is associated with reflective rumination, and requires a shift to reflective rumination and schema reconstruction for eventual growth to occur. How long reflective rumination must occur for growth to begin to emerge is unclear. Prolonged

grief has been described as “a persistently elevated set of specific symptoms of grief identified in bereaved individuals with significant difficulties adjusting to the loss” (Prigerson, Vanderwerker, & Maciejewski, 2007). Prigerson suggests that PTG and prolonged grief are “flipsides of the same coin” (personal communication, January 9, 2010). While it is unknown if brooding cognitions are reinforcing of prolonged grief, it makes sense that those who have a high degree of “brooding” ruminations might also be experiencing more symptoms of prolonged grief.

Multiple regression analysis was also conducted in order to examine the relationship between PTG and gender, personality factors of optimism, neuroticism, extraversion, and openness to experience, affective states, and resilience. Contrary to hypotheses and predictions set forth at the outset of this study, none of the study variables predicted PTG except resilience. Consistent with previous research (Tedeschi & McNally, 2011), there was an inverse relationship between PTG and resilience, further supporting the theory that highly resilient individuals have stronger coping skills and may not struggle with the psychological consequences of trauma and experience positive life changes as a result. Westphal and Bonanno (2007) have suggested that PTG is not a well-understood construct. They place PTG in the broader context of individual differences in response to traumatic events and link it with adaptation. They indicate that too much emphasis has been placed on the “cognitive processing” aspect of bereavement and not enough emphasis has been placed on the “positive adaptation” that occurs when one not only experiences growth but also new missions, habits, and behaviors that are meaningful and beneficial. Much like the development of resilience, which research demonstrates is contingent upon social support in the aftermath of the potentially

traumatic event (Bonanno, Galea, Bucciarelli, & Vlahov, 2007), these transformations in action and mission usually occur within the context of social support and engagement. They posit that measures of social engagement and support networks may be more reliable indicators of positive social functioning than perceived “growth” (Westphal & Bonanno, 2007).

Hypothesis 3

Lastly, hypothesis 3 examined the differences in the measurement of prolonged grief between those whose scores met criteria for PG and those whose scores did not meet criteria for PG. There were not any significant differences between those who met criteria and those who did not meet criteria. Additionally, a multiple regression was conducted and findings indicate that prolonged grief does not predict PTG. There is evidence to support the presence of growth in the midst of pathological sequelae of trauma, such as PTSD (Nelson, 2011), however prolonged grief has only been examined in two previous studies of suicide survivors and is only briefly considered in the suicide bereavement literature (Jordan and McIntosh, 2011). A great deal more is left to understand about the prevalence of and trajectory of prolonged grief among suicide survivors.

Resilience

Because resilience was the only variable that significantly predicted PTG, it was determined that resilience needed further investigation. As a result, this study began an investigation of those study variables that had significant relationships with resilience. The finding that extraversion, positive affect, reflective rumination, and neuroticism predict resilience is a surprising result. Some of the results are consistent with the

literature and others are conflicting. The finding that extraversion predicts resilience is not surprising. Extraverts are more adept at social relations and they are stimulated by being with others, hence, their need to be surrounded in moments of crisis by others. The resilience literature demonstrates a strong relationship between resilient outcomes and social support (Bonanno et al., 2007). Therefore, it makes sense that extraverts would likely be able to marshal the resources necessary of social support for more resilient outcomes. Along the same lines, individuals who are higher in positive affect, a hallmark of well-being, or people who appear “happier” have demonstrated through multiple studies to have better outcomes on multiple domains (Lyubomirsky, King, & Diener, 2005). It would make sense those individuals who demonstrate more happiness may also be able to marshal more internal and external resources in order to support themselves in a moment of crisis and be able to maintain those critical resources and support on an ongoing basis. It is simply how “happy” people live their lives. On the other hand, neuroticism or the tendency to experience negative emotional states intuitively would make sense as an emotional state that undermines a more resilient outcome. Therefore, the finding of neuroticism in an inverse relationship with resilience is consistent with the logic of the interaction between this personality construct and the elements necessary for resilient outcomes.

What is confusing and somewhat inconsistent with the cognitive components of posttraumatic growth theory is the finding that reflective rumination predicts resilience. Reflective rumination is a cognitive process whereby beliefs and world views are reconstructed and schemas are reborn. If the previous description of resilience as a process by which individuals do not perceive a need for psychological wrestling with

potentially traumatic events and reflective rumination is closely associated with cognitive processing of trauma, then there is some inconsistency in these findings with theory and previous research. It is also possible that the conceptualization of resilience is much broader and allows for differences among study populations, especially those who have experienced a trauma that challenges world views and “shatters” beliefs as intensely as suicide bereavement does.

Significant Factor Findings

Significant factor findings were also examined during the Posttraumatic Growth among Parent Survivors of Suicide study. There is evidence of significant results for two of the factors: Relating to Others and New Possibilities.

Factor One: Relating to Others

Resilience was the only significant predictor of the first factor, Relating to Others. While this is consistent with the multiple regression on PTG, intuitively it is still difficult to digest. However, a review of the literature on resilience demonstrates why a highly resilient individual would not experience changes in the way they relate to others: they do not perceive a need for it. Resilient individuals are significantly less likely to wrestle and struggle with the psychological consequences of a potentially traumatic event because of their superior coping skills (Lepore & Revenson, 2006) or their “ugly coping” skills, their “self-enhancing biases” which may seem maladaptive in some circumstances but highly adaptive in a traumatic situation (Westphal & Bonanno, 2007). In a study of bereaved individuals in the U.S. and Bosnian civilians in the aftermath of the civil war in the Balkans, self-enhancers were identified as being better adjusted, especially if the experience of loss was profound or particularly violent (Bonanno, Field, Kovacevic, &

Kaltman, 2002). Therefore, more highly resilient individuals may be less likely to change patterns of relationships by valuing them more or becoming especially close to those they are intimate with or even becoming more compassionate toward others who have experienced what they have experienced. Following this logic, this finding makes sense.

Factor Two: New Possibilities

When examining the findings related to the prediction of the second factor, New Possibilities, it makes intuitive sense that the personality trait construct of openness to experience would have a positive relationship with this domain of new responsibilities and new relationships. While neuroticism has been demonstrated in previous research to have a weak negative relationship with posttraumatic growth (Calhoun & Tedeschi, 2006), resilience, as has been discussed previously, has demonstrated in previous research to have an inverse relationship with growth. What is unique about this finding is that evidence for growth within grief and trauma is evident. Openness scores grew and resilience and neuroticism scores decreased as this second factor's score rose, suggesting that this personality construct of openness to experience nurtures this tendency to seek out "new possibilities," even in the midst of trauma and loss.

Special Considerations

Overall, the suicide bereaved parents' mean total PTGI score ($M = 46.26$, $SD = 24.83$), indicated a lower degree of posttraumatic growth for the group as a whole. The total mean PTGI score in a previous study of parents bereaved by homicide, accident, or illness was 64.66, but was measured a mean number of 7 years from the death of the child (Engelkemeyer & Marwit, 2008). In this same study, time since the death the child was correlated with the PTGI total score. Mean total PTGI scores of individuals who

have been exposed to trauma in other studies have fallen within a range. For example, mean scores were 41.2 for Japanese motor vehicle accident survivors (Nishi, Matsuoka, & Kim, 2010), 51 for cancer patients (Steel, Gamblin, & Carr, 2008), and 62.31 for caregivers bereaved by the death of a loved one to HIV/AIDS (Cadell & Sullivan, 2006). Calhoun & Tedeschi (2006) do not provide scores on growth scales and are skeptical of “average scores” on inventories, especially with regard to reactions to trauma, because of the tendency to underappreciate aspects of the change experienced by individuals (p. 15). However, by looking at other studies, one may glean information that provides some comparative value. One study characterized total PTGI scores that were equal to or greater than 60 as representing moderate positive life change and those equal to or exceeding a score of 80 indicating a great or very great degree of positive change (Feder et al, 2008). In *Posttraumatic Growth among Parent Survivors of Suicide*, 26% of the participants registered a score equal to or great than 60, representing moderate growth, and 12% of the scores were equal to or above 80, representing great or very great positive growth. Scores tended to be in the lower range with 31% scoring between 20 and 40 and 27% scoring between 40 and 60.

In order to gain some understanding of the domains of growth that were achieved, the factor scores were also analyzed. For the group as a whole, the items endorsed most strongly on the PTGI corresponded to the first factor, *Relating to Others*. Feder and colleagues (2008) identified mean factor scores equal to or above a 3 on a scale of 0 - 6 representing “at least moderate growth” (p. 363). In the *Posttraumatic Growth among Parent Survivors of Suicide* study, an examination of the factor scores determined that 40% of the suicide bereaved parents reflected a mean factor score of 3 or greater on the

first factor of Relating to Others. This is flanked by the fourth factor, Spiritual Change (34%), and the fifth factor, Appreciation of Life (33%). Much lower percentages of factor scores demonstrating at least moderate growth were signaled on the second factor, New Possibilities (18%), and the third factor, Personal Strength (19%). This is very consistent with the data collected by the authors of the PTGI over a number of studies and years (Calhoun et al., 2010). Bereaved individuals studied tend to report more growth in the following domain areas in descending order: Relating to Others, Appreciation of Life, and Spiritual Change. When compared to individuals affected by other traumas, bereaved individuals report lesser growth in the areas of Personal Strengths and New Possibilities. The suicide bereaved parents in the Posttraumatic Growth among Parent Survivors of Suicide study are consistent with these findings. They demonstrate higher mean factor scores in the domains of Relating to Others, Spiritual Change, and Appreciation of Life, but lower mean factor scores in the domains of Personal Strength and New Possibilities.

Limitations

There were a number of limitations of this study with, perhaps, the most important being its cross-sectional nature. One of the major criticisms put forward by Jordan and McIntosh of the suicide bereavement literature is the cross-sectional nature of most of the studies of suicide survivors, which deprives researchers of fully understanding the course of suicide bereavement. Additionally, Westphal and Bonanno (2007) are critical that most of the available PTG research is retrospective self-reports based on cross-sectional design. As a result, it is unclear if the reports of growth are

actual positive life changes or “retrospective reattributions” for the intense stress and difficulty during the recovery process (Bonanno, 2005, p. 267).

Given the lower mean PTGI score of this sample and the lower percentages of moderate growth scores on the individual PTG factors, when compared to other studies, one must wonder about the temporality of these responses and the closeness in proximity to the death of the child as being a disadvantage rather than an advantage. While Calhoun and Tedeschi (2006) argue that growth occurs closer to the event rather than farther away from the event, was time measurement too close to the event a barrier to measuring true growth from this trauma? The total mean PTGI score in a previous study of parents bereaved by homicide, accident, or illness was 64.66, but was measured a mean number of 7 years from the death of the child (Engelkemeyer & Marwit, 2008). In this same study, time since the death the child was correlated with the PTGI total score. Additionally, a previous study of 30 aviators held captive as POWs during the Vietnam War (Feder et al, 2008) demonstrates much higher percentages of respondents indicating moderate growth on the five domains of PTG, including 93% on Appreciation of Life, 80% on Personal Strength, 57% on Relating to Others, 57% on Spiritual Change, and 50% on New Possibilities, but was measured several decades from the event. Park and Lechner (2006) are critical of the varied lengths of time used in various studies and the lack of established time intervals that assessments should be conducted. A limitation of this study is that all the parents have experienced their loss within two years, although actual time since the loss was not captured. This ignores the possibility that the experience of loss is much different for those who lost their child three months ago versus eighteen months ago and would result in different PTG or PG outcomes.

Marilyn Koenig, founder of Friends for Survival Inc., a California-based suicide bereavement nonprofit that helped recruit participants for this study, has pondered the relationship between length of time from the suicide, the internal processes that this manner of death spurs, and potential growth as a result. “Due to the sheer trauma of this experience, the terrible shock and, sometimes, the PTSD experienced by family and friends, it takes months and years for suicide survivors to gain perspective on this experience. It takes a long time for survivors to appreciate how this death has affected their lives, in both positive and negative ways” (personal communication, June 9, 2011).

Another limitation is the self-selection bias of the research sample. The individuals recruited for this study were done so through national and international suicide support organizations, Friends for Survival, Inc. and Parents of Suicide online support. Individuals who participate in these organizations may tend to be help-seeking individuals who differ vastly on measures of personality and growth than those individuals who do not participate in groups geared toward helping suicide survivors navigate their way through this experience of loss.

While there were a number of limitations to this study, there were also several strengths. This study marks the first ever investigation of Posttraumatic Growth and survivors of suicide. While the experience of the suicide bereaved has not been fully investigated in general, the investigations that do exist tend to focus on the psychopathology of the experience rather than the growth potential. Another strength of this study is the nature of online data collection, which allows for a much broader pool of respondents. Additionally, because of the anonymity of the online environment, this form of data collection may also encourage more disclosure and more valid responses.

Future Directions

The current study respondents were asked to participate in future research. Perhaps, a longitudinal study of Posttraumatic Growth of parents bereaved by suicide will render different data including higher growth scores and higher factor scores consistent with previous research. In future research, it is also possible that PTG will vary based upon different relationships, such as various family members, work colleagues, and intimate partner relationships, that will be taken into consideration. Additionally, the quality and closeness of the relationship between the decedent and the bereaved may also be taken into consideration in future research. This may be accompanied by an investigation of the suddenness of the death and whether or not the death was after multiple previous attempts or long struggle with mental and/or physical illness and the suicide was seemingly out of the blue. Additionally, adding measures or approaches that capture pre-trauma estimations of self in order to more adequately gauge whether actual growth has occurred is another consideration. These questions are for future studies. The current study is the first of its kind among the suicide bereaved and more research, longitudinal in nature, is necessary before any definitive statements can be made about the nature of the relationship between this form of trauma, suicide bereavement, and the potential for growth as a result.

Appendix A

Informed Consent



The Catholic University of America

*David A. Jobes, Ph.D., ABPP
The Catholic University of America
Department of Psychology
Washington, DC 20064
Ph. 202-319-5761
Fax 202-319-6263*

Statement of Informed Consent

Title: Posttraumatic Growth among Parent Survivors of Suicide
Investigator: Melinda Moore, Dept of Psychology

You are being asked to participate in this research project at The Catholic University of America because you have lost a son or daughter to suicide and are in a unique position to contribute to what we know about surviving this kind of loss. You are what is known as a “suicide survivor” because you have survived this loss of your child to suicide. Currently, very little is known about this experience. Melinda Moore, the Principal Investigator of this study, is part of the Jobes Suicide Prevention lab at Catholic University of America and works on a team to investigate all aspects of suicidal thinking and behavior. For too long, researchers have not studied suicide survivors and yet they are the most acutely affected in the aftermath of this tragedy.

We want you to know that taking part in this research is entirely voluntary. You may choose to not take part, or you may withdraw from this study at any time. You may choose to take part but decline to answer particular questions. You may receive no direct benefit from taking part in this study other than the knowledge that this research may give us information to help other survivors of suicide in the future.

This study is being conducted because currently suicide bereavement researchers know very little about what it is like to lose a son or daughter to suicide and how certain personal factors, including personality factors as well as more temporary or circumstance-related factors, such as someone’s current mood, may either help or hinder one’s survival and potential growth from this experience.

The current study is being done in partial fulfillment of the researcher's doctoral dissertation process at The Catholic University of America. In this study, we will ask participants to respond to demographic information, open-ended questions, and ten instruments that measure personality, mood, and thoughts related to the suicide of your son or daughter. The entire process should take you less than 30 minutes to complete. The Principal Investigator will also be asking your permission to contact you in five years for a follow up study. In order to contact you, she will ask you for your name, address, telephone, and e-mail address in order to follow up with you later. This information will be stored separately from the information collected now and will not be used in any way to identify participants.

Any information obtained about you as a result of your participation in this study will be kept as confidential as is legally possible. Your identity and anonymity will be protected in accordance with relevant legal statutes. All participant survey forms and questionnaires will only be identified through a participant ID number and consent forms will be kept confidential.

Information gathered for a five-year follow up that contains name and contact information will be kept away from surveys and questionnaire data and in a locked cabinet. The results of this study may be published, but personal information will be kept confidential unless required by law.

The anticipated risks for your participation in this study are minimal, other than the discomfort of being reminded about your unique and personal loss of a loved one to suicide. Additionally, other questions in the survey may cause general discomfort as well. If you become uncomfortable and choose to stop participating in this study, you have the right to do so at any time. As well, if you become distressed and need to speak to a crisis counselor at any time, you can call 1-800-273-TALK (8255), the national toll-free crisis line that is available 24/7, or you can access a survivor support group in your state from the American Association of Suicidology's website at www.suicidology.org by clicking on a tab at the top titled "Suicide Loss Support," then clicking on the link to the support group directory to the left.

If you become distressed or have any questions or concerns about this study, you may contact the researchers at:

David A. Jobes, Ph.D., ABPP
Department of Psychology
The Catholic University of America
Washington, DC 20064
Ph: 202-319-5761
Fax: 202-319-6263

Melinda Moore, M.A.

Department of Psychology
The Catholic University of America
Washington, DC 20064
Ph: 703-220-9252
94Moore@cua.edu

You can also call the CUA Office of Sponsored Program at 213 McMahon Hall, Catholic University of America, Washington, DC 20064 or by phone at 202-319-5218 if you have any questions about this study or about your rights as a research participant.

There are no direct benefits from participating in this study, but the process of participating in this study may help others in the future as they encounter the suicide of a loved one. It is the express goal of this study to better understand this experience, so we can help survivors of suicide in the future. Your participation in this study is critical to understanding this experience. However, as stated previously, your participation is completely voluntary and one alternative is to not participate in the study.

The Current Study
I have read the explanation about this study. I hereby consent to take part in this study.
<input type="checkbox"/> Check if you agree to participate in the current study.
<input type="checkbox"/> Check if you agree to provide contact information for a five-year follow up study, then provide contact information below:

Participant's Name

Date
Contact information to be used for five-year follow-up study:
Your Name: _____
Your Address: _____
City: _____ State: _____
Telephone number: _____
Mobile number: _____
E-mail Address: _____

Appendix B

Demographic Questionnaire

Your gender (check one): ☐ Male ☐ Female

Year of your birth: _____

Relationship of deceased (check): ☐ Daughter ☐ Son

What is your ethnicity?

- ☐ American Indian or Alaska Native
- ☐ Asian
- ☐ Black or African American
- ☐ Hispanic or Latino
- ☐ Native Hawaiian or Pacific Islander
- ☐ White
- ☐ Other
- ☐ Unknown

What is your approximate annual household income?

- ☐ Less than \$10,000
- ☐ \$10,000 - \$14,999
- ☐ \$15,000 - \$24,999
- ☐ \$25,000 - \$34,999
- ☐ \$35,000 - \$49,999
- ☐ \$50,000 - \$74,999
- ☐ \$75,000 - \$99,999
- ☐ \$100,000 - \$149,999
- ☐ \$150,000 - \$199,999
- ☐ \$200,000 or more

What is the highest level of education you have obtained?

- ☐ Less than 9th Grade
- ☐ 9th to 12th Grade, No Diploma
- ☐ High School Graduate or Equivalent
- ☐ Some College, No Degree
- ☐ Associate Degree
- ☐ Bachelor's Degree
- ☐ Graduate or Professional Degree

What is your marital status?

- ☐ Never Married
- ☐ Married (together)
- ☐ Married (separated)
- ☐ Divorced
- ☐ Widowed

☐ Unmarried Partner

What is your religious affiliation?

☐ Catholic

☐ Protestant

☐ Jew

☐ Muslim

☐ Atheist

☐ Other _____

Have you had any difficult experiences with caregivers, such as physicians, psychologists, or clergy in the aftermath of your loss that relates to your son or daughter's suicide? ☐ Yes ☐ No

If yes, can you tell us about it?

What is the one thing they could have done or said differently that would have made this less difficult or painful?

Appendix C

Neuroticism, Extraversion, and Openness Subscales of NEO-FFI

Read each statement carefully. For each statement click the response that best represents your opinion.

- Click on SD if you *strongly disagree* or the statement is false.
- Click on D if you *disagree* or the statement is mostly false.
- Click on N if you are *neutral* on the statement, if you cannot decide, or if the statement is about equally true and false.
- Click on A if you *agree* or the statement is mostly true.
- Click on SA if you *strongly agree* or the statement is definitely true.

1. I am not a worrier.
2. I like to have a lot of people around me.
3. I don't like to waste my time daydreaming.
4. I often feel inferior to others.
5. I laugh easily.
6. Once I find the right way to do something I stick to it.
7. When I'm under a great deal of stress, sometimes I feel like I'm going to pieces.
8. I don't consider myself especially "light-hearted."
9. I am intrigued by the patterns I find in art and nature.
10. I rarely feel lonely or blue.
11. I really enjoy talking to people.
12. I believe letting students hear controversial speakers can only confuse and mislead them.
13. I often feel tense and jittery.
14. I like to be where the action is.
15. Poetry has little or no effect on me.
16. Sometimes I feel completely worthless.
17. I usually prefer to do things alone.
18. I often try new and foreign foods.
19. I rarely feel fearful or anxious.
20. I often feel as if I am bursting with energy.
21. I seldom notice the moods or feelings that different environments produce.
22. I often get angry at the way people treat me.
23. I am a cheerful, high-spirited person.
24. I believe we should look to our religious authorities for decisions on moral issues.
25. Too often, when things go wrong, I get discouraged and feel like giving up.

26. I am not a cheerful optimist.
27. Sometimes when I am reading poetry or looking at a work of art, I feel a chill or wave of excitement.
28. I am seldom sad or depressed.
29. My life is fast-paced.
30. I have little interest in speculating on the nature of the universe or the human condition.
31. I often feel helpless and want someone else to solve my problems.
32. I am a very active person.
33. I have a lot of intellectual curiosity.
34. At times I have been so ashamed I just wanted to hide.
35. I would rather go my own way than be a leader of others.
36. I often enjoy playing with theories or abstract ideas.

Appendix D

The Positive and Negative Affect Schedule

This scale consists of a number of words that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space next to that word. Indicate to what extent you generally feel this way. Use the following scale to record your answers.

1 = very slightly or not at all

2 = a little

3 = moderately

4 = quite a bit

5 = extremely

_____ interested

_____ distressed

_____ excited

_____ upset

_____ strong

_____ guilty

_____ scared

_____ hostile

_____ enthusiastic

_____ proud

_____ irritable

_____ alert

_____ ashamed

_____ inspired

_____ nervous

____ determined

____ attentive

____ jittery

____ active

____ afraid

Appendix E

Post Traumatic Growth Inventory

Indicate for each of the statements below the degree to which this change occurred in your life as a result of your child's suicide, using the following scale.

- 0= I did not experience this change as a result of my crisis.
- 1= I experienced this change to a very small degree as a result of my crisis.
- 2= I experienced this change to a small degree as a result of my crisis.
- 3= I experienced this change to a moderate degree as a result of my crisis.
- 4= I experienced this change to a great degree as a result of my crisis.
- 5= I experienced this change to a very great degree as a result of my crisis.

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

Appendix F

Prolonged Grief Disorder-13

PART I INSTRUCTIONS: FOR EACH ITEM, PLACE A CHECK MARK TO INDICATE YOUR ANSWER.

1. In the past month, how often have you felt yourself longing or yearning for the person you lost?

- ☐ 1 = Not at all
- ☐ 2 = At least once
- ☐ 3 = At least once a week
- ☐ 4 = At least once a day
- ☐ 5 = Several times a day

2. In the past month, how often have you had intense feelings of emotional pain, sorrow, or pangs of grief related to the lost relationship?

- ☐ 1 = Not at all
- ☐ 2 = At least once
- ☐ 3 = At least once a week
- ☐ 4 = At least once a day
- ☐ 5 = Several times a day

3. For questions 1 or 2 above, have you had the experience at least daily, for a period of at least 6 months?

- ☐ No
- ☐ Yes

4. In the past month, how often have you tried to avoid reminders that the person you lost is gone?

- ☐ 1 = Not at all
- ☐ 2 = At least once
- ☐ 3 = At least once a week
- ☐ 4 = At least once a day
- ☐ 5 = Several times a day

5. In the past month, how often have you felt stunned, shocked, or dazed by your loss?

- ☐ 1 = Not at all
- ☐ 2 = At least once
- ☐ 3 = At least once a week
- ☐ 4 = At least once a day
- ☐ 5 = Several times a day

PART II INSTRUCTIONS: FOR EACH ITEM, PLEASE INDICATE HOW YOU CURRENTLY FEEL. CIRCLE THE NUMBER TO THE RIGHT TO INDICATE YOUR ANSWER.

1=Not at all 2=Slightly 3=Somewhat 4=Quite a bit 5=Overwhelmingly

6. Do you feel confused about your role in life or feel like you don't know who you are (i.e., feeling that a part of yourself has died)?

1 2 3 4 5

7. Have you had trouble accepting the loss?

1 2 3 4 5

8. Has it been hard for you to trust others since your loss?

1 2 3 4 5

9. Do you feel bitter over your loss?

1 2 3 4 5

10. Do you feel that moving on (e.g., making new friends, pursuing new interests) would be difficult for you now?

1 2 3 4 5

11. Do you feel emotionally numb since your loss?

1 2 3 4 5

12. Do you feel that life is unfulfilling, empty, or meaningless since your loss?

1 2 3 4 5

PART III INSTRUCTIONS: FOR EACH ITEM, PLACE A CHECK MARK TO INDICATE YOUR ANSWER.

13. Have you experienced a significant reduction in social, occupational, or other important areas of functioning (e.g., domestic responsibilities)?

_____ No
_____ Yes

Appendix G

Ruminative Responses Scale

For each of the following items, indicate whether or not you agree the item represents what you think or do at this time by clicking yes or no.

- | | | |
|--|-----|----|
| 1. Think "What am I doing to deserve this?" | YES | NO |
| 2. Analyze recent events to try to understand why you are depressed | YES | NO |
| 3. Think "Why do I always react this way?" | YES | NO |
| 4. Go away by yourself and think about why you feel this way | YES | NO |
| 5. Write down what you are thinking and analyze it | YES | NO |
| 6. Think about a recent situation, wishing it had gone better | YES | NO |
| 7. Think "Why do I have problems other people don't have?" | YES | NO |
| 8. Think "Why can't I handle things better?" | YES | NO |
| 9. Analyze your personality to try to understand why you are depressed | YES | NO |
| 10. Go someplace alone to think about your feelings | YES | NO |

Appendix H

The 14-Item Resilience Scale (RS-14)

Date_____

Please read the following statements. To the right of each you will find seven numbers, ranging from "1" (Strongly Disagree) on the left to "7" (Strongly Agree) on the right. Circle the number which best indicates your feelings about that statement. For example, if you strongly disagree with a statement, circle "1". If you are neutral, circle "4", and if you strongly agree, circle "7", etc.

Circle the number in the appropriate column	Strongly Disagree				Strongly Agree		
1. I usually manage one way or another.	1	2	3	4	5	6	7
2. I feel proud that I have accomplished things in life.	1	2	3	4	5	6	7
3. I usually take things in stride.	1	2	3	4	5	6	7
4. I am friends with myself.	1	2	3	4	5	6	7
5. I feel that I can handle many things at a time.	1	2	3	4	5	6	7
6. I am determined.	1	2	3	4	5	6	7
7. I can get through difficult times because I've experienced difficulty before.	1	2	3	4	5	6	7
8. I have self-discipline.	1	2	3	4	5	6	7
9. I keep interested in things.	1	2	3	4	5	6	7
10. I can usually find something to laugh about.	1	2	3	4	5	6	7
11. My belief in myself gets me through hard times.	1	2	3	4	5	6	7
12. In an emergency, I'm someone people can generally rely on.	1	2	3	4	5	6	7
13. My life has meaning.	1	2	3	4	5	6	7
14. When I'm in a difficult situation, I can usually find my way out of it.	1	2	3	4	5	6	7

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Appendix I

Life Orientation Test-Revised

Please be as honest and accurate as you can throughout. Try not to let your response to one statement influence your responses to other statements. There are no "correct" or "incorrect" answers. Answer according to your own feelings, rather than how you think "most people" would answer.

A = I agree a lot
B = I agree a little
C = I neither agree nor disagree
D = I DISagree a little
E = I DISagree a lot

1. In uncertain times, I usually expect the best.
2. It's easy for me to relax.
3. If something can go wrong for me, it will.
4. I'm always optimistic about my future.
5. I enjoy my friends a lot.
6. It's important for me to keep busy.
7. I hardly ever expect things to go my way.
8. I don't get upset too easily.
9. I rarely count on good things happening to me.
10. Overall, I expect more good things to happen to me than bad.

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