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Relationship Between Resilience Factors and Presence of Posttraumatic Stress Disorder Symptoms and Posttraumatic Growth in Suicide Loss Survivors

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RELATIONSHIP BETWEEN RESILIENCE FACTORS AND PRESENCE OF POSTTRAUMATIC STRESS DISORDER SYMPTOMS AND POSTTRAUMATIC GROWTH IN SUICIDE LOSS SURVIVORS

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Dissertation Approval

This is to certify that the thesis presented to us by Natalya Bogopolskaya on the 17th day of December, 2018, in partial fulfillment of the requirements for the degree of Doctor of Psychology, has been examined and is acceptable in both scholarship and literary quality.

Committee Members' Signatures:

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Dedication

For my mother, who sacrificed endlessly for my brother and me to achieve all that we have today.

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Suicide continues to be a significant public health concern. Raising awareness and reducing stigma through open dialogue can help save lives and offer support to those in need. I hope that, in some small way, this study has helped to spark a continuation of that discussion and related actions.

Abstract

Many studies have examined the bereavement patterns and development of anxiety or mood disorders in suicide loss; however, few have looked at the development of posttraumatic stress disorder (PTSD) or the impact of resilience factors on the development of PTSD or posttraumatic growth (PTG) in suicide loss survivors. This study's primary hypothesis was that a greater number of resilience traits, as defined under the domains of personal competence, trust/tolerance/strengthening effects of stress, acceptance of change and secure relationships, control, and spiritual influences (CD-RISC-25; Connor & Davidson, 2003), would correlate with fewer PTSD symptoms under DSM-5 criteria (PCL-5; Weathers et al., 2013) and lower levels of PTG (PTGI-X; Tedeschi, Cann, Taku, Senol-Durak, & Calhoun, 2017). Additional factors were also assessed, including the method of discovery of the suicide, time passed since the suicide, level of perceived closeness to the deceased, relationship to the deceased, and exposure to support groups, mental health treatment, or other community supports. Data were collected from 336 adult participants between the ages of 18 and over 71 years, who identified as having lost someone to suicide in a time period more than six months prior to survey completion. Data analyses were performed on the 219 individuals who met inclusion criteria and responded to all 91 survey questions. The results of the study found that direct discovery of the suicide did not result in higher rates of reported PTSD symptoms when compared to the other methods of discovery of the suicide; more time passed since the discovery of the suicide significantly contributed to lower rates of reported PTSD symptoms; losing one's child, mother, or long-term significant partner to suicide resulted in statistically significant higher rates of reported PTSD symptoms compared to other relationships to the deceased; the more close a respondent reported feeling to the deceased, the more PTSD symptoms he or she endorsed; exposure to postvention did not significantly contribute to rates of reported PTSD symptoms; and an

increase in resilience factors statistically predicted lower rates of PTSD symptoms and higher rates of PTG.

Keywords: suicide, suicide loss, suicide loss survivors, bereavement, resilience, posttraumatic stress disorder, posttraumatic growth

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Chapter 1: Introduction

Statement of the Problem

Suicide. The Latin root of the word *suicide* means "self-murder" (Jordan & McIntosh, 2011). Suicide may be sudden or expected, possibly as a result of a long-time battle with a mental health disorder (Miyabayashi & Yasuda, 2007; Smolin & Guinan, 1993; Zisook & Shear, 2009). The Centers for Disease Control and Prevention (CDC; 2016) Web-based Injury Statistics Query and Reporting System (WISQARS) website reported that almost 45,000 people died by suicide in the United States in 2016. Suicide is the tenth leading cause of death in the United States across all ages (CDC, 2016) and the 15th leading cause of death internationally (World Health Organization [WHO], 2014). Given this continually rising increase in prevalence, death due to suicide is a public health concern.

Suicide loss. Many studies to date have established a number of potential negative significant impacts of losing a loved one—a child, a parent, a spouse, or a friend—to suicide, including long-term psychological effects and development of varied disorders (Barlow & Coleman, 2003; Brent, Perper, Moritz, Bridge, & Canobbio, 1996; de Groot & Kollen, 2013; Dyregrov, Nordanger, & Dyregrov, 2003; Jordan, 2008; Melhem et al., 2004; Young et al., 2012). Suicide bereaved individuals have been found to be more at risk for suicidality, complicated grief (CG), posttraumatic stress disorder (PTSD), anxiety, and depression than non-suicide bereaved individuals, which ultimately results in poorer physical and mental health (de Groot & Kollen, 2013; de Groot, Neeleman, van der Meer, & Burger, 2010; Dyregrov et al., 2003; Jordan, 2008; Young et al., 2012; Zisook & Shear, 2009). Jordan (2008) further specified additional risks to include increased distress, "intense guilt or feelings of responsibility for the death, a ruminative need to explain or make sense of the death, strong feelings of rejection, abandonment, and anger at the deceased, trauma symptoms, CG, and shame about the manner of death" (p. 680).

Suicide loss survivor. Those who have lost a close person to suicide are called "suicide loss survivors," including children and adults who consist of spouses, friends, family members, close coworkers, mental health providers, and more. If a suicide loss survivor is limited only to members of the nuclear family, there are approximately five to six survivors per suicide, in addition to 15 to 20 extended family and other social network members (Berman, 2011, p. 114). Through a random-digit-dial survey in Kentucky, Cerel, Maple, van de Venne, Moore, Flaherty, and Brown (2016), found that almost half of the participants reported lifetime exposure to suicide. In a study utilizing similar methods a few years prior, Cerel, Maple, Aldrich, and van de Venne (2013) found that 20% of their participants reported identifying as suicide loss survivors and being significantly impacted by suicide. Based on these estimates, and depending on the level of exposure to a suicide, approximately 250,000 to 2.5 million people became suicide loss survivors in 2015 and approximately 6 million Americans became survivors of suicide in the last 25 years.

Suicide grief and bereavement. The terms *grief* and *bereavement* are often used interchangeably. Grief refers to the psychological, behavioral, and emotional reaction to a loss (Andriessen, Draper, Dudley, & Mitchell, 2015) and is not considered a "state, but rather a process" (Zisook & Shear, 2009, p. 68). Bereavement is the state of having lost someone significant through death (Goldenberg, Biggs, Flynn, & McCarroll, 2010). In his book, *The Other Side of Sadness: What the New Science of Bereavement Tell Us About Life After Loss*, Bonanno (2009) described three broad courses of bereavement: resilience, recovery, and chronic grief. Here, resilience refers to returning to pre-loss functioning within a few months of the loss or trauma. Recovery refers to returning to pre-loss functioning within three to six months of the loss or trauma. Chronic grief is experienced by 10% to 15% of bereaved individuals who demonstrate more impaired functioning and prolonged grief symptoms for extended periods of time, such as six to 12 months (or more) post-loss or trauma (Goldenberg et al., 2010).

Although not included in the *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition* (*DSM-5*; American Psychiatric Association [APA], 2013) as a diagnosis, bereaved individuals with symptoms of chronic grief are said to meet the proposed symptoms for what is referred to as prolonged grief disorder (PGD) or CG. In general, CG includes some form of separation distress, which may consist of frequent pangs of painful emotions, intense yearning and longing for the deceased, ruminations about or preoccupations with thoughts of the loved one, and traumatic distress, which can include a persistent disturbing sense of disbelief regarding the death, anger and bitterness, distressing and intrusive thoughts related to the death, and avoidance of activities or situations which serve as reminders of the painful loss (Shear & Shair, 2005; Simon et al., 2007; Zisook & Shear, 2009). Experiencing an unexpected loss has been linked with higher probability for increased distress in mourners and more complicated grieving patterns (Miyabayashi & Yasuda, 2007).

Andriessen et al. (2015) outlined how the trajectory of bereavement and coping following a suicide is dependent upon factors such as the quality of the relationship with the deceased and the characteristics of the death. In reviewing major influences on adjustment following bereavement, Klein and Alexander (2003) identified that an unexpected, sudden, or traumatic death—such as a suicide or homicide—or being exposed to a badly damaged body can be extremely distressing and confusing, rather than healing, for the mourner. Direct exposure to the death scene or discovering the body after the suicide may lead to development of PTSD (Andress & Corey, 1978).

Development of posttraumatic stress disorder. In the fifth revision of the *DSM* (*DSM-5*), PTSD is no longer listed as an anxiety disorder as it had been in the *DSM-IV-TR*; rather, it is now in a new class of trauma and stress-related disorders (APA, 2013). There are eight diagnostic criteria for PTSD. The person had to have been exposed to a traumatic event or stressor (criterion A). The following four criteria are symptom clusters: intrusion (criterion B), avoidance (criterion C), negative alterations in cognitions

and mood (criterion D), and alterations in arousal and reactivity (criterion E). Criterion F is related to duration ("Persistence of symptoms, in Criteria B, C, D, and E, for more than one month"). Criterion G is related to how significant the functional impairment is (e.g., in work or social settings). Criterion H clarifies exclusion criteria ("Disturbance is not due to medication, substance use, or other illness"). Specifiers include dissociative symptoms and delayed onset (more than six months after the trauma) for meeting full criteria, even if some related symptoms were present immediately after (APA, 2013).

Commonly observed behaviors and predicted disorders that develop in suicide loss survivors are those related to depression and anxiety, along with suicidal ideation and behaviors; rarely is PTSD among that list (Andriessen et al., 2015). Wingo, Fani, Bradley, and Ressler (2010) defined trauma to include childhood emotional, sexual, or physical abuse, experiencing a natural disaster, serious accident or injury, sudden life-threatening illness, being in military combat or a war zone, being attacked with or without a weapon, having a close friend or family member attacked or murdered, or sexual assault. Many suicide loss survivors experience the loss of loved ones not only as unnatural violent deaths, but also as traumatic events that leave them with questions as to why someone close to them chose to kill himself or herself (Jordan & McIntosh, 2011). Although everyone experiences the death of a loved one in some form, losing someone close to suicide can be especially traumatic and, consequently, is one type of trauma that can lead to PTSD.

Approximately "50%–60% of the U.S. population is exposed to traumatic stress but only 5%–10% develop PTSD" (Ozer, Best, Lipsey, & Weiss, 2003, p. 54); nonetheless, estimates of chronic or prolonged PTSD have varied based on the type of stressor or exposure to trauma. Limited data on PTSD prevalence, specifically among suicide loss survivors, exist. Dyregrov, Nordanger, and Dyregrov (2003) found that one to one and half years post-loss, 51% to 52% of suicide bereaved parents met criteria for PTSD and 78% met criteria for CG. Zisook, Chentsova-Dutton, and Shuchter (1998)

found that two months after the loss, 36% of suicide or accident bereaved widows and widowers met criteria for PTSD.

Melhem, Day, Shea, Day, C. F. Reynolds, and Brent (2004) identified risk factors that may serve as predictors of PTSD among adolescents exposed to the suicide of a peer, such as seeing the scene of the death, previous personal or family history of psychiatric disorders such as depression or anxiety, believing they could have done something to prevent the death, prior interpersonal conflict with the deceased, financial problems, or having spoken to the victim during the 24 hours prior to the suicide. The authors also noted that depending on which risk factors were present in the suicide bereaved adolescents, the rate of meeting PTSD criteria by six months ranged from 37% to 78%. The presence of all risk factors was found to be associated with a 98% risk of PTSD (Melhem et al., 2004). In a meta-analysis of 68 studies on the predictors of PTSD and its symptoms, Ozer, Best, Lipsey, and Weiss (2003) identified seven predictors: prior trauma, prior psychological maladjustment, family history of psychopathology, perceived life threat during the trauma, lack of post-trauma social support, peritraumatic emotional responses (e.g., high levels of emotion during or in the immediate aftermath of the traumatic event), and peritraumatic dissociation (e.g., dissociative experiences during or in the immediate aftermath of the traumatic event). Further, the authors noted that data analysis produced results that peritraumatic psychological processes, not prior characteristics (e.g., prior adjustment, prior history of trauma, and family history of psychopathology), are the strongest predictors of PTSD.

Resilience. Depending on the context, the definition of resilience can range – from a process, to a set of personality traits, to the amount of time it takes an individual to recover to pre-stressor functioning. In reviewing 271 studies, Windle (2011) summarized resilience as "the process of negotiating, managing and adapting to significant sources of stress or trauma. Assets and resources within the individual, their life and environment facilitate this capacity for adaptation and 'bouncing back' in the face of adversity.

Across the life course, the experience of resilience will vary" (p. 1). Windle came to this definition based on her analysis of the studies and identifying three necessary requirements for resilience: "the need for a significant adversity/risk, the presence of assets or resources to offset the effects of the adversity, and positive adaptation or the avoidance of a negative outcome" (p. 12). Windle cited dictionary definitions, which generally describe resilience as the ability to recover quickly after a negative or stressful event. In regard to trauma and loss, Bonanno (2004) conceptualized resilience as "the ability of adults in otherwise normal circumstances who are exposed to an isolated and potentially highly disruptive event, such as the death of a close relation or a violent or life-threatening situation, to maintain relatively stable, healthy levels of psychological and physical functioning" (p. 20).

Bonanno (2004) highlighted three important points about resilience: resilience is different from the process of recovery, resilience in the face of loss or potential trauma is common, and there are multiple and sometimes unexpected pathways to resilience. Bonanno identified numerous pathways that lead to resilience, including the personality traits of hardiness, self-enhancement, repressive coping, positive emotion, and laughter. Mancini and Bonanno (2006) noted that although people may demonstrate having characteristics associated with resilience, to determine whether they truly

> exhibit resilience in the face of potential trauma can only be defined in terms of their actual outcome after a potentially traumatic event. The psychological study of resilience, therefore, dictates that we operationally define resilience as an outcome after a highly stressful event and then document the factors that either promote or detract from that outcome. (p. 972)

Given the slight varieties in definitions of resilience, no one measure for resilience has been determined a "gold standard" (Windle, Bennett, & Noyes, 2011). The Connor-Davidson Resilience Scale (CD-RISC; Connor & Davidson, 2003) is a self-report rating scaling, which measures stress coping ability in adults across five domains:

personal competence, trust/tolerance/strengthening effects of stress, acceptance of change and secure relationships, control, and spiritual influences. This measure encompasses both the innate resilient traits that one may possess in addition to external or environmental aspects that ultimately serve as protective factors as well.

Windle (2011) noted that having positive life experiences in childhood and/or adolescence and having protective factors or other assets are "defining attributes of resilience" (p. 13). As such, resilience and the traits that make it up can also serve as a protective factor, for example, against developing a disorder or taking too long to return to pre-stress or pre-trauma functioning.

Resilience as a protective factor. According to Bonanno (2004), "resilience is more than the simple absence of psychopathology" (p. 20). Regardless of personality traits predictive of resilience prior to a trauma, observing how a person responds to a traumatic event or loss confirms whether that person is resilient. This may be accomplished by measuring the amount of time it takes a person to return to pre-loss or pre-trauma level of functioning, and whether he or she returns to it at all (Bonanno, 2004; Mancini & Bonanno, 2006; Wagnild & Young, 1993). Here, time is a measure of how resilient a person may be; consequently, the possessed traits make the time to return to pre-stressor functioning shorter.

People with higher levels of resilience are less likely to be feel "shattered" by the traumatic event. Consequently, some people with high levels of resilience may feel empowered by it and experience self-growth as a result of the trauma, whereas others with high levels of resilience may be neither negatively nor positively affected by the trauma and, therefore, will not demonstrate the capacity for growth (Bonanno, Papa, & O'Neill, 2001; Bonanno, Wortman, & Nesse, 2004; Calhoun, Tedeschi, Cann, & Hanks, 2010; Janoff-Bulman, 2006; Levine, Laufer, Stein, Hamama-Raz, & Solomon, 2009; Moore, Cerel, & Jobes, 2015). Posttraumatic growth (PTG) can be described as a "positive post-trauma change in psychological functioning, . . . an outcome following a

major life event and meaning or sense making of the experience [and ultimately] both a coping strategy and precursor to the gaining of wisdom" (Groos & Shakespeare-Finch, 2013, p. 5).

The more resilience traits a person continues to experience and present, the more likely his or her overall resilience can serve as a protective factor against meeting full diagnostic criteria for disorders, such as PTSD, even if for some time the person may exhibit symptoms associated with the disorder. Further, especially after being exposed to the trauma of losing a close person or loved one to suicide, the less likely the person is to experience impairment in functioning and activities of daily living, including professional successes, personal relationships, and healthier life choices. High rates of positive decision-making and optimism are the strongest predictors of resilience (Begley & Quayle, 2007; Bonanno, 2004; Bonanno et al., 2001; Bonanno et al., 2004; Groos & Shakespeare-Finch, 2013; Moore et al., 2015; Mueller, Moergeli, & Maercker, 2008; Wortman & Boerner, 2011). In some, resilience is innate and present via certain personality traits as described above, whereas others benefit from training and guidance to develop those traits.

Despite these observations and findings, research on resilience as a concept and as a protective factor against experiencing full or subthreshold criteria for a disorder in adults is limited. Whereas "research on children has examined diverse sources of resilience, . . . research on adults has focused more on personal attributes, such as personality characteristics" (Windle, 2011, p. 14). Most research on resilience has been conducted on children and adolescents or treatment-seeking adults who have experienced trauma or loss (Windle, 2011).

Purpose of the Study

The purpose of this study was to examine the relationship between the number of personal traits of resilience as defined by the domains of personal competence, trust/tolerance/strengthening effects of stress, acceptance of change and secure

relationships, control, and spiritual influences in suicide loss survivors, and the development of PTSD symptoms under the new *DSM-5* criteria (APA, 2013), as well as the relationship between resilience and PTG as defined by the five domains outlined by Calhoun and Tedeschi (2004): Personal Strength, Relating to Others, New Possibilities, Spiritual Change, and Appreciation of Life. Suicide loss survivors are at risk to be impacted more severely than non-suicide bereaved individuals with more possible short- and long-term effects (e.g., poor physical health, anxiety, depression, isolation, ruminations, negative cognitions, CG, personal suicidal ideation and/or attempts, and so forth). Given the reported high rates of suicide bereaved individuals—approximately 250,000 to 2.5 million people per year in the United States, depending on one's interpretation of a suicide loss survivor—it should be noted that suicide loss survivors who have previously diagnosed mental health disorders are at an even higher risk (Barlow & Coleman, 2003; Brent et al., 1996; de Groot & Kollen, 2013; Dyregrov et al., 2003; Jordan, 2008; Melhem et al., 2004; Young et al., 2012). Consequently, resilience factors (e.g., the personality traits of hardiness, self-enhancement, repressive coping, positive emotion, and laughter; Bonanno, 2004) are crucial to prevent development of full diagnostic criteria for a disorder.

Suicide bereaved individuals may still exhibit some symptoms or criteria for internalizing or externalizing disorders without meeting full criteria for any given disorder. Resilience acts as an especially important protective factor for suicide bereaved individuals who have previously diagnosed mental health disorders or exhibit CG after the loss. These individuals are also at a higher risk for experiencing suicidal ideation and/or attempting suicide, as well as for developing major depression, an anxiety disorder, and/or posttraumatic stress disorder, which in turn impacts an individual's social-emotional functioning, personal growth, professional success, and interpersonal relations. At the same time, having too many personality traits associated with resilience may result in the individual not being affected positively or negatively by the trauma and,

therefore, not having the capacity to experience PTG (Bonanno et al., 2001; Bonanno et al., 2004; Calhoun et al., 2010; Janoff-Bulman, 2006; Levine et al., 2009; Moore et al., 2015).

Conclusion/Summary

Suicide is now the tenth leading cause of death in the United States (CDC, 2016) and fifteenth leading cause of death in the world (WHO, 2014). In 2016, almost 45,000 people in the United States died to suicide (CDC, 2016). In consideration of a variety of relationships to the deceased—first- and second-degree relatives, friends, coworkers, classmates, neighbor, client, and so forth—approximately 60 people per suicide identify as being impacted significantly by a given suicide (Cerel et al., 2013). Based on this estimate, approximately 60 million Americans became survivors of suicide in the last 25 years. Losing a close person to suicide can be a traumatic event, whether expected or sudden, violent or not violent. Consequently, this trauma puts suicide loss survivors at risk not only for disorders that may be a result of bereavement such as depression or CG, but also for PTSD. A suicide loss survivor not only grieves for the loss of a loved one but may also struggle with stigma associated with suicide, blame, guilt, feeling responsibility around not preventing the suicide, and/or continue to have unanswered questions around the death in an attempt to understand why someone may choose to die by suicide (Ali, 2015; Begley & Quayle, 2007; de Groot, de Keijser, & Neeleman, 2006; Dyregrov et al., 2003; Janoff-Bulman, 1989; Klein & Alexander, 2003; Nakajima, Ito, Shirai, & Konishi , 2012; Smolin & Guinan, 1993). Nevertheless, there have been mixed observations about the trajectory of bereavement in suicide loss survivors and individuals bereaved by other types of death; some patterns of bereavement are the same with all types of death, whereas others differ depending on the sudden or violent nature of the losses, and some observations are exclusive to suicide loss survivors (Bonanno, 2009; Jordan & McIntosh, 2011; Schneider, Grebner, Schnabel, & Georgi, 2011; Smolin & Guinan, 1993). The presence of traits indicative of resilience include self-confidence,

determination, optimism, positive biases in favor of self, emotional dissociation, and positive emotions (e.g., gratitude, interest, love; Bonanno, 2004). In this study, these traits were examined under the previously described five domains as assessed by the CD-RISC-25 (Connor & Davidson, 2003). Such personality traits can lead to better adjustment after a trauma, a faster time of return to pre-trauma functioning, and less of a likelihood of continuing to exhibit full diagnostic criteria for a disorder for a long time after the trauma (Bonanno, 2004).

Chapter 2: Literature Review

Suicide

In 1969, founder of American Association of Suicidology (AAS) Edwin Shneidman estimated approximately eight attempts per each completed suicide. The CDC (2016) WISQARS website showed 44,965 suicide deaths for all age groups in 2016, up from 44,193 in 2015. The WISQARS website enables users to identify the number of deaths for various International Classification of Diseases (ICD) death code categories for selected U.S. regions, age, gender, and race groups from 1999 to 2016. According to the CDC, suicide is the tenth leading cause of death in the United States across all ages and the second leading cause of death for 10- to 34-year-olds. In 2016, firearms accounted for 51% of all completed suicides, followed by suffocation— including hangings— (approximately 26%) and poisoning (approximately 15%). Ethnic breakdown of the suicides in 2016 were as follows: 81% were European American, 6% were Black or African American, approximately 3% were Asian American and Pacific Islander, 1.3% were among Native Americans and Alaska Natives, and about 8% were Latino Americans. Regarding age, 2.8% were 85 years or older, 37% were between 45 and 64 years old, and 13% were between 10 to 24 years old; the greatest number of suicides (8,417) was among 50- to 59-year-olds. European American males accounted for almost 7 out of 10 suicides in 2016 in the United States, and men, regardless of race, died by suicide almost three times more often than women (CDC, 2016).

According to the WHO (2014), suicide is the fifteenth leading cause of death internationally, is the second leading cause of death for 15- to 29-year-olds, and is attributed to 50% of violent deaths in men and 71% in women. In low- to middle-income countries, the male to female ratio of suicide rates is 1.5:1. Globally, the more common methods of suicide are ingestion of pesticide, hanging, and firearms (WHO, 2014).

It is believed that over 90% of people who die by suicide were experiencing some form of mental health disorder (Zisook & Shear, 2009). Further, a person may be more

likely to attempt suicide once recovering from depression due to gained energy and new motivation (Smolin & Guinan, 1993). More specifically, Smolin and Guinan (1993) described that often when a person is in the worst part of his or her depression, including having impaired acts of daily living such as self-care, sleep, diet, and so forth, his or her energy level is too low for him or her to attempt or complete a suicide even if he or she had many suicidal ideations. In contrast, as the person begins to recover from his or her depressive symptoms, feeling more energetic and set on his or her previously determined intentions, he or she not only appears and feels more functional, such as with acts of daily living or going to school/work, but also has more energy and motivation to attempt a suicide plan. This stage of recovery, from a fatigued and inactive person with depression to one who is more active, may be deceiving for close family members or friends who believe that the person is feeling better, as evidenced by increases in physical activity, social interactions, or work productivity; however, the person may still be experiencing negative cognitions and suicidal ideation, now with enough energy and motivation to attempt or complete the suicide plan.

Shneidman (1969) wrote that most suicides are dyadic: "the death relates primarily to the deep unfulfilled needs and wishes pertaining to the significant partner in a victim's life" (pp. 14-15). Shneidman drew conclusions after reviewing different studies on thoughts of death and suicide, and reflecting on who suffers more, the dying person or the bereaved person:

> Of the total sum of dyadic pain, most is certainly borne by the survivor in cases of sudden deaths; but in protracted dying, the present pain and the anguish involved in the lugubrious anticipation of being dead may well be sharper for the dying person than the pain suffered then and after by the survivor. (pp. 26, 28)

Suicide Loss Survivors

Individuals who have lost a loved one due to suicide and were affected by that death are referred to as "suicide loss survivors" or suicide bereaved individuals; in

current literature, this refers to family members, relatives, friends, mental health providers, coworkers, and others in the deceased's social network that may be affected by the suicide (Ali, 2015). Shneidman (1969) estimated that for every suicide, there are at least six survivors, which some researchers believe to be a conservative estimate (Berman, 2011). Crosby and Sacks (2002) reported results of a 1994 national telephone survey, which found that 7% of the U.S. population stated that they knew someone in their social networks who had died by suicide within the last year, which represented approximately 13.2 million people in the United States at the time of the survey. More specifically, 1.1% of surveyed people stated they had lost immediate family members or other relatives to suicide in the previous year (Crosby & Sacks, 2002). Notably, however, solely knowing of someone who died by suicide does not fall into the accepted definition of "suicide loss survivor."

Berman (2011) noted that Shneidman's nationally accepted statistic has not been validated empirically and that the number of survivors estimated varied depending on who defined themselves as survivors. Furthermore, "commonly offered definitions involve varying degrees of kinship, as in those in the immediate family . . . and some quality of relationship such that one is impacted by the death" (Berman, 2011, p. 111). For the purposes of his study, survivors of suicide loss were defined as "those believed to be intimately and directly affected by a suicide; that is, those who would self-define as survivors after the suicide of another person" (p. 111). Berman found that depending on the relationship to the deceased, the numbers of suicide loss survivors ranged from 45 to 80 per suicide:

> Parents of children who had died by suicide estimated that more than 80 individuals, ranging from immediate family members to classmates, would meet this definition of being a survivor. The total number of survivors estimated to have been directly and intimately affected by the suicide death of a partner or

> spouse is about 60; for siblings and friends the estimated number of survivors is in the range of 45 to 50. (p. 114)

Nevertheless, Berman further noted that if "we were to limit the estimates of survivors to only members of the nuclear family, Shneidman's (1969) original estimate of six survivors per suicide appears to be reasonably close to the estimate of 5.13 derived in this study" (p. 114). Based on this estimate, approximately six million Americans became survivors of suicide in the last 25 years.

Cerel, McIntosh, Neimeyer, Maple, and Marshall (2014) presented a continuum of exposure to suicide in order to reflect the varying levels of sensitivity of impact to suicide loss survivors. The four levels were denoted as suicide exposed, suicide affected, suicide bereaved–short-term, and suicide bereaved–long-term. This continuum allows for inclusion of individuals affected by suicide who not only identify as family members but also friends, partners, classmates, clinicians, coworkers, neighbors, and so forth. *Suicide exposed* refers to those who know of someone who died by suicide but were not necessarily affected significantly by it (e.g., celebrity or acquaintance). Based on a random-digit-dial survey in Kentucky, Cerel, Maple, Aldrich, and van de Venne (2013) found that 40% of the 302-adult sample knew someone who had died by suicide. *Suicide affected* refers to those bereaved by the suicide of a significant other and those "whose relationship to the deceased would have previously excluded them from being considered bereaved in the usual sense, as in witnesses to suicide who suffer posttraumatic symptomatology, or a student in a residence hall who finds it impossible to concentrate on his or her studies after a fellow resident takes his life" (Cerel et al., 2014, p. 595). This category would include first responders, anyone who discovers the decedent, classmates, coworkers, team members, or neighbors. Both levels of the *Suicide bereaved* categories require an attachment to the deceased. The *long-term* subtype includes those who have "close personal relationships to someone deceased by suicide who struggle across a protracted period with clinically significant responses to the loss" (Cerel et al.,

2014, p. 596), which may include family members, therapists, and close friends. Typically, this group of people can fall anywhere along the continuum, depending on the quality of the relationship or the level of closeness they report to the deceased: "The essential feature of a survivor appears to be related more to perceived closeness to the decedent than to type of relationship or demographics" (Cerel et al., 2013, p. 419).

In 2016, Cerel, Maple, van de Venne, Moore, Flaherty, and Brown conducted another random-digit-dial survey in Kentucky to examine who is exposed to suicide and its lasting impact. Out of the 1,687 participants included the study, both veterans and nonveterans, 48% reported lifetime exposure to suicide.

Reactions to Suicide

Shneidman (1969) explained that "the person who commits suicide puts his psychological skeleton in the survivor's emotional closet—he sentences the survivor to a complex of negative feelings and, most importantly, to obsessing about the reasons for the suicide death" (p. 22). Suicide bereaved individuals may experience blame, shame, guilt, social rejection, responsibility around not preventing the suicide, and/or continue to have unanswered questions around the death in an attempt to understand why someone may choose to die by suicide (Ali, 2015; Begley & Quayle, 2007; de Groot et al., 2006; Dyregrov et al., 2003; Janoff-Bulman, 1989; Klein & Alexander, 2003; Nakajima et al., 2012; Smolin & Guinan, 1993). Although common in trauma victims, Janoff-Bulman (1989) described feelings of anger, denial, self-blame, and intrusive recurrent thoughts to be forms of "inappropriate coping strategies" (p. 113); they become present because the bereaved individual is searching for ways to cope with the stressor, trauma, or loss.

Regarding the need to make sense of or understand why, Jordan (2008) expressed, "As an often inexplicable death for many survivors, the need to make sense of the frame of mind and motivations of the deceased are major preoccupations for many survivors" (p. 681). Jordan wrote that, in his experience, survivors tend to "overestimate their own role in contributing to the suicide or in failing to prevent it" (p. 681). Consequently, they

may minimize the role of other contributing factors to the suicide. In their guidebook for suicide loss survivors, Smolin and Guinan (1993) reminded their readers that there is never solely one reason for suicide. The authors gave examples of case studies when a child completes suicide after an argument with his or her parents or a husband completes suicide after a fight with his wife. Smolin and Guinan noted that, in most cases, after a parent-child or spousal argument, the end result is not a suicide; therefore, to attribute the suicide on those events alone is unfair to the mourning individual who is taking on too much self-blame. Jordan stated that guilt is associated with "foundational beliefs about one's world" (p. 681). He provided an example of a mother whose teenage son died by suicide by hanging after a verbal disagreement. The mother began to question the intentionality of her son's suicide, how well she knew her son, the nature of their relationship, and how "good" she was as a mother.

Just as Bonanno (2009) discussed in his book, *The Other Side of Sadness: What the New Science of Bereavement Tells us About Life after Loss*, that some bereaved individuals may feel a sense of relief after the passing of their loved ones, especially for deaths due to a long-existing physical illness, so, too, may some suicide bereaved individuals feel a sense of relief. Smolin and Guinan (1993) described how relief may occur in cases in which the individual was in trouble with the law or abusing drugs or alcohol. Jordan (2001) described how some suicide loss survivors may experience feeling relief after the completed suicide, which "makes the grief a mixed experience of negative emotions, such as guilt, rejection, abandonment, and sorrow, coupled with relief at not having to cope with the destructive behavior of the loved one" (p. 97).

Other suicide loss survivors may feel anger, feeling as if the person chose suicide in order to cause pain intentionally to the survivor (Smolin & Guinan, 1993). The bereaved individual may ask himself or herself questions such as "How/why could/would he/she do this to me?" Others may feel anger as a result of feeling abandoned or rejected by the deceased (Jordan, 2001). The anger may stem from feeling personally targeted or

dismissed by the deceased in the action of the suicide, especially when the bereaved individual perceives the suicide as a choice. Anger may be related to any feelings of blame toward whomever may have been "responsible" for the suicide (Jordan & McIntosh, 2011). Further, just as one may be angry at a murderer, anger in suicide loss survivors may be complicated by the fact that although the decedent chose to take his or her own life, he or she who would be considered a perpetrator in a homicide is also the victim (Jordan & McIntosh, 2011).

Some suicide loss survivors may misinterpret "grief reactions that are characteristic following a loss through suicide (e.g., relief or anger toward the deceased)" or question their roles related to the suicides, also called "dysfunctional beliefs," which may lead to higher risks of CG (de Groot et al., 2010). Jordan (2008) observed that feelings of abandonment or anger may be based on how the suicide bereaved individual perceives or tries to understand the suicide, either as a cause of mental illness or personal choice. Being aware of and understanding the deceased's psychiatric disorder, if he or she was previously diagnosed with one, may make processing and accepting the death easier for the suicide bereaved individual (Young et al., 2012).

Schneider, Grebner, Schnabel, and Georgi (2011) explored how emotional reactions of a suicide bereaved individual depend on his or her sex, the relationship to the deceased, the experienced consequences of the death, and the professional support he or she received. The study included interviews with first- and second-degree relatives of 163 people who had died by suicide in the Frankfurt, Germany area in 1999-2000. Interviews were carried out 8.5 months (SD = 6.8) after the suicides. Participants were interviewed between 1999 and 2000. One close person was interviewed for each suicide with the exception of four parental couples, who wanted to be interviewed together. A total of 167 informants were interviewed: 57 spouses, 34 adult children, 22 mothers, 11 fathers, and 43 other relatives and friends (among them 16 sisters). Approximately 25% of those interviewed had discovered the body of the deceased. The methods used most

often by the suicides in this study were hanging, intoxication, and jumping.

Schneider et al. (2011) found that demographic information contributed to reactions the suicide. More women than men reported feeling the following emotions: sorrow, depressed mood, lack of energy, anger toward the deceased, and anger toward somebody else. More men than women reported feeling the following emotions: guilt, abandonment, desire for the deceased, sympathy for the deceased, and admiration. Regarding relationship to the deceased, except for anger toward the deceased and guilt, parents and spouses of the deceased indicated feeling all of the aforementioned feelings more than adult children of the deceased. The authors noted that this may because children typically outlive their parents. Moreover, "all parents reported that their emotions were disturbed every day. Parents had an elevated risk of lack of energy and guilt. . . . Spouses had a five times higher risk of lack of energy compared with close persons other than parents or children" (p. 188). Schneider et al. concluded that lack of energy may indicate the presence of CG or depression. Longer time between the suicide and interview "was associated with less frequent report of feelings having disturbed everyday life of the bereaved" (p. 188). If the interviewee reported perceived positive consequences of the suicide, lower levels of negative emotions were reported. Results regarding social and professional support are discussed in the Postvention section.

In a study utilizing random-digit-dial survey methods conducted by Cerel et al. (2016), suicide-exposed individuals were twice as likely to have diagnosable depression and/or diagnosable anxiety, and almost twice as likely to have suicidal ideation than non-suicide-exposed individuals. Using the Short Screening Scale for PTSD, 11% of respondents met criteria for PTSD from the suicide. Those who reported higher levels of perceived closeness to the deceased were twice more likely to meet criteria for depression or anxiety, four times more likely to meet criteria for PTSD, and twice more likely to have suicidal ideation (Cerel et al., 2016).

Feigelman, Jordan, and Gorman (2011) examined the differences in grief difficulties, mental health problems, posttraumatic stress, and stigmatization among 571 parents whose children died either to drugs or other causes. In the sample, 48 parents lost children due to drug-related deaths and overdoses, 462 to suicide (including those due to drugs), 24 to natural death, and 37 to mostly accidental death. Cause of death was based on parents' self-reports using one of five categories provided on U.S. Standard Death Certificate form: accidental death, natural causes, homicide, suicide, and/or death under ambiguous circumstances or pending investigation (National Center for Health Statistics, 2008 as cited in Feigelman, Jordan, & Gorman, 2011). Although no significant difference was observed between parents who lost children to drugs or suicide, both groups combined demonstrated more grief and mental health problems using five measured criteria (grief difficulties, posttraumatic stress, CG, depression, and psychological problems) than parents who lost children to accident or natural causes. The authors hypothesize that one cause for these differences among the two observed categories of parents was due to the stigma, blame, and lack of recognition for "normal" or "legitimate" grieving that exists around substance abuse and mental health which, in turn, results in less support from family members, friends, and community members when a child dies due to drugs or suicide than by accident or of natural causes.

Stigma and Isolation

Stigma around suicide continues to be present today, some of which has to do with historical societal norms, different religious laws, or government laws (e.g., suicide is still illegal in some countries and was illegal in the United States until the 20th century; Ali, 2015; Jordan, 2008; Smolin & Guinan, 1993). Suicide loss survivors experience "more stigmatization from their social networks than survivors of most other types of death" (Jordan, 2008, pp. 681-682).

Despite the legal status of assisted suicide, the practice is still controversial and often discussed about negatively by the media and general public; thus, the participants in

studies on suicide loss may have already "experienced a sense of disapproval and isolation from their social environment" (Wagner, Keller, Knaevelsrud, & Maercker, 2012, p. 384). Higher rates of isolation exist for suicide loss survivors who experience more stigma in response to the suicide of their loved ones (Cerel, Jordan, & Duberstein, 2008; Jordan, 2008). This may, therefore, explain why many participants in Wagner et al.'s (2012) study shared that they did not disclose the cause of death of their loved ones to general community members. Due to possible blame from multiple directions, there becomes a "perceived need to keep the suicide a secret" (Jordan, 2008, p. 681). Suicide bereaved family members (siblings, spouses, adult children, and parents) interviewed by Barlow and Coleman (2003) reported feeling cautious or wary talking about their family members' suicides due to covert and overt blame from either other family or community members. Many of the participants shared how either they were directly blamed or that they blamed someone else in the family for the cause of their family members' suicides. Smolin and Guinan (1993) wrote that some suicide bereaved individuals may deny that the death of their loved ones were due to suicide, not only because of the stigma they experience from those in their families or communities but also as a part of their healing process in an attempt to abate some of the pain associated with the trauma of suicides versus an accidental or natural deaths.

Furthermore, interactions and relationships within the bereaved family and in the community may shift; a "communicational distortion" may occur within the suicide bereaved family and its respective social networks (Cerel et al., 2008). At the Kristin Rita Strouse Foundation's 15th Anniversary Speaker Event, Carol Graham, parent of one son lost to suicide and her other son eight months later in combat, shared that some family members and friends urged her not to have a funeral for her son that had died to suicide and also questioned if his funeral could be held in a church. Graham shared feeling conflicted with how to proceed and handle such logistics while still feeling shocked by the trauma. Graham reported feeling as though she could only acknowledge

and discuss the death of one son publicly—the one who died in combat— but not the other—the one who died to suicide as a result of his ongoing battle with depression (personal communication, June 12, 2016).

In their book, *Healing After the Suicide of a Loved One*, Smolin and Guinan (1993) discussed the impact that not being able to talk about a suicide death has on the process of mourning: "Just as the act itself is taboo, so is talking about it" (p. 61). Based on their facilitation of support groups for suicide loss survivors, the authors have observed that many suicide bereaved individuals experience some sense of denial of the death altogether or that the death was one by choice—a suicide. One reason may be that some close friends, family members, or partners of deceased individuals "fear that to admit a suicide took place is to expose personal agonies for the titillation of others" (p. 42). Some suicide loss survivors self-isolate preemptively to avoid any blame or negative judgments that may come from others (Jordan, 2008).

Interactions with family and community members vary for suicide loss survivors. Many of the suicide bereaved participants in Miers, Abbott, and Springer's (2012) study expressed gratitude for community members who were willing to listen and brought them food. Others shared that people may have had good intentions but often made hurtful statements. Some participants in Barlow and Coleman's (2003) study reported that they stopped talking to friends or family members even a year or more after their close family members' suicides because they were either experiencing or perceiving blame, were being told statements that made them feel worse ("Aren't you better off now?"), or were made to feel like they should be over the loss by that point and no longer want to talk about it. Some isolation experienced by suicide loss survivors may be due to family and community members not knowing how to help (Jordan, 2008).

Due to general stigma and lack of knowledge about mental health concerns leading up to a suicide, there is a valid concern that acknowledging that a loved one died by suicide may lead to blame or criticism. The criticism may be that the suicide loss

survivor contributed to the cause of the suicide or did not do enough to prevent the suicide. Such actual or perceived judgments may cause the suicide loss survivor to experience further guilt or to believe the aforementioned accusations. The inability to talk about the death or suicide may impede the mourning process and can possibly lead to clinical depression or other psychological disorders (Smolin & Guinan, 1993). Graham, speaker at the Kristin Rita Strouse Foundation 15th Anniversary Speaker Event, shared that she felt so much stigma around her son's suicide, discussing mental health problems, and receiving mental health services in general, that she delayed pursuing the services that she needed and eventually was helped by (personal communication, June 12, 2016). Yet, Smolin and Guinan (1993) observed most suicide bereaved individuals to feel a sense of relief and truly begin to mourn their losses in healthy ways once they acknowledged the cause of death and worked toward better understanding it rather than feeling ashamed, alone, or blaming themselves or others. Consequently, this type of acknowledgement, in addition to receiving help from a support group or therapy, can prevent further development of meeting full diagnostic criteria for a mental health disorder (Smolin & Guinan, 1993).

Suicide Bereavement

Many limitations and issues exist in the study of suicide bereavement, especially when comparing it to general bereavement (Ali, 2015; Jordan, 2001). Even with general bereavement studies, most research and data are quantitative in nature, as they are based on self-report questionnaires, present limited qualitative data due to small sample sizes, or focus too much on symptomology rather than the experience of grief (Ali, 2015; Jordan, 2001). Additionally, given the stigma and increased risk of psychological problems, suicide bereaved individuals are less likely to participate in bereavement studies.

Although it is generally accepted that suicide bereavement is similar to other violent death bereavement (Jordan, 2008), there is lack of consensus regarding the

trajectory of bereavement in suicide bereaved individuals and non-suicide bereaved individuals. Most studies indicate an increased risk for CG, PTSD, or depression (Brent et al., 1996; de Groot & Kollen, 2013; Dyregrov et al., 2003; Jordan, 2008; Melhem et al., 2004; Young et al., 2012). In their study comparing grief after suicide and natural death among spouses and first-degree relatives, de Groot, de Keijser, and Neeleman (2006) found that three months after the death, "self-reported psychiatric and general health of 153 relatives of 74 suicides was worse than of 70 relatives of 39 natural deaths" (p. 418). Further, the group that had lost their loved ones to suicide reported higher levels of depression, CG, health functioning, loneliness, and feeling a higher need for professional help. Jordan and McIntosh (2011) developed a model that distinguished feelings and thoughts that may be found after all types of death (sorrow, pain, missing the deceased and yearning to be reunited), unexpected deaths (shock and a sense of unreality), violent deaths (experience of trauma and shattered illusion of personal invulnerability), and suicide (anger, aggression, abandonment, and rejection.

Begley and Quayle (2007) interviewed eight suicide bereaved individuals—a brother, sisters, mothers, fathers, and a spouse—who had been receiving practical and social supports through a network of voluntary support groups in Ireland. The authors found four main themes throughout the interviews: controlling the impact of the suicide, making sense of the suicide, social uneasiness, and purposefulness. Controlling the impact of suicide included feeling guilt for not preventing the suicide and fear that it may happen again to another close family member, resulting in constant vigilance, numbness, pain, initial denial, and some self-harm behaviors. The authors noted how many of these initial reactions mirror PTSD responses and that they are consistent with other observed evidence of coping with traumatic experiences. Making sense of the suicide included ruminating about the "predeath demeanor of the deceased and about the events that led up to the actual act of suicide" (p. 29), how the deliberateness of the suicide did not match the predictability of daily life and trying to match it to the deceased's mental disorders or

other life challenges (such a "trigger" for the event without other options), reflection on personal relationship and trust with the deceased, personalizing the situation, and self-blame. Social uneasiness included treating the suicide as privileged information only to discuss with close family members, support from communities at first followed by abandonment, rejection by religious affiliates and members, support and warnings of anticipated experiences by others bereaved by suicide, a lack of desire to take part in previously enjoyed activities, and feeling accepted when among others who were suicide bereaved such as in the support groups. Purposefulness is discussed in the Posttraumatic Growth section.

Miyabayashi and Yasuda (2007) evaluated how the suddenness and unnaturalness of death affect general health, depression, and grief based on 215 responses to a questionnaire by the bereaved. The respondents were divided into five groups: bereaved by suicide, accident, acute illness (< 1 day from onset), shorter illness (< 1 year from onset), and longer illness. Median of years since death was approximately five years. Unlike some reports that found that the effect of cause of death was significant on perceived health, Miyabayashi and Yasuda found that the effect was "not significant on the two [Global Health Questionnaire] subscales of Somatic Symptoms and Anxiety and Insomnia, nor was the effect significant on medication at that time, which is a measurement of health-related behavior" (p. 506). Therefore, the impact of the cause of death factor was more apparent in mental rather than physical manifestations. The authors explained that "emotional reactions might be more persistent than physical reactions, although it is also suspected that the scales may have varied in sensitivity" (p. 506).

Some studies have observed the opposite regarding development of disorders differing in suicide and non-suicide bereaved individuals. McIntosh (1993) reviewed empirical studies of suicide loss survivors with designs that included control groups. McIntosh considered the sample, group size, relationship to the deceased (spouse, parent,

or peer), recruitment process, measures, and methodology strengths and weaknesses. Despite methodology weaknesses and limitations, overall, McIntosh found that suicide bereavement is generally nonpathological. McIntosh observed many similarities among suicide loss survivors and accidental death loss survivors among parents of deceased children. Among spouses, no differences were observed after the two-year mark of bereavement among the different types of deaths groups. In cases in which depression, psychological distress, and/or negative self-appraisal were observed, it was more similar among any type of bereaved group than the nonbereaved groups. Nonetheless, some studies among bereaved spouses indicated that grief "follow[ed] a different course" and took longer to subside among suicide loss survivors than among bereaved spouses due natural causes of death. Still, by two to two and a half years, bereaved spouses in both groups appeared to have similar functioning. McIntosh noted that all of the reviewed studies had limitations and cannot be generalized to all sexes, races, or socioeconomic statuses. Furthermore, the status of whether the participants in the reviewed studies received professional support of any kind—individual, general bereavement group, or suicide focused bereavement group—was not reported in the reviewed studies, which is a limitation in that treatment effects were not considered.

Jordan (2008) similarly observed no differences on anxiety or depression in suicide bereaved individuals as compared to other types of bereavement, but found higher levels of "shame and stigma, rejection, blaming, and guilt/responsibility early on in the mourning process" (p. 680). Jordan emphasized these differences, especially as they may not be detected "by standardized measures of psychopathology" (p. 680). Nevertheless, data are limited on how many bereaved individuals—due to suicide or non-suicide—develop the full syndrome of PTSD, as many "published studies thus far have excluded normal bereavement as an etiologic event for PTSD" based on *DSM-IV* criteria (Zisook Chentsova-Dutton, & Shuchter, 1998, p. 157).

Broad Courses of Bereavement

Bonanno (2009) described three broad courses of bereavement: resilience, recovery, and CG. For going through the process of grieving and readjusting to a normal routine, even if recalling or continuing to honor the life of a deceased loved one, around six months is considered "uncomplicated grief" (UG). This would include "the acute grief that occurs in the early aftermath of a death [that] can be intensely painful and is often characterized by behaviors and emotions that would be considered unusual in normal everyday life" and "integrated or abiding grief, in which the deceased is easily called to mind, often with associated sadness and longing" (Zisook & Shear, 2009, p. 68). Part of the grieving and healing process can include a continued honoring of, relationship with, or bond with the deceased, including initially believing to see or communicating with the deceased (Bonanno, 2009; Bonanno et al., 2001; Zisook & Shear, 2009).

Most people experience or are exposed to at least one violent or life-threatening situation during the course of their lives (Ozer et al., 2003). In his article on loss, trauma, and human resilience, Bonanno (2004) noted that although some people are unable to recover fully or recover with health problems or other setbacks, most people "manage to endure the temporary upheaval of loss or potentially traumatic events remarkably well, with no apparent disruption in their ability to function at work or in close relationships, and seem to move on to new challenges with apparent ease" (p. 20). Bonanno attested that most people are resilient and that grief is "not overwhelming or unending. We may be shocked, even wounded, by a loss, but we still manage to regain our equilibrium and move on. That there is anguish and sadness during bereavement cannot be denied. . . . It is something we are wired for, and it is certainly not meant to overwhelm us" (p. 7).

Bonanno (2004) emphasized that what is often described as "absent grief," the lack of depression or prolonged grief in bereaved individuals, should not be perceived as a "pathological response that results from denial or avoidance of the emotional realities of the loss" (p. 23). Rather, Bonanno argued that resilience "to the unsettling effects of

interpersonal loss is not rare but relatively common, does not appear to indicate pathology but rather healthy adjustment, and does not lead to delayed grief reaction" (p. 23). Most impairments exhibited by bereaved individuals tend to be time limited (several months to two years), which may not be reflected in research studies. Bonanno also emphasized the influence of memory bias, which is inevitable in bereavement studies, as they consequently occur post-death.

Memory bias can vary based on what participants are asked to recall, from quality of relationship with deceased partners, levels of prior grief, levels of prior impairment or functionality, and so forth. Safer, Bonanno, and Field (2001) conducted a study on long-term memories for grief reactions following the death of one's spouse and the role that these memories play in long-term adjustment. Part of this process involved considering "retrospective reappraisal," assessing how well or how poorly the person coped over time, which is also linked to the relationship between recall of prior grief and current functioning. Almost all of the 37 participants reported much less grief at five years after the death of a spouse than at six months. Participants were able to recall their six-month levels of grief-related symptoms and avoidant thoughts, but overestimated their six-month levels of intrusive ideation. The authors also found that there was "evidence for retrospective reappraisal, as across different measures, current levels of grief were predicted by recalled levels of grief" (p. 201). Safer, Bonanno, and Field (2001) concluded that the "retrospective reappraisal that one's past grief was not severe may indicate effective coping" (p. 195).

In a review article, Bonanno, Papa, and O'Neill (2001) described that, whereas some people may become impaired and continue to meet criteria or demonstrate symptoms of depression or prolonged grief one to two years or longer after the death of a close person, many—and sometimes the majority of—bereaved individuals in general show little or no overt grief reactions. Bonanno et al. argued that not showing expected or overt signs of grieving in Western cultures has been and sometimes still is considered

an indication of the presence of a disorder rather than an example of human resilience and healthy coping. Further, Bonanno, Papa, and O'Neill discussed a multidimensional nature or view of self, which differs from the traditional view of self. In the multidimensional view, one perceives one's faults and assets differently depending on the context of the situation, different human interactions, varied times of day or year, and so forth. This model, which is reportedly more accepted by social psychologists "as a normal, adaptive consequence of human mental activity" (p. 169), is linked to resilience in the sense that if one experiences a trauma or loses a close person, only part of the self may be affected, allowing the whole person to remain resilient and not wholly lose a sense of self.

The most well-known and commonly referred to stage model of mourning is that of Elisabeth Kübler-Ross (1969/2003), which consists of five stages: denial and isolation, anger, bargaining, depression, and acceptance. Kübler-Ross developed this model through her work with terminally ill medical patients, including treatments, observations of friends' and families' interactions with patients, and interdisciplinary (including a chaplain) interviews with dying patients. The stages originally represented what the terminally ill patient experienced upon learning the status of his or her health and as it progressively worsened. Later, her model was applied to the bereaved as well. Kübler-Ross emphasized that the families of these patients experience each stage in the prescribed order as part of the grieving and mourning process. In reviewing her interviews, Kübler-Ross highlighted how sometimes the patient and family member(s) went through the stages together while the patient was still alive but progressively had deteriorating health. She also noted that the family should be included in trying to help the patient handle and accept his or her illness and impending death given the emotional and logistical changes that arise in the family from the time of diagnosis and hospitalization and/or treatment. Kübler-Ross described these stages as defense and/or coping mechanisms to deal with extremely difficult situations. Kübler-Ross highlighted

that although most people do not need professional help, the most important way to help a grieving family member is to allow him or her to share his or her feelings, whether the listener finds them rational or irrational. She observed social workers to be some of the most helpful in her settings, as they helped families set up nursing home arrangements, which for many resulted in feelings of guilt for not being able to arrange home-based treatments. Kübler-Ross wrote that by allowing families to express their thoughts and feelings soon after the deaths, they were minimizing their chances for prolonged grief, shame, and guilt, which can result in physical or emotional illness.

Some professionals argue against the traditional five-stage grief model (Bonanno, 2009; Bonanno et al., 2001; Zisook & Shear, 2009). Bonanno (2009) described how in his work, he observed that grief is not one-dimensional and that "bereaved people show different patterns or trajectories of grief reactions across time" (p. 6). Despite the three broad trajectories described by Bonanno, Zisook, and Shear (2009), these authors explained that "to date, no grief stage theory has been able to account for how people cope with loss, why they experience varying degrees and types of distress at different times, and how or when they adjust to a life without their loved one over time" (p. 67). The variability in ways to mourn or grieve makes operationally defining "normal" and "complicated" grief difficult; the standards vary from literature to literature, study to study, and "expert" to "expert." Nevertheless, for clinicians, some decisions about the level of appropriate progress, concerning lack of progress, or adaptation post-trauma or post-death of a loved one are necessary in order to know when to introduce or change interventions (Zisook & Shear, 2009). Clinicians must recognize when a person is exhibiting appropriate and typical behavior or when his or her functioning is impaired enough to the point of meeting full or subthreshold diagnostic criteria no longer due to bereavement alone.

While recognizing that most people deal with death naturally and without clinical intervention, Klein and Alexander (2003) reviewed what features may lead to

pathological grief reactions. Specifically, the authors examined features of the death, the bereaved, the relationship, and the bereaved individual's circumstances. Features of the death included death that was untimely or unexpected, death of a child (including perinatal) or spouse, horrifying or mutilating death, death perceived as mismanaged, and missing the body. Features of the bereaved included insecurity, anxiety, prior psychiatric history, excessive anger or guilt, prior unresolved loss, inability to express emotions, and physical disability or illness. Features of the relationship included being highly dependent on the deceased and having a "love/hate" relationship with the deceased prior to his or her death. Lastly, features of the bereaved's circumstances included having an unsupportive family, lack of social or religious supports, and coming from a lower socioeconomic status.

Complicated Grief

CG is distinct from "normal" or "uncomplicated" grief. Zisook and Shear (2009) explained that "complicated grief, sometimes referred to as unresolved or traumatic grief, is the current designation for a syndrome of prolonged and intense grief that is associated with substantial impairment in work, health, and social functioning" (pp. 67-68).

Suicide bereaved individuals are more likely to experience CG than individuals bereaved by natural death (Jordan, 2008). Further, "individuals experiencing complicated grief have difficulty accepting the death, and the intense separation and traumatic distress may last well beyond six months" (Zisook & Shear, 2009, p. 69). In addition to emotional pangs, yearning, longing for the deceased, ruminations about the deceased, and avoidance of anything that reminds the bereaved of the deceased, CG can also include "trauma-like symptoms such as numbing, feeling life is meaningless without the deceased, and difficulty accepting the death" (Jordan, 2008, p. 682) or "detachment, and excessive irritability and anger" (de Groot et al., 2010, p. 485). The effects and symptoms of CG place an individual at higher risk for physical and psychiatric problems, including suicidality (de Groot et al., 2010). CG "leads to considerable functional

impairment, beyond that accounted for by any comorbid depression, PTSD, and other anxiety disorders" (Shear et al., 2011, p. 105). Moreover, developing CG after a loss is not the same as developing another disorder such as major depression or PTSD (Zisook & Shear, 2009).

Approximately 10% of bereaved people reportedly experience CG (Zisook & Shear, 2009), "with higher rates among individuals bereaved by disaster or violent death and higher among parents who lose children" (Shear et al., 2011, p. 105). Those with previously established mental health concerns are more likely to experience CG as they cope with the loss of loved ones. An estimated 6% to 20% of all bereaved individuals develop CG (Boelen, 2005; Prigerson et al., 2009).

Bartik, Maple, Edwards, and Kiernan (2013) examined the psychological impact of losing a close friend to suicide in young people. The study included 10 participants (eight females and two males). The average age at interview was 24 years. The age of the participants when they first experienced the suicide death of a friend ranged from 16 to 24 years. The time period between the suicide death and the interview ranged from one to eight years. The 10 participants had experienced 24 suicide deaths (22 friends and two family members). The authors' study "confirmed that young people who had lost a friend to suicide share levels of increased stress, depression, prolonged grief symptoms and reduced coping skills consistent with other suicide bereaved populations described in the literature" (p. 547). Participants did not meet criteria for prolonged grief disorder (PGD) and most demonstrated mild stress and depression symptoms; nonetheless, the participants indicated social and functional impairment, including difficulties with decision making and coping with upsetting situations. Additionally, "the length of time since the suicide death did not mediate or lessen the grief, suggesting that these behaviours can continue for a period of years, meaning that young people's potential for increased risk of poor health outcomes can be ongoing" (p. 548).

Boelen and van den Bout (2008) investigated the differences and similarities between CG and UG, especially given their proposed inclusion in future *DSM* editions, in mourners who lost someone more than six months prior (given that CG cannot be diagnosed within six months of the bereavement). Prior to the release of the *DSM-5* in 2013, Shear et al. (2011) discussed this addition, specifically citing a need for strict guidelines for diagnosing professionals in an order to prevent mis- or over-diagnosing. Currently, CG is not included as a standalone disorder in the *DSM-5*. Boelen and van den Bout found that "symptoms denoting CG but not symptoms representing UG were associated with concurrent distress and disability . . . [and that] symptoms of CG and UG were better conceptualized as representing distinct factors than as representing a unitary factor;" thereby supporting the idea that CG fits to be included in the *DSM*, "in which mental disorders are defined as being associated with distress and disability and as distinct from normal/expectable reactions to events" (p. 314).

Shear et al. (2011) did not describe grief or bereavement alone as disorders but, rather, as risk factors that can lead one to experience symptoms associated with related disorders. The authors further made the case for this inclusion in future *DSM* editions given the consideration that the treatment courses and trajectories for CG and major depression differ and should, therefore, be recognized as different disorders, especially given the existing exclusion criteria of bereavement at the time.

Risk for Suicidal Ideation and Attempts

Generally, bereavement is considered to be a risk factor for suicide, in addition to being a "severe stressor that can trigger the onset of a physical or mental disorder" (Shear et al., 2011, p. 104). Further, if the loss were due to a completed suicide, especially one that was witnessed or discovered, the bereaved individual has an increased chance of having suicidal ideation, as well as attempting or completing suicide (Bartik, Maple, Edwards, & Kiernan, 2013; de Groot et al., 2010; Jordan, 2008; Shear et al., 2011; Smolin & Guinan, 1993; Young et al., 2012). In their analysis of a 1994 national

telephone survey, Crosby and Sacks (2002) found that respondents who had known someone who died by suicide within a year preceding the survey were 1.6 times more likely to have suicidal thoughts or ideation, 2.9 times more likely to have suicidal plans, and 3.7 times more likely to have made suicide attempts than those who did not have such exposure. In a three-year longitudinal study, Brent, Perper, Moritz, Bridge, and Canobbio (1996) found that exposure to a suicide (witnessing the suicide or having knowledge of the act) in adolescents' friends did not result in an increased risk of suicidal behavior among friends and acquaintances. In fact, no completed suicides were reported in either the exposed or nonexposed group. In contrast, Brent et al. found that sibling conflict, discipline problems, age, and family history of substance abuse were significantly associated with suicide attempts.

Similarly, in their study on the mediating role that the level of suicidal ideation plays on the effectiveness of family-based cognitive-behavioral grief therapy for suicide bereaved relatives, de Groot et al. (2010) found that those who experienced suicidal ideation were more likely to have a history of mental health disorders and suicidal behaviors than those without suicidal ideation. Further, suicidal ideation was related to higher risks for depression and CG (de Groot et al., 2010). Aforementioned suicide loss survivor Carol Graham shared her personal bereavement experiences after her older son died by suicide. Graham expressed feeling depressed and having suicidal ideation of her own, which worsened when, eight months later, her second son died in combat (personal communication, June 12, 2016).

Development of Disorders Related to Bereavement

Many studies have been conducted to assess the presence of major depression through the course of grieving. In studies reviewed by Zisook and Shear (2009), about 24% to 42% met criteria for major depression at one to two months after the loss and around 16% after approximately one year post-loss. A diagnosis of major depression prior to the loss or a diagnosis around one or two months after the loss was found to be

the greatest predictor of continuing to meet criteria for the disorder at one year or longer (Zisook and Shear, 2009). Nevertheless, clinicians must use caution when diagnosing major depression after the loss of a close loved one given the confounding factor of bereavement; the presented behaviors may in actuality be part of an UG process. Shear et al. (2011) highlighted that the exclusion criteria of bereavement in disorders such as major depression are "reasonable if the primary goal is to avoid misdiagnosing normal grief" (p. 111).

During the grieving process, the bereaved person experiences both positive and negative emotions (Zisook & Shear, 2009). With time, the negative thoughts and emotions become rarer and are further apart. Zisook and Shear (2009) emphasized that "in contrast, major depression tends to be more pervasive and is characterized by significant difficulty in experiencing self-validating and positive feelings" (p. 70). Bereavement related major depression is typically severe and lasts for long periods of time. The authors argued that although the *DSM-IV* proposed a two-month wait period for bereaved individuals prior to considering their symptoms as those that meet the criteria for major depression, if the symptoms are present, individuals should receive the necessary treatment in order to prevent development of major depression. Zisook and Shear also cited that studies have shown bereavement-related major depression patients to benefit from the same treatment in the same manner as other patients with major depression not due to loss.

Brent, Melhem, Masten, Porta, and Payne (2012) examined the longitudinal effects of parental bereavement on adolescent developmental outcomes and competence, including success at work, satisfaction with romantic relationships, involvement with friends, academic success, quality of career development plans, and peer attachment as compared with non-bereaved controls. Pre-death and post-death parental and adolescent psychiatric functioning and impairments were reported and considered. Higher reports of psychiatric disorders resulted in negative impact on parent and child functioning.

Overall, the authors found that bereaved youth had less success at work, less elaborated career development plans, lower peer attachment, and diminished educational aspirations "primarily mediated by the impact of bereavement on child and parental functioning and on family climate" (p. 778). No differences were observed with respect to educational competence, certainty about future, or romantic relationships, and "outcomes were unrelated to age at the time of parental death, gender of the deceased parent, or cause of death" (Brent, Melhem, Masten, Porta, & Payne, 2012, p. 778). The authors found similar results even when excluding suicide bereaved adolescents from the sample analysis, which contradicts previous studies that indicated more impaired functioning in suicide bereaved children, especially in older children with younger siblings, as they have to assume parental responsibilities.

Nonetheless, recovery is possible and relies upon the rebuilding of nonthreatening assumptions and resolution of pre- and post-trauma interpretations of reality (Janoff-Bulman, 1992). Experiencing a stressful or traumatic event which results in having to challenge one's beliefs may lead to a traumatic stress response and consequential reorganizing of one's schemas, but may not necessarily lead to meeting full or subthreshold diagnostic criteria for a traumatic stress disorder (Hyer & Brandsma, 1999).

Development of PTSD

Not all loss is traumatic. Therefore, the way one copes with a loss or the trajectory of bereavement may not overlap with the trajectory of recovery after a trauma. Conversely, if a loss is traumatic, not only does the individual experience grief but also some form of posttraumatic stress. In the *DSM-IV-TR*, PTSD was classified as an anxiety disorder, whereas in the *DSM-5*, it has been placed under the new section on trauma and stressor-related disorders (APA, 2013). According to the *DSM-5*, there are now four diagnostic clusters for meeting PTSD criteria: reexperiencing, avoidance, negative cognitions and mood, and arousal. Specifically, there has to be a stressor, presence of intrusion symptoms, persistent effortful avoidance of distressing trauma-related stimuli,

negative cognitions or mood, and alterations in arousal or reactivity. The triggers for PTSD are now listed as exposure to actual or threatened death, serious injury, or sexual violation:

> The exposure must result from one or more of the following scenarios, in which the individual: directly experiences the traumatic event; witnesses the traumatic event in person; learns that the traumatic event occurred to a close family member or close friend (with the actual or threatened death being either violent or accidental); or experiences first-hand repeated or extreme exposure to aversive details of the traumatic event (not through media, pictures, television or movies unless work-related). The disturbance, regardless of its trigger, causes clinically significant distress or impairment in the individual's social interactions, capacity to work or other important areas of fun. (APA, 2013)

Zisook et al. (1998) conducted a study, which examined the prevalence, course, comorbidity, and consequences of PTSD after spousal bereavement. Categories of symptoms for participants to endorse included traumatic recollection, avoidance/numbness, and hyperarousal. The authors found that two months after bereavement, "36 of 350 (10%) widows/widowers were classified as having PTSD" (p. 159). Symptoms of PTSD decreased over time, but 40% of those with PTSD at two months still met criteria at 13 months and 60% of those with PTSD at 13 months continued to meet criteria at 25 months. Of note, the group with PTSD was "significantly younger than the group without PTSD and . . . was married for fewer years than the group without PTSD" (p. 159). Thirty-five percent of the widows and widowers in the sample reported losing a spouse to suicide or accident; this group "was found to be at an elevated risk for PTSD . . . compared to widows/widowers whose spouses died from 'natural' causes. Combining deaths resulting from suicide and accident, the rate of PTSD is 36%" (pp. 159-160). These results confirmed the authors' hypothesis that PTSD is more common after an unexpected loss than after an anticipated death.

Shear et al. (2011) reviewed multiple studies in order to demonstrate that CG is not a more chronic form of PTSD. The authors acknowledged that experiencing the death of a loved one "is a life event that meets the trauma criterion of observing or learning of death" (p. 106), as well as other criteria such as intrusive thoughts, avoidance behaviors, estrangement from others, sleep disturbance, and difficulties concentrating; however, the authors noted that "confrontation with physical danger is fundamentally different from losing a sustaining relationship" (p. 106) and that most people who present with CG do not meet criteria for PTSD given the lack of hypervigilance and increased fear due to a physical threat. Therefore, the greatest difference respectively between CG and PTSD are sadness and yearning versus fear. Shear et al. used this difference to highlight the foundational difference even between the shared criteria of intrusive thoughts and avoidance:

> People with PTSD re-experience thoughts and images of the traumatic event, whereas people with CG experience intrusive images and preoccupation with the deceased person. In PTSD, avoidance is used to prevent the recurrence of danger and in CG to avert painful thoughts or feelings related to the loss. (p. 107)

Further, Shear et al. (2011) also cited a 2007 study by Bonanno et al. when comparing CG and PTSD, which found that "loss showed reduced heart rate correlated with CG severity in contrast to increased heart rate which correlated with PTSD" (p. 106). Given these findings and observations, suicide bereaved individuals' symptoms should be carefully interpreted and considered under the appropriate disorder, if symptoms reach such a threshold.

In the introduction for his book, *Traumatology of Grieving: Conceptual, Theoretical, and Treatment Foundations*, Figley (1999) highlighted the common mislabeling of UG with PTSD, specifically noting that not every person experiencing a traumatic event will develop PTSD. Figley used the example of Vietnam War veterans to emphasize his point:

> It is estimated that only 36% ever developed PTSD and that only slightly more than 15% still have it. This means that 64% *never* had it, although most experienced symptoms of traumatic stress. Thus, we could say that these men and women experienced a *normal reaction to abnormally stressful situation*. (p. xv)

Janoff-Bulman (1989) discussed how the stress of a traumatic event can negatively impact people's assumptive worlds, and that "the impact on basic assumptions is still apparent years after the negative event" (p. 113). "Assumptive worlds" refers to "a basic conceptual system, developed over time, that provides us with expectations about ourselves and the world so that we might function effectively" (p. 114). The beliefs can also be referred to as schemas, which Janoff-Bulman stated serve as "preexisting theories that provide a basis for anticipating the future and guide what we notice and remember, as well as how we interpret new information" (p. 115). Because people are naturally inclined to rely on schemas to make sense of the changes or events that occur in their daily lives, humans are generally resistant to changing or adapting schemas. Further, if few negative life events have occurred to a person, this becomes part of the person's assumptive world; thus, when a negative event occurs to someone else, the person may think, "That will never happen to me." Conversely, once that or another type of traumatic event occurs, Janoff-Bulman wrote that violation of these assumptions, of which there are three categories—perceived benevolence of the world, meaningfulness of the world, and worthiness of the self—make that person vulnerable. The traumatic events result in a sense of cognitive dissonance (the person feels the "data do not fit with my preexisting assumptions") and are "too emotionally powerful to ignore or easily discount" (Janoff-Bulman, 1989, p. 121). This requires the trauma victim to rework the new data either to fit previous assumptions or to change previous assumptions based on the new data and experiences.

To test these theories, Janoff-Bulman (1989) conducted a study utilizing the World Assumptions Scale with university students who had and who had not experienced

various traumatic events (e.g., death of parent, death of sibling, incest, rape, fire, accident) to examine the effect the events had on the two groups of students' world assumptions, such as self-worth, benevolence of the world, and so forth. The author found that "even years after the negative event, the victims were significantly more depressed than were non-victims, and it appears that male victims fared worse than female victims" (p. 129). Therefore, Janoff-Bulman, demonstrated that although years had passed for some of the trauma victims, they continued to maintain negative views of themselves and the world at statistically significant levels in comparison to non-victims of trauma in the study.

PTSD Symptomology

Jordan (2008) noted that suicide loss survivors may experience intrusive thoughts, avoidance, ruminations about the emotional and physical suffering of the deceased at time of death, or reliving the trauma if they witnessed the suicide or found the body—symptoms commonly associated with PTSD.

Wagner, Keller, Knaevelsrud, and Maercker, (2012) examined the relationship between social acknowledgement of participants' family members' deaths due to suicide—in this case, legal assisted suicides in Switzerland—and the effects on their personal mental health to the development of PTSD and CG. The participants in this study were family members who witnessed the assisted death of significant others. The authors reported the following statistics from previously conducted studies with the same population: "Some 13% of the family members surveyed met the criteria for full posttraumatic stress disorder (PTSD) and 6.5% met the criteria for subthreshold PTSD. The prevalence of depression was 16%; that of anxiety was 6%. Moreover, 4.9% of the participants met the diagnostic criteria for complicated grief " (p. 382). Social acknowledgement, as opposed to social disapproval or criticism, in the context of PTSD is defined as victims' "perception of receiving positive individual or societal reactions that recognize their traumatic experiences and current difficult situation" (Mueller et al.,

2008, p. 548). Wagner et al. found that "perceived disapproval of the social environment was related to higher PTSD and CG symptoms. In addition, family disapproval was strongly related to CG processes" (pp. 383-384). Nonetheless, in their study, the perception of social support did not pair with positive outcomes either.

Instead of separating PTSD and CG as two distinct disorders and outlining how they differ theoretically and biologically, Nakajima, Ito, Shirai, and Konishi (2012) reviewed the effects of posttraumatic stress on CG in those bereaved by violent deaths, which included homicide, accidents, and suicide. Approximately 75% of people with CG have at least one comorbid *DSM-IV* disorder, with PTSD and depression being most prevalent (Simon et al., 2007). In studies reviewed by Nakajima et al., PTSD and CG had a comorbidity prevalence of 43% to 65%. The authors highlighted a biological causal relationship:

> Low activation of [anterior cingulate cortex (ACC)] at the early stage of grief in bereaved with PTSD leads to dysfunction of emotion regulation, resulting in interference with the normal grief process and developing CG. . . . The comorbidity of PTSD was particularly considered to contribute to the development of CG by suppressing the functioning of the [medial prefrontal cortex (mPFC) and the anterior cingulate cortex (ACC)], which facilitates the mourning process when grief distress is activated and interrupts acceptance of death. (p. 212)

The fear and intrusion symptoms of PTSD continue to escalate the presence or severity of CG in bereaved individuals with PTSD.

Melhem, Day, Shea, Day, C. F. Reynolds, and Brent (2004) examined the predictors of CG, depression, and PTSD among adolescents exposed to the suicide of a peer. Adolescents were interviewed at 6, 12 to 18, and 36 months following the suicide. Factors considered included psychiatric disorders, exposure to death, closeness or the relationship with the victim, and stressful life events. Similar to findings in adults, CG

symptoms differed from those of depression and PTSD in adolescents. Melhem et al. found that CG was "significantly associated with sex, participants' feeling that they could have done something to prevent the death, interpersonal conflict, previous history of depression, and family history of anxiety disorders" (pp. 25-26). Those who had a closer relationship to the deceased had higher rates of CG and/or PTSD. Also, the following risk factors were found to be associated with CG at six months: female gender, feeling "I could have done something to prevent the death," physical/psychiatric illness in family, financial problems, and previous history of depression or anxiety (in the adolescent or their family). The following factors were associated with PTSD at six months and differed from those associated with CG:

> having seen the scene of the death, feeling that he or she could have done something to prevent the death, speaking to the victim within the last 24 hours, experiencing interpersonal conflict, having financial problems, having a previous history of depression, having a previous history of anxiety disorders, and having a previous history of any psychiatric disorder. (pp. 27-28)

Therefore, previous personal or familial psychiatric history of depression and/or anxiety increases a suicide loss survivor's risk for developing PTSD, especially if exposed to the suicide of the close individual. The results of the study by Melhem et al. (2004) are consistent with those of Brent et al. (1996), which found that exposure to a suicide (witnessing the suicide or having knowledge of the act) in adolescents' friends resulted in increased incidence of depression, anxiety, and PTSD. Further, Brent et al. found that adolescents who knew about victims' suicide plans were at the "greatest risk for incident depression and PTSD over the entire course of follow-up" (p. 646), as were those with family psychiatric history. In the study by Melhem et al., age and sex were not significantly associated with PTSD. Melhem et al. also highlighted the differences between CG, depression, and PTSD in their findings: "Complicated grief was the only disorder found to cluster in specific social networks of suicide victims" (p. 29).

Bonanno (2004) reminded his readers it is "well established that many exposed individuals will evidence short-lived PTSD or subclinical stress reactions that abate over the course of several months or longer (i.e., the recovery pattern)" (p. 24), but that these individuals are often not included in studies that demonstrate either meeting full PTSD criteria or meeting subsyndromal (e.g., presenting with many symptoms but not full diagnostic criteria) PTSD. The studies may highlight those individuals that initially met full or subclinical PTSD criteria but fail to follow up or highlight how a much smaller percentage, typically those with higher exposure to the trauma, will develop chronic PTSD (Bonanno, 2004). Bonanno argued that it is inaccurate to describe those who have responded with resilience to violent or life-threatening events as demonstrating an "extreme form of heroism" or "exceptional emotional strength," or that these individuals are the only ones capable of being resilient. He then reviewed studies of a variety of traumatic events in which the majority of respondents (e.g., greater than 50%) reported few to no symptoms of PTSD.

Measuring Grief Reactions Among Suicide Loss Survivors

Several measures exist to measure grief reactions among the general bereaved population. Select measures that were utilized by the reviewed studies are described.

Prigerson et al. (1995) developed the Inventory of Complicated Grief (ICG) in order to distinguish certain symptoms of grief from bereavement-related depression and anxiety and to predict long-term impairments due to such symptoms. Nineteen items were selected based on a previous version of the scale. The main symptoms that were found to have "loaded highly on the grief factor were: preoccupation with thoughts of the deceased, crying, searching and yearning for the deceased, disbelief about the death, being stunned by the death, and not accepting the death" (Prigerson et al., 1995, p. 68). Response style is based on a 5-point Likert scale ranging from 0 (*never*) to 4 (*always*) measuring frequency experiencing each of the emotional, cognitive, and behavioral states described in the ICG. Participants on which the ICG was normed were widowed elders

who had been recruited as part of research program that was designed to study physiological changes in major depression and bereavement based on their sleep logs, routine laboratory tests, medical and psychiatric histories, and physical and neurological examinations; there were bereavement and healthy control sub-studies. The authors' goal with this tool was to more accurately assess CG as a separate or comorbid disorder for bereaved individuals. Items on the ICG were compared to the Texas Revised Inventory of Grief (TRIG; Fascingbauer, Zisook, & Devaul, 1987). Prigerson et al. found that persistent unresolved problems associated with the grief and time since loss were two main differences between the two measures, which impacted how criteria for CG and UG were determined.

Melhem et al. (2004) used the Texas Inventory of Grief (TIG) to measure the extent of unresolved or pathological grief in their study of suicide bereaved adolescents. The scale has 21 items and was administered at 6, 12 to 18, and 36 months post-loss. Two main factors resulted in the analysis. This first factor included CG along with its associated symptoms (e.g., yearning, crying, numbness, preoccupation with the deceased, functional impairment, and poor adjustment to the death). The CG factor predicted "the onset or course of depression and PTSD at follow-up even after controlling for depression and PTSD at baseline, respectively. The second factor included symptoms measuring normal grief reactions and did not predict depression or PTSD" (Melhem et al., 2004, p. 24).

In their study on social acknowledgement and development of PTSD or CG, Wagner, Keller, Knaevelsrud, and Maercker, (2012) utilized the ICG and the Impact of Event Scale at 14 to 24 months post-loss. The Impact of Event Scale was used to assess symptoms of PTSD. The measure has 22 items and assesses the extent to which respondents are distressed by witnessing the death of their loved ones, as well as related symptoms of intrusion, avoidance, and arousal experienced in the previous week on a 4-point Likert scale. The ICG was used to assess CG. The original scale includes 34 items.

The authors used a shortened version, which included only items assessing "the refined consensus criteria, . . . one on the triggering event (death of a significant other . . .), four on separation distress . . . , eight on traumatic distress . . . , one on duration of more than six months . . . , and one on disturbance causing clinically significant impairment. . . . A reduced 4-point response scale (1 = no/never to 4 = always) was applied" (Melhem et al., 2004, p. 383).

In their study comparing CG versus UG, Boelen and van den Bout (2008) used the Dutch version of the Inventory of Complicated Grief-revised (ICG-r) to assess for CG and the Present Feelings scale of the TRIG to assess for UG. Boelen and van den Bout also used the TRIG to more specifically assess UG rather than CG given that the "threatening symptoms" that constitute CG criteria are not assessed directly by the measure. De Groot et al. (2006) also utilized the Dutch version of the ICG-r in their study comparing grief among spouses and first-degree relatives of those lost to suicide and natural deaths. The version had 29 items and assessed "normal and potentially problematic grief symptoms" (de Groot et al., 2006, p. 421). A higher score indicates a higher likelihood of traumatic, or complicated, grief. Impairments can be indicated in social, general, mental, and physical health functioning.

Wong, Chan, and Beh (2007a, 2007b) created the Grief Reactions of Suicide Survivors Measure for their study on better understanding suicide loss survivors in Hong Kong. After gathering information on profiles of the deceased, the informants were asked to give responses on 14 items within four categories of questions to elicit their perspectives on suicide, which includes subcategories of stigmatization, psychological adjustment, social adjustment, and physical and tangible adjustment. The items are rated on a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Based on the results using this measure, the authors found that the reactions of suicide loss survivors in Hong Kong were generally consistent with the findings of earlier studies conducted in other countries, specifically in the areas of psychological distress,

stigmatization, and physical pain. Their participants reported having experienced loneliness, anxiety, misery, headache, back-pain, and shame after the suicide of a loved one (2007b). Unlike in other studies in which familial relationships became strained after a suicide of a family member, the participants in this study reported becoming closer with each other (2007b). The authors hoped to utilize the results of this survey to inform intervention and postvention, specifically focusing on public health policies while still recognizing that not all suicide bereaved individuals need professional supports after such a loss (Wong, Chan, & Beh, 2007b).

The PTSD Checklist for DSM-5 (PCL-5; Weathers et al., 2013) is a self-report rating scale assessing the 20 *DSM-5* PTSD items based on a 5-point Likert scale ranging from 0 (*not at all*) to 4 (*extremely*), which can be divided into four subscales corresponding to the clusters B through E in the *DSM-5* criteria for PTSD: Intrusion (five items), Avoidance (two items), Negative Alterations in Cognitions and Mood (seven items), and Alterations in Arousal and Reactivity (six items). The items refer to the past month after a specific event. Total scores range from 0 to 80 and a preliminary cutoff score of 31 to 33 is recommended (Bovin et al., 2015). There are three versions of the checklist. The first includes only the 20-item self-report rating scale. The second includes a brief Criterion A (trauma exposure) assessment. The third includes a more detailed Criterion A assessment as well as a life events checklist (LEC).

Resilience and Other Protective Factors

Resilience "is more common than often believed" (Bonanno, 2004, p. 20). Before exploring the prevalence of resilience, it is important to understand the concept and presentation of resilience in varied contexts. Resilience can be defined or perceived in many ways. One definition of resilience is the ability to "quickly bounc[e] back with little interruption in functioning" (Goldenberg et al., 2010, p. 389). Another description of resilience is "the ability to maintain a stable equilibrium" (Bonanno, 2004, p. 20). Authors of the Resilience Scale, a 25-item scale that assesses adults' traits of resilience

on a 7-point Likert-type scale, Wagnild and Young (1993) defined resilience to be a "personality characteristic that moderates the negative effects of stress and promotes adaptation" (p. 165). Moreover, Mancini and Bonanno (2006) explained that although a person may exhibit characteristics typically associated with resilience, to truly know if that person is resilient is to observe his or her reactions to a traumatic event or loss. One who is resilient is able to recoup and adapt after a very stressful or traumatic event and not develop or reach threshold level of a disorder (Wagnild & Young, 1993). In this sense, resilience is considered a protective factor against developing a disorder or needing mental health treatment during an UG process (Shear et al., 2011). Interestingly, Moore, Cerel, and Jobes (2015) reviewed studies that found that having a higher level of resilience and, consequently, more coping skills, has related to an individual seeing a traumatic event as "less shattering." As a result, this individual will have less of an opportunity to grow from or experience positive life changes as a result of the traumatic experience (Moore et al., 2015). Therefore, although resilience may be a protective factor against developing a psychological disorder, it also may prevent a trauma exposed individual from experiencing any positive outcomes as a result of the trauma. This will be described further in the Posttraumatic Growth section.

Bonanno, Papa, and O'Neill (2001) reviewed studies which indicated that resilient individuals tend to have more positive perceptions of themselves, including a self-enhancing bias, which act as a buffer against negative long-term effects during bereavement and leads to an increase in self-growth due to the more positive perceptions in others' supportive actions during bereavement. In general, Bonanno, Papa, and O'Neill cited that resilient individuals may maintain identity continuity during bereavement through worldview, self-enhancement, concrete aspects of self, and emotional regulation. The authors also noted that accepting the death, in Western culture, can be an indicator of resilience. As Klein and Alexander (2003) highlighted, most Western cultures and religions do not have prescribed timelines for bereavement. The

authors gave an example of "shivah" in Judaism, which requires the bereaved to mourn intensely for seven days. Klein and Alexander demonstrated that with such rituals, "the uncertainty for the bereaved with regard to how they should behave and for how long" (p. 266) is removed. Bonanno (2009) discussed how Eastern and Latino cultures and religions allow and, in some instances, expect mourners to communicate with the dead and recognize the deceased's afterlife. Such beliefs and practices allow for mourners to have an ongoing tangible relationship and, for some, may alleviate the stigma of an ongoing relationship with the deceased. Accepting the death of a loved one in Western culture can allow for a spectrum of emotions (Bonanno et al., 2001). For example, upon accepting the death, the bereaved individual may experience sadness, which may lead to self-reflection as well as sympathy and helping responses from others; a person may also experience positive emotions, which may lead to more genuine laughter, positive recollections of the deceased, and more positive responses from others (Bonanno et al., 2001).

Bonanno, Wortman, and Nesse (2004) found that positive memories and lack of distress at six months following a death of a spouse are a sign of resilience and "good adjustment rather than defensive denial" (p. 268). It is also important to note that Bonanno et al. found that even the spouses who showed resilience overall reported feeling yearning, emotional pangs, and grief-related intrusions and ruminations. With this, the authors highlighted that even resilient individuals "are not spared from at least some initial distressing thoughts and emotions related to the death of their spouse" (p. 268). Nevertheless, those demonstrating resilience do not typically continue to experience significantly distressing feelings after approximately six months. Similar observations have been made in children: "Resilience does not necessarily mean that one is unaffected or untouched by the trauma one has endured nor does it mean that one always functions well. It is also possible that a child may show resilience at one point in

life and not at another, or in one domain and not another" (Wright, Masten, & Narayan, 2013, p. 19).

Hilgard, Newman, and Fisk (1960) investigated the impact of parental death during childhood in an adult sample. The authors found that a compatible relationship between parents with clearly defined roles prior to the death, a strong surviving parent who can manage a dual role including keeping the remaining family together, family or community resources for the surviving parent to utilize, and considering grief and mourning patterns based on age and sex of child and sex of parent lost were protective factors for a healthy development of the child after the loss, regardless of the type of death of the parent, including suicide or illness. Indeed, Hilgard et al. emphasized the circumstances within the family and between the two parents prior to the death to have the most impact on the child's development after the death. High self-esteem or lack of exposure to pre-loss problems are also considered protective factors for children who have lost a parent to suicide (Andriessen et al., 2015).

Cerel, Fristad, Weller, and Weller (2000) examined suicide bereaved children's family histories of psychopathology and family environments before and after death of their parents. The sample included 26 suicide bereaved children, aged 5 to 17 years, and their 15 surviving parents who were compared with 332 children bereaved from parental death not caused by suicide and their 201 surviving parents in interviews 1, 6, 13, and 25 months after the death. The authors found that parents who had died by suicide reportedly exhibited higher rates of psychopathology than parents who had died of other causes. Additionally, more disruptions were reported in families of suicide bereaved children than non-suicide bereaved children prior to the death of the parent. One interpretations from the findings was that suicide bereaved children who had been separated from the suicidal parent coped better with the loss than those who had not been separated due to "less exposure to their parent's problems and their subsequent decision to [die by] suicide" (Cerel, Fristad, Weller, & Weller, 2000, p. 443).

For adolescents, attitude toward suicide and closeness of the relationship to the person who completed the suicide may prevent personal suicidal ideation and attempts (Abbott & Zakriski, 2014). Abbott and Zakriski (2014) also found that adolescents who reported being closer to the deceased experienced more prolonged grief and had less of a belief in the preventability of suicide. Abbott and Zakriski noted that not believing in preventability of suicide allows for some alleviation of responsibility for some, whereas for others, this may lead to feelings of hopelessness. Further, the authors did not find, as they hypothesized they would, that "those who were more affected by the suicides would have less stigmatizing, yet more hopeless, attitudes toward suicide" (p. 677).

Social support can serve both as a protective factor and risk factor in that it can present suicide as preventable or encourage further rumination around the suicide, which can lead to a development of depression (Adriessen et al., 2015). In regard to social support, Abbott and Zakriski (2014) found that social support from family was "associated with less past grief, yet support from significant others and friends was not" (p. 677); rather it was related to some negative and less accepting attitudes toward the act of suicide, which may help reduce self-blame but also increase stigma toward suicide in the community. During a personal communication at the 2016 Resilience Summit, John Lyons, a Senior Policy Fellow at Chapin Hall at University of Chicago, discussed the importance of the relationship between one's skills and the environment in order to build resilience. Lyons highlighted that a person can have a talent or strength, but without having social supports or being part of a community, the skill may not serve as strong of a protective factor. By integrating oneself and one's abilities into the community, resilience has a higher chance of being built and sustained. Lyons also described how this approach can allow for resilience to be a preventive strategy rather than a reactive one, when building upon personal strengths and resilience skills are taught after experiencing adversity (personal communication, November 2, 2016).

Mancini, Prati, and Black (2011) examined the mediating effects of worldviews (benevolence, meaningfulness, and self-worth beliefs) in bereaved spouses and parents at four and 18 months post-loss. The authors referred to Janoff-Bulman's (1989) theory on how traumatic events can shift one's assumptive world. Intact worldviews are considered to serve as protective factors against feelings of vulnerability, which may in turn lead to CG or PTSD. In their study, Mancini et al. found that those bereaved by violent causes (defined as death by accident, homicide, or suicide) had higher rates of PTSD, grief, and depression symptoms at four and 18 months post-loss than those bereaved by natural causes. They also observed that self-worth, but not benevolence or meaningfulness, mediated the effects of violent loss on depression symptoms at four months and PTSD symptoms at four and eight months. This implies that a violent loss can diminish self-worth, which leads to a more prolonged course of PTSD symptoms (Mancini et al., 2011).

Resilience differs from the trajectory paths of "recovery" and meeting full diagnostic criteria for a disorder (Bonanno, 2004; Goldenberg et al., 2010). "Recovery refers to the experience of those individuals who suffer significant grief symptoms and a disruption in functioning for at least several months before returning to pre-event status. Finally, a small but not insignificant percentage of people (about 10-15 percent) have even more impairing and longer-term reactions to their loss" (Goldenberg et al., 2010, p. 389). In the recovery, a person may exhibit some symptoms related to a disorder right after the traumatic event but then "gradually returns to pre-event levels" (Bonanno, 2004, p. 20). Bonanno (2004) described resilience as "more than the simple absence of psychopathology" (p. 20). A resilient person may initially experience some impairments or dysfunction immediately following a loss or trauma but the intensity is low and duration is short. Further, a person demonstrating a resilient trajectory is capable of healthy functioning and positive emotions across time.

Some critics of Bonanno's research argue that the "resilient" reaction to death of a loved one or even a traumatic experience, depends on the type of trauma (Infurna & Luthar, 2016; Steenkamp, Litz, Dickstein, Salters-Pedneault, & Hofmann, 2013). Steenkamp et al. (2013) found that "recovery (high initial distress and impairment that subsides over time) rather than resilience (minimal disruption in functioning post trauma) was the modal outcome following sexual assault [which contradicted Bonanno's thesis that] resilience is the modal outcome following trauma and loss" (p. 394). Steenkamp et al. emphasized that functioning and the impact after a trauma are dependent on the type and frequency of trauma experienced: "Intentional, malicious traumas have repeatedly been shown to be uniquely psychologically damaging" (p. 294). Although Steenkamp et al. agreed that most sexual assault victims will experience positive long-term outcomes, the authors found that "78% of participants had probable PTSD 1-month post assault, when missing data were at a minimum. . . . It is clear that most participants in [their] study were not able to 'maintain a stable equilibrium' following the assault, Bonanno's definition of resilience" (p. 395). Infurna and Luthar (2016) also argued that one cannot describe resilience as common due to the fact that "labels of resilience can differ greatly based on measurements used to define resilience; it is practically impossible to make definitive 'diagnoses of resilience' because of the range of plausible adjustment difficulties that must be ruled out" (p. 200). The varying definitions of and methods to assess resilience also influence our current perceptions of the prevalence of resilience and recovery after a trauma.

Bonanno (2004) reviewed the minimal existent literature exploring the multiple pathways to resilience, in which he includes the following: the personality trait of hardiness, self-enhancement, repressive coping, positive emotion, and laughter. Hardiness is defined by three dimensions: "being committed to finding meaningful purpose in life, the belief that one can influence one's surroundings and the outcome of events, and the belief that one can learn and grow from both positive and negative life

experiences." (Bonanno, 2004, p. 25). Self-enhancement may be defined as an "unrealistic or overly positive [bias] in favor of the self" (Bonanno, 2004, p. 25). Repressive copers tend to "operate primarily through emotion-focused mechanisms, such as emotional dissociation" (Bonanno, 2004, p. 26). Although "generally viewed as maladaptive . . . [these] tendencies also appear to foster adaptation to extreme adversity" (Bonanno, 2004, p. 26). Bonanno noted, too, that increased adjustment does not equate to increased social competence; therefore, the repressive coper may avoid any interaction, even potentially positive ones, with the perceived intention of retriggering the trauma-related symptoms. Janoff-Bulman (2006) made an observation along a similar framework: "Individuals who begin with negative views of the world and themselves are less apt to experience the terror of trauma, but will also look less psychologically adjusted over time" (p. 93). During a lecture on trauma and resilience at Teachers College, Columbia University, Bonanno also expressed that optimism, which may be seen as parallel or similar to hardiness, is one of the main predictors of resilience (February 2015).

King, King, Fairbank, Keane, and Adams (1998) found that hardiness contributes to protection against developing chronic PTSD after combat. The authors examined relationships among several war zone stressor dimensions, resilience-recovery factors, and PTSD symptoms in a national sample of 1,632 Vietnam veterans. King et al. (1998) used Kobasa's (1979) definition of hardiness, which was based on three main components: (a) a sense of control or influence over one's life, (b) an ability to feel deeply involved in or committed to the activities of one's life, and (c) the anticipation of change as an exciting challenge to further development. Individuals who may be non-resilient, less hardy, or faced with more stressors "may tend to drive away members of their support network" (King, King, Fairbank, Keane, & Adams, p. 426). Therefore, having higher levels of hardiness may allow the person to build a larger or more complex support network than when compared to a person with lower levels of hardiness. King et

al. found that "hardiness demonstrated a direct negative association with PTSD for both women and men. . . . Those who scored higher on items assessing the trio of hardiness dispositions (i.e., control, commitment, and change as challenge) appeared to exhibit fewer PTSD symptoms" (p. 429). These findings were similar to Kobasa's, who found that those with higher personality traits related to hardiness were less likely to fall ill when faced with varied stressors. Observed reasons for this effect may be that the person is more likely to see the stressor as a positive challenge to utilize inner resources. As such, the person suspects he or she may grow from the challenge. Lastly, the person with higher levels of hardiness is more likely to recognize what aspects of the stressor he or she has control over even if initially the stressor was not self-initiated (Kobasa, 1979).

Brooks and Fletcher (2016), both directors for the Wounded Warrior Project's Combat Stress Recovery Program, were in the process of conducting a study on the relationship between resilience and global and mental health functioning in veterans who are in the program. Brooks and Fletcher reported that 75% of veterans receiving services through the Wounded Warrior Project met criteria for PTSD in comparison to 20% receiving services through Veteran Affairs, which reflects the self-selective sample. Prior to receiving the intervention and treatment of the Combat Stress program, participants' resilience levels were assessed using the CD-RISC and health-related quality of life levels were assessed using the RAND-36 Health Survey (RAND-36). Preliminary findings have demonstrated a percentage increase on post-intervention CD-RISC and RAND-36 scores. Veterans were not specifically reevaluated for PTSD symptoms. No conclusions have been made yet prior to the collection of data from the third time point.

Friborg, Hjemdal, Rosenvinge, and Martinussen (2003) supported the notion that resilience is a multidimensional phenomenon. Psychological or dispositional traits (e.g., internal locus of control, prosocial behavior, and empathy), family support/cohesion, and external support systems are considered the most significant determinants of a healthy

adjustment to long-term stressors. Resilience can be present or developed by having more resources that protect against the development of psychiatric disturbances (Friborg, Hjemdal, Rosenvinge, & Martinussen, 2003).

Building resilience should consider many aspects of a child's life and provide participative interventions, rather than solely social emotional learning strategies. A. J. Reynolds and Ou (2003) reviewed different early childhood intervention (ECI) programs aimed at building resilience in children who experienced multiple social-environmental risk factors due to economic disadvantage. Protective factors and interventions have greater effects on those who are at high risk; using a needs-based perspective, resilience can be developed through social and educational interventions (such as school readiness; A. J. Reynolds & Ou, 2003). The assessed programs resulted in cognitive development, school achievement, reduced need for school remedial services, and educational attainment. The most effective programs, which contributed to positive well-being later in life, began during the first three years of life, continued for multiple years, and provided support to families:

> The effects of early intervention may be transmitted through (1) developed cognitive and scholastic abilities (cognitive advantage hypothesis), (2) parents' behavior with or on behalf of children (family support hypothesis), (3) children's motivation or self-efficacy (motivational advantage hypothesis), (4) social development and adjustment (social adjustment hypothesis) and (5) the quality of the school environments children experience after participating in the program (school support hypotheses). (A. J. Reynolds & Ou, 2003, p. 442)

Waves of Resilience Research

Wright, Masten, and Narayan (2013) outlined four waves of resilience research and definitions as related to children and adolescents. The authors highlighted that the concept of resilience in research arose during a shift from a deficits-focused perspective to a strengths-based one. The first wave looked at resilience as a protective factor in

relation to risk factors and multiple forms of adversity. As studies identified that risk factors do not occur in isolation, researchers began to observe that resilience could be happening concurrently as the child is experiencing multiple stress factors, such as divorce, poverty, or illness, or after a trauma such as war or torture (Wright et al., 2013).

The second wave examined what is normative or typical behavior, what behaviors would lead to development of a psychological disorder, and the processes that may lead to resilience. As Wright et al. (2013) explained, "the second wave yielded a more dynamic accounting of resilience, adopting a developmental systems approach to theory and research on positive adaptation in the context of adversity or risk, and focused on the transactions among individuals and the many systems in which their development is embedded" (p. 15). Wave two research did not only look at why a person is resilient but also at the interaction between the person and his or her context (e.g., family, community, society, and culture). A child may be resilient in one context or time but not in another. "It is particularly helpful to think of a 'continuum of resilience' as well as a 'continuum of vulnerability' across multiple domains (physical, psychological, interpersonal, and occupational) and to be alert to the ever-changing dynamic of the child's functioning over time" (p. 26) in order to conceptualize resilience more fully.

Third wave researchers used what was learned from first and second wave research on natural and acquired resilience to plan and create ways to teach and promote resilience as a preventative and reactive measure in situations in which it may not naturally otherwise occur. Researchers of the third wave considered timing of resilience building interventions to ensure longer lasting effects (Wright et al., 2013). Further, "these studies emphasize the need to promote competence as well as to reduce risk. Boosting fundamental skills for learning and school success and nurturing parent-child relationships are also promising pathways to adaptive development for young, disadvantaged children" (Wright et al., 2013, p. 29). Wright, Masten, and Narayan (2013) also highlighted varied theoretical perspectives in regard to defining, "mediating,

moderating, promoting, compensating, and cascading processes" (p. 29) in order to create effective and efficient intervention models to benefit children and society. This continues to be an ongoing process.

The fourth wave in resilience research is focused on "multilevel dynamics and the many processes linking genes, neurobiological adaptation, brain development, behavior, and context at multiple levels" (Wright et al., 2013, p. 30); this includes looking at executive functions, such as emotional regulation, and adaptive responses to adversity.

Measuring Resilience

Windle, Bennett, and Noyes (2011) reviewed 19 resilience measurement scales, including four of which were refinement measures of original scales. Of these, the authors found three with the best psychometric properties: the Connor-Davidson Resilience Scale, the Resilience Scale for Adults, and the Brief Resilience Scale. All three scales were developed for use among adults. Windle et al. highlighted how different approaches in defining and assessing resilience has led to inconsistent prevalence rates and understanding of risk and protective factors across studies, even in which the populations face the same adversities, making some of the results of the studies incomparable (Windle et al., 2011).

The CD-RISC is a self-report rating scaling, which targets measuring stress coping ability in adults (Connor & Davidson, 2003). It consists of 25 items on five domains (personal competence, trust/tolerance/strengthening effects of stress, acceptance of change and secure relationships, control, spiritual influences). Responses are scored on a 5-point scale, with higher overall scores (factoring in reversals) reflecting greater resilience. The CD-RISC was designed to assess the personal characteristics that embody resilience. Connor and Davidson (2003) explained that "the CD-RISC is a wave two resilience measure, . . . assessing characteristics of resilience, and does not assess the resiliency process or provide information about the theory of resilience" (p. 81). The scale was administered to subjects in the following groups: community sample, primary

care outpatients, general psychiatric outpatients, clinical trial of generalized anxiety disorder, and two clinical trials of PTSD. The scale demonstrates that resilience is modifiable and can improve with treatment, with greater improvement corresponding to higher levels of global improvement. From this, Connor and Davidson concluded that resilience may also be viewed as measure of successful stress-coping ability. They also noted that resilience may either be a determinant of response or an effect of exposure to stress. When compared with other measures of stress, hardiness, disability, and social support, the authors found that greater resilience was associated with less disability, less perceived stress, and greater social support. Windle et al. (2011) concluded the following about the scale: "Although this scale was one of the higher scoring ones in the psychometric evaluation and has been applied with an intervention, with reference to our definition, it is an individual level measure that would benefit from more theoretical clarification" (p. 8).

The Resilience Scale for Adults (RSA; Friborg et al., 2003), originally from Norway, is a self-report measure consisting of 37 items among five domains (personal competence, social competence, family coherence, social support, and personal structure) examining "intrapersonal and interpersonal protective factors presumed to facilitate adaptation to psychosocial adversities" (Windle et al., 2011, p. 9). Friborg et al. (2003) intended to examine resilience on the belief that, in addition to psychological skills or abilities, a person's ability to use family, social, and external support systems to cope with stress is an equally important component of what makes an individual resilient to developing psychological distress. This created the foundation of the three categories: dispositional attributes, family cohesion/warmth, and external support systems, which encompass the aforementioned five domains. The rating scale was administered to patients with psychiatric disorders (approximately 24% of whom had PTSD) and healthy controls twice, separated by four months. Participants were also given the Sense of Coherence Scale (SOC)—a measure of psychological/personal adjustment—and the

Hopkins Symptoms Checklist (HSCL)—a measure of anxiety, depression, and somatization. A positive correlation was observed between the RSA and SOC, and a negative correlation was observed between the RSA and the HSCL. The internal consistency of the RSA has been found to range from .76 to .90. Test-retest reliability has been reported to range between .69 and .84 (Friborg et al., 2003).

The Brief Resilience Scale (BRS; Smith et al., 2008) is a self-report six-item measure with one domain. The developers of the BRS aimed to assess resilience under the definition of "the ability to bounce back" or returning to a pre-stress level of functioning, not its other definitions of "resistance to illness, adaptation to stress, and functioning above the [individual's] norm in spite of stress" (Smith et al., 2008, p. 194). Smith et al. (2008) highlighted that other measures assess protective factors related to personality characteristics and coping styles rather than "specifically assessing resilience as the ability to bounce back, resist illness, adapt to stress, or thrive in the face of adversity" (p. 195). Samples were from university students, cardiac rehabilitation patients, patients with fibromyalgia, and patients who reported to be healthy without medical concerns. In the norming of this scale, participants from the different samples were administered not only the BRS but also full or specific items from other measures in the areas of resilience-related constructs, other personal characteristics, coping styles, social relationships, and health-related outcomes. Results showed that "the BRS was positively correlated with the resilience measures, optimism, and purpose in life, and negatively correlated with pessimism and alexithymia. In addition, it was positively correlated with social support and negatively correlated with negative interactions. Finally, it was consistently positively correlated with active coping and positive reframing and negatively correlated with behavioral disengagement, denial, and self-blame" (Smith et al., 2008, p. 197). The internal consistency of the BRS has been found to range from .80 to .91, and test-retest reliability has been reported to range between .62 and .69 (Smith et al., 2008).

Posttraumatic Growth

Although the term *posttraumatic growth* (PTG) was coined by Tedeschi and Calhoun in the mid-1990s, the concept is not new. PTG is a "positive post-trauma change in psychological functioning, . . . an outcome following a major life event and meaning or sense making of the experience [and ultimately] both a coping strategy and precursor to the gaining of wisdom" (Groos & Shakespeare-Finch, 2013, p. 5). Wortman and Boerner (2011) described how positive emotions in suicide bereaved individuals "can include increased self-confidence and independence, altered life priorities, and enhanced compassion for others suffering similar losses" (p. 466). PTG can be described by five main domains: "seeing new possibilities, changed relationships, the paradoxical view of being both stronger yet more vulnerable, a greater appreciation for life, and changes in the individual's spiritual and existential domain" (Calhoun & Tedeschi, 2004, p. 95). These domains also comprised Calhoun and Tedeschi's initial Posttraumatic Growth Inventory (PTGI).

Janoff-Bulman (2006) described how after a traumatic event, a person can experience a shattering of the inner world (with thoughts such as "I am unprepared to handle this") and the outer world (with thoughts such as "The world can be arbitrarily dangerous even for someone as careful as me;" p. 85). She reminded her readers that a person who has experienced a trauma may first only acknowledge the negative effects, with time recognize the positive, and further along will have access to both the positive and negative effects of the trauma. Janoff-Bulman further highlighted a number of studies that have demonstrated that "between 75% and 90% of survivors report benefits, while approximately 5% to 15% have reported negative effects as a result of the trauma, such as anxiety and PTSD" (p. 82).

Janoff-Bulman (2006) proposed three kinds of PTG processes: strength through suffering, existential reevaluation, and psychological preparedness. Strength through suffering "involves self-discovery and new self-perceptions produced over the course of

coping and adaptation" (pp. 82-83). Survivors of trauma "develop in the process of facing a difficult challenge, and in turn . . . become aware of [their] greater competence and strength" (Janoff-Bulman, 2006, p. 87).

Existential reevaluation "involves reflective appraisals and the creation of value triggered by perceptions of human fragility in the aftermath of victimization" (Janoff-Bulman, 2006, p. 83). The survivor of trauma may question the meaning of life and why this happened to him or her in particular; however, Janoff-Bulman explained that "over the course of successful coping, these threatening assumptions increasingly cease to wholly define the survivor's inner world" (p. 89). With time and reflection, the assumptions of the survivor of trauma become less "all or nothing" and more nuanced. With this shift, the survivor of trauma may begin to value his or her life more and recognize a new value, or "preciousness," in his or her existence (Janoff-Bulman, 2006). Trauma survivors begin to recognize that they have control over some events in their lives but not others; consequently, to create more meaningful life experiences, they alter the choices that they now make in life (Janoff-Bulman, 2006).

Psychological preparedness "focuses on changes in the survivor's assumptive world that suggest greater complexity and structural growth" (Janoff-Bulman, 2006, p. 83). This type of PTG addresses more of the inner world and acts as buffer against future or further psychological traumatization. Now that the person has experienced the trauma, he or she becomes more "immune" to future traumas (Janoff-Bulman, 2006). Similarly, Calhoun, Tedeschi, Cann, and Hanks (2010) described the experience as follows: "The loss of a loved one, particularly when the death is violent or sudden, tells the survivors that they are indeed vulnerable to losses that are unpredictable, unexpected, and perhaps tragic" (p. 127). Furthermore, Calhoun et al. noted that the manner in which a person responds to or handles the death is related to and may be a reflection of that person's assumptive world beliefs.

Using Janoff-Bulman's conceptualization as a starting point, Tedeschi and

Calhoun (1996) formulated an evolving model of PTG (Calhoun & Tedeschi, 2004; Janoff-Bulman, 2006). In Tedeschi and Calhoun's PTGI, the strength through suffering type of PTG is captured by the following two factors: personal strength and new possibilities. The existential reevaluation type of PTG is captured by the following three factors: Appreciation of Life, Relating to Others, and Spiritual Growth. Given that psychological preparedness refers more to "psychological state and its structural underpinnings" (Janoff-Bulman, 2006, p. 91), this type of PTG is not covered by the five factors of the PTGI (Tedeschi & Calhoun, 1996), which focuses more on the positive changes that survivors of trauma report (Janoff-Bulman, 2006).

The five factors that make up Tedeschi and Calhoun's (1996) PTGI are Personal Strength, Relating to Others, New Possibilities, Spiritual Change, and Appreciation of Life. Personal Strength is defined as increased self-reliance or recognition of possessing a sense of strength. Relating to Others is defined as a greater sense of closeness, intimacy, or compassion for others. New Possibilities is defined as developing a new opportunity or taking a new path in life. Spiritual Change is defined as a deeper understanding of spirituality, including stronger religious beliefs. Appreciation of Life is defined as a greater appreciation for the value of life (Taku, Tedeschi, & Cann, 2015).

Just as resilience can almost exclusively be measured after experiencing a traumatic or stressful event, so too can PTG. Calhoun, Tedeschi, Cann, and Hanks (2010) examined what positive outcomes or PTG bereaved individuals experience, and found that "posttraumatic growth clearly occurs in a context of significant life challenges, with concomitant states of psychological distress and sometimes great suffering" (p. 127). Therefore, experiencing PTG does not imply that one does not experience grief after a death or other negative responses after a trauma. Likewise, not all who experience a major stressor, including bereavement, will experience PTG (Calhoun et al., 2010).

Resilience and PTG

Moore, Cerel, and Jobes (2015) investigated PTG and what variables, such as

reflective rumination, resilience, personality variables, and mood states, contributed to PTG among recently (within two years) suicide bereaved parents. In this study, resilience was defined as "a preparedness . . . for future events that may otherwise be traumatic" (p. 242). The authors found that "resilience inversely predicted PTG scores, but reflective rumination did not predict PTG. PTG scores were in the low–moderate range and were lower than those of parents bereaved by other causes of death" (p. 241). Participants indicated strengthened relationships, increased spirituality, and appreciation for life (Moore et al., 2015).

Levine, Laufer, Stein, Hamama-Raz, and Solomon (2009) examined the association between resilience, defined as resistance to PTSD following adversity and PTG among adolescents directly and indirectly exposed to terror, and citizens and combatants exposed to wartime trauma. PTG was assessed using the Hebrew translated version of the PTGI. The authors found that, in the first study examining adolescents and terror exposure, PTG and resilience were inversely related: the lower the levels of PTSD (which the authors translated to "higher levels of resilience"), the lower the levels of PTG (Levine et al., 2009). No dedicated measure for resilience was used.

Because PTG may develop differently in children and adolescents due to abstract thinking abilities that develop with age, Levine et al. (2009) conducted a second study, which examined the relationship between resilience (defined as low PTSD scores) and growth among adults (civilians and military personnel exposed to the second Lebanon war with an average range of 26 years in this sample). Participants in the second study were divided into three groups: those with PTSD (with minimally one intrusive symptom, three avoidant symptoms, and two hyperarousal symptoms), subclinical symptom severity, or no symptoms (i.e., resilience). The results indicated that the least PTG was associated with the most resilience (i.e., no PTSD symptoms). The authors explained this relationship in regard to meaning- or sense-making of a death or trauma. Bonanno, Wortman, and Nesse (2004) found that the resilient spouse-bereaved individuals in their

study searched for meaning less than all other groups except depressed–improved individuals. Bonanno et al. also considered time as a factor: at six months post-loss, two thirds of the participants reported not searching for meaning. Likewise, Levine et al. concluded that the participants in their study may not have had as much of a *need* for PTG and were demonstrating healthy coping in response to their respective traumatic exposures.

Depending on the circumstances surrounding the death, the individual may describe stressor-specific changes (e.g., "My father died of a heart attack and as a result I try to eat a much healthier diet") or idiosyncratic changes (e.g., "The loss led me to want to go into nursing;" Calhoun et al., 2010, p. 129). For individuals who experience significant challenging of beliefs as a result of loss, experiencing PTG may be more difficult, as there is now a dual task of rebuilding beliefs while also grieving; for others, the process of PTG occurs simultaneously with bereavement (Calhoun et al., 2010). With time, however, the individual whose beliefs have been "shattered" or "disrupted" the most may experience the most symptoms related to PTSD and, consequently, have the potential for greater PTG "out of an attempt to come to new understandings of a world that no longer fits people's ideas about themselves, how others behave, what their future will be, and the like" (Calhoun et al., 2010, pp. 135). In summary, "challenges to core beliefs, high levels of distress, and rumination" are associated with PTG (Calhoun et al., 2010, p. 135). Therefore, it is not only the loss itself but the cognitive and emotional work—the need to reconstruct one's assumptive world—that brings about change (Calhoun et al., 2010). According to Taku, Tedeschi, and Cann (2015), factors that contribute to the degree of PTG that a person may experience include "characteristics of the person pre-trauma (e.g., personality, religious beliefs), seismicity of the triggering event (e.g., severity and subjective impact of the event), cognitive processing (e.g., intrusive and deliberate rumination), and sociocultural context (e.g., disclosure, cultural value)" (Taku et al., 2015, p. 57).

Calhoun et al. (2010) noted that the course of PTG for bereavement differs from other highly stressful events. In identifying a trend across many of their studies using the PTGI, the authors observed that participants "reporting on a death showed reliably more growth in the areas of Relationships with Others, Appreciation of Life, and Spiritual Change. However, bereaved persons reported less growth in the areas of Personal Strength and New Possibilities" (p. 135). It should be noted that the deaths reported in these studies ranged and the majority were more "natural" than sudden or unexpected.

In examining relationships between PTG and stress responses in bereaved young adults, Taku, Tedeschi, and Cann (2015) highlighted that PTG is not a single-dimensional construct. The authors referred to a number of studies that examined which dimensions of PTG demonstrated most growth based on the type of trauma experienced and cultural background of the sample population. For example, "death of a loved one . . . is often associated with higher levels of PTG, characterized by high growth in the domains of Appreciation of Life and Relating to Others but relatively low growth in the domains of New Possibilities and Personal Strength" (Taku et al., 2015, p. 59). Therefore, the authors emphasized that to examine PTG, researchers should not rely on the overall PTGI score but, rather, the individual dimension scores.

Taku et al. (2015) examined each of the PTG domains separately in a sample of Japanese bereaved college students who reported their losses to be their most traumatic events in the past five years. Curvilinear relationships were predicted in domains with the greatest number of items on the PTGI and in the domain most frequently reported by bereaved individuals as the highest area of growth. The authors used the Japanese translation of the 21-item PTGI (which includes four domains, as two of the domains are combined) to measure the degree of positive change, and the Japanese translation of the 22-item Impact of Event Scale-Revised (IES-R), the IES-R-J, to measure posttraumatic stress responses or the perceived negative psychological impact of the event (Asukai et al., 2002; Weiss & Marmar, 1997). Taku et al. used the overall, not domain, score from

the IES-R-J and the domain scores from the PTGI-J. Taku et al. found that "of the four PTGI-J domains, Relating to Others and the combined factor of Spiritual Change and Appreciation of Life showed predicted inverted-U quadratic relationships beyond any linear relationships" (p. 64), which was not the case for the domains of New Possibilities and Personal Strength. Furthermore, "among the four PTGI-J subscales, the degree of PTG reported in Relating to Others and the combined factor of Spiritual Change and Appreciation of Life was significantly more than PTG reported in Personal Strength and New Possibilities" (Taku et al., 2015, p. 65).

Taku et al. (2015) also found that reported stress level played a role in PTG. Participants who reported moderate levels of stress related to their losses also reported experiencing the most PTG in the Relating to Others and Spiritual Change/Appreciation of Life domains. Additionally, "bereaved [individuals] with high levels of stress responses overall reported lower growth, which may suggest that these are the ones who are struggling with PTSD symptoms and that this impedes a connection between their loss and growth" (Taku et al., 2015, p. 66). Therefore, if a person reports too little or too much stress, he or she is less likely to experience PTG "than those with intermediate levels of stress responses" (Taku et al., 2015, p. 57). The authors did not collect data on degree of closeness between bereaved and deceased nor any characteristics of the death.

Suicide bereaved parents interviewed by Miers, Abbott, and Springer (2012) shared that although they felt some guilt and helplessness following the suicides of their teenagers, they found a sense of purpose to be able to give back to their communities, especially in regard to increasing suicide awareness and prevention. Some parents became volunteers alongside professionals for suicide bereaved support groups. Other parents shared how they connected more with their deceased teens' friends: Initially, the friends visited the parents to show their support to the bereaved families but, with time, the suicide bereaved parents became support givers to their deceased adolescents' friends.

In this sense, they felt they were continuing to keep the memory of their children while also providing support and raising awareness.

Bonanno (2009) highlighted that experiencing losses often can help, or force, people to reevaluate and reprioritize life goals and actions in addition to adjusting relatively quickly back to routines that allow them to live productively. Without labeling it PTG, Begley and Quayle's (2007) interviewees who took part in support groups for suicide bereaved individuals reported feeling a positive change in their lives eventually, feeling a sense of "purposefulness," and finding meaning in their lives after the deaths of their loved ones. Participants reported being more open with close family members, trying new activities, being more likely to help others who are vulnerable, shifting priorities, and continuing to attribute these positive life changes to the maintained connection with and legacy of the deceased.

Postvention

Postvention, which is "the support or interventions put in place to address reduce the risk of any negative consequences experienced by individuals as a result of the suicide . . . has come to be specifically associated with efforts intended to diminish the repercussions of a suicide" (Parrish & Tunkle, 2005, p. 89). The term was proposed by Shneidman (1969) to "label activities which occur after a suicidal event" (p. 21). He described two types of postvention: (a) working with an individual who has attempted but not completed suicide to help reduce probability of future attempts and to mitigate the consequences of the recent attempt, and (b) working with the suicide loss survivor "to help [him or her] with [his or her] anguish, guilt, anger, shame, and perplexity" (p. 21). Postvention can be in the form of recommended or provided strategies, public or private debriefings, formal or informal, small or large group, or clinical interventions (Parrish & Tunkle, 2005). Often, suicide bereaved individuals are treated or approached in a manner similar to general bereaved patients, or they lack support from mental health providers, friends, family members, co-workers, and more due to the stigma surrounding suicide.

Further, some question the training and expertise clinicians have in regard to suicide in general, which results in generic treatments and occasionally over-prescriptions of medications (Ali, 2015). Given the possibility of isolation among friends, family, or community, some suicide loss survivors turn to social support networks, whether professional or community based (Ali, 2015; Barlow & Coleman, 2003; Begley & Quayle, 2007; Bonanno et al., 2001; Cerel, Padgett, Conwell, & Reed, 2009; de Groot et al., 2007; de Groot et al., 2010; Groos & Shakespeare-Finch, 2013; Jordan, 2008; McDaid, Trowman, Golder, Hawton, & Sowden, 2008; Miers, Abbott, & Springer, 2012; Schneider et al., 2011; Shear et al., 2011; Smolin & Guinan, 1993).

Jordan (2008) reported that there are not many controlled studies of interventions that were designed specifically to help suicide bereaved individuals. Most commonly reported interventions include individual therapy with a "mental health professional, or a bereavement support group (both peer or professionally led), are the most common interventions offered to suicide [loss] survivors" (Jordan, 2008, p. 682). Individual therapy is recommended more for those experiencing higher levels of traumatization, when they are at risk for suicide themselves, or when they develop CG or other psychiatric disorders. Jordan also advocated for suicide bereavement groups led by professionals, during which support and psychoeducation can be provided. This idea is supported by de Groot, Neeleman, van der Meer, and Burger (2010), who stated that grief interventions are "more effective for high risk individual" (p. 425).

Jordan (2008) discussed how psychoeducation can help dispel some unrealistic expectations about the mourner's guilt, the preventability of the suicide, and the grieving process, stating that "grief should be over in a year, everyone should grieve the same, etc." (p. 684). Nevertheless, it should be noted that the perspective of what is realistic versus unrealistic varies (e.g., Miers et al. [2012] on the preventability of suicide and Bonanno [2004] on the most common trajectory of bereavement). Additionally, Shear et al. (2011) argued that earlier treatment in the bereavement process "to reduce suicide risk

is likely the most effective long-term preventative intervention available, as risk appears highest in the month before treatment, next highest in the first month after treatment, and lower thereafter" (pp. 111-112). Yet, only approximately 25% of suicide bereaved individuals access support groups or therapy (Groos & Shakespeare-Finch, 2009).

In their research, Groos and Shakespeare-Finch (2013) used grounded theory—interviewing with the goal of better understanding the interviewee's point of view rather than enforcing external beliefs on the interviewee (Strauss & Corbin, 1990)—to examine the experiences of 13 participants who had attended psychoeducational support groups for those bereaved by suicide. They found that most of the participants in the support groups reported feeling a sense of normalcy in their experiences, camaraderie in distinguishing their types of grief and bereavement from others', and a diminished sense of guilt, especially in regard to suicide prevention. In Ireland, interviewees in Begley and Quayle's (2007) study gave similar responses regarding the positive experiences, feeling of belonging or relatability, and acceptance from taking part in the support groups with other suicide bereaved individuals. In Germany, Schneider et al. (2011) found that the interviewees in their study who reported receiving "insufficient professional support—regardless of whether or not they had sought support—reported increased levels of sorrow, lack of energy, and guilt" (p. 190). The authors noted that if professional support seems necessary, providing sufficient professional support to the suicide bereaved may diminish the risk for experiencing negative feelings, especially for those who may not receive the supports they need from friends and family. In addition, due to the guilt and fear of being blamed, Schneider et al. indicated that many suicide bereaved individuals who need professional or social network support may not pursue it. In their study, 61% of the interviewees reported receiving a sufficient amount of support from family and friends, and for those who did not receive "sufficient professional support, emotions of sorrow, lack of energy, and abandonment were described significantly more often" (p. 189). Bonanno, Papa, and O'Neill (2001) discussed that therapy for someone who is

traumatically bereaved should be carefully examined and tailored to his or her culture—especially individualistic versus collectivistic—and also needs to examine whether the presented psychopathology is due directly to the loss, which may require grief tailored counseling, or to maladjustment or previously existing disorders exacerbated by the traumatic loss.

Trauma-informed/focused therapy has also been found to reduce CG symptoms for those bereaved by violent death, given the comorbidity and strong relationship between PTSD and CG (Nakajima et al., 2012). In Calgary, Canada, Barlow et al. (2010) found that suicide bereaved individuals benefitted just as much from peer support services, in the form of triads and dyads, as they did from group counseling. The authors emphasized that many participants, both the peer supporters and clients, found the peer support program contributed to their healing in terms of memorializing of the deceased, connecting with others, making meaning of the suicide, and more. Jordan (2008) also recommended therapy that helps to work on repairing the bond or connection between the deceased and bereaved if the relationship between the two requires it; examples of such therapies he lists include "empty-chair" conversations and letter writing to the deceased.

In the midwestern United States, Miers, Abbott, and Springer (2012) interviewed six parent units who had lost teenagers to suicide two to 12 years prior to examine their needs. Six main themes emerged from the interviews: support by listening and responding, support from another suicide loss survivor, support in finding direction, support when viewing the deceased teen, support in remembering the teen, and support in parents giving back to the community. Each parent unit discussed the challenges they faced immediately following the suicide, especially in terms of dealing with the emotional turmoil, desire to see their child one more time before autopsy, and knowing what logistical steps to take in the midst of feeling overwhelmed by pain. Some parent units expressed a desire for guidebooks or social workers to guide them through the upcoming steps or logistics that would take place to instill a level of preparation and

preparedness in a time when so much was unexpected. Jordan (2008) described new survivor-to-survivor outreach groups, which provide in-home support for recently suicide bereaved families, a service reported to be desired and needed by the participants in the study by Miers et al. As a result of negative interactions with family and community members, most interviewees in their study expressed feeling best when speaking with other suicide bereaved parents who went through similar experiences and could relate (Miers et al., 2012).

McDaid, Trowman, Golder, Hawton, and Sowden (2008) conducted a systematic review of data from eight controlled studies of interventions for people bereaved through suicide, including a four-session cognitive-behavioral family therapy study led by a psychiatric nurse, a 10-week psychologist-led group for children, and an eight-week therapy group for adults delivered by a mental health professional and volunteer. The authors found some benefit from intervention for suicide bereaved people but not significantly so. The reviewed 10-week bereavement group intervention for children, led by psychologists, was more effective than no intervention at reducing anxiety and depression, but demonstrated no significant differences in social adjustment and posttraumatic stress. The reviewed eight-week group therapy intervention delivered by a mental health professional and a volunteer was associated with a significant lessening in intensity of eight of nine emotions (anger toward the deceased, anger towards self, anxiety, depression, grief, guilt, puzzlement, and shame, but not suicidal ideation) in comparison to one of nine emotions for the control group. McDaid et al. found that studies comparing two or more active interventions had inconsistent results. The authors also reviewed different threats to validity in the eight studies and interventions, including some selection bias, poor randomization, and the relatively short time lapse between bereavement and exposure to treatment. Additionally, they found that it was not possible to explore "whether the effects of interventions varied with age, gender, self-referral, characteristics of the deceased or the nature of the relationship between the bereaved and

the deceased" (p. 442) or to what extent participants were experiencing CG prior to, during, or after the intervention, even if respective symptoms were reported to be reduced.

In the Netherlands, de Groot, Neeleman, van der Meer, and Burger (2010) examined whether the presence of suicidal ideation in suicide bereaved relatives 2.5 months post-loss mediated the effectiveness of cognitive-behavior grief therapy. Previous studies have found no changes initially in self-reported levels of CG, depression, or suicidal ideation after receiving family-based cognitive-behavior grief therapy, though decreased rates of the aforementioned negative outcomes were reported at a 13-month follow up (de Groot et al., 2010). Results of this study showed that after the intervention of grief therapy, those who experience suicidal ideation were more likely to show a decrease in maladaptive grief reactions and suicidality than those without suicidal ideation. CG also decreased more in those with suicidal ideation, but not significantly. De Groot et al. concluded that suicide bereaved individuals who demonstrate suicidal ideation may benefit from grief therapy, as it reduces the risk of maladaptive grief reactions and progression "along the suicidal process" (p. 431) among those with suicidal ideation prior to or within 2.5 months of the suicides of their loved ones.

Bonanno (2004) warned that a lack of differentiation in literature between recovery and resilience among trauma theorists may lead to ineffective or sometimes harmful interventions. A widely accepted form of trauma-informed therapy often involves imaginal or in vivo exposure to the traumatic stimulus. Jordan (2008) also reported that "trauma reduction techniques such as eye movement desensitization and reprocessing and prolonged exposure therapy may be helpful in the course of treatment" (p. 684), but there is mixed research regarding eye movement therapy. Bonanno remarked that, "ironically, the effectiveness of reliving traumatic experiences for individuals with PTSD may have helped blur the distinction between recovery and

resilience" (p. 22). Therefore, what may help a person who is experiencing the recovery trajectory may not be as effective for someone appropriately identified as experiencing the resilient trajectory.

Similar controversial results have been discussed around psychological debriefing post-trauma: "Critics of psychological debriefing argue . . . that such a broad application may pathologize normal reactions to adversity and thus may undermine natural resilience processes" (Bonanno, 2004, p. 22). Bonanno summarized the research of Litz, Gray, Bryant, and Adler (2002) by explaining their proposal of "the development of initial screening practices for intervention with individuals who show possible risk factors (e.g., prior trauma, low social support, hyperarousal) for developing chronic PTSD" (Bonanno, 2004, p. 22). This idea implies that an individual's trajectory of demonstrating or experiencing resilience should not be intervened with by clinical intervention but, rather, recovery should be allowed to occur naturally given the expected resilience trajectory.

Calhoun et al. (2010) discussed the role that a grief therapist, or "expert companion" as termed in the PTG framework, can play for a bereaved individual: "Instead of seeking to merely provide comfort and reassurance with platitudes, that are often given by well-meaning friends and family, the clinician working as an expert companion is willing to explore these beliefs, and the doubts about them, that may be raised by the experiences of the bereaved" (p. 136). The authors highlighted the needs of an individual, not only focusing on the fact that the individual is grieving, and providing prescribed interventions. Although some people may not experience "shattered or disruption to core beliefs as a result of their losses, others might; those who need guidance to explore their core beliefs may do so with the help of expert companions and also may be more likely to experience PTG.

Chapter 3: Research Questions and Hypotheses

This study aimed to examine the relationship between resilience and the presence of reported PTSD symptoms based on *DSM-5* criteria and PTG in suicide bereaved individuals. Resilience traits were as defined under the CD-RISC-25 domains of personal competence, trust/tolerance/strengthening effects of stress, acceptance of change and secure relationships, control, spiritual influences (Connor & Davidson, 2003). PTSD symptoms were assessed using the PCL-5 (Weathers et al., 2013). PTG was assessed using the PTGI-X (Tedeschi et al., 2017). Additional factors assessed included method of discovery of the suicide, time passed since suicide, level of perceived closeness to the deceased, relationship to the deceased, and exposure to support groups or mental health treatment. Hypotheses and research questions to examine these variables were developed:

Hypothesis 1: Direct discovery of the suicide (i.e., discovering the body) would result in higher rates of reported PTSD symptoms compared to the other methods of discovery of the suicide.

Hypothesis 2: The greater the time passed since the discovery of the suicide, the lower the rate of reported PTSD symptoms.

Hypothesis 3: Having lost one's child would result in higher rates of reported PTSD symptoms compared to other relationships to the deceased.

Hypothesis 4: Higher perceived closeness to the deceased would result in higher rates of reported PTSD symptoms.

Hypothesis 5: Increased exposure to any type of postvention would result in lower rates of reported PTSD symptoms. Two research questions related to Hypothesis 5: 5a. Which mental health support postvention was most effective at predicting lower rates of PTSD symptoms? 5b. Which additional postvention support was most effective at predicting lower rates of reported PTSD symptoms?

Hypothesis 6: Increased exposure to postvention would result in increased rates of reported PTG Factor I (Relating to Others), PTG Factor II (New Possibilities), PTG Factor III (Personal Strength), PTG Factor IV (Spiritual-Existential Change), PTG Factor V (Appreciation of Life), and PTG Total Score. Two research questions related to Hypothesis 6: 6a. Which mental health support postvention was most effective at predicting PTG rates? 6b. Which additional postvention support was most effective at predicting higher PTG rates?

Hypothesis 7: An increase in the number of endorsed present resilience traits would correlate with lower PTSD Total Scores. One research question related to Hypothesis 7: 7a. Which of the 25 resilience traits was most effective at predicting lower rates of reported PTSD symptoms?

Hypothesis 8: An increase in the number of endorsed present resilience traits would correlate with lower PTG scores. A research question related to Hypothesis 8: 8a. Which of the 25 resilience traits was most effective at predicting higher PTG rates?

Chapter 4: Method

Design

The purpose of this regression analysis study was to identify the relationship between a suicide loss survivor's level of resilience (as defined as the number of endorsed present resilient traits) and his or her total number of endorsed PTSD symptoms based on *DSM-5* criteria, as well as his or her level of PTG, overall and in each of the five factors of PTG (I – Relating to Others, II – New Possibilities, III – Personal Strength, IV – Spiritual-Existential Change, and V – Appreciation of Life). Additionally, the relationship to the deceased, time passed since the suicide, method of discovery of the suicide, reported level of closeness to the deceased, and exposure to support groups or mental health treatment were considered as factors. Resilience was operationalized by scores on the CD-RISC-25 (Connor & Davidson, 2003). PTSD symptoms were measured using the PCL-5 (Weathers et al., 2013). Levels of PTG were measured using the PTGI-X (Tedeschi et al., 2017).

Participants

In total, 336 participants were recruited through multiple recruitment techniques. Of the 336 participants who responded or indicated interest to participate, 46 did not meet inclusion criteria. Further, data from 71 participants who did not fully complete either rating scales were removed, leaving a total sample of 219. See Table 1 for characteristics of the sample. This was a convenience sample, as participants self-selected for participation upon receiving an electronic invitation. Invitations were sent via e-mails, listservs, Facebook pages, and research opportunities webpages of the American Foundation of Suicide Prevention (AFSP), AFSP-Illinois Chapter, the AAS, two randomly-selected survivors of suicide groups from each state in the United States, Pennsylvania's Chester County Suicide Prevention Task Force, and Pennsylvania Youth Suicide Prevention Initiative; snowball effects (i.e., people sharing the post or e-mail)

were also taken into consideration for participant recruitment and, consequently, inclusion of those who may not have affiliated with the aforementioned organizations. The social media postings and e-mails described the purpose of the study, and requested participation by those who had loved ones die by suicide, including a parent, child, spouse, other family member, romantic partner, close friend, or other; each recruitment posting included a link for the survey hosted by Survey Monkey. Data were collected from October 12, 2017 through February 6, 2018.

Inclusion criteria. Men and women who were aged 18 or older, could read written materials in English, resided in the United States at the time of data collection, and who self-identified as having one or more loved ones die by suicide at least six months prior to participation in the current study were included. Those who already reported to have a diagnosis of PTSD were not excluded from the study.

Exclusion criteria. Those who did not meet inclusion criteria, were currently receiving inpatient mental health services, and did not fully complete all three rating scales and demographics were omitted from the sample. Mental health providers who lost patients to suicide were excluded from the study if they planned to report about patients rather than other loved ones lost to suicide outside of their professional relationships.

Measures

Resilience. The CD-RISC was administered to subjects in the following groups: community sample, primary care outpatients, general psychiatric outpatients, clinical trial of generalized anxiety disorder, and two clinical trials of PTSD. Connor and Davidson (2003) completed repeated trials of the CD-RISC on the same populations with PTSD in treatment (short-term pharmacotherapy) and found a 25% or higher increase in CD-RISC score. In validating the measure, the internal consistency was found to be .89, and test-retest reliability was reported to be .87 (Connor & Davidson, 2003).

Posttraumatic stress disorder. The present study utilized the 20-item self-report version rating the PCL-5 described in Chapter 2. Internal consistency for the PCL-5 has been reported "good" in a number of studies. In a study of 140 veterans receiving care at a Veterans Affairs Medical Center, Bovin et al. (2015) found PCL-5 test scores demonstrated good internal consistency ($\alpha = .96$), test–retest reliability ($r = .84$), and convergent and discriminant validity. In a sample of 412 trauma-exposed college students, Armour, Contractor, Elhai, Shea, and Pietrzak (2016) reported high internal consistency ($r = 0.96$) for the total scale. In a Swedish study on a sample of 62 parents 0.8 to 5.6 years after their children's burns, internal consistency of the PCL-5 was satisfactory, with Cronbach's alpha ranging from 0.56 to 0.77 and mean inter-item correlations ranging from 0.22 to 0.73 for the four PCL-5 subscales and the PCL-5 total (Sveen, Bondjers, & Willebrand, 2016).

Posttraumatic growth. The original PTGI (Tedeschi & Calhoun, 1996) was the primary tool to measure PTG in this study. The 21-item PTGI yielded high internal consistency ($\alpha = .90$) and test-retest reliability ($r_{tt} = .71$; Horswill, Desgagné, Parkerson, Carleton, & Asmundson, 2016). When developed in 1996, the PTGI's items "were based primarily on interviews with persons who had suffered physical disabilities in adulthood or the death of a spouse in later life, and were tested in a large sample of college students who reported a variety of traumatic life events. Emerging from this work were 21 items, with a 5-factor structure comprising domains of Personal Strength, New Possibilities, Relating to Others, Appreciation of Life, and Spiritual Change" (Tedeschi, Cann, Taku, Senol-Durak, & Calhoun, 2017, p. 11). Horswill et al. (2016) evaluated five variants of the original 21-item PTGI. Some variants included additional items on compassion that were not in the original PTGI. Horswill et al. concluded that those "interested in individual factor scores may . . . want to consider using the 18- or 21-item PTGI variants" (p. 445). The authors also acknowledged that although researchers use the total

PTGI score for statistical analyses, "consideration of the specific subscales may be more meaningful for interpreting PTGI than a total score" (p. 443).

In 2016, the expanded version of the PTGI (PTGI-X) consists of 25 items, including four additional questions in the spiritual-existential change factor (Tedeschi et al., 2017). Samples for the four new items, to ensure representation across cultures and religious affiliations, were collected from the United States, Turkey, and Japan. All participants had reported experiencing recent traumatic events. The four additional items were selected by a panel of judges from each of the three cultural backgrounds represented by the sample groups; judges had familiarity with PTG research and spiritual-existential growth (Tedeschi et al., 2017, p. 13). The authors found that the "broader representation of areas of existential growth allowed people who might have nonreligious perspectives to report growth they had experienced" (p. 16). An overall greater score on both versions indicates a greater growth since the traumatic event. Each of the five domains on both the PTGI and PTGI-X has a different number of items: Relating to Pthers consists of seven items, New Possibilities consists of five items, Personal Strength consists of four items, Spiritual Change consists of six items, and Appreciation of Life consists of three items. Each question is rated on a Likert-scale ranging from 0 to 5. Tedeschi et al. (2017) found that "internal reliability values of the PTGI-X total scale were satisfactory across the three samples: .97 for the United States, .96 for Turkey, and .95 for Japan" (p. 14). The present study utilized the PTGI-X.

Demographic questionnaire. Participants were also asked to complete a Participant Information Questionnaire, which incorporated questions about demographics and suicide loss experiences. The information collected included each participant's age, gender, race/ethnicity, religious affiliation and practices, previous mental health diagnoses, method of discovery of the suicide, time passed since suicide, gender of the deceased, relationship to the deceased, and exposure to support groups or mental health treatment. Please refer to Appendix A for all survey questions—including questions to

determine eligibility to participate; PCL-5, CD-RISC-25, and PTGI-X measures; and the detailed demographics questionnaire.

Procedure

After accessing the link to Survey Monkey, participants were first taken to a page that asked them to verify their ages and assess for other inclusion/exclusion criteria. If participants indicated that they are 18 years of age or older and met the other inclusion criteria, they were prompted to click a specific indicated button. They were then informed that they were participating in a research study, of the risks and benefits involved, that their responses would be anonymous (no personal information was collected and no responses were linked back to IP addresses), and that they were permitted to terminate participation at any time. Participants were then able to proceed to the survey. Upon entering the survey, participants were asked to complete the inventories (PTGI-X, CD-RISC-25, and PCL-5, counterbalanced to control for order effects) and a short demographic questionnaire. The complete survey, including the screener and participant information questionnaire, totaled 91 questions. Completion of all 91 questions was estimated to take 15 to 25 minutes. Data were sent directly to a secure database without any identifying information regarding the participants.

Chapter 5: Results

Data were collected from 336 participants, of which 46 did not meet inclusion criteria and 71 did not complete the survey questions fully. The subsequent data analyses were performed on the 219 individuals who met inclusion criteria and responded to all 91 survey questions on the three dependent variables (resilience, PTSD, and PTG) and 12 categorical factors (independent variables: method of discovery of the suicide, time passed since the discovery of the suicide, level of perceived closeness to the deceased, exposure to mental health postvention, exposure to other or additional sources of postvention, exposure to any postvention source, PTSD symptoms, overall PTG, and PTG factors one through five). The five factors that make up the PTGI-X (Tedeschi et al., 2017) are Relating to Others, New Possibilities, Personal Strength, Spiritual-Existential Change, and Appreciation of Life. Mental health postvention sources included peer led support groups, professional led support groups, individual therapy, group therapy, online support (e.g., forums), none, or other. Additional postvention sources included neighbors; religious communities; family; friends; coworkers or work, school staff, or classmates; none; or other. A list of the 25 resilience traits from the CD-RISC-25 (Conner & Davidson, 2003) are outlined in Table 87 in Appendix B.

Demographic Information of the Sample

Regarding demographic characteristics, the largest percentage of participants were between the ages of 51 and 60 years old (27.4%), followed by 31 to 40 years old (22.37%). In addition, most participants were female (85.85%), White/European American (90.87%), Christian (48.86%), or identified as not practicing a religion (28.31%), and reported having a diagnosis of depression (48.86%), anxiety (39.73%), or no diagnosis (38.35%). Complete demographic characteristics are described in Table 1.

Table 1

Demographics Characteristics of Survey Respondents

Variable	n	%
Total Sample	219	100%
Age		
18-25 years	13	5.94%
26-30 years	23	10.50%
31-40 years	49	22.37%
41-50 years	39	17.81%
51-60 years	60	27.40%
61-70 years	28	12.79%
71 years and older	7	3.20%
Gender		
Female	188	85.85%
Male	28	12.79%
Transgender	2	0.91%
Prefer not to say	1	0.46%
Race/Ethnicity		
American Indian or Alaska Native	1	0.46%
Asian/Asian American	2	0.91%
Black/African/African American	3	1.37%
Latino/Hispanic	6	2.74%
White/European American	199	90.87%
Bi/multi-racial	8	3.65%
Religious Affiliation and/or Practice		
Muslim	0	0.00%
Jewish	2	0.91%
Christian	107	48.86%
Buddhist	8	3.65%
Unitarian/Universalist	4	1.82%
Hindu	1	0.46%
Sikh	0	0.00%
Wiccan	3	1.37%
Pagan	0	0.00%
Agnostic	10	4.57%
Atheist	12	5.48%
Do not practice a religion	62	28.31%
Two or more religions	10	4.57%
Previous or Current Mental Health Diagnoses		
Depression	107	48.86%
Anxiety	87	39.73%
Posttraumatic Stress Disorder	56	25.57%
Borderline Personality Disorder	8	3.65%
Obsessive Compulsive Disorder	2	0.91%
Other	5	2.28%
None	84	38.35%

Suicide loss experiences. When reporting on suicide loss experiences, the largest percentage of participants reported having one close person die by suicide (64.38%) and approximately one fourth lost two close people to suicide (24.20%). Most participants reported learning of the suicide from friends or family members (61.64%), but approximately 19% discovered the body and 16% were informed by an official. Slightly over one quarter of respondents reported the loss occurred two years and one month to five years prior (26.94%) or five years and one month to 10 years prior (25.57%) to completing the surveys. Descriptive statistics revealed that the five most common relationships to the deceased were one's child (20.09%), brother (14.61%), friend (14.16%), spouse (13.24%), and father (10.05%). Most participants reported the gender of the deceased to be male (76.26%) and reported being very close to the deceased (77.63%; approximately 19% reported being somewhat close and 3% not at all), and noted that the impact of the death was devastating and still felt (58.45%; almost one quarter reported that the death was significant and devastating but not currently felt about the same way as before). Most respondents reported receiving individual therapy (61.64%) or participating in peer led support groups (40.64%), with additional supports from family (71.23%) or friends (77.17%). About one fifth reported participating in online support groups and another one fifth reported not receiving any mental health supports. Approximately one fourth of respondents received support from their neighbors and religious communities, and one third of respondents received support from coworkers. Complete suicide loss experiences are described in Table 2.

Table 2

Suicide-Based Responses (N=219)

Variable	n	%
Number of close people who died by suicide		
1	141	64.38%
2	53	24.20%
3	15	6.8%
4	5	2.28%
5	1	0.46%
6	3	1.37%
7	1	0.46%
8	0	0.00%
9	0	0.00%
10	0	0.00%
11 or more	0	0.00%
Discovery of Suicide		
Discovered the body	41	18.72%
Learned from a friend or family member	135	61.64%
Informed by an official (e.g., police officer, doctor, mental health professional, etc.)	36	16.44%
Other	7	3.20%
Time Passed since Suicide		
6 months - 1 year	20	9.13%
1 year 1 month - 2 years	29	13.24%
2 years 1 month - 5 years	59	26.94%
5 years 1 month - 10 years	56	25.57%
10 years 1 month - 15 years	23	10.50%
More than 15 years	32	14.61%
Gender of the Deceased		
Female	51	23.29%
Male	167	76.26%
Transgender	1	0.46%
Prefer not to say	0	0.00%
Reported Level of Closeness		
Very close	170	77.63%
Somewhat close	42	19.18%
Not close at all	7	3.20%
Reported Level of Effect of Suicide		
The death had little effect on my life.	1	0.46%
The death had somewhat of an effect on me but did not disrupt my life.	12	5.48%
The death disrupted my life for a short time.	24	10.96%
The death disrupted my life in a significant or devastating way, but I no longer feel that way.	54	24.66%
The death had a significant or devastating effect on me that I still feel.	128	58.45%

(continued)

(continued)

Variable	n	%
Deceased's Relationship to Respondent		
Mother	16	7.31%
Father	22	10.05%
Child	44	20.09%
Sister	6	2.74%
Brother	32	14.61%
Spouse	29	13.24%
Long-term significant partner	10	4.57%
Aunt/uncle	3	1.37%
Cousin	9	4.11%
Friend	31	14.16%
Coworker	3	1.37%
Classmate	4	1.83%
Other	10	4.57%
Postvention (Mental Health Supports)		
Peer led support group	89	40.64%
Professional led support group	34	15.53%
Individual therapy	135	61.64%
Group therapy	32	14.61%
Online support (e.g., forum)	50	22.83%
Other	19	8.68%
None	50	22.83%
Additional Supports		
Neighbors supports (neighbors)	58	26.48%
Religious community supports	56	25.57%
Family supports	156	71.23%
Friends supports	169	77.17%
Coworker/work supports	74	33.79%
School staff/classmates supports	25	11.41%
Other	7	3.20%
None	25	11.42%

Analysis of the Hypotheses

Responses on the CD-RISC-25 (Connor & Davidson, 2013), which assessed resilience traits, were recoded to indicate whether each symptom was present for the respondent. Specifically, if a respondent had indicated "often true" or "nearly true all the time" for the presence of a particular resilience trait, his or her response was coded to indicate the presence of that resilient factor. If a respondent indicated "not true at all," "rarely true," or "sometimes true," his or her response was recoded to indicate that there was no presence of that resilience factor. Additionally, throughout the discussion of the summary statistics, "PTSD Total Score" refers to the number of PTSD symptoms that

respondents endorsed on the PCL-5 (Weathers et al., 2013). Whether a participant met full criteria for PTSD based on *DSM-5* criteria was not calculated. Lastly, as assessed by the PTGI-X (Tedeschi et al., 2017), both the PTG Total Score and the five individual PTG factor scores were examined based on the study by Taku, Tedeschi, and Cann (2015), which demonstrated that although overall PTG may be considered, PTG is multidimensional, and people may experience more growth in one area of their lives than others; therefore, it is important to distinguish between the five factors of PTG.

Hypothesis 1. It was hypothesized that direct discovery of the suicide (i.e., discovering the body) would result in higher rates of reported PTSD symptoms compared to the other methods of discovery of the suicide. Respondents could only choose one of the aforementioned methods of discovery of suicide. A one-way between subjects analysis of variance (ANOVA), with a planned comparison, was conducted to compare the effect of directly discovering the body to other methods of learning about the suicide on level of reported PTSD symptoms, which is labeled as "PTSD Total Score." Those who had discovered the body reported approximately the same number of PTSD symptoms (N = 41, $M = 26.88$, $SD = 17.55$) as those who discovered about the suicide through other methods (learning from a friend or family member: N = 135, $M = 23.19$, $SD = 17.14$; being informed by an official: N = 36, $M = 24.61$, $SD = 17.10$; other: N = 7, $M = 30.14$, $SD = 21.54$). Contrast scores were calculated to compare mean differences of direct discovery of the suicide to the other methods of discovery of suicide and PTSD. Levene's test was used for assumption of equality of variances (Table 3). Contrary to Hypothesis 1, with equal variances assumed ($F = 0.66$, $p = .575$), direct discovery of the suicide did not result in higher rates of reported PTSD symptoms compared to the other methods of discovery of the suicide (i.e., learning from a friend or family member; being informed by an official, or other unidentified method), $t(215) = 0.25$, $p = .806$ (Table 4). This indicates that the reported rates of PTSD symptoms were not contingent upon the method of discovery of suicide.

Table 3

Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
PTSD Total Score	.66	3	215	.575

Table 4

Comparison of Effect of Direct Discovery of the Body versus Other Methods of Discovery on the PTSD Total Score

		Contrast	Value of Contrast	Std. Error	t	Df	Sig. (2-tailed)
PTSD Total Score	Assume equal variances	1	2.69	10.94	.25	215	.806
	Does not assume equal	1	2.69	12.01	.22	24.50	.825

Hypothesis 2. It was hypothesized that the greater the time passed since the discovery of the suicide, the lower the rate of reported PTSD symptoms. Time passed since the discovery of suicide was measured in months and years. Respondents were able to choose from one of the following: 6 months to 1 year; 1 year, 1 month to 2 years; 2 years, 1 month to 5 years; 5 years, 1 month to 10 years; 10 years, 1 month to 15 years; and more than 15 years. ANOVA and simple linear regression analyses were conducted. The ANOVA report indicated how each of the different amounts of time passed since discovering the loved one's suicide differed from one another to predict the total reported PTSD symptoms ("PTSD Total Score"). When the ANOVA was calculated, values for a regression sum of squares were reported; this indicates the amount of variability in the dependent variable (time passed since the discovery of the suicide) that is accounted for by the regression model. The regression reports indicate the specific effect and direction (positive or negative) of the relationship between the dependent and independent variables.

In support of Hypothesis 2, the results of the regression indicated that time passed since the discovery of the suicide explains 6% of the variance (Adjusted $R^2 = .06$), and significantly contributes to the rate of reported PTSD symptoms, $F(1,217) = 15.12$, $p = .000$; Table 5). It was found that time passed since the discovery of the suicide significantly predicted the rate of reported PTSD symptoms ($\beta = -.26$, $p = .000$). The equation of the fitted regression line is ŷ (the rate of reported PTSD symptoms) = 35.16 - 3.01 (time passed since the discovery of the suicide), indicating that with an increase in time passed since the discovery of the suicide, there was a decrease in the mean of the rate of reported PTSD symptoms (Table 6).

Table 5

ANOVA of Relationship Between PTSD Total Score and Time Passed Since the Discovery of the Suicide

Variable	Mean Square	F	Sig.
TimePassed	4260.50	15.12	.000*

Note. TimePassed = Time passed since the discovery of the suicide
*$p < .001$

Table 6

Summary of Simple Linear Regression of PTSD Total Score and Time Passed Since the Discovery of the Suicide

	Unstandardized Coefficients		Standardized Coefficients		
Variable	B	Std. Error	Beta	t	Sig.
Intercept	35.16	3.00	.00	11.70	.000
TimePassed	-3.01	.78	-.26	-3.89	.000*

Note. TimePassed = Time passed since the discovery of the suicide
*$p > .001$

Hypothesis 3. It was hypothesized that having lost one's child would result in higher rates of reported PTSD symptoms compared to other relationships to the deceased. Respondents could only choose one relationship to the deceased about whom they were responding, even if they had lost more than one close person to suicide. Relationships

included (phrased as "I lost my…"): mother, father, child, sister, brother, spouse, long-term significant partner, aunt/uncle, cousin, friend, co-worker, classmate, and other. A one-way between subjects ANOVA with a planned comparison was conducted to compare the effect of losing one's child to suicide to other relationships to the deceased on level of reported PTSD symptoms, which is labeled as "PTSD Total Score." Those who had lost their children reported slightly lower PTSD symptoms ($M = 29.34$, $SD = 15.23$) compared to those who lost their mothers ($M = 31.69$, $SD = 16.85$) or long-term significant partners ($M = 39.70$, $SD = 19.93$) but higher PTSD symptoms than losing one's father ($M = 21.86$, $SD = 13.33$), sister ($M = 21.67$, $SD = 15.23$), brother ($M = 23.88$, $SD = 16.03$), spouse ($M = 23.07$, $SD = 15.45$), or friend ($M = 21.06$, $SD = 18.11$). Contrast scores were calculated to compare mean differences of losing one's child to suicide to remaining relationships to the deceased and PTSD. Levene's test was used for assumption of equality of variances (Table 7). In support of Hypothesis 3, with equal variances assumed ($F = 1.249$, $p = .252$), losing one's child to suicide resulted in higher rates of reported PTSD symptoms compared to the other relationships to the deceased, $t(206) = 2.906$, $p = .004$ (Table 8). This indicates that the reported rates of PTSD symptoms were, in part, contingent upon the relationship to the deceased.

Table 7

Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
PTSD Total Score	1.249	12	206	.252

Table 8

Comparison of Losing One's Child to Suicide versus Other Relationships to the Deceased on the PTSD Total Score

		Contrast	Value of Contrast	Std. Error	t	df	Sig. (2-tailed)
PTSD Total Score	Assume equal variances	1	107.01	36.829	2.906	206	.004*
	Does not assume equal variances	1	107.01	36.491	2.932	62.461	.005

*$p < .01$

It should be noted that additional planned comparisons were calculated and indicated that losing one's mother also resulted in higher rates of reported PTSD symptoms, $t(206) = 2.536$, $p = .012$ (Table 9), as did losing one's long-term partner, $t(206) = 3.630$, $p = .000$ (Table 10), when compared to all remaining relationships to the deceased. Losing one's father (Table 11), sister (Table 12), brother (Table 13), spouse (Table 14), or friend (Table15) did not result in significantly different reported PTSD symptoms when compared to other relationships to the deceased.

Table 9

Comparison of Losing One's Mother to Suicide Versus Other Relationships to the Deceased on the PTSD Total Score

		Contrast	Value of Contrast	Std. Error	t	df	Sig. (2-tailed)
PTSD Total Score	Assume equal Variances	1	137.51	54.217	2.536	206	.012*
	Does not assume equal variances	1	137.51	52.934	2.598	17.984	.018

*$p < .05$

Table 10

Comparison of Losing One's Long-term Significant Partner to Suicide Versus Other Relationships to the Deceased on the PTSD Total Score

		Contrast	Value of Contrast	Std. Error	t	df	Sig. (2-tailed)
PTSD Total Score	Assume equal Variances	1	241.68	66.573	3.630	206	.000*
	Does not assume equal variances	1	241.68	77.099	3.135	9.720	.011

*$p < .001$

Table 11

Comparison of Losing One's Father to Suicide Versus Other Relationships to the Deceased on the PTSD Total Score

		Contrast	Value of Contrast	Std. Error	t	df	Sig. (2-tailed)
PTSD Total Score	Assume equal variances	1	9.80	47.550	.206	206	.837
	Does not assume equal variances	1	9.80	37.675	.260	30.578	.796

Table 12

Comparison of Losing One's Sister to Suicide Versus Other Relationships to the Deceased on the PTSD Total Score

		Contrast	Value of Contrast	Std. Error	t	df	Sig. (2-tailed)
PTSD Total Score	Assume equal variances	1	7.24	84.176	.086	206	.932
	Does not assume equal variances	1	7.24	76.102	.095	5.415	.928

Table 13

Comparison of Losing One's Brother to Suicide Versus Other Relationships to the Deceased on the PTSD Total Score

		Contrast	Value of Contrast	Std. Error	t	df	Sig. (2-tailed)
PTSD Total Score	Assume equal variances	1	35.95	41.178	.873	206	.384
	Does not assume equal variances	1	35.95	37.590	.956	44.705	.344

Table 14

Comparison of Losing One's Spouse to Suicide Versus Other Relationships to the Deceased on the PTSD Total Score

		Contrast	Value of Contrast	Std. Error	t	df	Sig. (2-tailed)
PTSD Total Score	Assume equal variances	1	25.47	42.712	.596	206	.552
	Does not assume equal variances	1	25.47	37.984	.671	40.198	.506

Table 15

Comparison of Losing One's Friend to Suicide versus Other Relationships to the Deceased on the PTSD Total Score

		Contrast	Value of Contrast	Std. Error	t	df	Sig. (2-tailed)
PTSD Total Score	Assume equal variances	1	-.58	41.662	-.014	206	.989
	Does not assume equal variances	1	-.58	42.167	-.014	40.058	.989

Hypothesis 4. It was hypothesized that higher perceived closeness to the deceased would result in higher rates of reported PTSD symptoms. ANOVA and simple linear regression analyses were conducted. The ANOVA report indicates if the total report PTSD symptoms ("PTSD Total Score") significantly predicted the level of perceived closeness to the deceased. When the ANOVA was calculated, values for a regression sum of squares were reported; this indicates the amount of variability in the dependent variable (level of perceived closeness to the deceased) that is accounted for by the regression model. The regression reports indicate the specific effect and direction (positive or negative) of the relationship between the dependent and independent variables.

In support of Hypothesis 4, the results of the regression indicate perceived closeness to the deceased explains 5% of the variance (Adjusted $R^2 = .05$), and significantly predicted rates of reported PTSD symptoms, $F(1,217) = 13.63$, $p = .000$ (Table 16). It was found that perceived closeness to the deceased significantly predicted rates of reported PTSD symptoms ($\beta = .24$, $p = .000$; Table 17). The equation of the fitted regression line is $\hat{y}$ (rates of reported PTSD symptoms) = 1.47 + 8.33, which indicates that with a reported increase in perceived closeness to the deceased, there was an increase in the mean of the rates of reported PTSD symptoms.

Table 16

ANOVA of Relationship Between PTSD Total Score and Perceived Closeness to the Deceased

Variable	Mean Square	F	Sig.
PerceivedCloseness	3865.35	13.63	.000*

Note. PerceivedCloseness = perceived closeness to the deceased
*$p < .001$

Table 17

Summary of Simple Linear Regression of PTSD Total Score and Perceived Closeness to the Deceased

	Unstandardized Coefficients		Standardized Coefficients		
Variable	B	Std. Error	Beta	t	Sig.
Intercept	1.47	6.30	.00	.23	.815
PerceivedCloseness	8.33	2.26	.24	3.69	.000*

Note. PerceivedCloseness = perceived closeness to the deceased; Exposure = exposure to any postvention
*$p < .001$

Hypothesis 5. It was hypothesized that increased exposure to any type of postvention would result in lower rates of reported PTSD symptoms. Mental health postvention sources included peer led support group, professional led support group, individual therapy, group therapy, online support (e.g., forum), none, or other. Additional postvention sources included neighbors, religious communities, families, friends, coworkers or work, school staff or classmates, none, or other. Exposure to postvention in this analysis was defined as total number of any (mental health or additional) postvention sources accessed or received. ANOVA and simple linear regression analyses were conducted. Contrary to Hypothesis 5, the results of the regression indicate that exposure to postvention explains 0% of the variance (Adjusted R^2 = . 00), and did not significantly predict reported PTSD symptoms, $F(1,217) = .73$, $p = .393$; Table 18).

Table 18

ANOVA of Relationship Between PTSD Total Score and Exposure to Any Postvention

Variable	Mean Square	F	Sig.
Exposure	220.40	.73	.393

Note. Exposure = exposure to any postvention
*$p < .001$

5a. Which mental health support postvention was most effective at predicting lower rates of PTSD symptoms? Independent variables in this analysis included receiving or accessing any mental health postvention sources. The reported number of PTSD symptoms was the dependent variable. Using the enter method within multiple linear regression, a significant model emerged: $F(7,211) = 3.26, p = .003$ (Table 19). The model explains 7% of the variance (Adjusted $R^2 = .07$). Table 20 gives information for the independent variables entered into model. Significant predictors of reported rates of PTSD symptoms include individual therapy ($\beta = .18, p = .045$), group therapy ($\beta = .22, p = .001$), and online support forum ($\beta = .14, p = .049$; Table 20). Of these, group therapy was the largest (most effective contributor) to reported higher PTSD symptoms given its larger β value compared to the other two. The remaining independent variables did not contribute significantly to rates of reported PTSD symptoms. Although not statistically significant at $\alpha = .05$, there was a negative, or inverse, trend between peer-led support groups ($\beta = -.92, p = .719$) and professional support groups ($\beta = -6.02, p = .068$) and rates of reported lower PTSD symptoms.

Table 19

ANOVA of Relationship Between PTSD Total Score and Exposure to Mental Health Postvention

Variable	Mean Square	F	Sig.
MentalHealth	911.75	3.26	.003*

Note. MentalHealth = exposure to mental health supports as postvention
*$p < .01$

Table 20

Summary of Multiple Linear Regression of PTSD Total Score and Mental Health Supports

	Unstandardized Coefficients		Standardized Coefficients		
Variable	B	Std. Error	Beta	t	Sig.
Intercept	18.35	3.32	.00	5.53	.000
Peer SG	-.92	2.56	-.03	-.36	.719
Professional SG	-6.02	3.28	-.13	-1.83	.068
Indiv. Therapy	6.37	3.16	.18	2.02	.045*
Grp. Therapy	10.62	3.29	.22	3.23	.001**
Online Support	5.72	2.89	.14	1.98	.049*
None	1.14	3.94	.03	.29	.773
Other	3.27	4.71	.05	.69	.489

Note. SG = support group; Indiv.= individual; Grp.= group
*$p < .05$, **$p < .01$

5b. Which additional postvention support was most effective at predicting lower rates of reported PTSD symptoms? Additional supports were scrutinized. A multiple linear regression was used to determine whether there were any significant relationships between additional supports and PTSD symptoms. When looking at PTSD symptoms, a significant model emerged: $F(8, 210) = 4.02$, $p = .000$ (Table 21). The model explains 10% of the variance (Adjusted $R^2 = .10$). Table 22 gives information for the independent variables entered into model. The only significant (most effective) predictors of the PTSD Total Score were receiving no additional support ($\beta = .29$, $p = .002$) and other unnamed supports ($\beta = .17$, $p = .010$). The remaining independent variables did not contribute significantly to the PTSD Total Score. Although not statistically significant at $\alpha = .05$, there was a negative, or inverse, trend between neighbors ($\beta = -3.37$, $p = .246$), family ($\beta = -3.21$, $p = .309$), and school staff/classmates ($\beta = -4.85$, $p = .183$) and rates of reported lower PTSD symptoms.

Table 21

ANOVA of Relationship Between Additional Postvention Supports and PTSD

Variable	Mean Square	F	Sig.
PTSD Total Score	1085.31	4.02	.000*

*$p < .001$

Table 22

Summary of Multiple Linear Regression of Additional Postvention Supports and PTSD Total Score

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
Intercept	19.52	3.91	.00	5.00	.000
Neighbors	-3.37	2.90	-.09	-1.16	.246
Religious Community	4.88	2.85	.12	1.71	.088
Family	-3.21	3.14	-.08	-1.02	.309
Friends	4.89	3.67	.12	1.33	.184
Coworkers	3.86	2.61	.11	1.48	.140
School Staff/Classmates	-4.85	3.64	-.09	-1.33	.183
None	15.67	5.10	.29	3.07	.002*
Other	19.56	7.54	.17	2.59	.010*

*$p < .05$, *$p < .01$

Hypothesis 6. It was hypothesized that increased exposure to postvention would result in increased rates of reported PTG Factor I (Relating to Others), PTG Factor II (New Possibilities), PTG Factor III (Personal Strength), PTG Factor IV (Spiritual-Existential Change), PTG Factor V (Appreciation of Life), and PTG Total Score. Because PTG is multidimensional, both the respondents' overall PTG Total Scores (overall reported posttraumatic growth) and the five individual PTG factors were examined to determine which specific areas of PTG the respondents were more likely to experience. ANOVA and simple linear regression analyses were used to test whether exposure to postvention significantly predicted the rate of reported PTG Factor I (Relating to Others), PTG Factor II (New Possibilities), PTG Factor III (Personal

Strength), PTG Factor IV (Spiritual-Existential Change), PTG Factor V (Appreciation of Life), and PTG Total Score. The ANOVA reports indicate which PTG factors significantly predicted exposure to postvention. When the ANOVA was calculated values for a regression sum of squares were reported; this indicates the amount of variability in the dependent variable (exposure to postvention) that is accounted for by the regression model. The regression reports indicate the specific effect and direction (positive or negative) of the relationship between the dependent and independent variables.

In support of Hypothesis 6, the results of the regression indicate exposure to postvention explains 10% of the variance (Adjusted $R^2 = .10$), and significantly predicted with the rate of reported PTG Factor I, $F(1,217) = 24.68$, $p = .000$; Table 23). It was found that exposure to postvention significantly predicted the rate of reported PTG Factor I ($\beta = .32$, $p = .000$). The equation of the fitted regression line is $\hat{y}$ (the rate of reported PTG Factor I) = 10.92 + 1.56, which indicates that with exposure to any postvention, there was an increase in the mean of the rate of reported PTG Factor I (Table 24).

Table 23

ANOVA of Relationship Between PTG Factor I and Exposure to Postvention

PTG Factor	Mean Square	F	Sig.
PTG Factor I	2047.04	24.68	.000**

Note. PTG Factor I = Relating to Others
*$p < .01$, **$p < .001$

Table 24

Summary of Simple Linear Regression of Exposure to Postvention and PTG Factor I

	Unstandardized Coefficients		Standardized Coefficients		
Variable	B	Std. Error	Beta	T	Sig.
Intercept	10.92	1.53	.00	7.13	.000
Exposure	1.56	.31	.32	4.97	.000*

Note. Exposure = exposure to any postvention
*$p < .001$

In support of Hypothesis 6, the results of the regression indicate exposure to postvention explains 4% of the variance (Adjusted $R^2 = .04$), and significantly predicted the rate of reported PTG Factor II, $F(1,217) = 8.94$, $p = .003$; Table 25). It was found that exposure to postvention significantly predicted the rate of reported PTG Factor II ($\beta = .20$, $p = .003$). The equation of the fitted regression line is $\hat{y}$ (the rate of reported PTG Factor II) = 8.97 + .72, which indicates that with exposure to any postvention, there was an increase in the mean of the rate of reported PTG Factor II (Table 26).

Table 25

ANOVA of Relationship Between PTG Factor II and Exposure to Postvention

PTG Factor	Mean Square	F	Sig.
PTG Factor II	431.49	8.94	.003*

Note. PTG Factor II = New Possibilities
*$p < .01$, **$p < .001$

Table 26

Summary of Simple Linear Regression of Exposure to Postvention and PTG Factor II

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	T	Sig.
Intercept	8.97	1.17	.00	7.68	.000
Exposure	.72	.24	.20	2.99	.003*

Note. Exposure = exposure to any postvention
*$p < .01$

In support of Hypothesis 6, the results of the regression indicate exposure to postvention explains 5% of the variance (Adjusted $R^2 = .05$), and significantly predicted the rate of reported PTG Factor III, $F(1,217) = 11.31$, $p = .001$; Table 27). It was found that exposure to postvention significantly predicted the rate of reported PTG Factor III ($\beta = .22$, $p = .001$). The equation of the fitted regression line is $\hat{y}$ (the rate of reported PTG Factor III) = 7.19 + .69, which indicates that with exposure to any postvention, there was an increase in the mean of the rate of reported PTG Factor III (Table 28).

Table 27

ANOVA of Relationship Between PTG Factor III and Exposure to Postvention

PTG Factor	Mean Square	F	Sig.
PTG Factor III	401.69	11.31	.001**

Note. PTG Factor III = Personal Strength
*$p < .01$, **$p < .001$

Table 28

Summary of Simple Linear Regression of Exposure to Postvention and PTG Factor III

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
Intercept	7.19	1.00	.00	7.17	.000
Exposure	.69	.21	.22	3.36	.001**

Note. Exposure = exposure to any postvention
*$p < .001$

In support of Hypothesis 6, the results of the regression indicate exposure to postvention explains 4% of the variance (Adjusted $R^2 = .04$), and significantly predicted the rate of reported PTG Factor IV, $F(1,217) = 10.21$, $p = .002$; Table 29). It was found that exposure to postvention significantly predicted the rate of reported PTG Factor IV ($\beta = .21$, $p = .002$). The equation of the fitted regression line is $\hat{y}$ (the rate of reported PTG Factor IV) = 7.43 + .96, which indicates that with exposure to any postvention, there was an increase in the mean of the rate of reported PTG Factor IV (Table 30).

Table 29

ANOVA of Relationship Between PTG Factor IV and Exposure to Postvention

PTG Factor	Mean Square	F	Sig.
PTG Factor IV	777.01	10.21	.002*

Note. PTG Factor IV = Spiritual-Existential Change
*$p < .01$, **$p < .001$

Table 30

Summary of Simple Linear Regression of Exposure to Postvention and PTG Factor IV

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
Intercept	7.43	1.47	.00	5.06	.000
Exposure	.96	.30	.21	3.20	.002*

Note. Exposure = exposure to any postvention
*$p < .01$

In support of Hypothesis 6, the results of the regression indicate exposure to postvention explains 5% of the variance (Adjusted $R^2 = .05$), and significantly predicted the rate of reported PTG Factor V, $F(1, 217) = 11.38$, $p = .001$; Table 31). It was found that exposure to postvention significantly predicted the rate of reported PTG Factor V ($\beta = .22$, $p = .002$). The equation of the fitted regression line is $\hat{y}$ (the rate of reported PTG Factor V) = 6.94 + .44, which indicates that with exposure to any postvention, there was an increase in the mean of the rate of reported PTG Factor V (Table 32).

Table 31

ANOVA of Relationship Between PTG Factor V and Exposure to Postvention

PTG Factor	Mean Square	F	Sig.
PTG Factor V	164.43	11.38	.001**

Note. PTG Factor V = Appreciation of Life
*$p < .01$, **$p < .001$

Table 32

Summary of Simple Linear Regression of Exposure to Postvention and PTG Factor V

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
Intercept	6.94	.64	.00	10.85	.000
Exposure	.44	.13	.22	3.37	.001*

Note. Exposure = exposure to any postvention
*$p < .001$

In support of Hypothesis 6, the results of the regression indicate exposure to postvention explains 7% of the variance (Adjusted $R^2 = .07$), and significantly predicted the rate of reported PTG Total Score, $F(1,217) = 17.18$, $p = .000$; Table 33). It was found that exposure to postvention significantly predicted the rate of reported PTG Total Score ($\beta = .27$, $p = .000$). The equation of the fitted regression line is $\hat{y}$ (the rate of reported PTG Total Score) = 41.45 + 4.38, which indicates that with exposure to any postvention, there was an increase in the mean of the rate of reported PTG Total Score (Table 34).

Table 33

ANOVA of Relationship Between PTG Total Score and Exposure to Postvention

PTG Factor	Mean Square	F	Sig.
PTG Total Score	16067.30	17.18	.000**

*$p < .01$, **$p < .001$

Table 34

Summary of Simple Linear Regression of Exposure to Postvention and PTG Total Score

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
Intercept	41.45	5.15	.00	8.06	.000
Exposure	4.38	1.06	.27	4.14	.000*

Note. Exposure = exposure to any postvention
*$p < .001$

6a. Which mental health support postvention was most effective at predicting PTG rates? A multiple linear regression was used to determine which mental health supports (peer led support group, professional led support group, individual therapy, group therapy, online support [e.g., forum], none, or other) were the greatest contributors to the five PTG factors (I – Relating to Others, II – New Possibilities, III – Personal Strength, IV - Spiritual-Existential Change, and V – Appreciation of Life) and overall PTG score.

A significant model emerged between mental health supports and PTG Factor I: $F(7,211) = 3.49, p = .001$ (Table 35). The model explains 7% of the variance (Adjusted $R^2 = .07$). Table 34 gives information for the independent variables entered into model. The only significant (most effective) predictor of PTG Factor I was receiving no mental health treatment ($\beta = -.22, p = .020$). The remaining independent variables did not contribute significantly to PTG Factor I. Although not statistically significant at $\alpha = .05$, there was a positive trend between peer support groups ($\beta = .07, p = .305$), professional support groups ($\beta = .13, p = .059$), and individual therapy ($\beta = .02, p = .825$) and rates of reported higher PTG Factor I (Table 36).

Table 35

ANOVA of Relationship Between Mental Health Supports and PTG Factor I

PTG Factor	Mean Square	F	Sig.
PTG Factor I	297.21	3.49	.001*

Note. PTG Factor I = Relating to Others
*$p < .001$

Table 36

Summary of Multiple Linear Regression of Mental Health Supports and PTG Factor I

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
Intercept	18.25	1.83	.00	9.96	.000
Peer SG	1.45	1.41	.07	1.03	.305
Professional SG	3.44	1.81	.13	1.90	.059
Indiv. Therapy	.39	1.74	.02	.22	.825
Grp. Therapy	-1.99	1.81	-.07	-1.10	.273
Online Support	-.16	1.60	-.01	-.10	.918
None	-5.09	2.17	-.22	-2.34	.020*
Other	-3.75	2.60	-.10	-1.44	.151

Note. SG = support group; Indiv.= individual; Grp.= group
*$p < .05$

A significant model emerged between mental health supports and PTG Factor II: $F(7,211) = 3.54, p = .001$ (Table 37). The model explains 8% of the variance (Adjusted $R^2 = .08$). Table 36 gives information for the independent variables entered into model. The only significant (most effective) predictor of PTG Factor II was receiving no mental health treatment ($\beta = -.22, p = .022$). The remaining independent variables did not contribute significantly to PTG Factor II. Although not statistically significant at $\alpha = .05$, there was a positive trend between peer support groups ($\beta = .08, p = .244$), professional support groups ($\beta = .06, p = .372$), and individual therapy ($\beta = .08, p = .352$) and rates of reported higher PTG Factor II (Table 38).

Table 37

ANOVA of Relationship Between Mental Health Supports and PTG Factor II

PTG Factor	Mean Square	F	Sig.
PTG Factor II	163.85	3.54	.001*

Note. PTG Factor II = New Possibilities
*$p < .001$

Table 38

Summary of Multiple Linear Regression of Mental Health Supports and PTG Factor II

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
Intercept	11.92	1.35	.00	8.83	.000
Peer SG	1.22	1.04	.08	1.17	.244
Professional SG	1.19	1.33	.06	.89	.372
Indiv. Therapy	1.20	1.28	.08	.93	.352
Grp. Therapy	-1.08	1.34	-.05	-.81	.420
Online Support	-.60	1.18	-.04	-.51	.611
None	-3.71	1.60	-.22	-2.31	.022*
Other	-.55	1.92	-.02	-.29	.776

Note. SG = support group; Indiv.= individual; Grp.= group
*$p < .05$

A significant model emerged between mental health supports and PTG Factor III: $F(7,211) = 3.12, p = .004$ (Table 39). The model explains 6% of the variance (Adjusted

R^2 = .06). Table 38 gives information for the independent variables entered into model. No predictors contributed significantly to PTG Factor III. Although not statistically significant at $\alpha = .05$, there was a negative trend between receiving no mental health treatment ($\beta = -.16, p = .098$) and PTG Factor III; there was also a positive trend between peer support groups ($\beta = .08, p = .276$), professional support groups ($\beta = .08, p = .225$), and individual therapy ($\beta = .11, p = .199$) and rates of reported higher PTG Factor III (Table 40).

Table 39

ANOVA of Relationship Between Mental Health Supports and PTG Factor III

PTG Factor	Mean Square	F	Sig.
PTG Factor III	108.61	3.12	.004*

Note. PTG Factor III = Personal Strength
*$p < .01$

Table 40

Summary of Multiple Linear Regression of Mental Health Supports and PTG Factor III

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
Intercept	9.73	1.17	.00	8.31	.000
Peer SG	.99	.90	.08	1.09	.276
Professional SG	1.41	1.16	.08	1.22	.225
Indiv. Therapy	1.43	1.11	.11	1.29	.199
Grp. Therapy	-1.63	1.16	-.10	-1.40	.162
Online Support	-.43	1.02	-.03	-.43	.671
None	-2.31	1.39	-.16	-1.66	.098
Other	-1.69	1.66	-.07	-1.02	.310

Note. SG = support group; Indiv.= individual; Grp.= group

A significant model emerged between mental health supports and PTG Factor IV: $F(7,211) = 2.23, p = .033$ (Table 41). The model explains 4% of the variance (Adjusted R^2 = .04). Table 40 gives information for the independent variables entered into model. No predictors contributed significantly to PTG Factor IV. Although not statistically

significant at $\alpha = .05$, there was a negative trend between receiving no mental health treatment ($\beta = -.18$, $p = .064$) and PTG Factor IV; there was also a positive trend between peer support groups ($\beta = .07$, $p = .345$), professional support groups ($\beta = .09$, $p = .216$), and individual therapy ($\beta = .03$, $p = .723$) and rates of reported higher PTG Factor IV (Table 42).

Table 41

ANOVA of Relationship Between Mental Health Supports and PTG Factor IV

PTG Factor	Mean Square	F	Sig.
PTG Factor IV	170.05	2.23	.033*

Note. PTG Factor IV = Spiritual-Existential Change
*$p < .05$

Table 42

Summary of Multiple Linear Regression of Mental Health Supports and PTG Factor IV

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
Intercept	11.87	1.73	.00	6.84	.000
Peer SG	1.27	1.34	.07	.95	.345
Professional SG	2.13	1.71	.09	1.24	.216
Indiv. Therapy	.58	1.65	.03	.35	.723
Grp. Therapy	-2.51	1.72	-.10	-1.47	.144
Online Support	-.55	1.51	-.03	-.36	.718
None	-3.84	2.06	-.18	-1.87	.064
Other	.17	2.46	.00	.07	.944

Note. SG = support group; Indiv.= individual; Grp.= group

No significant model emerged between mental health supports and PTG Factor V: $F(7,211) = 2.01$, $p = .055$ (Table 43). The model explains 3% of the variance (Adjusted $R^2 = .03$). The only significant (most effective) predictor of PTG Factor V was receiving no mental health treatment ($\beta = -.22$, $p = .027$). The remaining independent variables did not contribute significantly to PTG Factor V. Although not statistically significant at $\alpha = .05$, there was a positive trend between professional support groups ($\beta = .03$, $p = .666$),

individual therapy ($\beta = .03, p = .759$), and online support ($\beta = .06, p = .389$) and rates of reported higher PTG Factor V (Table 44).

Table 43

ANOVA of Relationship Between Mental Health Supports and PTG Factor V

PTG Factor	Mean Square	F	Sig.
PTG Factor V	29.54	2.01	.055

Note. PTG Factor V = Appreciation of Life

Table 44

Summary of Multiple Linear Regression of Mental Health Supports and PTG Factor V

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
Intercept	9.33	.76	.00	12.27	.000
Peer SG	-.32	.59	-.04	-.54	.587
Professional SG	.32	.75	.03	.43	.666
Indiv. Therapy	.22	.72	.03	.31	.759
Grp. Therapy	-.69	.75	-.06	-.91	.363
Online Support	.57	.66	.06	.86	.389
None	-2.00	.90	-.22	-2.22	.027*
Other	-.58	1.08	-.04	-.54	.591

Note. SG = support group; Indiv.= individual; Grp.= group
*$p < .05$

A significant model emerged between mental health supports and PTG Total Score: $F(7,211) = 3.53, p = .001$ (Table 45). The model explains 8% of the variance (Adjusted $R^2 = .08$). Table 44 gives information for the independent variables entered into model. The only significant (most effective) predictor of PTG Total Score was receiving no mental health treatment ($\beta = -.22, p = .019$). The remaining independent variables did not contribute significantly to PTG Total Score. Although not statistically significant at $\alpha = .05$, there was a positive trend between peer support groups ($\beta = .07, p = .325$), professional support groups ($\beta = .10, p = .157$), and individual therapy ($\beta = .06, p = .507$) and rates of reported higher PTG Total Score (Table 46).

Table 45

ANOVA of Relationship Between Mental Health Supports and PTG Total Score

PTG Factor	Mean Square	F	Sig.
PTG Total Score	3283.23	3.53	.001*

*$p < .001$

Table 46

Summary of Multiple Linear Regression of Mental Health Supports and PTG Total Score

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
Intercept	61.09	6.05	.00	10.10	.000
Peer SG	4.60	4.67	.07	.99	.325
Professional SG	8.49	5.98	.10	1.42	.157
Indiv. Therapy	3.82	5.76	.06	.66	.507
Grp. Therapy	-7.90	5.99	-.09	-1.32	. 189
Online Support	-1.17	5.27	-.02	-.22	.824
None	-16.95	7.18	-.22	-2.36	.019*
Other	-6.40	8.59	-.05	-.74	.457

Note. SG= support group; Indiv.= individual; Grp.= group
*$p < .05$

6b. Which additional postvention support was most effective at predicting higher PTG rates? Additional supports included were scrutinized. A multiple linear regression was used to determine whether there were any significant relationships between additional supports and PTG factor scores.

A significant model emerged between additional supports and PTG Factor I: $F(8,210) = 5.17, p = .000$ (Table 47). The model explains 13% of the variance (Adjusted $R^2 = .13$). Table 48 gives information for the independent variables entered into the model. The only significant (most effective) predictor of PTG Factor I was receiving no additional supports ($\beta = -.22, p = .017$). The remaining independent variables did not contribute significantly to PTG Factor I. Although not statistically significant at $\alpha = .05$, there was a positive trend between neighbors ($\beta = .08, p = .245$), religious communities

($\beta = .11, p = .123$), family ($\beta = .08, p = .323$), friends ($\beta = .04, p = .682$), and coworkers ($\beta = .06, p = .368$) and rates of reported higher PTG Factor I (Table 48).

Table 47

ANOVA of Relationship between Additional Postvention Supports PTG Factor I

Variable	Mean Square	F	Sig.
PTG Factor I	412.37	5.17	.000***

Note. PTG Factor I = Relating to Others
*$p < .05$, **$p < .01$, ***$p < .001$

Table 48

Summary of Multiple Linear Regression of Additional Postvention Supports and PTG Factor I

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
Intercept	15.22	2.12	.00	7.17	.000
Neighbors	1.84	1.58	.08	1.17	.245
Religious Community	2.39	1.55	.11	1.55	.123
Family	1.69	1.71	.08	.99	.323
Friends	.82	1.99	.04	.41	.682
Coworkers	1.28	1.42	.06	.90	.368
School Staff/Classmates	-.15	1.98	-.01	-.08	.938
None	-6.69	2.77	-.22	-2.42	.017*
Other	3.40	4.10	.05	.83	.408

*$p < .05$

No significant model emerged between Additional Supports and PTG Factor II: $F(8,210) = 1.61, p = .124$ (Table 49). The model explains 2% of the variance (Adjusted $R^2 = .02$). Table 50 gives information for the independent variables entered into the model. No independent variables contributed significantly to PTG Factor II. Although not statistically significant at $\alpha = .05$, there was a positive trend between religious community ($\beta = .08, p = .305$), friends ($\beta = .15, p = .104$), and coworkers ($\beta = .04, p = .582$) and rates of reported higher PTG Factor II (Table 50).

Table 49

ANOVA of Relationship Between Additional Postvention Supports and PTG Factor II

Variable	Mean Square	F	Sig.
PTG Factor II	78.76	1.61	.124

Note. PTG Factor II = New Possibilities

Table 50

Summary of Multiple Linear Regression of Additional Postvention Supports and PTG Factor II

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
Intercept	10.24	1.66	.00	6.16	.000
Neighbors	-.09	1.23	-.01	-.07	.942
Religious Community	1.25	1.21	.08	1.03	.305
Family	-.31	1.34	-.02	-.23	.818
Friends	2.55	1.56	.15	1.63	.104
Coworkers	.61	1.11	.04	.55	.582
School Staff/Classmates	-1.13	1.55	-.05	-.73	.466
None	-1.76	2.17	-.08	-.81	.419
Other	.44	3.21	.01	.14	.891

No significant model emerged between Additional Supports and PTG Factor III: $F(8,210) = 1.89, p = .063$ (Table 51). The model explains 3% of the variance (Adjusted $R^2 = .03$). Table 52 gives information for the independent variables entered into the model. No independent variables contributed significantly to PTG Factor III. Although not statistically significant at $\alpha = .05$, there was a positive trend between neighbors ($\beta = .08, p = .324$), religious community ($\beta = .02, p = .802$), family ($\beta = .09, p = .274$), friends ($\beta = .03, p = .772$), and coworkers ($\beta = .04, p = .574$) and rates of reported higher PTG Factor III (Table 52).

Table 51

ANOVA of Relationship Between Additional Postvention Supports PTG Factor III

Variable	Mean Square	F	Sig.
PTG Factor III	67.99	1.89	.063

Note. PTG Factor III = Personal Strength

Table 52

Summary of Multiple Linear Regression of Additional Postvention Supports and PTG Factor III

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
Intercept	8.79	1.43	.00	6.16	.000
Neighbors	1.05	1.06	.08	.99	.324
Religious Community	.26	1.04	.02	.25	.802
Family	1.26	1.15	.09	1.10	.274
Friends	.39	1.34	.03	.29	.772
Coworkers	.54	.95	.04	.56	.574
School Staff/Classmates	-.43	1.33	-.02	-.32	.748
None	-2.25	1.86	-.12	-1.21	.228
Other	2.74	2.75	.07	1.00	.320

A significant model emerged between Additional Supports and PTG Factor IV: $F(8,210) = 3.16, p = .002$ (Table 53). The model explains 7% of the variance (Adjusted $R^2 = .07$). Table 54 gives information for the independent variables entered into the model. Supports from the religious community ($\beta = .21, p = .005$) and receiving no additional supports contributed significantly to PTG Factor IV ($\beta = -.23, p = .018$). The remaining independent variables did not contribute significantly to PTG Factor IV. Although not statistically significant at $\alpha = .05$, there was a positive trend between neighbors ($\beta = .01, p = .847$) and coworkers ($\beta = .09, p = .197$) and rates of reported higher PTG Factor IV (Table 54).

Table 53

ANOVA of Relationship Between Additional Postvention Supports and PTG Factor IV

Variable	Mean Square	F	Sig.
PTG Factor IV	232.36	3.16	.002*

Note. PTG Factor IV = Spiritual-Existential Change
*$p < .01$

Table 54

Summary of Multiple Linear Regression of Additional Postvention Supports and PTG Factor IV

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
Intercept	12.40	2.04	.00	6.09	.000
Neighbors	.29	1.51	.01	.19	.847
Religious Community	4.23	1.48	.21	2.85	.005**
Family	-.47	1.64	-.02	-.28	.776
Friends	-1.48	1.91	-.07	-.77	.440
Coworkers	1.76	1.36	.09	1.29	.197
School Staff/Classmates	-2.13	1.90	-.08	-1.12	.262
None	-6.35	2.66	-.23	-2.39	.018*
Other	.36	3.93	.01	.09	.926

*$p < .05$, **$p < .01$

A significant model emerged between Additional Supports and PTG Factor V: $F(8,210) = 2.47, p = .014$ (Table 55). The model explains 5% of the variance (Adjusted $R^2 = .05$). Table 56 gives information for the independent variables entered into model. No independent variables contributed significantly to PTG Factor V. Although not statistically significant at $\alpha = .05$, there was a positive trend between family ($\beta = .15, p = .070$), religious community ($\beta = .06, p = .445$), friends ($\beta = .02, p = .832$), coworkers ($\beta = .06, p = .435$), school staff/classmates ($\beta = .08, p = .242$), and rates of reported higher PTG Factor V (Table 56).

Table 55

ANOVA of Relationship between Additional Postvention Supports and PTG Factor V

Variable	Mean Square	F	Sig.
PTG Factor V	35.45	2.47	.014*

Note. PTG Factor V = Appreciation of Life
*$p < .05$

Table 56

Summary of Multiple Linear Regression of Additional Postvention Supports and PTG Factor V

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
Intercept	7.59	.90	.00	8.42	.000
Neighbors	-.15	.67	-.02	-.22	.824
Religious Community	.50	.66	.06	.77	.445
Family	1.32	.73	.15	1.82	.070
Friends	.18	.85	.02	.21	.832
Coworkers	.47	.60	.06	.78	.435
School Staff/Classmates	.98	.84	.08	1.17	.242
None	-1.04	1.18	-.08	-.88	.379
Other	.13	1.74	.01	.08	.939

A significant model emerged between Additional Supports and PTG Total Score: $F(8,210) = 3.25, p = .002$ (Table 57). The model explains 8% of the variance (Adjusted $R^2 = .08$). Table 58 gives information for the independent variables entered into the model. No independent variables contributed significantly to PTG Total Score. Although not statistically significant at $\alpha = .05$, there was a negative trend between receiving no additional supports ($\beta = -.18, p = .057$) and PTG Total Score. Additionally, there was a positive trend between neighbors ($\beta = .04, p = .585$), religious community ($\beta = .12, p = .103$), family ($\beta = .05, p = .549$), friends ($\beta = .03, p = .718$), and coworkers ($\beta = .07, p = .337$) and rates of reported higher PTG Total Score (Table 58).

Table 57

ANOVA of Relationship between Additional Postvention Supports and PTG Total Score

Variable	Mean Square	F	Sig.
PTG Total Score	3012.76	3.25	.002**

**$p < .01$

Table 58

Summary of Multiple Linear Regression of Additional Postvention Supports and PTG Total Score

	Unstandardized Coefficients		Standardized Coefficients		
Variable	B	Std. Error	Beta	t	Sig.
Intercept	54.24	7.24	.00	7.49	.000
Neighbors	2.94	5.38	.04	.55	.585
Religious Community	8.64	5.28	.12	1.64	.103
Family	3.50	5.83	.05	.60	.549
Friends	2.46	6.80	.03	.36	.718
Coworkers	4.66	4.84	.07	.96	.337
School Staff/Classmates	-2.86	6.74	-.03	-.42	.672
None	-18.09	9.45	-.18	-1.91	.057
Other	7.08	13.98	.03	.51	.613

Hypothesis 7. It was hypothesized that an increase in the number of endorsed present resilience traits would effectively predict lower PTSD Total Scores. Simple linear regression analysis was used to test whether the total number of endorsed resilience traits significantly predicted the rate of reported PTSD symptoms. In support of Hypothesis 7, the results of the regression indicate that the total number of endorsed resilience traits explains 25% of the variance (Adjusted $R^2 = .25$), and significantly predicted PTSD Total Score, $F(1,217) = 75.46$, $p = .000$; Table 59). It was found that the total number of endorsed resilience traits significantly contributed to PTSD Total Score ($\beta = -.51$, $p = .000$). The equation of the fitted regression line is $\hat{y}$ (PTSD Total Score) = 43.91 - 1.33, which indicates that with an increase in the total number of endorsed resilience traits, there was the average decrease in the mean PTSD Total Score (Table 60).

Table 59

ANOVA of Relationship Between Number of Endorsed Resilience Traits and PTSD Scores

Variable	Mean Square	F	Sig.
PTSD	16874.40	75.46	.000*

*$p < .001$

Table 60

Summary of Simple Linear Regression of Number of Number of Resilience Traits and PTSD Total Score

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
Intercept	43.91	2.47	.00	17.78	.000
NumberResilienceTraits	-1.33	.15	-.51	-8.69	.000*

Note. NumberResilienceTraits = total number of present resilience traits endorsed
*$p < .001$

7a. Which of the 25 resilience traits were most effective at predicting lower rates of reported PTSD symptoms? Please refer to Table 87 in Appendix B for a list of coding for all 25 resilience traits assessed in this study based on the CD-RISC-25 (Connor & Davidson, 2003). The independent variables were the 25 resilience traits; the dependent variable was PTSD Total Score. Using the enter method within multiple linear regression, a significant model emerged: $F(25,193) = 5.79$, $p = .000$ (Table 61). The model explains 35% of the variance (Adjusted $R^2 = .35$). Table 62 gives information for the independent variables entered into model. The following were the resilience traits which significantly (most effectively) contributed to PTSD Total Score: 2 (I have at least one close and secure relationship that helps me when I am stressed; $\beta = -.24$, $p = .017$), 9 (Good or bad, I believe that most things happen for a reason; $\beta = -.14$, $p = .035$), 19 (I am able to handle unpleasant or painful feelings like sadness, fear, and anger; $\beta = -.14$, $p = .044$), 22 (I feel in control of my life; $\beta = -.23$, $p = .006$), and 24 (I work to attain my goals no matter what roadblocks I encounter along the way; $\beta = -.18$, $p = .033$). The remaining resilience traits did not significantly contribute to PTSD Total Score.

Table 61

ANOVA of Relationship Between Resilience Traits and PTSD

Variable	Mean Square	F	Sig.
PTSD Total Score	1121.07	5.79	.000*

*$p < .001$

Table 62

Summary of Multiple Linear Regression of Number of Resilience Traits and PTSD Total Score

	Unstandardized Coefficients		Standardized Coefficients		
Resilience Trait	B	Std. Error	Beta	t	Sig.
Intercept	46.79	3.07	.00	15.24	.000
ResilienceTrait1	-2.70	2.73	-.07	-.99	.323
ResilienceTrait2	-10.61	2.95	-.24	-3.60	.000***
ResilienceTrait3	3.20	2.39	.09	1.34	.183
ResilienceTrait4	-1.98	2.69	-.05	-.74	.462
ResilienceTrait5	-2.53	2.68	-.07	-.94	.346
ResilienceTrait6	-2.46	2.17	-.07	-1.13	.259
ResilienceTrait7	1.39	2.57	.04	.54	.590
ResilienceTrait8	-2.85	2.74	-.08	-1.04	.300
ResilienceTrait9	-5.02	2.37	-.14	-2.12	.035*
ResilienceTrait10	1.30	2.71	.03	.48	.631
ResilienceTrait11	-1.40	2.92	-.04	-.48	.631
ResilienceTrait12	3.79	2.90	.10	1.31	.193
ResilienceTrait13	-3.04	2.71	-.08	-1.12	.263
ResilienceTrait14	-1.30	2.39	-.04	-.54	.587
ResilienceTrait15	.49	2.56	.01	.19	.848
ResilienceTrait16	2.28	2.47	.07	.92	.358
ResilienceTrait17	-3.15	2.85	-.08	-1.10	.271
ResilienceTrait18	3.08	2.41	.09	1.27	.204
ResilienceTrait19	-5.12	2.53	-.15	-2.03	.044*
ResilienceTrait20	2.13	2.11	.06	1.01	.314
ResilienceTrait21	2.89	2.82	.08	1.03	.306
ResilienceTrait22	-7.85	2.85	-.23	-2.76	.006**
ResilienceTrait23	-.59	2.56	-.02	-.23	.819
ResilienceTrait24	-6.20	2.88	-.18	-2.15	.033*
ResilienceTrait25	1.95	2.94	.05	.66	.509

*$p < .05$, **$p < .01$, ***$p < .001$

Hypothesis 8. It was hypothesized that an increase in the number of endorsed present resilience traits would predict lower PTG scores. ANOVA and simple linear regression analyses were used to test whether the total number of endorsed present resilience traits were significant contributors to each of the five PTG factors (I – Relating to Others, II – New Possibilities, III – Personal Strength, IV - Spiritual-Existential Change, and V – Appreciation of Life) and overall PTG (PTG Total Score).

Contrary to Hypothesis 8, the results of the regression indicate the number of endorsed resilience traits explains 13% of the variance (Adjusted $R^2 = .13$), and significantly predicted PTG Factor I, $F(1,217) = 33.19$, $p = .000$ (Table 63). It was found that the number of endorsed resilience traits significantly predicted PTG Factor I ($\beta = .36$, $p = .000$) (Table 64). The equation of the fitted regression line is $\hat{y}$ (PTG Factor I) = 10.12 + .53, indicating an increase in the number of endorsed resilience traits significantly contributed to an increase in the average reported mean PTG Factor I (Table 64).

Table 63

ANOVA of Relationship Between Number of Endorsed Resilience Traits and PTG Factor I

Variable	Mean Square	F	Sig.
PTG Factor I	2659.24	33.19	.000*

*$p < .001$

Table 64

Summary of Simple Linear Regression of Number of Endorsed Resilience Traits and PTG Factor I

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
Intercept	10.12	1.48	.00	6.85	.000
NumberResilienceTraits	.53	.09	.36	5.76	.000*

Note. NumberResilienceTraits = total number of present resilience traits endorsed
*$p < .001$

Regarding PTG Factor II, contrary to Hypothesis 8, the results of the regression indicate the number of endorsed resilience traits explains 16% of the variance (Adjusted $R^2 = .16$), and significantly contributed to PTG Factor II, $F(1, 217) = 41.11$, $p = .000$; Table 65). It was found that the number of endorsed resilience traits significantly contributed to PTG Factor II ($\beta = .40$, $p = .000$). The equation of the fitted regression line is $\hat{y}$ (PTG Factor II) = 5.89 + .43, indicating an increase in the number of endorsed resilience traits significantly predicted an increase in the average reported mean PTG Factor II (Table 66).

Table 65

ANOVA of Relationship Between Number of Endorsed Resilience Traits and PTG Factor II

Variable	Mean Square	F	Sig.
PTG Factor II	1737.56	41.11	.000*

*$p < .001$

Table 66

Summary of Simple Linear Regression of Number of Endorsed Resilience Traits and PTG Factor II

	Unstandardized Coefficients		Standardized Coefficients		
Variable	B	Std. Error	Beta	t	Sig.
Intercept	5.89	1.07	.00	5.49	.000
NumberResilienceTraits	.43	.07	.40	6.41	.000*

Note. NumberResilienceTraits = total number of present resilience traits endorsed
*$p < .001$

Regarding PTG Factor III, contrary to Hypothesis 8, the results of the regression indicate the number of endorsed resilience traits explains 22% of the variance (Adjusted $R^2 = .22$), and significantly predicted PTG Factor III, $F(1, 217) = 63.82$, $p = .000$; Table 67). It was found that the number of endorsed resilience traits significantly contributed to PTG Factor III ($\beta = .48$, $p = .000$). The equation of the fitted regression line is $\hat{y}$ (PTG Factor III) = 3.81 + .44, indicating an increase in the number of endorsed resilience traits

significantly contributed an increase in the average reported mean PTG Factor III (Table 68).

Table 67

ANOVA of Relationship Between Number of Endorsed Resilience Traits and PTG Factor III

Variable	Mean Square	F	Sig.
PTG Factor III	1842.13	63.82	.000*

*$p < .001$

Table 68

Summary of Simple Linear Regression of Number of Endorsed Resilience Traits and PTG Factor III

	Unstandardized Coefficients		Standardized Coefficients		
Variable	B	Std. Error	Beta	t	Sig.
Intercept	3.81	.89	.00	4.29	.000
NumberResilienceTraits	.44	.05	.48	7.99	.000*

Note. NumberResilienceTraits = total number of present resilience traits endorsed
*$p < .001$

Regarding PTG Factor IV, contrary to Hypothesis 8, the results of the regression indicate the number of endorsed resilience traits explains 10% of the variance (Adjusted $R^2 = .10$), and significantly predicts the rates of reported PTG Factor IV, $F(1,217) = 25.13$, $p = .000$; Table 69). It was found that the number of endorsed resilience traits significantly predicted PTG Factor IV ($\beta = .32$, $p = .000$). The equation of the fitted regression line is $\hat{y}$ (PTG Factor IV) = 5.34 + .43, indicating an increase in the number of endorsed resilience traits significantly predicted an increase in the average reported mean PTG Factor IV (Table 70).

Table 69

ANOVA of Relationship Between Number of Endorsed Resilience Traits and PTG Factor IV

Variable	Mean Square	F	Sig.
PTG Factor IV	1794.11	25.13	.000*

*$p < .001$

Table 70

Summary of Simple Linear Regression of Number of Endorsed Resilience Traits and PTG Factor IV

	Unstandardized Coefficients		Standardized Coefficients		
Variable	B	Std. Error	Beta	t	Sig.
Intercept	5.34	1.40	.00	3.83	.000
NumberResilienceTraits	.43	.09	.32	5.01	.000*

Note. NumberResilienceTraits = total number of present resilience traits endorsed
*$p < .001$

Regarding PTG Factor V, contrary to Hypothesis 8, the results of the regression indicate the number of endorsed resilience traits explains 14% of the variance (Adjusted $R^2 = .14$), and significantly predicted the rates of reported PTG Factor V, $F(1,217) = 36.80$, $p = .000$; Table 71). It was found that the number of endorsed resilience traits significantly predicted PTG Factor V ($\beta = .38$, $p = .000$). The equation of the fitted regression line is $\hat{y}$ (PTG Factor V) = 5.62 + .22, indicating an increase in the number of endorsed resilience traits significantly contributed to an increase in the average reported mean PTG Factor V (Table 72).

Table 71

ANOVA of Relationship Between Number of Endorsed Resilience Traits and PTG Factor V

Variable	Mean Square	F	Sig.
PTG Factor V	478.59	36.80	.000*

*$p < .001$

Table 72

Summary of Simple Linear Regression of Number of Endorsed Resilience Traits and PTG Factor V

	Unstandardized Coefficients		Standardized Coefficients		
Variable	B	Std. Error	Beta	t	Sig.
Intercept	5.62	.60	.00	9.44	.000
NumberResilienceTraits	.22	.04	.38	6.07	.000*

Note. NumberResilienceTraits = total number of present resilience traits endorsed
*$p < .001$

Regarding the PTG Total Score, contrary to Hypothesis 8, the results of the regression indicate the number of endorsed resilience traits explains 18% of the variance (Adjusted $R^2 = .18$), and significantly predicted the rates of reported PTG Total Score, $F(1,217) = 48.72, p = .000$; Table 73). It was found that the number of endorsed resilience traits significantly predicted PTG Total Score ($\beta = .43, p = .000$). The equation of the fitted regression line is $\hat{y}$ (PTG Total Score) = 30.78 + 2.05, indicating an increase in the number of endorsed resilience traits significantly contributed to an increase in the average reported mean PTG Total Score (Table 74).

Table 73

ANOVA of Relationship Between Number of Endorsed Resilience Traits and PTG Total Score

Variable	Mean Square	F	Sig.
PTG Total Score	40162.34	48.72	.000*

*$p < .001$

Table 74

Summary of Simple Linear Regression of Number of Endorsed Resilience Traits and PTG Total Score

	Unstandardized Coefficients		Standardized Coefficients		
Variable	B	Std. Error	Beta	t	Sig.
Intercept	30.78	4.74	.00	6.49	.000
NumberResilienceTraits	2.05	.29	.43	6.98	.000*

Note. NumberResilienceTraits = total number of present resilience traits endorsed
*$p < .001$

8a. Which of the 25 resilience traits was most effective at predicting higher PTG rates? Please refer to Table 87 in Appendix B for a list of coding for all 25 resilience traits assessed in this study based on the CD-RISC-25 (Connor & Davidson, 2003). Multiple linear regression analyses were used to test which specific resilience traits were most effective at predicting higher rates of each of the five PTG factors (I – Relating to Others, II – New Possibilities, III – Personal Strength, IV - Spiritual-Existential Change, and V – Appreciation of Life) and overall PTG (PTG Total Score).

Regarding PTG Factor I, a significant model emerged: $F(25,193) = 3.15$, $p = .000$ (Table 75). The model explains 20% of the variance (Adjusted $R^2 = .20$). Table 76 gives information for the independent variables entered into model. The following are resilience traits which significantly contributed to PTG Factor I: 5 (Past successes give me confidence in dealing with new challenges and difficulties; $\beta = .18$, $p = .031$), 7 (Having to cope with stress can make me stronger; $\beta = .19$, $p = .025$), and 20 (In dealing with life's problems, sometimes you have to act on a hunch without knowing why; $\beta = .15$, $p = .028$). The remaining independent variables did not contribute significantly to PTG Factor I.

Table 75

ANOVA of Relationship Between Resilience Traits and PTG Factor I

Variable	Mean Square	F	Sig.
PTG Factor I	232.46	3.15	.000*

Note. PTG Factor I = Relating to Others
*$p < .001$

Table 76

Summary of Multiple Linear Regression of Number of Resilience Traits and PTG Factor I

	Unstandardized Coefficients		Standardized Coefficients		
Resilience Trait	B	Std. Error	Beta	t	Sig.
Intercept	7.95	1.89	.00	4.20	.000
ResilienceTrait1	2.18	1.68	.10	1.29	.197
ResilienceTrait2	3.01	1.82	.12	1.65	.100
ResilienceTrait3	2.26	1.47	.12	1.53	.127
ResilienceTrait4	-1.29	1.66	-.06	-.78	.436
ResilienceTrait5	3.60	1.65	.18	2.18	.031*
ResilienceTrait6	.43	1.34	.02	.32	.751
ResilienceTrait7	3.60	1.59	.19	2.27	.025*
ResilienceTrait8	-2.47	1.69	-.12	-1.46	.146
ResilienceTrait9	-.78	1.46	-.04	-.53	.596
ResilienceTrait10	-1.71	1.67	-.08	-1.02	.308
ResilienceTrait11	1.04	1.80	.05	.58	.564
ResilienceTrait12	.20	1.79	.01	.11	.912
ResilienceTrait13	2.18	1.67	.11	1.30	.195
ResilienceTrait14	-1.97	1.48	-.10	-1.34	.183
ResilienceTrait15	.86	1.58	.04	.54	.587
ResilienceTrait16	-1.85	1.53	-.10	-1.22	.226
ResilienceTrait17	-1.17	1.76	-.05	-.67	.506
ResilienceTrait18	-1.00	1.49	-.05	-.67	.502
ResilienceTrait19	1.07	1.56	.06	.69	.493
ResilienceTrait20	2.88	1.30	.15	2.21	.028*
ResilienceTrait21	1.32	1.74	.07	.76	.449
ResilienceTrait22	.46	1.76	.02	.26	.792
ResilienceTrait23	1.52	1.58	.08	.96	.338
ResilienceTrait24	-.48	1.78	-.02	-.27	.787
ResilienceTrait25	2.00	1.81	.09	1.10	.271

*$p < .05$

Regarding PTG Factor II, significant model emerged: $F(25,193) = 2.78$, $p = .000$ (Table 77). The model explains 17% of the variance (Adjusted $R^2 = .17$). Table 78 gives information for the independent variables entered into model. The following are resilience traits which most significantly predicted PTG Factor II: 5 (Past successes give me confidence in dealing with new challenges and difficulties; $\beta = .23$, $p = .006$), and 20 (In dealing with life's problems, sometimes you have to act on a hunch without knowing why; $\beta = .14$, $p = .042$). The remaining independent variables did not contribute significantly to PTG Factor II.

Table 77

ANOVA of Relationship Between Resilience Traits and PTG Factor II

Variable	Mean Square	F	Sig.
PTG Factor II	115.41	2.78	.000*

Note. PTG Factor II = New Possibilities
*$p < .001$

Table 78

Summary of Multiple Linear Regression of Number of Resilience Traits and PTG Factor II

	Unstandardized Coefficients		Standardized Coefficients		
Resilience Trait	B	Std. Error	Beta	t	Sig.
Intercept	6.41	1.42	.00	4.51	.000
ResilienceTrait1	.19	1.26	.01	.15	.881
ResilienceTrait2	-.46	1.37	-.03	-.34	.736
ResilienceTrait3	.23	1.11	.02	.21	.833
ResilienceTrait4	.42	1.24	.03	.34	.735
ResilienceTrait5	3.46	1.24	.23	2.78	.006**
ResilienceTrait6	-.74	1.01	-.05	-.74	.461
ResilienceTrait7	2.20	1.19	.16	1.85	.067
ResilienceTrait8	-.11	1.27	-.01	-.08	.934
ResilienceTrait9	-.18	1.10	-.01	-.17	.867
ResilienceTrait10	-1.75	1.26	-.11	-1.39	.165
ResilienceTrait11	1.18	1.35	.08	.87	.385
ResilienceTrait12	.97	1.34	.06	.72	.470
ResilienceTrait13	.28	1.26	.02	.23	.821
ResilienceTrait14	-.55	1.11	-.04	-.50	.620
ResilienceTrait15	.63	1.18	.04	.54	.593
ResilienceTrait16	-1.23	1.15	-.09	-1.08	.283
ResilienceTrait17	-.82	1.32	-.05	-.62	.535
ResilienceTrait18	-.41	1.12	-.03	-.37	.711
ResilienceTrait19	-.14	1.17	-.01	-.12	.907
ResilienceTrait20	1.99	.98	.14	2.04	.042*
ResilienceTrait21	1.44	1.30	.10	1.10	.272
ResilienceTrait22	-.49	1.32	-.03	-.38	.708
ResilienceTrait23	1.44	1.19	.10	1.22	.225
ResilienceTrait24	-.13	1.33	-.01	-.10	.923
ResilienceTrait25	2.10	1.36	.12	1.54	.125

*$p < .05$, **$p < .01$

Regarding PTG Factor III, a significant model emerged: $F(25,193) = 4.26$, $p = .000$ (Table 79). The model explains 17% of the variance (Adjusted $R^2 = .17$). Table 80 gives information for the independent variables entered into model. The following are the resilience traits which were significant (most effective) predictors of PTG Factor III: 5 (Past successes give me confidence in dealing with new challenges and difficulties; $\beta = .22$, $p = .005$), 7 (Having to cope with stress can make me stronger; $\beta = .18$, $p = .021$),

and 25 (I take pride in my achievements; β = .17, p = .028). The remaining independent variables did not contribute significantly to PTG Factor III.

Table 79

ANOVA of Relationship between Resilience Traits and PTG Factor III

Variable	Mean Square	F	Sig.
PTG Factor III	115.30	4.26	.000*

Note. PTG Factor III = Personal Strength
*$p < .001$

Table 80

Summary of Multiple Linear Regression of Number of Resilience Traits and PTG Factor III

	Unstandardized Coefficients		Standardized Coefficients		
Resilience Trait	B	Std. Error	Beta	t	Sig.
Intercept	4.23	1.15	.00	3.69	.000
ResilienceTrait1	.08	1.02	.01	.08	.939
ResilienceTrait2	-1.31	1.10	-.08	-1.19	.236
ResilienceTrait3	1.04	.89	.08	1.16	.246
ResilienceTrait4	-.05	1.00	.00	-.05	.962
ResilienceTrait5	2.84	1.00	.22	2.83	.005**
ResilienceTrait6	-.25	.81	-.02	-.31	.759
ResilienceTrait7	2.24	.96	.18	2.33	.021*
ResilienceTrait8	-.97	1.02	-.08	-.95	.346
ResilienceTrait9	.12	.89	.01	.13	.896
ResilienceTrait10	-1.07	1.01	-.08	-1.05	.293
ResilienceTrait11	1.00	1.09	.08	.92	.360
ResilienceTrait12	1.11	1.08	.08	1.02	.307
ResilienceTrait13	.72	1.01	.05	.71	.477
ResilienceTrait14	-.03	.89	.00	-.03	.976
ResilienceTrait15	1.37	.96	.11	1.44	.152
ResilienceTrait16	-1.27	.92	-.10	-1.37	.172
ResilienceTrait17	.47	1.07	.03	.44	.663
ResilienceTrait18	-1.60	.90	-.13	-1.77	.078
ResilienceTrait19	.78	.94	.06	.83	.410
ResilienceTrait20	1.18	.79	.10	1.50	.134
ResilienceTrait21	-.48	1.05	-.04	-.46	.647
ResilienceTrait22	1.15	1.06	.09	1.08	.283
ResilienceTrait23	.95	.96	.08	.99	.324
ResilienceTrait24	-.38	1.08	-.03	-.35	.727
ResilienceTrait25	2.43	1.10	.17	2.21	.028*

*$p < .05$, **$p < .01$

Regarding PTG Factor IV, significant model emerged: $F(25,193) = 3.65$, $p = .000$ (Table 81). The model explains 23% of the variance (Adjusted $R^2 = .23$). Table 82 gives information for the independent variables entered into model. The following are resilience traits which were significant (most effective) predictors of PTG Factor IV: 3 (When there are no clear solutions to my problems, sometimes fate or God can help; $\beta = .29$, $p = .000$), and 20 (In dealing with life's problems, sometimes you have to act on a hunch without knowing why; $\beta = .19$, $p = .006$). The remaining independent variables did not contribute significantly to PTG Factor IV.

Table 81

ANOVA of Relationship Between Resilience Traits and PTG Factor IV

Variable	Mean Square	F	Sig.
PTG Factor IV	221.87	3.65	.000*

Note. PTG Factor IV = Spiritual-Existential Change
*$p < .001$

Table 82

Summary of Multiple Linear Regression of Number of Resilience Traits and PTG Factor IV

	Unstandardized Coefficients		Standardized Coefficients		
Resilience Trait	B	Std. Error	Beta	t	Sig.
Intercept	5.12	1.72	.00	2.98	.003
ResilienceTrait1	.23	1.53	.01	.15	.878
ResilienceTrait2	-1.32	1.65	-.06	-.80	.426
ResilienceTrait3	5.18	1.34	.29	3.87	.000**
ResilienceTrait4	-1.82	1.51	-.10	-1.21	.228
ResilienceTrait5	2.61	1.50	.14	1.74	.084
ResilienceTrait6	-1.21	1.22	-.07	-.99	.322
ResilienceTrait7	2.41	1.44	.14	1.67	.097
ResilienceTrait8	-.47	1.54	-.03	-.31	.760
ResilienceTrait9	.26	1.33	.01	.20	.843
ResilienceTrait10	-.06	1.52	.00	-.04	.969
ResilienceTrait11	-.78	1.63	-.04	-.48	.633
ResilienceTrait12	1.02	1.62	.05	.63	.532
ResilienceTrait13	2.13	1.52	.11	1.40	.162
ResilienceTrait14	-1.05	1.34	-.06	-.78	.434
ResilienceTrait15	.37	1.43	.02	.26	.795
ResilienceTrait16	-1.39	1.39	-.08	-1.00	.318
ResilienceTrait17	.55	1.60	.03	.34	.733
ResilienceTrait18	-1.34	1.35	-.08	-.99	.324
ResilienceTrait19	-.33	1.42	-.02	-.23	.818
ResilienceTrait20	3.31	1.18	.19	2.80	.006*
ResilienceTrait21	2.34	1.58	.13	1.48	.140
ResilienceTrait22	-.62	1.60	-.03	-.39	.698
ResilienceTrait23	1.99	1.43	.11	1.39	.167
ResilienceTrait24	-.17	1.61	-.01	-.11	.916
ResilienceTrait25	1.17	1.65	.05	.71	.479

*$p < .01$, *$p < .001$

Regarding PTG Factor V, significant model emerged: $F(25,193) = 2.99$, $p = .000$ (Table 83). The model explains 19% of the variance (Adjusted $R^2 = .19$). Table 84 gives information for the independent variables entered into model. The following are the resilience traits which were significant (most effective) predictors of PTG Factor V: 3 (When there are no clear solutions to my problems, sometimes fate or God can help; $\beta = .15$, $p = .048$), 5 (Past successes give me confidence in dealing with new challenges and

difficulties; β = .26, p = .002), and 25 (I take pride in my achievements; β = .20, p = .012). The remaining independent variables did not contribute significantly to PTG Factor V.

Table 83

ANOVA of Relationship Between Resilience Traits and PTG Factor V

Variable	Mean Square	F	Sig.
PTG Factor V	36.89	2.99	.000*

Note. PTG Factor V = Appreciation of Life
*$p < .001$

Table 84

Summary of Multiple Linear Regression of Number of Resilience Traits and PTG Factor V

	Unstandardized Coefficients		Standardized Coefficients		
Resilience Trait	B	Std. Error	Beta	t	Sig.
Intercept	5.22	.77	.00	6.74	.000
ResilienceTrait1	-.70	.69	-.08	-1.01	.312
ResilienceTrait2	.27	.74	.03	.37	.715
ResilienceTrait3	1.20	.60	.15	1.99	.048*
ResilienceTrait4	.77	.68	.09	1.14	.258
ResilienceTrait5	2.15	.68	.26	3.18	.002**
ResilienceTrait6	-.45	.55	-.06	-.82	.414
ResilienceTrait7	.05	.65	.01	.08	.939
ResilienceTrait8	-.09	.69	-.01	-.13	.896
ResilienceTrait9	-.18	.60	-.02	-.31	.760
ResilienceTrait10	-.68	.68	-.08	-.99	.321
ResilienceTrait11	-.63	.74	-.08	-.86	.391
ResilienceTrait12	1.05	.73	.13	1.44	.152
ResilienceTrait13	-.35	.68	-.04	-.51	.611
ResilienceTrait14	.51	.60	.07	.85	.397
ResilienceTrait15	.32	.64	.04	.50	.618
ResilienceTrait16	-.48	.62	-.06	-.77	.442
ResilienceTrait17	.28	.72	.03	.39	.694
ResilienceTrait18	-.47	.61	-.06	-.78	.436
ResilienceTrait19	.49	.64	.06	.77	.445
ResilienceTrait20	.59	.53	.08	1.11	.267
ResilienceTrait21	.65	.71	.08	.91	.362
ResilienceTrait22	-.69	.72	-.09	-.96	.338
ResilienceTrait23	.39	.65	.05	.61	.542
ResilienceTrait24	-.14	.73	-.02	-.19	.847
ResilienceTrait25	1.88	.74	.20	2.53	.012*

*$p < .05$, **$p < .01$

Regarding the overall PTG score (PTG Total Score), a significant model emerged: $F(25,193) = 3.69$, $p = .000$ (Table 85). The model explains 24% of the variance (Adjusted $R^2 = .24$). Table 86 gives information for the independent variables entered into model. The following are resilience traits which were significant (most effective) predictors of PTG Total Score: 3 (When there are no clear solutions to my problems,

sometimes fate or God can help; β = .15, p = .038), 5 (Past successes give me confidence in dealing with new challenges and difficulties; β = .22, p = .007), 7 (Having to cope with stress can make me stronger; β = .17, p = .042), and 20 (In dealing with life's problems, sometimes you have to act on a hunch without knowing why; β = .16, p = .019). The remaining independent variables did not contribute significantly to PTG Total Score.

Table 85

ANOVA of Relationship Between Resilience Traits and PTG Total Score

Variable	Mean Square	F	Sig.
PTG Total Score	2835.33	3.69	.000*

*$p < .001$

Table 86

Summary of Multiple Linear Regression of Number of Resilience Traits and PTG Total Score

	Unstandardized Coefficients		Standardized Coefficients		
Resilience Trait	B	Std. Error	Beta	t	Sig.
Intercept	28.94	6.11	.00	4.73	.000
ResilienceTrait1	1.98	5.43	.03	.37	.715
ResilienceTrait2	.19	5.87	.00	.03	.974
ResilienceTrait3	9.91	4.76	.15	2.08	.038*
ResilienceTrait4	-1.97	5.35	-.03	-.37	.713
ResilienceTrait5	14.65	5.34	.22	2.75	.007**
ResilienceTrait6	-2.23	4.33	-.04	-.51	.608
ResilienceTrait7	10.50	5.12	.17	2.05	.042*
ResilienceTrait8	-4.10	5.46	-.06	-.75	.453
ResilienceTrait9	-.76	4.72	-.01	-.16	.872
ResilienceTrait10	-5.27	5.40	-.07	-.98	.330
ResilienceTrait11	1.80	5.81	.03	.31	.757
ResilienceTrait12	4.35	5.77	.06	.75	.452
ResilienceTrait13	4.97	5.40	.07	.92	.359
ResilienceTrait14	-3.09	4.76	-.05	-.65	.517
ResilienceTrait15	3.56	5.09	.05	.70	.485
ResilienceTrait16	-6.22	4.92	-.10	-1.26	.208
ResilienceTrait17	-.70	5.67	-.01	-.12	.902
ResilienceTrait18	-4.83	4.80	-.08	-1.00	.316
ResilienceTrait19	1.88	5.03	.03	.37	.710
ResilienceTrait20	9.95	4.20	.16	2.37	.019*
ResilienceTrait21	5.26	5.61	.08	.94	.349
ResilienceTrait22	-.19	5.67	.00	-.03	.973
ResilienceTrait23	6.29	5.09	.10	1.23	.218
ResilienceTrait24	-1.30	5.73	-.02	-.23	.821
ResilienceTrait25	9.57	5.85	.13	1.64	.103

*$p < .05$, **$p < .01$

Chapter 6: Discussion

Summary of Findings

The main goals of this study were to determine the relationship between resilience, PTSD symptoms, five PTG factors (I – Relating to Others, II – New Possibilities, III – Personal Strength, IV - Spiritual-Existential Change, and V – Appreciation of Life), and other factors around the suicide such as the method of discovery of the suicide, the relationship to the deceased, the perceived level of closeness the respondent felt to the deceased, and the length of time passed since the suicide.

Of the 336 participants from whom data were collected, 219 individuals met inclusion criteria and responded to all 91 survey questions; data analyses were performed on the responses of those 219 participants. Almost 49% of those participants reported being diagnosed with depression, almost 40% were diagnosed with anxiety, and approximately 38% had no diagnosis. Most respondents lost one close person to suicide (64.38%) and approximately 24% lost two close people to suicide. The majority learned about the suicides from friends or family members (61.64%). Approximately half of the respondents experienced these losses two to 10 years prior to completing the surveys. Most participants reported the gender of the deceased to be male (76.26%), which matches national data. Approximately 20% of participants had lost children to suicide. A little over three fourths of the respondents reported being very close to the deceased. Almost 60% reported that the deaths had significant or devastating effects on them that they still feel; about one quarter of respondents reported that although the deaths disrupted their lives in significant or devastating ways, they no longer feel that way. Participants reported accessing a number of postvention supports; the most reported sources included peer led support groups (40.64%), individual therapy (61.64%), online support (22.83%), neighbors (26.48%), religious community supports (25.57%), family

supports (71.23%), friend supports (77.17%), and coworker/work supports (33.79%). About one fifth of respondents reported not receiving any mental health supports.

Previous studies have found that direct exposure to a death scene can lead to increased distress for the mourner and possible development of PTSD (Andress & Corey, 1978; Brent et al., 1996; Klein & Alexander, 2003; Melhem et al., 2004), and that witnessing or discovering a completed suicide may lead to an increased chance of having suicidal ideation as well as attempting or completing suicide (Bartik et al., 2013; de Groot et al., 2010; Jordan, 2008; Shear et al., 2011; Smolin & Guinan, 1993; Young et al., 2012). Conversely, in a three-year longitudinal study, Brent, Perper, Moritz, Bridge, and Canobbio (1996) found that exposure to a suicide (witnessing the suicide or having knowledge of the act) in adolescents' friends did not result in increased risk of suicidal behavior among friends and acquaintances. The present study found that direct discovery of the suicide did not result in higher rates of reported PTSD symptoms compared to the other methods of discovery of the suicide. This suggests that method of discovery of the suicide does not affect level of reported PTSD symptoms. It should be noted that when looking at the mean scores of PTSD symptoms among the three groups of method of discovery, the scores were fairly similar. Therefore, one should not interpret this to say that discovery the body of a loved one's suicide results in fewer PTSD symptoms; rather, participants generally experienced a similar number of PTSD symptoms regardless of how they learned about the suicide of their loved ones. This may indicate that other factors associated with suicide loss contribute more to the PTSD symptoms than the method of the discovery of the suicide.

The more time passed since the discovery of the suicide, the lower the rates of reported PTSD symptoms. This contradicts findings by Janoff-Bulman (1989) in which some trauma victims demonstrated that although years had passed, they continued to maintain negative self-views of themselves and the world at statistically significant levels in comparison to non-victims of trauma in the study. Bartik, Maple, Edwards, and

Kiernan (2013) also found that for young people who experienced the suicide of close friends or family members, when the bereaved was between the ages of 16 and 24, the young people did not report lessened grief as more time passed since the suicides, indicating that "young people's potential for increased risk of poor health outcomes can be ongoing" (p. 548). In contrast, the result of the present study supports findings of other studies that demonstrated that the number of people who met criteria for PTSD decreased as more time passed since their losses (Dyregrov et al., 2003; Schneider et al., 2011; Zisook et al., 1998). Nonetheless, other studies showed that PTSD symptoms can be sustained even years after a traumatic loss when certain risk factors are present, such as prior trauma, previous diagnoses of psychological disorders, history of psychiatric disorders in the family, peritraumatic emotional responses, believing he or she could have done something to prevent the death, prior interpersonal conflict with the deceased, having spoken to the victim during the 24 hours prior to the suicide, and more (Melhem et al., 2004; Ozer et al., 2003).

Regarding relationship to the deceased, Schneider, Grebner, Schnabel, and Georgi (2011) found that parents and spouses of the deceased indicated feeling sorrow, depressed mood, lack of energy, anger toward somebody else, abandonment, desire for the deceased, sympathy for the deceased, and admiration more than adult children of the deceased. Schneider et al. also found that "all parents reported that their emotions were disturbed every day. Parents had an elevated risk of lack of energy and guilt" (p. 188). Shear et al. (2011) reported that parents who lose their children are at higher risk for developing CG than other demographics. The findings from these studies and reports were attributed to the fact that children typically outlive their parents, which is consistent with Janoff-Bulman's (1989) explanations of world schemas and assumptions. Therefore, when children die before their parents, a world assumption has been shattered and that schema has to be reexamined and redefined. Brent, Melhem, Masten, Porta, and Payne (2012) found that parent bereaved adolescents—regardless of cause of parental

death—had less success at work, less elaborated career development plans, lower peer attachment, and diminished educational aspirations, but had no impact on their educational competence, certainty about future, or romantic relationships. Melhem, Day, Shea, Day, C. F. Reynolds, and Brent (2004) found that suicide bereaved adolescents who had closer relationships to deceased peers had higher rates of CG and/or PTSD. In the present study, respondents who had lost a child, mother, or long-term significant partner to suicide reported significantly higher rates of PTSD symptoms than compared to other relationships to the deceased.

Cerel, Maple, Aldrich, and van de Venne (2013) found that "the essential feature of a survivor appears to be related more to perceived closeness to the decedent than to type of relationship or demographics" (p. 419). In a later study, Cerel et al. (2016), found that those who reported higher levels of perceived closeness to the deceased were four times more likely to meet criteria for PTSD. The present study found that the closer a respondent reported feeling to the deceased, the more PTSD symptoms he or she endorsed.

One of the seven predictors of PTSD identified by Ozer, Best, Lipsey, and Weiss (2003) was lack of post-trauma social support. Abbott and Zakriski (2014) found that the impact of social support varied depending on the relationship to the provider of that support. Smolin and Guinan (1993) wrote that receiving help from a support group or accessing therapy can prevent development of meeting full diagnostic criteria for a mental health disorder in suicide bereaved individuals. Others emphasize that grief interventions or professional-led therapy are most effective for individuals who are experiencing higher levels of traumatization, when they are at risk for suicide themselves, or when they develop CG or another psychiatric disorder (de Groot et al., 2010; Jordan, 2008). In Canada, Barlow et al. (2010) found that suicide bereaved individuals benefitted just as much from peer support services as they did from group counseling, and that peer support programs contributed to the participants' healing in terms of memorializing of the

deceased, connecting with others, and making meaning of the suicide. Contrary to those collective findings, in the present study, overall, exposure to postvention (including mental health and community supports) resulted in no significant relationship with rates of reported PTSD symptoms.

Contrary to expectations, however, when specific mental health postvention sources were examined, significant positive relationships were observed, specifically between respondents who reported receiving individual therapy, group therapy, and participating in online support forums, with an increase in PTSD symptoms. Although it is possible that this could indicate that accessing these three services could lead to prolonged and increased PTSD symptoms, this analysis could also be interpreted to mean that those respondents who indicated a greater number of PTSD symptoms accessed most postvention services and resources given their need or possible referrals, reinforcing the notion that professional mental health resources are more effective for and needed by higher risk individuals. Additionally, Shear et al. (2011) reported that receiving treatment earlier in the bereavement process is a preventative measure to reduce personal suicide risk. The present study did not collect data on when and for how long participants received treatment, the fidelity of such treatments, if reported mental health diagnoses were diagnosed prior to or after the suicide loss, or histories of participants' suicidal ideation and attempts.

When specific additional postvention sources were examined (i.e., neighbors, religious communities, families, friends, coworkers/work, school staff or classmates, or none), having "none" of such resources had a significant relationship with higher reported PTSD symptoms, indicating that not accessing community resources may result in higher levels of PTSD symptoms. Overall, the findings of the present study are more consistent with those identified during a systematic review of data from eight controlled studies of interventions for people bereaved through suicide by McDaid, Trowman, Golder, Hawton, and Sowden (2008) and a study by de Groot, Neeleman, van der Meer,

and Burger (2010), which found that suicide bereaved relatives at 2.5 months post-loss reported no changes in chronic grief, depression, or suicidal ideation after receiving family-based cognitive-behavior grief therapy; decreased rates of the aforementioned negative outcomes were reported at a 13-month follow-up, but not significantly.

Multiple studies found that participating in support groups for suicide loss created a sense of normalcy for the survivors, a feeling of belonging and acceptance, decrease in feeling stigmatized or blamed, and an overall increase in positive feelings (Begley & Quayle, 2007; Groos & Shakespeare-Finch, 2013; Miers et al., 2012; Schneider et al., 2011). Calhoun et al. (2010) described how a grief therapist, or "expert companion" as termed in the posttraumatic growth framework, treating a bereaved individual may provide guidance to explore whether there were any disruptions to one's core beliefs or "shattered world assumptions," instead of solely providing comfort and reassurance (as one might receive from friends or family members), and how through that process, the bereaved individual may be more likely to experience PTG. In the present study, respondents who reported exposure to multiple postvention resources also reported higher levels of all five factors of PTG, including overall PTG. When examined in more detail, receiving no mental health postvention resources had a significant inverse relationship with Factors I (Relating to Others), II (New Possibilities), and V (Appreciation of Life) of PTG, as well as overall PTG. Receiving or accessing no community postvention resources significantly contributed to lower rates of reported PTG Factors I (Relating to Others) and IV (Spiritual-Existential Change). Receiving or accessing supports from one's religious community significantly contributed to higher rates of reported PTG Factor IV (Spiritual-Existential Change). Although not statistically significant, having family supports predicted higher rates of reported PTG Factor V (Appreciation of Life). There were no significant relationships between any mental health postvention and PTG Factors III (Personal Strength) and IV (Spiritual-Existential Change). Overall, this could

indicate that respondents who did not receive mental health services or family/community supports did not experience as much PTG as those who did.

Overall, the results regarding the impact of accessing mental health and community postvention resources indicate that no one source predicted reducing PTSD symptoms and/or developing PTG; however, accessing some form of postvention support generally resulted in lower reported PTSD symptoms (apart from individual therapy, group therapy, and online support forums, which as previously explained demonstrated a relationship with higher reported PTSD symptoms) and higher PTG rates across all five domains compared to receiving no support at all. This may be due to individual needs (i.e., preferring in-person versus online supports, group versus individual supports, and professional versus peer-led supports) and the lack of consistency in delivery of services under similar labels (e.g., peer led support group). Ultimately, although not statistically significant, considering the best match to one's needs and preferences, receiving some form of support or treatment appears to be more beneficial than receiving none in order to increase PTG rates and decrease PTSD symptoms.

Bonanno (2009) described three broad trajectories of bereavement: resilience, recovery, and chronic grief. In this context, resilience was measured by time and referred to returning to pre-loss functioning within a few months of the loss or trauma. Begley and Quayle (2007) found that the participants in their study reported initial reactions that mirrored PTSD responses and were also consistent with other observed evidence of coping with traumatic experiences. Bonanno, Papa, and O'Neill (2001) highlighted that some behaviors that mourners show are part of the bereavement process but often become labeled as "symptoms" associated with a disorder too soon after the death of a loved one. Even those demonstrating resilience may initially experience impairments or dysfunction. Additionally, the authors argued that in Western cultures, not showing expected or overt signs of grief is often interpreted as indication of a disorder rather than as an example of human resilience and healthy coping. Resilience is not only defined by

time or absence of pathology, but also by certain personality traits or beliefs. Mancini, Prati, and Black (2011) found that self-worth, but not benevolence or meaningfulness, mediated the effects of violent loss on PTSD symptoms at four and eight months post-loss. As hypothesized, having more resilience traits overall statistically significantly predicted lower PTSD symptoms. Further, respondents who reported having higher rates of the following five (out of 25 assessed) resilience traits reported experiencing fewer PTSD symptoms: "I have at least one close and secure relationship that helps me when I am stressed. . . . Good or bad, I believe that most things happen for a reason. . . . I am able to handle unpleasant or painful feelings like sadness, fear, and anger. . . . I feel in control of my life. . . . I work to attain my goals no matter what roadblocks I encounter along the way."

It should be noted that resilience was defined and measured differently in past studies, including time of recovery since traumatic event or absence of psychiatric disorder diagnosis. Additionally, Calhoun et al. (2010) found a trend across studies using the PTGI with bereaved individuals (albeit those who reported more "natural" than "sudden" or "unexpected" deaths), which identified more growth in the areas of Relationships with Others, Appreciation of Life, and Spiritual Change, but not Personal Strength and New Possibilities. Contrary to expectations, in the present study, respondents who reported having more resilience traits (a greater number of traits or beliefs present more frequently in their lives) also reported experiencing more PTG Factors I through V and overall PTG. This aligns more with the previous research that has found that people with higher levels of resilience, or more resilience personality traits, are less likely to feel "shattered" by traumatic events and, consequently, feel empowered by them, resulting in self-growth (Calhoun et al., 2010). Another explanation is that those individuals may have demonstrated more healthy coping, resulting in less of a "need" for PTG (Levine et al., 2009).

Out of 25 resilience traits assessed, five resilience traits were found to be the greatest contributors to the five PTG factors. Respondents who reported having higher rates of the following resilience trait also reported experiencing more PTG Factors I (Relating to Others), II (New Possibilities), III (Personal Strength), and V (Appreciation of Life) levels: "Past successes give me confidence in dealing with new challenges and difficulties." The following resilience factor contributed to higher levels of PTG Factors I (Relating to Others), II (New Possibilities), IV (Spiritual-Existential Change): "In dealing with life's problems, sometimes you have to act on a hunch without knowing why." The following resilience factor contributed to higher levels of PTG Factors I (Relating to Others) and III (Personal Strength): "Having to cope with stress can make me stronger." The following resilience factor contributed to higher levels of PTG Factors III (Personal Strength) and V (Appreciation of Life): "I take pride in my achievements." The following resilience factor contributed to higher levels of PTG Factors IV (Spiritual-Existential Change) and V (Appreciation of Life): "When there are no clear solutions to my problems, sometimes fate or God can help."

Although stress levels were not assessed formally, it is possible that the positive relationship between resilience traits and PTG scores across all five domains align with the findings of Taku et al. (2015): Trauma victims who reported experiencing too much or too little stress as a result of the trauma were more likely to report experiencing growth than those who reported intermediate levels of stress response. In this sense, the resilience traits could have allowed the suicide bereaved individuals who reported higher levels of PTG and higher levels of resilience to ultimately have experienced less stress with time after the suicides, or the suicides of their loved ones were so stressful that the resilience traits and beliefs they reported to have now may have only developed afterward and then contributed to their PTG across the varied domains.

Study Limitations

Ali (2015) and Jordan (2001) acknowledged that many limitations exist with research around suicide bereavement, some of which include that studies are almost exclusively quantitative in nature (based on self-report questionnaires), involve limited qualitative data, often include small sample sizes, have too much focus on symptomology rather than the experience of grief, and lack of participation by suicide loss survivors due to stigma and increased risk of psychological problems. All of these concerns and limitations were present in the current study. First, most respondents who participated in the study were recruited through AFSP, local suicide prevention organizations, or support groups. This may have resulted in a self-selected sample pool. Perhaps responses by suicide loss survivors who were not connected with any sort of support group or suicide prevention advocacy group would have indicated a different pattern of responses.

Additionally, memory bias and self-enhancing bias may have impacted participants' responses (Bonanno, 2004; Bonanno et al., 2001; McDaid et al., 2008; Safer, Bonanno, & Field, 2001). Especially when participants were asked to assess their own growth, which is in the present and not past, it is difficult to distinguish whether their perceptions of their growth are actual or solely their perceptions. Additionally, where memory bias is apparent, it is difficult to gauge whether participants accurately perceived their levels of functioning before the suicide of their loved ones. Therefore, not only may respondents' answers be inflated with intention to submit positive results to a study that is important enough for them to participate in but also with a desire to portray oneself one way or another—either as experiencing growth or impaired functioning. Consequently, the self-reports must be interpreted with caution.

Participants who lost more than one person to suicide were only asked to reflect on the impact of one suicide but not given direction on what else to do when having experienced a loss of more than one close person, such as completing the survey another time regarding the other person. The survey directed participants to respond based on the

suicide that impacted him or her the most. Nevertheless, some participants who had lost multiple loved ones shared that choosing to respond about only one suicide was challenging and emotionally conflicting; they would have appreciated direction on how to address their bereavement processes and recovery regarding all lost loved ones. Furthermore, although a participant may have reported losing more than one person to suicide, he or she was only able to select one relationship to the deceased, which then was used to indicate about whom their responses were referring. Respondents were allowed to complete the survey multiple times for each lost loved one; however, this option was not clarified to all participants unless they contacted the investigator to ask how to respond about multiple lost loved ones.

One of the screener questions was "Are you a mental health provider who lost a patient to suicide?" If a participant responded "yes," he or she was excluded from the study. Perhaps the question should have been rephrased to clarify that mental health providers who lost someone other than or in addition to patients may participate and respond to subsequent questions about their loved ones but not about the patients, given that this study did not examine mental health providers' responses to loss of their patients. This decision was based on previous research findings and common knowledge about the impact of lawsuits and other legal matters when a patient dies and the impact that this may have on the provider's grieving pattern when losing a patient (Zisook & Shear, 2009). The present study did not intend to exclude individuals who happen to be mental health providers and lost loved ones, beside or in addition to, patients in their professional capacities.

Additionally, although the current study examined impact on suicide loss survivors, the study did not consider the age of the deceased or the age of the suicide loss survivor at the time of suicide. This may have been an important contributor for prevention and postvention planning purposes, especially considering developmental factors. For example, are some of the differences in resilience, PTSD, and PTG in this

sample due to their ages and perceptions of the world (i.e., their schemas) at the time of their loved ones' suicides? Does losing one's parent to suicide as a child versus losing one's parent to suicide as an adult impact one's resilience traits, PTSD symptoms, or PTG? Nonetheless, most previous studies have indicated that the closeness of the relationship between the suicide loss survivor and the deceased, as well as the impact of the death on the suicide loss survivor, are most pertinent when determining what supports to provide and how much time after the death correlates to growth, as opposed to the label of the relationship (Cerel et al., 2013).

The study also did not differentiate between participants who previously received or accessed postvention resources with those who were currently receiving services. The question was phrased in the past tense (i.e., "Did you receive?"). Therefore, when investigating the relationships between mental health and other postvention resources and supports with levels of PTSD and PTG, it was difficult to determine whether the supports or services were ongoing or ones only accessed in the past, which, consequently, impacts the determination of "how much" or "how many" services are more effective rather than detrimental (i.e., causing suicide loss survivors to ruminate and reexperience the loss rather than grow from it).

Additionally, the survey did not distinguish between "previous" or "current" mental health diagnoses, before and after the suicide of the loved one about whom participants completed the survey. Previous research has indicated that preexisting psychiatric disorders prior to a trauma or stressor put one at higher risk for developing additional disorders or having greater difficulties with recovery (Brent et al., 1996; Klein & Alexander, 2003; Melhem et al., 2004). The present study may have been able to find support for or against this previous research were the question "Do you have any previous or current mental health diagnoses?" presented as two questions such as, "Did you have any previous mental health diagnoses prior to losing a loved one to suicide?" and "Do you have any mental health diagnoses since the suicide of your loved one?"

Again, this question would have to be in conjunction with keeping one loved one in mind when completing each survey.

Although a number of analyses were conducted to determine the relationship between different suicide loss experiences and demographics with PTSD symptoms, the study did not control for time passed since suicide or the gender of the suicide bereaved when other variables were examined. Were those variables controlled for, more precise data could have been gathered about differences in the presence of PTSD symptoms.

The study also did not address that a participant's PTSD diagnosis may be due to another traumatic event. As done so in other studies (Taku et al., 2015), a demographics question may have been included to determine whether the participant considered the discussed suicide the most traumatic event of his or her life or over the past set number of years.

Future Implications

Although method of discovery of the suicide (discovering the body, learning from a friend or family member, or being informed by an official) did not influence the rate of PTSD symptoms in the analyzed sample, the greater the time passed since the suicide, the lower PTSD symptoms were endorsed. This finding supports previous explanations that those who are grieving need to be given supports but not necessarily interventions, which may interfere and worsen the natural path to recovery from traumatic events or losses (Bonanno, 2004; Bonanno, 2009; Goldenberg et al., 2010; Janoff-Bulman, 1992). This finding also supports that although a suicide loss survivor did not discover the body of the deceased, he or she may still experience high levels of PTSD symptoms; this should be considered when responding to or processing with the suicide loss survivor.

Given the high rates of suicide in the military and the distinct stressors around military-related suicides, future studies may consider explicitly identifying participants who either are in the military or lost loved ones to suicide who were in the military. Because PTSD levels vary based on levels of traumatic exposure even within the military

(Brooks & Fletcher, 2016), identifying military participants would also help clarify what levels of particular resilience traits and domains of PTG are more uniquely correlated with veterans or military families and friends and, consequently, better inform prevention and postvention strategies.

Additionally, future studies may also consider examining the relationship between resilience, PTSD, and PTG in those who had loved ones attempt suicide but survive. After not meeting inclusion criteria, several participants communicated outside of the surveys via phone or e-mail about the lasting impact that their own suicide attempts had on their friends, families, partners, and others.

Although it was initially hypothesized that an increase in resilience would statistically contribute to a decrease in PTG, in the current sample, respondents who endorsed a higher number of resilience traits also endorsed higher overall PTG. Additionally, postvention services appeared not to be as helpful in aiding suicide loss survivors' recovery. Future studies may rate initial PTSD levels and reassess PTSD and PTG levels several years later to see whether having initially experienced higher levels of PTSD is correlated with PTG or later PTSD symptoms. These studies may also conduct peer ratings to reduce memory and self-enhancing biases, or may consider using a qualitative approach to examine whether suicide loss survivors' stories indicate the postvention services to result in more rumination or tools to grow.

Although the current study did not examine resilience, PTSD, and PTG in children and adolescents bereaved by suicide, future studies may consider examining such factors. Understanding the effects of suicide on minors is crucial in that the impact may last into adulthood, as evidenced in the current study by participants who informally reported losing love ones as children or adolescents. Currently, a larger number of peer- and professionally-led groups exist for adults who have lost loved ones than for minors who have loved ones to suicide. Findings for children and adolescents—especially which

resilient factors are the best protective factors for lower PTSD and higher PTG—could also help to better plan postvention strategies.

Conclusions

Both resilience and PTG can almost exclusively be assessed in the aftermath of what one perceives to be a traumatic event (Calhoun et al., 2010; Mancini and Bonanno, 2006). Calhoun et al. (2010) identified that PTG can differ for those who are grieving than from other highly stressful events. Overall, the traumatic event forces the person to reassess his or her core beliefs (Calhoun et al., 2010; Janoff-Bulman, 2006). Regarding suicide bereaved parents, previous studies have found that this group experienced higher levels of PTG by maintaining connections with and legacies of their deceased children, or finding a sense of purpose to give back to their communities, especially by way of increasing suicide awareness and prevention (Begley and Quayle, 2007; Miers et al., 2012). When specifically examining the relationship between resilience and PTG, previous studies have identified that higher levels of resilience were correlated with lower levels of PTG (Bonanno et al., 2004; Levine et al., 2009; Moore et al., 2015). As definitions of resilience often vary, these studies did not use a dedicated or standardized measure for resilience. In Levine et al.'s (2009) study, resilience was defined as lower levels of PTSD. These authors similarly concluded that resilient individuals reported lower levels of PTG, which may have been explained by the lack of need for such growth, as they were instead demonstrating healthy coping (Levine et al., 2009).

Resilience does not always have to indicate that a person is numb or not experiencing the pain associated with distress (Bonanno et al., 2004; Wright et al., 2013). Although Calhoun et al. (2010) emphasized that growth can occur without a loss, trauma, or stressor, and that not all who experience such events will experience growth, some struggle and recovery process is necessary to experience growth and change. Furthermore, as Taku, Tedeschi, and Cann (2015) demonstrated, PTG is "not a single-dimension construct" (p. 57); different levels of stress correlate with different levels of

PTG across the five domains and, therefore, each domain of PTG should be examined separately to truly understand what areas of growth a person may or may not be experiencing after a stressor.

The present study concluded that an increase in resilience factors statistically significantly predicted lower rates of PTSD symptoms and higher rates of overall PTG. Specifically, five resilience traits most greatly statistically contributed to lower PTSD symptoms and higher PTG rates across all five factors of PTG (I – Relating to Others, II – New Possibilities, III – Personal Strength, IV - Spiritual-Existential Change, and V – Appreciation of Life). Although this study initially hypothesized that experiencing too much resilience may result in too much "hardiness" or "numbness" and, consequently, no opportunities to experience PTG, the results of this study indicate otherwise.

The participants in this study indicated that having resilience was more of a protective factor against developing PTSD and allowed for PTG more so than mental health or community supports. Although such supports help reduce stigma and create connection between people in a time of need and afterward, considering the results of this study, future postvention supports can focus on fostering resilience traits in general to serve as a protective factor against developing an increase in PTSD symptoms as well as to aid fostering PTG.

For greater impact, certain resilience traits should be given closer attention and intervention. Specifically, to help prevent PTSD symptoms, it is recommended to develop the following areas of resilience: having a close relationship to rely on when stressed, believing that most things happen for a reason, handling painful feelings, feeling control over one's life, and overcoming obstacles to obtain a goal. To help cultivate PTG, it is recommended to build on the following resilience traits: acknowledge confidence from past successes, take pride in one's achievements, follow one's instinct when problem solving, consider spiritual supports or fate when there are no clear solutions, and recognize how coping with previous stress has built strength. Although

strengthening these resilience traits most likely will not interfere with the natural bereavement trajectory, especially following a suicide, they may serve as additional tools during the stages of recovery.

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Appendix A

Survey Questions

Inclusion/Exclusion Criteria

Are you 18 or older?
- a. Yes
- b. No

Can you read written materials in English?
- a. Yes
- b. No

Do you live in the United States?
- a. Yes
- b. No

Have you lost someone to suicide?
- a. Yes
- b. No

Have at least six (6) months passed since the suicide?
- a. Yes
- b. No

Are you currently receiving inpatient mental health services?
- a. Yes
- b. No

Are you a mental health provider who lost a patient to suicide?
- a. Yes
- b. No

Connor-Davidson Resilience Scale 25 (CD-RISC-25)

Directions: For each item, please select the number that best indicates how much you agree with the following statements as they apply to you over the last month. If a particular situation has not occurred recently, answer according to how you think you would have felt.

1. I am able to adapt when changes occur.
   0 = not true at all
   1 = rarely true
   2 = sometimes true
   3 = often true
   4 = true nearly all the time

2. I have at least one close and secure relationship that helps me when I am stressed.
   0 = not true at all
   1 = rarely true
   2 = sometimes true
   3 = often true
   4 = true nearly all the time
3. When there are no clear solutions to my problems, sometimes fate or God can help.
   0 = not true at all
   1 = rarely true
   2 = sometimes true
   3 = often true
   4 = true nearly all the time

4. I can deal with whatever comes my way.
   0 = not true at all
   1 = rarely true
   2 = sometimes true
   3 = often true
   4 = true nearly all the time

5. Past successes give me confidence in dealing with new challenges and difficulties.
   0 = not true at all
   1 = rarely true
   2 = sometimes true
   3 = often true
   4 = true nearly all the time

6. I try to see the humorous side of things when I am faced with problems.
   0 = not true at all
   1 = rarely true
   2 = sometimes true
   3 = often true
   4 = true nearly all the time

7. Having to cope with stress can make me stronger.
   0 = not true at all
   1 = rarely true
   2 = sometimes true
   3 = often true
   4 = true nearly all the time

8. I tend to bounce back after illness, injury, or other hardships.
   0 = not true at all
   1 = rarely true
   2 = sometimes true
   3 = often true
   4 = true nearly all the time

9. Good or bad, I believe that most things happen for a reason.
   0 = not true at all
   1 = rarely true
   2 = sometimes true
   3 = often true
   4 = true nearly all the time

10. I give my best effort no matter what the outcome may be.
    0 = not true at all
    1 = rarely true
    2 = sometimes true
    3 = often true
    4 = true nearly all the time

11. I believe I can achieve my goals, even if there are obstacles.
    0 = not true at all
    1 = rarely true
    2 = sometimes true
    3 = often true
    4 = true nearly all the time

12. Even when things look hopeless, I don't give up.
    0 = not true at all
    1 = rarely true
    2 = sometimes true
    3 = often true
    4 = true nearly all the time

13. During times of stress/crisis, I know where to turn for help.
    0 = not true at all
    1 = rarely true
    2 = sometimes true
    3 = often true
    4 = true nearly all the time

14. Under pressure, I stay focused and think clearly.
    0 = not true at all
    1 = rarely true
    2 = sometimes true
    3 = often true
    4 = true nearly all the time

15. I prefer to take the lead in solving problems rather than letting others make all the decisions.
    0 = not true at all
    1 = rarely true
    2 = sometimes true
    3 = often true
    4 = true nearly all the time

16. I am not easily discouraged by failure.
    0 = not true at all
    1 = rarely true
    2 = sometimes true
    3 = often true
    4 = true nearly all the time

17. I think of myself as a strong person when dealing with life's challenges and difficulties.
    0 = not true at all
    1 = rarely true
    2 = sometimes true
    3 = often true
    4 = true nearly all the time

18. I can make unpopular or difficult decisions that affect other people, if it is necessary.
    0 = not true at all
    1 = rarely true
    2 = sometimes true
    3 = often true
    4 = true nearly all the time

19. I am able to handle unpleasant or painful feelings like sadness, fear, and anger.
    0 = not true at all
    1 = rarely true
    2 = sometimes true
    3 = often true
    4 = true nearly all the time

20. In dealing with life's problems, sometimes you have to act on a hunch without knowing why.
    0 = not true at all
    1 = rarely true
    2 = sometimes true
    3 = often true
    4 = true nearly all the time

21. I have a strong sense of purpose in life.
    0 = not true at all
    1 = rarely true
    2 = sometimes true
    3 = often true
    4 = true nearly all the time

22. I feel in control of my life.
    0 = not true at all
    1 = rarely true
    2 = sometimes true
    3 = often true
    4 = true nearly all the time

23. I like challenges.
    0 = not true at all
    1 = rarely true
    2 = sometimes true
    3 = often true
    4 = true nearly all the time

24. I work to attain my goals no matter what roadblocks I encounter along the way.
    0 = not true at all
    1 = rarely true
    2 = sometimes true
    3 = often true
    4 = true nearly all the time

25. I take pride in my achievements.
    0 = not true at all
    1 = rarely true
    2 = sometimes true
    3 = often true
    4 = true nearly all the time

The PTSD Checklist for DSM-5 (PCL-5)

Weathers, F. W., Litz, B. T., Keane, T. M., Palmieri, P. A., Marx, B. P., & Schnurr, P. P. (2013). The PTSD Checklist for DSM-5 (PCL-5) – Standard [Measurement instrument].

Directions: Below is a list of problems that people sometimes have in response to a suicide. Please read each problem carefully and then select the number to indicate how much you have been bothered **in the past month** by the suicide that **impacted you the most**.

1. Repeated, disturbing, and unwanted memories of the suicide?
   0 = not at all
   1 = a little bit
   2 = moderately
   3 = quite a bit
   4 = extremely

2. Repeated, disturbing dreams of the suicide?
   0 = not at all
   1 = a little bit
   2 = moderately
   3 = quite a bit
   4 = extremely

3. Suddenly feeling or acting as if the suicide were actually happening again (as if you were actually back there reliving it)?
   0 = not at all
   1 = a little bit
   2 = moderately
   3 = quite a bit
   4 = extremely

4. Feeling very upset when something reminded you of the suicide?
   0 = not at all
   1 = a little bit
   2 = moderately
   3 = quite a bit
   4 = extremely

5. Having strong physical reactions when something reminded you of the suicide (for example, heart pounding, trouble breathing, sweating)?
   0 = not at all
   1 = a little bit
   2 = moderately
   3 = quite a bit
   4 = extremely

6. Avoiding memories, thoughts, or feelings related to the suicide?
   0 = not at all
   1 = a little bit
   2 = moderately
   3 = quite a bit
   4 = extremely

7. Avoiding external reminders of the suicide (for example, people, places, conversations, activities, objects, or situations)?
   0 = not at all
   1 = a little bit
   2 = moderately
   3 = quite a bit
   4 = extremely

8. Trouble remembering important parts of the suicide?
   0 = not at all
   1 = a little bit
   2 = moderately
   3 = quite a bit
   4 = extremely

9. Having strong negative beliefs about yourself, other people, or the world (for example, having thoughts such as: I am bad, there is something seriously wrong with me, no one can be trusted, the world is completely dangerous)?
   0 = not at all
   1 = a little bit
   2 = moderately
   3 = quite a bit
   4 = extremely

10. Blaming yourself or someone else for the suicide or what happened after it?
    0 = not at all
    1 = a little bit
    2 = moderately
    3 = quite a bit
    4 = extremely

11. Having strong negative feelings such as fear, horror, anger, guilt, or shame?
    0 = not at all
    1 = a little bit
    2 = moderately
    3 = quite a bit
    4 = extremely

12. Loss of interest in activities that you used to enjoy?
    0 = not at all
    1 = a little bit
    2 = moderately
    3 = quite a bit
    4 = extremely

13. Feeling distant or cut off from other people?
    0 = not at all
    1 = a little bit
    2 = moderately
    3 = quite a bit
    4 = extremely

14. Trouble experiencing positive feelings (for example, being unable to feel happiness or have loving feelings for people close to you)?
    0 = not at all
    1 = a little bit
    2 = moderately
    3 = quite a bit
    4 = extremely

15. Irritable behavior, angry outbursts, or acting aggressively?
    0 = not at all
    1 = a little bit
    2 = moderately
    3 = quite a bit
    4 = extremely

16. Taking too many risks or doing things that could cause you harm?
    0 = not at all
    1 = a little bit
    2 = moderately
    3 = quite a bit
    4 = extremely

17. Being "superalert" or watchful or on guard?
    0 = not at all
    1 = a little bit
    2 = moderately
    3 = quite a bit
    4 = extremely

18. Feeling jumpy or easily startled?
    0 = not at all
    1 = a little bit
    2 = moderately
    3 = quite a bit
    4 = extremely

19. Having difficulty concentrating?
    0 = not at all
    1 = a little bit
    2 = moderately
    3 = quite a bit
    4 = extremely

20. Trouble falling or staying asleep?
    0 = not at all
    1 = a little bit
    2 = moderately
    3 = quite a bit
    4 = extremely

Posttraumatic Growth Inventory – Expanded (PTGI-X)

L. G. Calhoun and R. G. Tedeschi
Used with permission

Directions: Indicate for each of the statements below the degree to which this change occurred in your life as a result of the suicide that **affected you the most.**

1. I changed my priorities about what is important in life.
   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.

2. I have a greater appreciation for the value of my own life.
   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.

3. I developed new interests.
   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.

4. I have a greater feeling of self-reliance.
   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.

5. I have a better understanding of spiritual matters.
   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.

6. I more clearly see that I can count on people in times of trouble.
   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.

7. I established a new path for my life.
   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.

8. I have a greater sense of closeness with others.
   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.

9. I am more willing to express my emotions.
   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.

10. I know better that I can handle difficulties.
   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.

11. I am able to do better things with my life.
   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.

12. I am better able to accept the way things work out.
    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.

13. I can better appreciate each day.
    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.

14. New opportunities are available which wouldn't have been otherwise.
    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.
15. I have more compassion for others.
    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.

16. I put more effort into my relationships.
    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.

17. I am more likely to try to change things which need changing.
    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.

18. I have a stronger religious faith.
    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.

19. I discovered that I'm stronger than I thought I was.
    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.

20. I learned a great deal about how wonderful people are.
    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.

21. I better accept needing others.
    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.

22. I have a greater sense of harmony with the world.
    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.

23. I feel more connected with all of existence.
    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.

24. I feel better able to face questions about life and death.
    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.

25. I have greater clarity about life's meaning.
    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.

Participant Information Questionnaire

Please select one response:

1. What is your age?
    a. 18-25 years
    b. 26-30 years
    c. 31-40 years
    d. 41-50 years
    e. 51-60 years
    f. 61-70 years
    g. 71 years and older

2. What is your gender?
    a. Male
    b. Female
    c. Transgender
    d. Prefer not to say

3. What is your race/ethnicity? (check one or more boxes)
    a. American Indian or Alaska Native
    b. Asian/Asian American
    c. Black/African/African American
    d. Latino/Hispanic
    e. White/European American
    f. Other: (_____)

4. What is your religious affiliation and/or practice? (check one or more boxes)
    a. Muslim
    b. Jewish
    c. Christian
    d. Buddhist
    e. Unitarian/Universalist
    f. Hindu
    g. Sikh
    h. Wiccan
    i. Pagan
    j. Agnostic
    k. Atheist
    l. Do not practice a religion
    m. Other:

5. Do you have any previous or current mental health diagnoses?
    a. Depression
    b. Anxiety
    c. Posttraumatic Stress Disorder (PTSD)
    d. None
    e. Other:

6. How many people close to you have died by suicide?
   a. 1
   b. 2
   c. 3
   d. 4
   e. 5
   f. 6
   g. 7
   h. 8
   i. 9
   j. 10
   k. 11 or more

   If you have experienced the loss of multiple loved ones by suicide, please answer the following questions thinking about the suicide that affected you the most.

7. How did you discover your loved one had died by suicide?
   a. Discovered the body
   b. Learned from a friend or family member
   c. Informed by an official (e.g., police officer, doctor, mental health professional, etc)
   d. Other:

8. How much time has passed since the suicide?
   a. 6 months - 1 year
   b. 1 year 1 month - 2 years
   c. 2 years 1 month - 5 years
   d. 5 years 1 month - 10 years
   e. 10 years 1 month - 15 years
   f. More than 15 years

9. What was the gender of the deceased?
   a. Male
   b. Female
   c. Transgender
   d. Prefer not to say

10. What was your relationship to the deceased? I lost my…:
    a. Mother
    b. Father
    c. Child
    d. Sister
    e. Brother
    f. Spouse
    g. Long-term significant partner
    h. Aunt/uncle
    i. Cousin
    j. Friend
    k. Co-worker
    l. Classmate
    m. Other:

11. How close did you feel to the deceased?
    a. Very close
    b. Somewhat close
    c. Not close at all

12. Thinking about the effect of the person's suicide on your life, what response is closest to your experience?
    a. The death had little effect on my life.
    b. The death had somewhat of an effect on me but did not disrupt my life
    c. The death disrupted my life for a short time.
    d. The death disrupted my life in a significant or devastating way, but I no longer feel that way.
    e. The death had a significant or devastating effect on me that I still feel.

13. What exposure to support groups or mental health treatment, if any, did you receive? (check all that apply)
    a. Peer led support group
    b. Professional led support group
    c. Individual therapy
    d. Group therapy
    e. Online support (e.g., forum)
    f. None
    g. Other:

14. What additional supports did you feel, experience, or receive? (check all that apply)
    a. Neighbors supports (neighbors)
    b. Religious community supports
    c. Family supports
    d. Friends supports
    e. Coworker/work supports
    f. School staff/classmates supports
    g. None
    h. Other:

Appendix B

Table 87

Codes for Resilience Traits from Connor-Davidson Resilience Scale 25

(CD-RISC-25; Connor and Davidson, 2013)

Code	Variable
ResilienceTrait1	I am able to adapt when changes occur
ResilienceTrait2	I have at least one close and secure relationship that helps me when I am stressed
ResilienceTrait3	When there are no clear solutions to my problems, sometimes fate or God can help
ResilienceTrait4	I can deal with whatever comes my way
ResilienceTrait5	Past successes give me confidence in dealing with new challenges and difficulties
ResilienceTrait6	I try to see the humorous side of things when I am faced with problems
ResilienceTrait7	Having to cope with stress can make me stronger
ResilienceTrait8	I tend to bounce back after illness, injury, or other hardships
ResilienceTrait9	Good or bad, I believe that most things happen for a reason
ResilienceTrait10	I give my best effort no matter what the outcome may be
ResilienceTrait11	I believe I can achieve my goals, even if there are obstacles
ResilienceTrait12	Even when things look hopeless, I don't give up
ResilienceTrait13	During times of stress/crisis, I know where to turn for help
ResilienceTrait14	Under pressure, I stay focused and think clearly
ResilienceTrait15	I prefer to take the lead in solving problems rather than letting others make all the decisions
ResilienceTrait16	I am not easily discouraged by failure
ResilienceTrait17	I think of myself as a strong person when dealing with life's challenges and difficulties
ResilienceTrait18	I can make unpopular or difficult decisions that affect other people, if it is necessary
ResilienceTrait19	I am able to handle unpleasant or painful feelings like sadness, fear, and anger
ResilienceTrait20	In dealing with life's problems, sometimes you have to act on a hunch without knowing why
ResilienceTrait21	I have a strong sense of purpose in life
ResilienceTrait22	I feel in control of my life
ResilienceTrait23	I like challenges
ResilienceTrait24	I work to attain my goals no matter what roadblocks I encounter along the way
ResilienceTrait25	I take pride in my achievements