Impact of Coping Strategies, Relationship to the Deceased, and Severity of Prolonged Grief Disorder on Individuals Bereaved by Unexpected Loss

by

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Abstract

The loss of a significant other is an inevitable experience that results in a grief response. Extensive grief or prolonged grief can impair mental and physical functioning. The type of death loss, relationship to the deceased prior to death, and coping strategies implemented to alleviate mental health symptoms related to grief can influence the severity and duration of grief. Prolonged Grief Disorder (PGD) is characterized as extensive yearning and longing for the deceased. The purpose of this study was to examine the severity of PGD among adults bereaved by unexpected or violent loss, assess the relationship with the deceased prior to death, and identify the coping strategies implemented to alleviate PGD. Participants of this study included a sample of 190 individuals that were bereaved by a death loss. Results indicated a statistically significant relationship between dysfunctional coping and PGD severity ($p < .001$) as measured by the PG-13-R. Specifically, self-distraction, denial, and self-blame as measured by the Brief COPE inventory, demonstrated statistically significant relationships with PGD severity. Moreover, dysfunctional coping was determined to be a statistically significant predictor of PGD severity ($p < .001$). The QRI-B indicated that individuals with increased closeness to the deceased prior to the death reported heightened scores of PGD ($p < .001$). These findings can assist counselors in developing treatment modalities that target dysfunctional coping strategies in order to reduce the extensivity of grief. Bereaved individuals may find these results validating and may gain insight into how coping strategies and relationship to the deceased prior to the death contribute to the extensivity and severity of grief; this can encourage bereaved individuals to seek out therapeutic treatment.

Dedication

This dissertation is dedicated to my father, Gary Quadlander. His belief in my abilities along with his unconditional love made this project possible. I miss you.

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CHAPTER ONE

Introduction

The loss of a significant other, family member, or close friend is a momentous event that most people will experience at some point in their lifetime. These events often result in grief, a "landmark experience" that is described as the "epitome of suffering" (Gravesen & Birkelund, 2021, p. 8). According to the Centers for Disease Control and Prevention (CDC; 2022) over three million individuals died in the United States in 2020, impacting the mental health of hundreds of thousands of individuals. With the ongoing worldwide pandemic caused by COVID-19 along with other prominent causes of death in the United States such as heart disease, cancer, accidents, and stroke (CDC, 2022), developing an understanding of how type of death contributes to the severity and symptomatology of disordered grief is pertinent to conceptualizing treatment for bereaved individuals.

The death of a loved one has been described as one of the greatest stressors an individual can experience (Maciejewski et al., 2007). However, some individuals experience an extended grieving process that involves different symptoms outside of "normal" grief, which is distinguished from pathological grief due to the length of the mourning process (American Psychiatric Association [APA], 2013; Nakajima, 2018). Extensive research on disordered grief is gaining momentum as classification systems identify and recognize relevant grief symptoms and longer duration periods of grief. Prolonged Grief Disorder (PGD) has been deemed as the diagnosis to represent disordered grief in replacement of the well-documented "Complicated Grief" (CG) and the *Diagnostic Statistical Manual of Mental Disorders*, 5th edition (DSM-5) grief disorder, Persistent Complex Bereavement Disorder (PCBD) (APA, 2022). According to Prigerson et al. (2021), a committee gathered in June 2019, to present research on disordered

grief, which resulted in the consideration of PGD for the next classification text. PGD is now in the *Diagnostic and Statistical Manual of Mental Disorders,* fifth edition, text revision (DSM-5-TR) that was published in March 2022 (APA, 2022) and was previously documented in the International Classification of Diseases 11th edition (ICD-11) (World Health Organization [WHO], 2018). PGD is characterized by extensive yearning or longing for the deceased, along with cognitive, emotional, and behavioral symptoms (e.g., difficulty accepting the loss, difficulty moving on, and numbness) (Prigerson et al., 2009). Moreover, when considering PGD and grief response, it is critical to assess for other variables, such as the nature of the death and the relationship to the deceased that may impact how one copes with the loss. However, it is noted that grief response and bereavement is not limited to loss that is a result from death but also loss related to separation from significant others, employment loss, relocation, incapacitation, changing of the number of family members, and retirement (Parkes, 1998). Although these losses are relevant to understanding bereavement outcomes and grief severity, unexpected or violent loss is consistently reported as a traumatic experience that increases the likelihood of psychiatric disorders (Keyes et al., 2014).

Unexpected death is described as sudden death that is not anticipated (Bruera et al., 2015). As noted by Cankay et al. (2009), unexpected deaths can provoke heightened grief responses as there is less time to anticipate or prepare for the loss. Also referred to as unexpected death, violent death, which includes accidents, suicide, and homicide, has been correlated with grief severity (Kaltman & Bonanno, 2003). However, Aldrich (1974) notes that anticipatory grief, or the grief that occurs prior to the loss when a death is anticipated and is sometimes termed as normal (i.e., due to chronic illness or aging), is notably different than post-loss grief. Moreover, personal relationships such as between spouses, a parent and a child, or siblings can

influence grief severity, symptoms, and outcomes (Fisher et al., 2020). As suggested by Heeke et al. (2017), the relationship to the deceased, particularly those with intimate relationships, can increase the severity of PGD that the bereaved individual experiences. Smigelsky et al. (2019) proposes that the most at-risk group of individuals for adverse grief reactions is those that experienced high levels of relationship conflict contributing to lack of resolution before the death. As with any grief, individuals resort to coping strategies to alleviate symptoms. Coping is referred to as a category of adaptation implemented by individuals in unusually taxing circumstances (Costa et al., 1996).

Lazarus and Folkman (1984) proposed that individuals combat stress through primary appraisal or the perception of threat to oneself and secondary appraisal, which is defined as conceptualizing a response to said threat. Moreover, Lazarus and Folkman (1984) described problem-focused coping as modification to the situation, whereas emotion-focused coping includes changing the perspective or relation to the situation. Carver et al. (1989) added to this concept by stating that coping is "the process of executing the response" from the secondary appraisal (p. 267). However, Carver and Connor-Smith (2010) recently defined coping as "efforts to prevent or diminish threat, harm, and loss, or to reduce associated distress" (p. 685). Understanding the influence of an unexpected loss on prolonged grief severity as well as the impact of the relationship with the deceased and coping strategies used to alleviate symptoms is a novel idea that has yet to be explored. Gaining insight into these components and the history of disordered grief can assist in the development of treatment modalities that support coping strategies such as emotion-focused (i.e., "aimed at reducing or managing the emotional distress that is associated with (or cued by) the situation" (Carver et al., 1989, p. 267)) and problem-focused (i.e., "aimed at problem solving or doing something to alter the source of stress" (Carver

et al., 1989, p. 267). Additionally, this insight can shed light on factors that contribute to issues associated with unexpected loss, such as the nature of the unexpected loss (e.g., violent or traumatic) and relationship to the deceased.

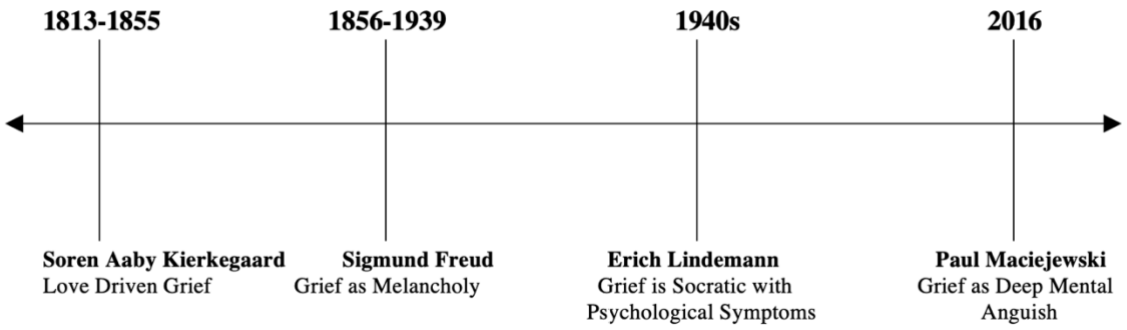
Literature Review

Grief

Whether it is the loss of a person, job, health, hope or dream, grief is an inevitable outcome that most individuals will experience. Conceptualizations of grief have been described by prominent thinkers dating back to the 1800s (Gravesen & Birkelund, 2021). Danish theologian and philosopher, Soren Aaby Kierkegaard (1813-1855), thought of grief as love-driven in which the loss of a loved one results in a missing opportunity to reciprocate love (Kierkegaard, 2013). Furthermore, Austrian neurologist, Sigmund Freud (1856-1939), conceptualized grief as a normal emotion that is comparable to melancholy; however, Freud recognized that grief is a result of an external event that can diminish over time (Horacek, 1988; Gravesen & Birkelund, 2021). These concepts of grief have contributed to various theories and further research of grief. However, grief was not titled or labeled until the 1940s by Erich Lindemann, who stated that grief is a syndrome inquiring Socratic and psychological symptoms (Horacek, 1988; Kutscher, 1993). More recently, Maciejewski et al. (2016) defined grief as "deep mental anguish, a process of the psyche", whereas bereavement is focused on an event such as the "loss of a valued loved-one due to death" (p. 272). Moreover, grief is noted to be experienced in waves wherein pangs of grief or intense reactions are triggered (Kristensen et al., 2017). To fully conceptualize grief, it is imperative to understand the risk factors that can increase or decrease an individual's grief severity and symptoms. Refer to Figure 1 for a timeline of the historical context of grief.

Figure 1

Timeline of the History of the Concept of Grief



An extensive review conducted by Stroebe et al. (2007) assessed the risk factors that contribute to vulnerability of bereaved individuals. Specifically, the study analyzed the circumstances of the death, intrapersonal and interpersonal variables, and types of coping utilized to alleviate symptoms. A review of 16 studies that used the terms "bereavement" and "grief" that were published after 1997 on PubMed, Medline, or PsychINFO revealed that those struggling with bereavement are at a heightened risk for mortality, physical health problems, and a wide range of psychological reactions, if not treated effectively. Results of this meta-analysis revealed that bereavement outcome is related to coping mechanisms including situation, intrapersonal, and interpersonal factors (Stroebe et al., 2007).

Although grief is interconnected to a wide range of issues such as an increase in acquired physical health issues, increased medication use, more hospitalizations, and high rates of disability (Stroebe et al., 2007), further understanding of grief is necessary to combat negative health outcomes. Gravesen and Birkelund (2021) describe the hesitancy of researchers to announce grief as a disorder since it could suggest the "abnormality" of a grief response. As

noted by Prigerson et al. (2021), “pathologizing” grief or treating grief as an abnormality is of concern, since some mental health professionals and researchers consider it to be a normal process and expected response to the death of a loved one. However, one could argue that the lack of diagnosis may result in diminished treatment modalities for bereaved individuals. Disabling and enduring grief may require specialized treatment (Prigerson et al., 2021). Lichententhal et al. (2018) notes that “the clinical value of using straightforward diagnostic criteria to distinguish pathological grief from other clinical presentations” (p. 365) is necessary for clinicians to become educated on PGD, differentiate between normal and abnormal grief responses, and deliverance of effective interventions and treatments. Lastly, Kersting and Kroker (2010) argue that individuals misdiagnosed with disorders that are not grief related may result in therapeutic approaches that extend or prolong the grief symptoms. Thus, understanding the evolution of disordered grief and the necessity of grief diagnosis, along with other variables that can exacerbate symptoms is pertinent to conceptualizing and treating PGD.

Grief Disorders

The historical context of grief diagnoses is imperative in understanding the emergence of PGD. The first bereavement-related diagnostic criteria was developed by Horowitz and colleagues in 1993 to define “Complicated Grief” (Horowitz et al., 1997). This conceptualization contributed to researchers theorizing on how grief is experienced in addition to the development of appropriate diagnostic terminology. Next, Prigerson et al. (1999) coined the term “Traumatic Grief” through a consensus conference, a “panel of leading experts in reactions to loss and trauma” that convened to determine criteria for traumatic grief, that defined four distress symptoms and eight traumatic distress symptoms (p. 67). However, PGD was generated as it offered a concise explanation of diagnostic criteria including more definitive symptoms that

would reduce confusion amongst grief disorders (Wagner & Maercker, 2010). A prominent study conducted by Prigerson et al. (2009), titled the *Yale Bereavement Study*, assessed bereaved individuals via three separate interviews conducted over a span of 0-6 months, 6-12 months, or 24 months post loss to validate the criteria for PGD as proposed previously by Prigerson et al. (2009). Results from this study indicated that individuals diagnosed with PGD experienced enduring distress and dysfunction (Prigerson et al., 2009).

Throughout the development of diagnostic criteria, researchers have debated about appropriate diagnosis for individuals struggling with grief. Clinicians often resorted to the DSM-5 diagnosis of Persistent Complex Bereavement Disorder (PCBD) as the primary title for those struggling with bereavement issues. Before the recent changes of the DSM-5, PCBD was sought as a compromise between PGD and Complicated Grief (CG) (Maciejewski et al., 2016). The discussion regarding CG, as developed by Shear et al. (2001), has been regarded as the main topic of diagnosis in bereavement research. A study that compared the ICD-11 diagnostic criteria of PGD, CG, and PCBD revealed no significant difference between PGD and PCBD (Maciejewski et al., 2016). However, Maciejewski et al. (2016) suggests that the differences in diagnostic criteria for PGD and PCBD are semantic, not substantiative, and that additional diagnostic assessments should be developed. According to the APA (2022), the rationale for the addition of PGD in classification criteria was due to PCBD being considered as "a condition for further study" in the DSM-5 (APA, 2013, Section 3), resulting in further research that substantiated PGD as appropriate and validated criteria for the DSM-5-TR. Moreover, it is also noted that a PGD diagnosis can reduce the combination of symptoms that were used to meet the diagnosis criteria for PCBD (Prigerson et al., 2021). PGD is the only grief disorder recognized in the DSM-5-TR while PCBD is "under further consideration" (APA, 2022). Grief terminology

has been interchangeable with the diagnostic titles of "Complicated Grief" (Prigerson et al., 1995), "Traumatic Grief" (Prigerson et al., 1999), and "Complicated Grief Disorder" (Horowitz et al., 1997). Nevertheless, the WHO (2018) confirmed diagnostic criteria for PGD in the ICD-11 in addition to APA (2021) approving PGD to be added to the DSM-5, text revision in 2021. Yet, O'Connor et al. (2020) states that while there are several diagnostic criteria assessments for PGD with validated psychometric properties, these scales do not effectively capture the criteria denoted by the ICD-11. The PGD diagnostic criteria in the DSM-5-TR has been psychometrically validated with several PGD assessments including the PG-13-Revised (Prigerson et al., 2021) and the Traumatic Grief Inventory Self-Report (Boelen et al., 2019). Although the history of grief as a recognized disorder is documented, the similarity in symptoms for other disorders should be assessed to reduce misdiagnosis or screen for comorbidity. To view the diagnostic criteria of CG, PCBD, and PGD, view Table 1.

Table 1

Diagnostic Criteria of Grief Disorders

Diagnosis	Criteria Set
Complicated Grief Shear et al., 2011	1. Persistent intense symptoms of acute grief 2. The presence of thoughts, feelings, or behaviors reflecting excessive or distracting concerns about the circumstances or consequences of the death

Persistent Complex Bereavement Disorder APA, 2013	1. Persistent yearning/longing for the deceased 2. Intense sorrow and emotional pain 3. Preoccupation with the deceased 4. Preoccupation with the circumstances of the death 5. Difficulty accepting the death 6. Disbelief or numbness 7. Difficulty positive reminiscing about deceased 8. Bitterness or anger 9. Maladaptive appraisals about the self associated with the self (e.g., self-blame) 10. Excessive avoidance of stimuli 11. A desire to die to be with the deceased 12. Difficulty trusting other people 13. Feeling alone or detached from other persons 14. Feeling that life is empty or meaningless or one is unable to function without the deceased 15. Confusion about one's role and diminished identity (e.g., feeling that part of self has died) 16. Difficulties to pursue interests or plan for the future (e.g., friendships, activities) (DSM-5, APA, 2013)
Prolonged Grief Disorder APA, 2022	1. The death occurred at least 12 months ago 2. Intense yearning/longing for the deceased person 3. Preoccupation with thoughts or memories of the deceased person 4. At least 3 of the following 8 symptoms have been experienced to a clinically significant degree since the death, including nearly every day or more often for at least the last month: • Identity disruption (e.g., feeling as though part of oneself has died) • Marked sense of disbelief about the death • Avoidance of reminder that the person is dead • Intense emotional pain (e.g., anger, bitterness, sorrow) related to the death • Difficulty with reintegration into life after the death (e.g., problems engaging with friends, pursuing interests, planning for the future) • Emotional numbness (i.e., absence or marked reduction in the intensity of emotion, feeling stunned) as a result of the death • Feeling that life is meaningless as a result of the death • Intense loneliness (i.e., feeling alone or detached from others) as a result of the death

As with any diagnostic criteria, it is important to distinguish between disorders that have similar symptoms to reduce misdiagnosis. Doering and Eisma (2016) warn that mental health professionals should be cognizant of the overdiagnosis and misdiagnosis of debilitating grief symptoms that fall under the category of complicated grief or abnormal grief. Grief has generally been diagnosed as Major Depressive Disorder (MDD) due to similarity in symptoms (Bonanno & Kaltman, 2001) or Post-Traumatic Stress Disorder (PTSD) (Prigerson et al., 2009).

According to the DSM-5 (APA, 2013), the diagnostic criterion for PTSD includes "exposure to actual or threatened death, serious injury, or sexual violence", intrusive symptoms, avoidance of reminders of traumatic event, and "negative alterations in cognitions and mood associated with the traumatic event" (p. 271). On the other hand, the DSM-5-TR (APA, 2022) indicates that PGD is characterized by an "intense yearning or longing" for the individual that has passed, often including a "preoccupation with thoughts or memories of the deceased" (Symptoms and Diagnosis section). Likewise, an additional study that assessed for subgroups of bereaved individuals based on the criteria for PGD, PTSD, and depressive symptoms proposed that distinctive subgroups can be derived from symptomatology (Djelantik et al., 2017). Djelantik et al. (2017) suggests that bereaved individuals can be categorized based on symptom clusters instead of post-loss response severity. One study that compared symptoms of PTSD, PGD, and MDD, indicated that separation distress from the deceased is indicative of a PGD diagnosis for individuals that experience loss as a result of a traumatic event (Lenferink et al., 2017). Furthermore, Smith and Ehlers (2021) state that there are clear cognitive differences between prolonged grief and posttraumatic stress disorder with regard to loss-related cognitions such as memory characteristics and resilience related to grief. Specifically, individuals with PGD indicated "significantly higher mean scores on memory characteristics and grief resilience" compared to individuals experiencing PTSD (Smith & Ehlers, 2021, p. 9). These differences among bereaved individuals that have PGD or PTSD are worth noting with consideration of the type of loss.

With relation to death loss, one study notes the overlap in increased emotional distress for those that have been bereaved by an unexpected or violent loss that are also diagnosed with PGD or PTSD (Boelen, 2015). Although emotional distress is not a symptom of PGD, it is relevant to

understanding the exacerbation of grief symptoms as a result of a violent or unexpected loss. Emotional distress, as it differentiates between PGD and PTSD is relevant to the development of accurate diagnosis, resulting in either a trauma-informed therapeutic approach or grief-oriented interventions. Furthermore, Boelen (2015) notes that the exacerbation of psychopathology post unexpected or violent loss is pertinent to understanding bereavement as it relates to the type of loss.

Importantly, Bryant (2013) suggests that persistent yearning that occurs after bereavement extends further than depression or anxiety, with the loss being the central component related to symptoms, indicating that interventions that target the grief, rather than only depressive symptoms, are necessary for alleviation. Likewise, prolonged grief is different than depression due to the bereaved individual's yearning and longing for the deceased, including cognitions and emotions related to the deceased, whereas depression contains tones of guilt and worthlessness (Kristensen et al., 2017). Boelen et al. (2016) was able to differentiate between subgroups, that were defined by types of unnatural or violent loss, along with PGD, PGD and depression, and a resilient group (i.e., participants with a low probability of PGD related symptoms and depression symptoms) based on the dominance of a particular syndrome rather than levels of severity. This study demonstrated that symptom scores are accurate indicators of a PGD, or a depressive diagnosis compared to a graded severity of a general post-loss response. Other studies have found that symptoms scores for evaluating PGD are effective in diagnosing compared to general or overall severity scores (Boelen et al., 2015; Prigerson et al., 2021).

Lichtenthal et al. (2018) conducted a study that analyzed accurate diagnosis of PGD by clinicians provided with training on this mental disorder compared to clinicians not receiving this

information. Results indicated that PGD informed clinicians were four and half times more likely to accurately diagnose PGD. Additionally, the study noted that lack of diagnosis of PGD or misdiagnosis of PGD can result in "suboptimal treatment" (Lichtenthal et al., 2018, p. 365). Correspondingly, Kersting and Kroker (2010) touched on the importance of establishing and utilizing PGD, which can result in the "prevention of the substantial amount of psychological physical health problems that have been associated with its symptoms" (p. 28) Thus, it is imperative that researchers and clinicians rule out other diagnoses when assessing and treating PGD.

Prolonged Grief Disorder

Grief is viewed as a normal process or experience of life. However, the increase in intensity along with abnormal durations contributed to the idea of prolonged grief (Maciejewski et al., 2016). Prolonged Grief Disorder (PGD) is defined by a persistent and pervasive longing for the deceased that includes intense emotional pain occurring for at least six months following the loss (WHO, 2019). Additional core symptoms of PGD include a preoccupation with the deceased with emotional distress and significant functional impairment (Killikelly & Maercker, 2017; Kristensen et al., 2012). WHO (2019) documents other PGD symptoms as sadness, guilt, anger, denial, blame, difficulty accepting the death, feeling one has lost a part of oneself, an inability to experience positive mood, emotional numbness, and difficulty engaging with social or other activities (Description section). Although the general symptoms of PGD are documented, it is crucial to utilize diagnostic criteria from mental health classification systems to certify a clinically appropriate diagnosis.

PGD has depicted significant neurological differences compared to other similar disorders. A study conducted by O'Connor et al. (2008) that implemented functional magnetic

resonance imaging (fMRI) demonstrated the neurological differences in complicated grief participants. Results of this study indicated that reward-related neural activity, that is located in the nucleus accumbens, was present in response to reminders of the deceased, indicating a lengthening of the grieving process, resulting in PGD. The nucleus accumbens is responsible for the rewards system as it provides processing and analysis of rewards and satisfaction (Salgado & Kaplitt, 2015). Similarly, a study conducted by Bryant et al. (2021) suggested that the activation of brain regions associated with reward networks is depicted for those diagnosed with PGD. Moreover, the O'Connor et al. (2008) study revealed a positive association between yearning and the nucleus accumbens, but not related to duration post-loss or age of participant, which contributes to lack of adaptation to the loss in the present. An extensive systematic review conducted by Kakarala et al. (2020) suggested that there was an association between the amygdala and the orbitofrontal cortex in addition to the insula, for PGD related activity, resulting in the idea that PGD is linked to the reward system. As noted by these studies, the literature on the neurobiology of PGD is minimal, however, the studies that have examined PGD and the brain are often inconclusive. However, activation of the reward system is connected to prolonged grief, which provides further insight into the neurological process that bereaved individuals experience.

According to the Council for the Accreditation of Counseling and Relation Programs (CACREP) (2016), counselors in training who are preparing to enter the clinical mental health field must understand the "impact of biological and neurological mechanisms on mental health" in addition to a "neurobiological and medical foundation and etiology of addiction and co-occurring disorders" (p. 24). Blair et al. (2021) notes that therapists should be knowledgeable regarding the effects of psychotropic medications on neurological functioning as therapists often

engage in supporting regular use of medication along with recognizing differences in behavior. Moreover, Busacca et al. (2015) suggests that counselors and mental health practitioners should consider the impact of social, cultural, psychological, and biological factors that influence the brain, to conceptualize clients and development treatment plans. The counselor educator can infuse neuroscience into counseling curriculum to increase "student's counseling skills, case conceptualization, and treatment planning" (Duenyas & Luke, 2019, p. 378). Thus, by increasing insight into the neurological components as a foundation to understanding bereaved individuals' experiences of PGD, specifically regarding the rewards system, counselors and clinicians can better understand the processes that their clients are experiencing, furthering the implementation of informed treatment approaches in therapy.

Counselors should have a foundation of knowledge regarding the neurological components that impact an individual's mental health. Understanding the neurology of PGD can support counselors in gaining insight into the effectiveness of interventions that target the areas of the brain stimulated by bereavement. For example, counselors may implement therapeutic strategies that activate or deactivate the rewards system for individuals with PGD to find alleviation in symptoms. Furthermore, it is imperative that counselors develop holistic case conceptualizations, including consideration of psychotropic medications that influence the client's thoughts and behaviors through neurological activity. CACREP (2016) requires that counseling students understand these neurological processes that impact mental health prior to entering the field. Thus, counselor's knowledge about the neurological processes that promote PGD is necessary in developing effective treatment plans.

The International Classification of Diseases, 11th revision (ICD-11) (WHO, 2018) is an international classification system that provided the original official diagnostic criteria set for

PGD. The ICD-11 was the first to provide diagnostic guidelines on PGD noted symptom criteria and culture-related features. Killikelly and Maercker (2017) argued for the ICD-11 to function as diagnostic guidelines for PGD due to the clinical utility, which provides clinicians with flexibility in diagnosing and treating PGD. The duration documented in the ICD-11 for a diagnosis of PGD is six months after the loss (Prigerson et al., 2009). The diagnostic criteria for PGD in the ICD-11 states that the individual must experience at least one of two separation distress symptoms and one of ten accessory symptoms to an impairing degree (Rosner et al., 2021). The following are separation distress symptoms: a persistent and pervasive longing for the deceased or a persistent and pervasive preoccupation with the deceased (WHO, 2018, Diagnostic Requirements section). Additionally, the following are accessory symptoms: separation distress symptoms are accompanied by intense emotional pain, guilt, anger, denial, blame, difficulty accepting the death, feeling one has lost a part of oneself, an inability to experience positive mood, emotional numbness, and difficulty engaging with social or other activities (WHO, 2018). The criteria have served as the original guidelines for PGD diagnosis; however, the DSM-5-TR diagnostic criteria offer a different list of symptoms. A study conducted by Eisma et al. (2022) suggested that the diagnostic criteria for the ICD-11 and the DSM-5-TR depicted content overlap. However, Tyrer (2018) notes that while the ICD-11 covers worldly diagnosis, the DSM is the "official classification in the USA for clinical diagnosis" due to the "apparent advantages for research and the general belief that it is more accurate" (p. 282). Furthermore, a few studies have validated the DSM-5-TR criteria for PGD, indicating prevalence rates of 3.4% (Treml et al., 2022) and 4.4% (Maciejewski et al., 2016) in accordance with the diagnostic algorithm.

Previous literature indicates that PGD occurs more frequently in females than males (N = 809, X^2 (1) = 7.77, p = 0.005) (Treml et al., 2022). Several studies that have assessed PGD

frequency, revealing significantly higher numbers of female participants than males (Smith & Ehlers, 2021; Buckley et al., 2015; Lundorff et al., 2021). Kersting and Koker (2010) state that women are "at a higher risk of experiencing bereavement" due to an "increased average life span", and adverse pregnancy outcomes, resulting in further potential for loss (p. 27). However, Heeke et al. (2017) notes that the overrepresentation of women (who are more likely to voice their emotional experiences) in these studies results in lack of generalizability and underrepresentation of males. This is an important factor to consider in this study and further research regarding PGD due to the generalizability of findings. The generalizability is imperative in the development of appropriate treatment interventions for PGD.

Recognizing the prevalence of PGD is necessary in understanding the importance of this dissertation. Several studies have analyzed the frequency to which bereaved individuals experience PGD symptoms. Djeltanik et al. (2020) analyzed twenty-five articles through multivariate meta-regression, which revealed that approximately half of individuals (N = 25) bereaved from unnatural loss experience symptoms of PGD. Correspondingly, a study conducted by Boelen and Lenferink (2021) that compared bereaved individuals at one- and two-years post-loss, suggested that 71% of bereaved individuals that met criteria for PGD at one year were more likely to have PGD in the second year. Moreover, an assessment of 914 bereaved individuals from a German sample suggested that 1.5% experienced the diagnostic criteria from the ICD-11 of PGD, in addition to 1.2% experiencing the diagnostic criteria from the DSM-5 (Rosner et al., 2021). However, it should be noted that countries outside of the United States of America utilize the ICD-11 more frequently than the DSM-5.

Extending the map, studies have documented the prevalence of PGD in Asian countries and the Global North (i.e., United States, Canada, England, etc.) (Stelzer et al., 2020). In a

slightly different vein, Killikelly et al. (2018) mentioned that some cultures may experience specific grief related symptoms that are not considered in diagnostic criteria, such as grieving customs (i.e., funerals, ceremonies, rituals) and physical or biological responses to bereavement. A study conducted by Silverman et al. (2021) that utilized an ethnographic approach in examining themes from global case studies focused on grief experiences revealed that emotional aspects of grief and the relationship with those that are alive and those that have passed play a significant role in the cultural implications of loss. Precisely, bereaved individuals engaging in a "shaping and defining" of the death through the lens of their culture, which results in an emotional response (Silverman et al., 2021, p. 5). Furthermore, Silverman et al. (2021) notes that culture influences how individual's experiences, particularly, with relation to determining the "meaning of one's life and death" (p. 6). A study conducted by Kokou-Kpolou et al. (2020) that compared PGD responses among French and Togolese bereavers suggested that French bereaver's grief is greatly impacted by the number of years married to the deceased whereas Togolese bereaver's grief is influenced by the gender of the person lost. Kokou-Kpolou et al. (2020) attribute these findings to the French culture which emphasizes emotional intimacy and romance. However, the Togolese culture prioritizes masculinity re-marriage (Kokou-Kpolou et al., 2020). Moreover, a study that assessed PCBD in Nepali widows determined that Nepal's civil war that occurred from 1996 to 2006 greatly influenced grief severity along with poverty and discrimination (Kim et al., 2017). This study sheds light on how a country's political climate contributes to grief. Thirdly, Killikelly et al. (2021) analyzed the influence of cultural norms on PGD for Syrian refugees, suggesting that emotional outbursts, yearning, and somatic symptoms were exhibited in the sample. Moreover, the study discussed stigma around grief in Syrian culture, noting that fear of judgement by communal members is feared with relation to grief and

receiving mental health services (Killikelly et al., 2021). These three studies demonstrate the cultural implications related to grief. Although PGD is well documented across several countries, Stelzer et al. (2020) warns that researchers should consider the cultural factors and culture-related symptoms to reduce the chance of over or under estimating prevalence.

The implications experienced by individuals with PGD demonstrate the need for further research and understanding of the disorder. Williams et al. (2018) studied 130 grieving individuals bereaved by violent loss which suggested that 42% endorsed suicidal ideation in addition to symptoms such as avoidance and depression. Similarly, Heeke et al. (2017) conducted a study that used meta-analyses to assess PGD and revealed that individuals diagnosed with PGD that have been bereaved by an unexpected loss have high associations with suicidality ($N = 923$) ($r = 0.41$, $p < 0.001$). However, Rosner's et al. (2021) study depicted that 60% of individuals that indicate PGD sought health care services. This mix of information suggests that more research must be conducted to understand the full nature of this disorder.

Unexpected Death

An abundance of grief literature (Gravesen & Birkelund, 2021) that evaluated and described the experiences of individuals bereaved by natural loss, states that natural loss is considered death due to natural causes and chronic illness (Kaltman & Bonanno, 2003). However, only recently, have researchers started to investigate the aftermath of unnatural or violent deaths including homicide, suicide, accidents, natural disasters, terrorism, or warfare (Kaltman & Bonanno, 2001; Rynearson, 2006). Unexpected, violent, and traumatic deaths are characterized by an external cause of death (De Leo et al., 2020). According to Prigerson (2004), individuals bereaved by unnatural or violent death are at an increased chance, approximately 10-15%, of experiencing disordered grief. Furthermore, a meta-analysis that identified risk factors

for complicated grief revealed that violent death is associated with adverse mental health outcomes (Burke & Neimeyer, 2013). This may be due to the suddenness of the loss, frequently associated with violent deaths, resulting in increased grief symptom severity (Kaltman & Bonanno, 2003).

According to a study conducted by Fisher et al. (2020), bereaved parents, partners, siblings, and adult children experienced increased grief severity after not considering the possibility of death of a U.S. military service member. This suggests that anticipating the loss can influence bereavement outcomes. Furthermore, Neimeyer et al. (2002) states that loss as a result from trauma such as homicide, suicide, or mutilating accident, is often accompanied by additional challenges related to grief such as skewing an individual's worldview, making meaning of the loss, and interpreting the causes of the death. Martikainen and Valkonen (1996) noted that widows or widowers are at an increased risk for mortality as a result of alcohol-related disease, heart disease, or lung cancer, which are attributed to increase in risk taking related to "accidental and violent causes and causes strongly related to alcohol and tobacco use" (p. 267). Importantly, researchers should consider the differences in symptoms across types of violent and unexpected loss to effectively treat PGD.

In relation to violent and unexpected loss, some researchers have provided explanations as to the severity of impact of violent loss. For example, Janoff-Bulman (1989) suggested that dealing with violent loss can influence individual's perceptions of positive beliefs about the world and oneself. On the other hand, it is suggested that violent loss may include the bereaved individual visually conceptualizing the deceased's final minutes before death in addition to imagining what the deceased went through (Baddeley et al., 2015). If the bereaved individual observed the loss, they may avoid intrusive images related to the loss and could experience

symptoms related to PTSD. Thus, individuals that were at the scene of the loss will be excluded from this study, as this may exacerbate symptoms related to disorders other than PGD.

Furthermore, researchers have mentioned that individuals bereaved by violent loss find it difficult to conceptualize meaning from the loss (i.e., meaning making) (Currier et al., 2006; Milman et al., 2018). However, Milman et al. (2018) suggests that individuals bereaved by violent loss can benefit from meaning-oriented interventions; that is, which is described as the interpretation or identifying meaning related to the loss can impact the severity of grief. Boelen et al. (2016) examined subgroups of people that were impacted by unnatural or violent loss to recognize symptoms related to PGD. Results of the Boelen et al. (2016) study indicated catastrophic misinterpretations of grief were significantly related to the PGD group of unnatural loss (that met the qualifications of all but four PGD symptoms and exclusion of depressive symptoms) compared to the other subgroups of the study (a resilient class with one PGD symptom and a combined PGD/PTSD class). Thus, bereaved individual's interpretation of the loss can impact grief severity and symptoms.

Interestingly, much of the research conducted on PGD demonstrates that a wide range of individuals are bereaved by unnatural or violent loss. Smith and Ehlers (2021) analyzed the differences between PGD and PTSD. Results indicated that individuals bereaved by a violent death experienced significant PGD, with 20% of the overall sample identifying with violent loss and 24% of this group endorsed PGD. Furthermore, Buckley et al. (2015) found that six months post-loss, bereavement intensity was higher for those bereaved by a drawn-out or violent death. Similarly, another study that compared individuals diagnosed with PGD at different periods depicted those bereaved by the loss of a child to unnatural or violent causes had an increased chance of experienced PGD during the second year (Boelen & Lenferink, 2021). Moreover,

people bereaved by violent loss indicate significantly higher emotional distress along with higher symptom levels of PGD, compared to those not bereaved by violent loss (Boelen et al., 2015). As suggested by literature, unexpected or violent loss can greatly impact the severity of grief experienced by bereaved individuals. However, there are few studies that integrate unexpected or violent loss and PGD, potentially due to the disorder only recently being studied.

Relationship to the Deceased

The relationship or perceived closeness to the deceased can influence the severity of symptoms and duration of grief. For example, as confirmed by Smigelsky et al. (2019), relationship closeness contributes to grief symptomatology. However, relationship conflict before death demonstrates a positive correlation with grief severity for bereaved college students with CG (Smigelsky et al., 2019). In relation to PGD, a meta-analysis of 37 studies conducted by Heeke et al. (2017) revealed that the closeness of the relationship with the deceased was a significant correlate ($p < .001$) to PGD severity. The study depicted that interpersonal dependency or the thoughts, feelings, beliefs, and behaviors (Hirschfeld et al., 1977) surrounding another individual has a positive association with severity of PGD (Sekowski & Prigerson, 2021). Correspondingly, Harrison et al. (2021) compared a PGD diagnosed group ($N = 27$) to a healthy control group ($N = 27$) regarding the impact of interpersonal relationships on grief. Results confirmed that perceived closeness of the bereaved individual was a statistically significant predictor of PGD, in addition to the continued feeling of closeness after the loss was increased for the PGD group. Holland and Neimeyer (2011) compared separation and traumatic distress symptoms experienced by bereaved individuals with PGD, which revealed that separation distress is a major component of PGD. Furthermore, Kokou-Kpolou et al. (2020) assessed bereaved young adults, five years after loss, which suggested that the death of a family

member increased severity of PCBD related to separation distress, however, the loss of an intimate partner or friend was affiliated with increased social and identity disruption related to PCBD. As noted previously, PCBD has been recently replaced by PGD in the DSM-5-TR. As suggested by multiple studies, relationship to the deceased impacts the severity of PGD as well as the coping strategies implemented post-loss.

Coping

The concept of coping originated from the idea of stress, a term that entered the field of health psychology in 1926 (Baqutayan, 2015). Stress can be an event that causes tension, a subjective response that influences the mental arousal, or a physical bodily response for an individual (Baqutayan, 2015). Coping is a natural reaction that individuals practice to manage daily stressors and life transitions. While various interpretations of stress have materialized, Lazarus and Folkman (1984) suggested that a theoretical framework should be considered in relation to stress. Much of the history of coping is based on Richard Lazarus' publications such as the text, *Psychological Stress and the Coping Process* (Folkman & Moskowitz, 2004).

Moreover, coping continued to be developed through the 1970s and 1980s, as authors published books on coping and adaptation in addition to researching coping in relation to chronic illness and children (Folkman & Moskowitz, 2004). Importantly, Stroebe and Shut (1999) discussed the lack of clarification with regard to stressors that are a result of grief. Thus, Stroebe and Shut (1999) proposed the Dual Process Model of Coping, which emphasized loss-orientation, restoration-orientation, and oscillation. According to Stroebe and Shut (1999), loss-orientation refers to the "contrition on, and dealing with, processing some of the aspect of the loss experience itself, most particularly, with respect to the deceased person (p. 212) whereas restoration-orientation is defined by components of the loss that must be "dealt with" (p. 214).

Thirdly, the Dual Process Model (Stroebe and Shut, 1999) proposes the concept of oscillation or the alternating between loss-orientation and restoration-orientation, which results in the processing of confronting or avoiding the stressors related to the loss.

According to Lazarus and Folkman (1984), coping can be defined as an individual's constant modification of cognitive and behavioral efforts to manage the stress affiliated with an event. Folkman and Lazarus (1980) implemented the "Ways of Coping Mechanisms" which Folkman and Lazarus (1988) developed the "Ways of Coping Questionnaire", distinguishing the coping strategies implemented to alleviate stress such as problem-focused coping (i.e., confrontive coping, seeking social support, and problem-solving) and emotion-focused coping (i.e., self-control, seeking social support, distancing, positive appraisal, accepting responsibility, and escape or avoidance). Problem-focused coping refers to attempts to modify a stressful situation through problem solving or action while emotion-focused coping is oriented towards regulating emotions related to the stressful situation by changing meaning (Lazarus & Folkman, 1984).

Furthering the "Ways of Coping Mechanisms", Carver et al. (1989) prompted that dysfunctional coping could be added to the theory, bringing forth a third coping strategy that focused on the venting of feelings, mental and behavioral disengagement, substance use, and denial. However, it is important to note that coping strategies can become maladaptive and dysfunctional if they are used to alleviate distress for longer periods of time (Carver et al., 1989). Carver et al. (1989) proposed additional activities related to problem-focused coping such as active coping, restraint coping, planning, using social support for instrumental reasons, and the suppression of competing activity since the prior concept of problem-focused coping was general, lacking support on the individual activities. Additional activities added to the theory for

emotion-focused coping included religion, acceptance, humor, seeking social support for emotion-related issues, positive reinterpretation, and growth since there are differing applications of the activities (Carver et al., 1989). To view the modifications from Lazarus and Folkman's "Ways of Coping" questionnaire (1984) to the Carver et al. (1989) COPE inventory, see Figure 2.

Figure 2

Representation of the Additions of Coping Strategies from Lazarus & Folkman (1984) to Carver et al. (1989)

Lazarus & Folkman (1984) Ways of Coping

Problem-Focused Coping	**Emotion-Focused Coping**
Confrontative coping	Self-control
Seeking social support	seeking social support
Plan full problem solving	Distancing
	Positive appraisal
	Accepting responsibility
	Escape/avoidance

Carver et al. (1989) COPE Inventory

Problem-Focused Coping	**Emotion-Focused Coping**	**Dysfunctional Coping**
		Focus on and venting emotions
Active coping	Seeking social support for emotional reasons	
	Positive reinterpretation & growth	Behavioral disengagement
Planning		
Suppression of competing activities	Turning to religion	Mental disengagement
		Alcohol-drug use
Restraint coping	Acceptance	
Seeking social support for instrumental reasons		Denial

As a result of the additions to the "Ways of Coping Mechanisms" developed by Folkman and Lazarus (1980), Carver et al. (1989) proposed the "COPE" scales, depicting 14 scales that assessed for coping tendencies. Further development of theories of coping have been established, however, Lazarus and Folkman's perspective on coping was an underpinning in the development of Carver's concept of coping (Carver et al., 1989). Later on, Carver and Connor-Smith (2010) defined coping as "efforts to prevent or diminish threat, harm, and loss, or to reduce associated distress" (p. 685). In the clinical setting, coping can be viewed as a strategy that is used to alleviate mental health symptoms. However, coping with grief, particularly a long-term grieving process such as PGD, is critical for the wellbeing and treatment of the bereaved individual (Fisher et al., 2020). The conceptualization of coping through a description of Folkman and Lazarus' (1988) theory of coping, resulting in the additions and modifications implemented by Carver et al. (1989) is foundational to understanding how bereaved individuals alleviate grief symptoms.

Coping and Loss

Studies indicate that the cause of death as well as the relationship to the deceased will affect the coping strategies implemented post-loss (Buckley et al., 2015; Kokou-Kpolou et al., 2020). Kokou-Kpolou et al. (2020) assessed the differences in coping strategies utilized by bereaved young adults struggling with grief and depression, five years after the loss. According to Kokou-Kpolou et al. (2020), those experiencing PCBD most benefit from help-seeking behaviors, support and problem solving. However, positive reframing or positive thinking predicted decreased grief symptoms and seeking social support increased grief reactions (Kokou-Kpolou et al., 2020). Kokou-Kpolou et al. (2020) suggest that the increase in grief reactions related to social support is a result of ineffectiveness of the coping strategy for bereavement

caused by traumatic deaths. Located under the category of problem-focused coping, Lee et al. (2020) examined the role of religious and spiritual coping and how it affected young Black men bereaved by violent death and homicide, suggesting that religiosity and spirituality positively impacted the men to construct meaning, reduce fear, and foster posttraumatic growth.

Similarly, another study suggested that self-esteem, active/affective coping, and avoidant emotional coping directly influenced parents bereaved by the violent death of their children (Murphy et al., 2003). Interestingly, this study found that the self-esteem of a parent directly impacted their coping (i.e., how the parents felt about themselves regarding coping anticipated how they would cope) (Murphy et al., 2003). Additionally, this study indicated that active and affective coping strategies coincide, whereas problem solving coping increases over time for parents bereaved by violent loss of a child. Moreover, Fisher et al. (2020) examined the coping strategies implemented by parents, partners, siblings, and adult children that were bereaved by an unexpected or violent loss of a U.S. military service member, which suggested that dysfunctional coping strategies such as denial, behavioral disengagement, and self-blame increased negative effects on bereavement outcomes. These studies (Kokou-Kpolou, 2020; Murphy et al., 2003; Lee et al., 2020) demonstrate the need for insight into coping strategies and violent or unexpected loss. Increased knowledge about these coping strategies and individuals bereaved by unexpected loss, will assist mental health professionals to learn how to best support their clients in coping, as well as develop appropriate treatment interventions.

Coping and PGD

Several studies have assessed the use of coping strategies that are used to combat symptoms of PGD. In a similar direction as the current study, Fisher et al. (2020) examined coping strategies implemented by individuals bereaved by a sudden or violent death using the

Brief COPE scale, which suggested that denial, behavioral disengagement, and self-blame resulted in negative bereavement outcomes and higher grief severity. Additionally, in the Fisher et al. (2020) study, neither supportive nor active coping displayed any association to grief severity. In a similar study, CG severity demonstrated a positive correlation with problem-focused coping (i.e., active coping, planning, instrumental support, and religion) in addition to active emotional coping (i.e., venting, positive reframing, humor, acceptance, and emotional support) and avoidant emotional coping (i.e., self-distraction, denial, behavioral disengagement, self-blame, and substance abuse) styles for college students that experienced a previous traumatic loss (Schnider et al., 2007).

Furthermore, for caregivers that lost an individual that are unconscious or in a minimally conscious state, coping strategies that were frequently implemented included problem-focused coping strategies (i.e., active coping, instrumental support, planning and acceptance) whereas venting, emotional support, and religion were less common with humor, substance abuse, and behavioral disengagement not utilized at all (Schnider et al., 2007). A systematic review and meta-analysis of 37 eligible studies that assessed PGD in adults who were bereaved by violent death conducted by Heeke et al. (2017) suggested that religious beliefs depict a small or minimal association with PGD severity. Nonetheless, this study revealed that PGD had increased association with suicidality ($r = 0.41$, $p < .001$, 95% confidence interval [.30; .52]) (Heeke et al., 2017). Religion can be used as a form of coping, however, how one interprets their religious beliefs may reflect their feelings regarding the violent loss (e.g., such as the loss being viewed as a punishment of the bereaved individual). Similarly, de la Morena and Cruzado (2013) suggested that religion was a less common coping strategy implemented by caregivers experiencing PGD. Yet, caregivers diagnosed with PGD indicated increased utilization of problem-focused coping

strategies such as active coping (M = 6.41; SD = 1.02), instrumental support (M = 6.41; SD = 1.06), planning (M = 6.32; SD = 1.01), and the emotion-focused coping strategy of acceptance (M = 6.20; SD = 1.29) (de la Morena & Cruzado, 2013). However, dysfunctional coping strategies such as denial (p = 0.003; η^2 = 0.98) and self-blame (p = 0.004, η^2 = 0.91) increased the severity of PGD in caregivers (de la Morena & Cruzado, 2013). As demonstrated in prior studies, coping strategies directly correspond with the alleviation of mental health symptoms.

Conclusion

With the increase in disordered grief due to homicide, suicide, accidents, terroristic acts, and the worldwide pandemic has resulted in the emergence of PGD as a relevant diagnosis, mental health professionals must gain insight into the symptoms experienced by individuals with PGD as well as learn how to support the fostering of effective coping strategies in clients. Furthermore, extensive literature has explored the impact of unexpected loss. However, increased research on PGD severity as a result of unexpected loss is necessary to fully conceptualize clients that fall under these categories. Taking it a step further, the relationship to the deceased can impact the grief experienced and how one copes with the situation. Assessing the coping strategies implemented by individuals bereaved by unexpected loss that are experiencing PGD can result in the development of effective treatment modalities and prevention plans and increased awareness surrounding grief.

Purpose of the Study

The purpose of this study is to examine the severity of Prolonged Grief Disorder among adults bereaved by unexpected or violent loss in addition to recognizing the impact of the relationship to the deceased along with the coping strategies implemented to alleviate grief symptoms.

Research Questions and Hypotheses

1. Is there a significant group difference between unexpected or violent loss and natural loss on the severity of PGD?

   H_A: Individuals bereaved by unexpected or violent loss experience increased Prolonged Grief Severity compared to those bereaved by natural loss

   H_o: Individuals bereaved by unexpected or violent loss experience no difference in Prolonged Grief Disorder compared to those bereaved by natural loss

2. Is there a significant group difference between unexpected or violent loss and natural loss on coping strategies?

   H_A: Individuals bereaved by unexpected or violent loss implement increased dysfunctional coping strategies compared to problem-focused coping or emotion-focused coping

   H_o: Individuals bereaved by unexpected or violent loss implement dysfunctional, problem-focused, and emotion-focused coping strategies equally

3. Is there a significant group difference between lower versus higher PGD severity on the endorsement of dysfunctional coping strategies?

   H_A: Individuals experiencing heightened PGD severity endorsed dysfunctional coping strategies rather than problem-focused coping or emotion-focused coping

   H_o: Individuals experiencing heightened PGD implement dysfunctional, problem-focused, and emotion-focused coping strategies equally

4. Is there a significant group difference between lower versus higher PGD severity on the endorsement of closeness or conflict prior to the death loss?

H_A: Individuals that experienced conflict with the deceased prior to death have higher PGD severity

H_o: Individuals that experienced conflict with the deceased prior to death have equal PGD severity to individuals that did not experience conflict prior to the loss

Definition of Terms

Bereavement: The loss of a loved one or significant person as a result of death (Maciejewski et al., 2016).

Coping: Attempts to reduce threat, harm, and loss, associated with distress (Carver & Connor Smith, 2010).

Emotion-Focused Coping: Attempts to minimize the distress through regulation of emotions (Carver & Connor-Smith, 2010; Folkman & Lazarus, 1988).

Dysfunctional Coping: Focuses on and the venting of emotions while including mental and behavioral disengagement, substance abuse and denial (Carver et al., 1989).

Grief: A normal process that that evokes a natural and universal response to loss (Maciejewski et al., 2016; Mughal et al., 2022).

Natural Loss: Death that is the result of natural causes such as chronic illness and aging (Kaltman & Bonanno, 2003).

Problem-Focused Coping: Efforts or attempts to combat the stressor or problem, by making attempts to either remove or evade the issues (Carver & Connor-Smith, 2010).

Prolonged Grief Disorder: A complicated grief disorder that is characterized by intense longing for or yearning for the deceased, which can be accompanied by symptoms such as difficulty accepting the death, struggles with continuing life, feeling as if oneself is lost

with the death, emotional numbness, and the avoidance of situations/activities/places that serve as reminders of the deceased (Prigerson et al., 2009).

Unexpected and Violent Death: Death as a result of an external cause such as homicide, suicide, accidents, terrorism, and warfare (De Leo et al., 2020; Kaltman & Bonanno, 2001; Rynearson, 2006).

CHAPTER TWO

Methodology

The aim of this chapter is to provide a review of the methodological approach that was implemented in this project. Further details of methodology include the research design, requirements of participants, instruments, and data analyses. The present study furthered the understanding of Prolonged Grief Disorder as it pertains to severity for those bereaved by unexpected or violent loss. Moreover, this study assessed the influence of the relationship to the deceased along with the coping strategies endorsed by this population.

Research Questions

1. Is there a significant group difference between unexpected or violent loss and natural loss on the severity of PGD?
2. Is there a significant group difference between unexpected or violent loss and natural loss on coping strategies?
3. Is there a significant group difference between lower versus higher PGD severity on the endorsement of dysfunctional coping strategies?
4. Is there a significant group difference between lower versus higher PGD severity on the endorsement of closeness or conflict prior to the death loss?

Research Design

This study followed a quantitative, correlational, cross-sectional design format for survey research, to evaluate the severity of PGD, influence of relationship to the deceased, and coping strategies implemented to alleviate symptoms for bereaved individuals. A cross-sectional design format allows for data to be collected at one point in time, flexibility in data collection facilitated by a survey, and cost effectiveness related to distributing the survey (Connelly, 2016). Creswell

and Creswell (2018) notes that a survey design "provides a quantitative description" of "associations among variables of a population, by studying a sample of that population" (p. 207). The purpose of the survey was to compare the PGD severity scores between individuals bereaved by unexpected loss or natural loss, assess the coping strategies implemented to alleviate prolonged grief, and determine the impact of the relationship to the deceased on PGD severity. A survey was created that included the measures described below. The survey consisted of five parts which included a screening questionnaire and demographics survey, with a total of 70 items that included multiple choice and slider questions. Any adult that had experienced a loss was encouraged to participate. The survey was developed in Qualtrics and distributed to counseling practices, grief support groups, mental health-oriented listservs, and social media channels. Snowballing was allowed and distribution of survey information by word-of-mouth was encouraged. IRB approval was requested and accepted; data collection occurred in the spring of 2023. Data was kept anonymous as the Qualtrics survey did not collect identification information such as names or IP addresses. Two groups were analyzed after data collection with one group composed of individuals bereaved by natural loss and the other group composed of individuals bereaved by unexpected or violent loss, as indicated by the survey. The data collected was stored on the Qualtrics server, which was well protected. Once data collection was completed, the data was downloaded into an Excel spreadsheet that was saved to a computer that is password protected and was located in a secured office space. Incentives included a raffle to win one of 20 Amazon gift cards worth $25.00 each and this was offered to the participants after completing the survey. This incentive method was implemented to increase participant participation.

Participants

Participants for this study consisted of adults who were between the ages of 19-64 that experienced the loss of a partner/spouse, parent, child, or other significant person and considered themselves to be grieving. The study focused on two groups that were categorized after data collection was completed; one group consisted of participants that were bereaved by a natural loss and the second group was characterized by those that were bereaved by an unexpected or violent loss. For the purpose of this study, unexpected loss was defined as a loss occurring in an interval of less than 1 day with no forewarning (Kaltman & Bonanno, 2003). For exclusion purposes, this study excluded individuals that were currently receiving inpatient services or residential treatment for other disorders since these individuals are engaged in therapeutic processes that could influence coping and severity of PGD. This further excluded anyone experiencing issues with a substance abuse disorder who are admitted to an inpatient or residential treatment facility since substance use disorders can influence responses regarding coping, specifically, dysfunctional coping. Participants were screened for Substance Use Disorder and inpatient or residential treatment before starting the survey through a short self-report screening questionnaire that had to be completed to access the survey. Additionally, participants were excluded if they were bereaved by multiple losses within the past year since this could influence PGD severity and coping strategies. Single episodes of loss were considered for this study to depict transparency of PGD severity, relationship to the deceased, and coping strategies. Participants that indicated that they directly witnessed the death were excluded from this study. Exclusion criteria were screened for by the screening questionnaire (Appendix B). If participants did not meet the inclusion criteria in the screening questionnaire (i.e., respond “no”

to each question), the participant was not provided access the survey. The screening questionnaire can be viewed in Appendix B.

Data Collection Procedures

Participants were required to agree to an IRB approved information letter prior to accessing the survey (See Appendix A). Once the participant agreed to information letter, the participant was forwarded to start the survey. Participants completed the short screening questionnaire prior to starting the survey. If the participant indicated "yes" on one of the answers of the screening questionnaire, access was denied to the survey and a page expressing gratitude for interest was displayed. The screening questionnaire can be viewed in Appendix B. If the participant met the requirements of inclusion criteria for the study, the survey proceeded to the demographic questions. After the completion of demographic questions, participants proceeded to questions derived from the Prolonged Grief Disorder-13-R inventory (Prigerson et al., 2021), the Brief COPE inventory (Carver, 1997), and the Quality of Relationships Inventory-Bereavement Version (Bottomley et al., 2019). Upon completion of the survey, participants were provided with a link to an additional survey to submit their email for a chance to win one of 20 Amazon gift cards worth $25.00. The participants only submitted their email in this second link as to maintain anonymity on their responses in the prior survey. Two separate surveys, with one for incentives, ensured that participant identifying information was not linked to their responses. The incentive survey can be viewed in Appendix D. The data collected was stored in Qualtrics, which was secure. Then, the data was downloaded to an Excel spreadsheet for further analysis.

Recruitment

Bereaved individuals were invited to participate in the study through various counseling practices, grief support groups, mental health-oriented listservs, and social media channels. An

online and physical flyer that included a QR code to the study was developed and distributed. The flyers informed potential participants about the study, including criteria, approximate time duration for survey completion, incentives, and the QR code along with a link to access the survey. Snowballing and distribution via word-of-mouth was encouraged to increase the number of bereaved individuals to participate in the study. All eligible bereaved individuals were encouraged to participate.

To calculate sample size, the G*Power 3.1 (Erdfelder et al., 1996) statistical power analysis program was utilized. For this study, G*Power 3.1 (Erdfelder et al., 1996) calculated a minimal sample size of $N = 126$ for the study to have sufficient power at .80 to detect significant results, should they exist at a medium effect size of .05.

Instrumentation

Demographics

Demographic information was collected through a brief questionnaire at the beginning of the survey (see Appendix C). Questions inquired about the participant's age, sexual orientation, gender identity, race, religious affiliation, and geographic location. Participants confirmed the loss of a partner, parent, child, or other close person prior to starting the survey. Participants indicated the individual that has died (i.e., spouse/partner, parent, child, close friend, or other significant person) along with the type of loss (i.e., unexpected or violent, natural). Participants were given the option to write in responses for sexual orientation, diagnosis of a mental disorder, the deceased person, specifics regarding the type of death. This demographic information provided a necessary context that described the sample, particularly as it relates to Prolonged Grief Disorder. To examine the participant demographic information, descriptive and frequency analysis were performed.

Prolonged Grief Disorder Diagnostic Tool

To align diagnostic criteria with the PGD inventory used in this study, the DSM-5-TR was used as the diagnostic criteria for PGD. Although disordered grief has been documented, the DSM-V (APA, 2013) noted that "adjustment-like disorders with prolonged duration of more than six months" falls under "other specified trauma and stress-related disorders" (p. 289). According to the DSM-5-TR (APA, 2022), individuals must experience "intense yearning/longing for the deceased, preoccupation with thoughts or memories of the deceased, identity disruption, marked sense of disbelief about the death, avoidance of reminders that the person is dead, intense emotional pain, difficulty with reintegration into life after death, emotional numbness, feeling that life is meaningless as a result of the death, intense loneliness, and functional impairment for at least six months post-loss" (Symptoms and Diagnosis section). According to Tyrer (2018), the DSM diagnostic criteria have been implemented to support the reliability and validity of diagnosis in research, whereas the ICD-11 has demonstrated issues with generating research data. Moreover, Eisma et al. (2020) suggested that research conducted using the ICD-11 diagnostic criteria for PGD should be conducted on a broad level due to the criteria lacking consistency in symptoms with other diagnostic classifications, overlap with other diagnoses of bereavement, and minimal criteria. Haneveld et al. (2022) states that the key differences between the diagnostic criteria for PGD in the DSM-5-TR and ICD-11 are the time criterion and requirement of additional symptoms. In the DSM-5-TR diagnostic criteria provided by the APA (2022), individuals struggling with PGD experience symptoms for at least 12 months while meeting a minimum of three out of eight additional symptoms. On the other hand, the WHO (2018) diagnostic criteria within the ICD-11 states that symptoms of PGD persist for a minimum of six months with only one of the ten additional symptoms being experienced. However, studies

have validated the DSM-5-TR PGD criteria with the Prigerson et al. (2009) proposed criteria for PGD symptoms (Boelen, 2021; Prigerson et al., 2021). Thus, for the purpose of this project, and in alignment with the duration of PGD in the Prolonged Grief Disorder (PG-13) inventory by Prigerson and Maciejewski, the DSM-V-TR diagnostic criteria is used, which has been psychometrically validated by several studies (Maciejewski et al., 2016; Treml et al., 2022) in addition to the DSM-5-TR serving as the classification system most commonly implemented by researchers and mental health professionals in the United States (Stelzer et al., 2020).

The Prolonged Grief Disorder 13 (PG-13) is a diagnostic tool developed by Prigerson and Maciejewski (2009) to assess PGD criteria according to Prigerson et al. (2009). The PG-13 contains 13 items, two of which focus on duration and impairment (items 3 and 13) that require a response of "yes" or "no" and 11 items that include cognitive, behavioral, and emotional symptoms, that are rated on a 5-point Likert scale. Items 1, 2, 4, and 5 are rated on a frequency scale of 1 = *not at all* to 5 = *several times a day*. Items 6-12 are rated on an intensity scale that has a range from 1 = *not at all* to 5 = *overwhelmingly*. In order to assess the occurrence of PGD, five criteria must be experienced: (a) the respondent has experienced a loss (event-related), (b) the respondent must experience grief related to yearning at least daily (separation-distress), (c) symptoms of separation distress must be elevated at least 6 months post-loss (duration), (d) respondent must experience a minimum of 5 symptoms based on items 4-11 at least once daily or "quite often" (cognitive, emotional, and behavioral), and (e) respondent must experience significant impairment with regard to social, occupational, or other important areas related to functional impairment (Prigerson et al., 2009). PG-13 scoring is a continuous measure in which the scores for the symptoms are summed; however, the duration and functional impairment items

are excluded from the summation (Prigerson et al., 2009). The total score range is 11 – 55 for the PG-13.

The PG-13 inventory (Prigerson et al., 2009) was derived from the Inventory of Complicated Grief- Revised (ICG-R) created by Prigerson and Jacobs (2001). Due to the newest text revision of the DSM-5 regarding PGD, Prigerson, Xu, and Maciejewski revised the PG-13 inventory to fit the DSM-5-TR criteria, which is titled the PG-13-R (Prigerson et al., 2021). The main difference between the PG-13 and the PG-13-R is the duration criteria, which was modified from 6 months to 12 months post loss. Other modifications in the transition from the PG-13 to the PG-13-R include a reduction of rating the duration of symptoms experienced along with changes in wording. For example, question 11 from the PG-13 (Prigerson et al., 2009, p. 3) states "do you feeling emotionally numb since your loss" whereas the question in the PG-13-R (Prigerson et al., 2021) states "do you feel emotionally numb or detached from others?" (p. 4). The modification of wording is reflective of criteria from the DSM-5-TR. Due to these changes, scoring was modified to a total of 10-50 with a threshold symptom score of 30 or higher, which indicates that DSM-5-TR criteria has been met with significant impairment (Prigerson et al., 2021). According to Prigerson et al. (2021), the PG-13-R contains excellent external validity compared to the DSM-5-TR and reliability as assessed through multiple administrations. Furthermore, the PG-13-R can predict enduring distress and dysfunction. A study conducted by Prigerson et al. (2021) that assessed the validation of the PG-13-R through data collection from the *Yale Bereavement Study* (Prigerson et al., 2009), the *Utrecht Bereavement Study* (Boelen et al., 2015), and the *Oxford Grief Study* (Smith & Ehlers, 2020), demonstrated that the PG-13-R had high internal consistencies with Cronbach's alphas of .83 (Prigerson et al., 2009), .90 (Boelen et al., 2015), and .93 (Smith & Ehlers, 2020). Example questions of the PG-13-R

include: “do you feel yourself longing or yearning for the person who died?”, “do you feel emotional pain (e.g., anger, bitterness, sorrow) related to the death?”, and “do you feel like life is meaningless without the person who died?” (Prigerson et al., 2021, p. 1). The PG-13-R inventory can be viewed in Appendix E.

Several studies have included translations of the PG-13 into Swedish, African, Middle Eastern, Asian, and European languages, which have documented the validity and reliability of the inventory (Pohlkamp et al., 2018). According to Smith and Ehlers (2021), the PG-13 contains an excellent internal consistency ($\alpha = .91$). Moreover, a validation study conducted by Pohlkamp et al. (2018) revealed that the PG-13 internal consistency was very good ($\alpha = .89$), in addition to concurrent validity, establishing associations between depressive symptoms, anxiety, and PTSD. For the purpose of this study, the criteria used from the DSM-5-TR is utilized as it most aligns with the PG-13 diagnostic tool.

The COPE Inventory

The COPE model was derived from coping literature including Lazarus and Folkman’s (1984) model of coping and Carver and Scheier (1981, 1990) model of behavioral self-regulation (Carver, 1997). The revised “Ways of Coping” inventory was developed and then revised by Lazarus and Folkman (1980; 1984). According to Lazarus and Folkman (1984), individuals combat stress through primary appraisal, which is the perception of a threat to the individual and secondary appraisal, referring to the process of developing a response to said threat. As noted by Carver et al. (1989), primary and secondary appraisals contribute to coping, the implementation of the response from the secondary appraisal. The “Ways of Coping” inventory measure depicted coping in a transactional (or situational) sense in which respondents indicated yes or no on a scale that measured problem-focused coping and emotion-focused coping. Lazarus and

Folkman's (1984) model attributed coping to two styles; problem-focused coping and emotion-focused coping. Problem-focused coping refers to activities that plan or engage in a specific behavior to overcome the distressing issue (i.e., active coping, planning, instrumental support, and religion) whereas emotion-focused is the attempt to regulate emotions (i.e., venting, positive reframing, humor, acceptance, and emotional support) (Lazarus & Folkman, 1984). These coping strategies employ "two major functions: dealing with the problem that is causing distress (problem-focused coping) and regulating emotion (emotion-focused coping)" (Baqutayan, 2015, p. 482). While Carver et al. (1989) agreed with the concept of problem-focused and emotion-focused coping styles, it was noted that these strategies lacked transparency; the example being that denial, positive reinterpretation, and seeking social support are categorized as emotion-focused coping styles, however, these styles are vastly different from one another. Moreover, a review of existing measures of coping strategies indicated issues with clarity and ambiguity, lack of specific domains, and the development of skills through an empirical lens rather than being theoretically conceptualized (Carver et al., 1989). Thus, Carver et al. (1989) proposed the COPE inventory that built on Lazarus and Folkman's (1984) "Ways of Coping Mechanisms" to include 13 distinct scales with the addition of dysfunctional coping strategies as a category and coping styles that fall under problem-focused and emotion-focused coping.

According to Carver et al. (1989), the subscales of the COPE were developed from relevant theoretical foundations including Lazarus and Folkman's (1984) "Ways of Coping", that contained characteristics of coping strategies in addition to prior literature on coping. Carver et al. (1989) touches on the "styles" and "dispositions" of coping that have been posed by other researchers. However, it is noted that within the COPE inventory, three questions arise: whether

individuals have preferred coping strategies used in all stressful situations, if coping is related to personality variables, and if individuals are dispositionally oriented towards coping strategies. In addition to the 13 subscales of the COPE inventory, further subscales were added to reflect value or impede adaptive coping, equaling 15 subscales (Carver et al., 1989; Carver 1997). The COPE inventory is comprised of 60 items with four items per scale (Carver, 1997).

The subscales included in the COPE inventory:

> Active Coping or "the process of taking steps to try to remove or circumvent the stressor or to ameliorate its effects", Planning or "thinking about how to cope with a stressor", Suppression of Competing Activities or not engaging in projects continuously, Restraint coping or "holding oneself back", Seeking Social Support for Instrumental Reasons such as looking for advice, Seeking Social Support for Emotional Reasons including "moral support, sympathy, or understanding", Focusing on and Venting of Emotions, Behavioral Disengagement or "reducing one's effort to deal with the stressor" and also known as helplessness, Mental Disengagement, which serves to distract from thinking about "the behavioral dimension or goal with which the stressor is interfering", Alcohol-drug disengagement or resorting to substances, Turning to Religion, Positive Reinterpretation defined as "managing the distressing emotions" and Growth, and Acceptance, including denial (Carver et al., 1989, p. 268-269).

The response choices for the COPE inventory include a rating on a scale from one "I usually don't do this at all", to two "I usually do this a little bit", to three "I usually do this a medium amount", to four "I usually do this a lot" (Carver et al., 1989). The coefficient alphas for the COPE inventory subscales include Active Coping ($\alpha = .62$), Planning ($\alpha = .80$), Suppression of completing activities ($\alpha = .68$), Restraint coping ($\alpha = .72$), Seeking social support (instrumental)

(α = .75), Seeking social support (emotional) (α = .85), Positive reinterpretation and growth (α = .68), Acceptance (α = .65), Turning to religion (α = .92), Focus on and venting of emotions (α = .77), Denial (α = .71), Behavioral disengagement (α = .63), and Mental disengagement (α = .45) (Carver et al., 1989). However, due to the extensivity of the COPE inventory, Carver (1997) developed a reduced version of the inventory, resulting in the Brief COPE inventory, which includes two scales omitted, three scales restructured due to problems identified in previous work, and one scale added. Carver et al. (1989) notes that the scale "Alcohol-drug disengagement" was posed as Mental Disengagement and was not exhibited in the study.

The Brief Cope

The Brief COPE assessment (Carver, 1997) was developed as a shortened version from Carver's COPE Inventory (1989), and measures three categories of coping: problem-focused strategies (i.e., instrumental support, planning, and active coping), emotion focused coping strategies (i.e., acceptance, social support, humor, positive reframing, and religion), and dysfunctional coping strategies (i.e., behavioral disengagement, denial, self-distraction, self-blaming, substance abuse, and venting). Carver (1997) developed the Brief COPE due to the extensive time and effort required of participants to complete the original COPE Inventory, noting that the "larger demand on the participants, the less likely they may commit themselves to involvement" (p. 93). The Brief COPE consists of 28 items with two items per scale within 14 subscales related to coping styles that originated from Carver's COPE model that was comprised of 60 items with four items per scale (Carver et al., 1989; Carver, 1997). The Brief COPE subscale coefficient alphas depict a range from .50 to .90 (Carver, 1997). The three categories of coping maintain good internal consistencies: emotion-focused coping (α = .72), problem-focused coping (α = .84), and dysfunctional coping (α = .75). The Brief COPE subscales include Active

Coping (α = .68), Planning (α = 0.73), Positive Reframing (α = .64), Acceptance (α = .57), Humor (α = .73), Religion (α = .82), Using Emotional Support (α = .71), Using Instrumental Support (α = .64), Self-Distraction (α = .71), Denial (α = .54), Venting (α = .50), Substance Use (α = .90), Behavioral Disengagement (α = .65) and Self-Blame (α = .69) (Carver, 1997). Individuals completing the Brief COPE assessment rate their responses on a 4-point Likert scale with statements from 0 (*I haven't been doing this at all*) to 4 (*I've been doing this a lot*) (Carver, 1997). Statements that are rated on the Brief COPE include: "I've been refusing to believe that it has happened", "I've been getting comfort and understanding from someone", and "I've been blaming myself for things that happened" (Carver, 1997, p. 96). The scoring of the Brief COPE is conducted through the summation of the appropriate items for each scale. Scoring will include a range from two (minimum) to eight (maximum). High scores indicate increased use of the coping strategy being measured. Furthermore, the Brief COPE inventory can be administered in several formats including a retrospective and situational format or a concurrent and situational format, yet it is noted that modifications to format such as response options and delivering instructions are dependent on the researcher conducting the study (Carver, 1997).

The Brief COPE has been demonstrated as an effective assessment in determining the coping strategies implemented by individuals struggling with grief and bereavement (Buckley et al., 2015; Fisher et al., 2020). A study conducted by Buckley et al. (2015) indicated that the Brief COPE inventory was useful in determining the coping strategies implemented by bereaved individuals, with results indicating that emotional support ($p = 0.02$), self-blame ($p = 0.003$) and denial ($p < .001$) were associated with intensity of bereavement after six months. Moreover, another study that utilized the Brief COPE inventory suggested that individuals bereaved by suicide, accident, or combat, had coping styles and grief severity vary depending on the cause of

death (Fisher et al., 2020). The Brief COPE inventory can be used to gauge the coping strategies implemented by bereaved individuals in order for researchers to gain further insight into strategies to support this population. The Brief COPE inventory in this study is derived from the COPE inventory. Consideration of the development and primary concepts of the COPE Inventory is relevant to understanding the implementation of the Brief COPE, which is the inventory used in this study. A full description is provided for both instruments. The Brief COPE inventory can be viewed in Appendix F.

Quality of Relationships Inventory-Bereavement Version

The Quality of Relationships Inventory-Bereavement Version (QRI-B) (Bottomley & Neimeyer, 2018) is a self-report measure that uses 13-items to assess pre-death mourner-decedent relationship via closeness and conflict. The QRI-B closeness scale assesses the support and intimacy of the relationship prior to death (e.g., "To what extent could you count on this person to help you if a family member very close to you died"). The conflict scale recognizes the frequency and degree of interpersonal friction in the relationship prior to death (e.g., "How upset did this person sometimes make you feel?"). The items of the QRI-B are rated on a Likert scale of 1 (*not at all*) to 4 (*very much*). The QRI-B is scored through summing items 2, 5, 6, 7, 8, 9, 10, and 12 for the closeness subscale and summing items 1, 3, 4, 11, and 13 to compute the conflict subscale (Bottomley & Neimeyer, 2018). The higher the score on the closeness subscale indicates that the relationship to the deceased was of great significance and was reflective of intimacy and support (Bottomley & Neimeyer, 2018). However, higher scores on the conflict subscale depict a relationship that was very conflictual and contentious before the loss (Bottomley & Neimeyer, 2018). Both subscales demonstrate high internal consistency: closeness ($\alpha = .95$) and conflict ($\alpha = .88$). Furthermore, the QRI-B has demonstrated predictive validity for

both subscales comparable to the Texas Revised Inventory of Grief (Prigerson et al., 1995) and the Grief Experiences Questionnaire (Bailley et al., 1999). Example questions from the QRI-B include: “If this person were still alive, how close would your relationship be with this person in 10 years?” and “How angry did this person make you feel?” (Bottomley et al., 2019, p. 8).

The QRI-B has been utilized in a few studies that evaluate the influence of the relationship to the deceased for a bereaved individual. A study that assessed grief severity for bereaved college students suggested that relationship closeness demonstrated a positive relationship with grief severity ($r = 0.44$) and relationship conflict indicated a positive correlation with grief severity ($r = 0.35$) (Smigelsky et al., 2020). Furthermore, a study that examined individuals that lost a family member and were experiencing symptoms of prolonged grief with the QRI-B, indicated that closeness to the deceased was positively associated with prolonged grief symptoms (Sekowski & Prigerson, 2022). The QRI-B inventory can be implemented to assess the impact of closeness and conflict on grief outcomes. The QRI-B inventory can be viewed in Appendix G.

Data Analysis Plan

The Qualtrics survey data was downloaded in Excel format to the researcher’s computer. The data was cleaned to identify and correct any structural error occurring within that data set including blank or null entries. The data was screened to check and remove errors within the data set. The cleaning and screening of the data ensured that assumptions were met such as normality, linearity, and homoscedasticity (Tabachnick & Fidell, 2007). After being uploaded to the Statistical Package for the Social Sciences (SPSS), 27th edition, descriptive and frequency statistics were conducted to identify the range, mean, median, and standard deviation of the data. The data was organized based on responses of the type of loss experienced by participants. One

group included all participants that indicated bereavement as a result of a natural loss. The other group was composed of all participants that indicated bereavement as a result of an unexpected or violent loss.

Correlational analyses were conducted to recognize any intercorrelations occurring between variables, with specific examination on type of loss and PGD severity, type of loss and symptoms of PGD, type of loss and coping strategies, and PGD severity and coping strategies. Correlational analysis was performed to identify any relationship between demographic information and primary variables.

Further analysis included an independent samples t-test to compare the means of PGD severity based on scores from the PG-13-R (Prigerson et al., 2021) for the unexpected loss group and the natural loss group, which would determine any significant differences in severity between the groups (answering Research Question 1). An additional independent sample t-test was performed to compare the coping strategies implemented by the groups, which would indicate if individuals bereaved by unexpected or violent loss implemented dysfunctional coping strategies more frequently than those bereaved by natural loss (answering Research Question 2). To determine if type of loss is a predictor of PGD severity or dysfunctional coping, two simple linear regressions were conducted; one simple linear regression focused on unexpected or violent loss as a predictor for PGD severity and a second simple linear regression assessed if unexpected or violent loss is a predictor of dysfunctional coping. To analyze group differences among PGD severity and coping strategies implemented, an analysis of variance was performed (answering Research Question 3). Next, to determine the relationship between closeness or conflict with the deceased prior to the loss influences PGD severity, an additional analysis of variance was conducted (answering Research Question 4).

Summary

This chapter provided an overview of the methodological approach and procedures that were proposed for this dissertation study, specifically, to examine the relationship among Prolonged Grief Disorder (PGD), coping strategies, and relationship to the deceased for individuals bereaved by unexpected or violent loss. The participants included any adult that experienced bereavement as a result of the death of a partner/spouse, parent, child, or other significant person. Furthermore, data was collected through the use of the Prolonged Grief Disorder-13-Revised (Prigerson et al., 2021), the Brief COPE inventory (Carver, 1997), and the Quality of Relationships Inventory-Revised (Bottomley & Neimeyer, 2018). Demographic information was collected to provide a description of the sample. ANOVA and regression were performed to address the research questions and hypotheses.

CHAPTER THREE

Results

This chapter provides an overview of the results, starting with the preliminary analysis. A review of the four hypotheses and findings of the main analysis are described. Data were analyzed using SPSS (29) (Pallant, 2013).

The survey collected information from 1,654 participants. Of the participants, 208 had over 20% of data missing that were completely random and deleted from the analyses (Little & Rubin, 2002). The following cases were also removed based on the exclusion criteria for this study, 49 participants did not respond to the demographic item regarding age and 11 participants indicated that they were outside of the age range (i.e., 19-64). Participants indicating that they resided in an inpatient or residential facility were excluded from the study. 634 responded that they were located in a residential or inpatient facility, and six participants had no response to the demographic item regarding inpatient or residential facility. With regard to a diagnosis of Substance Use Disorder, 116 participants confirmed a diagnosis and three did not respond to the demographic item. To meet the inclusion criteria, participants were asked about the number of losses experienced in addition to if the death loss occurred within the last year. Of the participants left, 210 responded that they had experienced multiple losses and 155 participants indicated that their death loss occurred within the last year. With regard to multiple losses, one participant did not respond to the demographic item. An additional exclusion criterion was directly observing the death loss for which 71 participants indicated that this was their experience. After cleaning and screening the data, 190 participants met all criteria. All cases were complete and did not require imputation.

Demographics

Descriptive analysis indicated a sample size of 190 participants who self-identified as being bereaved by a death loss that occurred at least 12 months prior to completing the survey, as reported in Table 2. Participants indicated an average age of 37.39 (*SD* = 12.91). The median age of the sample was 41; 67.4% of the participants were under the age of 41 and 32.6% of the participants were over the age of 41. The majority of respondents (79.5%; *n* = 151) were female, most identified as heterosexual (84.2%; *n* = 160), and white (78.9%; *n* = 150). In terms of education, over half of the participants reported college experience with 13.2% indicating some college with no degree, 4.2% obtained an associate degree, 23.7% had a bachelor's degree, and 37.4% had a graduate degree. With regard to geographic location, majority of the participants were located in the southern United States (e.g., TX, GA, SC) (55.3%). Of the participants, 19.5% responded that they were single, 15.8% were partnered, 47.9% were married, 10% were widowed, 5.8% were divorced, and 1.1% were separated. With regard to mental health disorders, 30% (*N* = 57) of participants indicated a mental disorder diagnosis. Specifically, 37.6% of the participants that indicated a mental health disorder reported a diagnosis of Generalized Anxiety Disorder, or Major Depressive Disorder (33.3%), or Posttraumatic Stress Disorder (9.7%), or Bipolar Disorder (3.2%). One participant indicated a diagnosis of Trichotillomania, and another participant indicated a diagnosis of Premenstrual Dysphoric Disorder.

Table 2

Demographic Characteristics of Study Population

Characteristic	*n*	%
Gender		
Male	38	20
Female	151	79.5
Transgender Male	1	0.5
Sexual Orientation		
Asexual	7	3.7

Bisexual	12	6.3
Gay/Lesbian	2	1.1
Heterosexual	160	84.2
Queer	3	1.6
Prefer not to answer	6	3.2
Race		
Black or African American	16	8.4
White	150	78.9
Asian	9	4.7
Hispanic or Latino	9	4.7
Native American	5	2.6
Other	1	0.5
Age		
<41	128	67.4
>41	62	32.6
Education		
Grade school completed	5	2.6
Some high school completed (no diploma)	8	5.2
High school graduate	20	10.5
Some college credit (no degree)	25	13.2
Trade/technical/vocational training	8	4.2
Associate degree	8	4.2
Bachelor's degree	45	23.7
Graduate degree	71	37.4
Relationship Status		
Single	37	19.5
Partnered	30	15.8
Married	91	47.9
Widowed	19	10
Divorced	11	5.8
Separated	2	1.1
Geographic Location		
Southern United States	105	55.3
Midwestern United States	31	16.3
Northeastern United States	24	12.6
Western United States	28	14.7
No response	2	1.1
Diagnosed with a Mental Disorder		
Yes	57	30

No	133	70
Mental Disorder Diagnosis		
Attention-Deficit Hyperactivity Disorder	8	8.6
Generalized Anxiety Disorder	35	37.6
Major Depressive Disorder	31	33.3
Grief	3	3.2
Bipolar Disorder	3	3.2
Posttraumatic Stress Disorder	9	9.7
Obsessive Compulsive Disorder	2	2.2
Trichotillomania	1	1.1
Premenstrual Dysphoric Disorder	1	1.1

Participant information regarding loss is depicted in Table 3. Of the participants, 37.4% reported experiencing unexpected or violent loss (*n* = 71) and 62.6% reported bereavement by natural loss (*n* = 119). With regard to the relationship to the deceased, participants reported that 16.8% (*n* = 32) was a spouse or partner, 33.7% (*n* = 64) was a parent, 15.3% (*n* = 29) was a child, 7.4% (*n* = 14) was a sibling, 5.8% (*n* = 11) was a grandparent, 3.2% (*n* = 6) was an aunt or uncle, 0.5% (*n* = 1) was a cousin, and 14.7% (*n* = 28) was a close friend. Of the sample, most of the participants indicated natural loss (62.6%) and a third of the participants responded with the loss of a parent (33.7%). With regard to the type of loss, 2.1% (*n* = 4) of the participants indicated a loss from homicide, 12.6% (*n* = 24) from suicide, 16.3% (*n* = 31) from accident, 4.2% (*n* = 8) from natural disaster, 1.6% (*n* = 3) from terrorism, 1.6% (*n* = 3) from warfare, 27.4% (*n* = 52) from natural causes, and 29.5% (*n* = 56) from chronic illness. One participant indicated “other loss” and 4.2% (*n* = 8) from COVID-19. Of the sample, the highest frequencies for unexpected or violent loss were for accidents (16.3%) and for natural loss, chronic illness (29.5%).

Table 3

Loss Characteristics of the Study Population

Characteristic	*n*	%
Given at least one day's notice prior to the loss		
No	71	37.4
Yes	119	62.6
Relationship to the deceased		
Spouse/Partner	32	16.8
Parent	64	33.7
Child	29	15.3
Sibling	14	7.4
Grandparent	11	5.8
Aunt/Uncle	6	3.2
Cousin	1	0.5
Close friend	28	14.7
Other	5	2.6
Type of death		
Homicide	4	2.1
Suicide	24	12.6
Accident	31	16.3
Natural disaster	8	4.2
Terrorism	3	1.6
Warfare	3	1.6
Natural causes	52	27.4
Chronic illness	56	29.5
COVID-19	8	4.2
Other	1	0.5

Preliminary Analyses

Preliminary analyses of the data included an examination of assumptions. All of the data met the standards for statistical assumptions and demonstrated normal distribution as outlined by Hair et al. (2010) who states that normal skewness lies between -2.00 and 2.00 in addition to kurtosis between -7.00 and 7.00.

The subscale means, standards deviations, Cronbach's alpha and intercorrelations (Table 4) were explored for the main scales; the PG-13-R, the Brief COPE Inventory, and the QRI-B. For the PG-13-R, the Cronbach's alpha for the scale was .89, which aligns with the findings of

Prigerson et al. (2021), who stated a range for the scale from .83 to .93. The composite subscales (i.e., problem-focused, emotion-focused, and dysfunctional) for the Brief COPE were calculated through the summation of the corresponding 14 subscale items, creating "composite" subscales (Cooper et al., 2008; Engler & Lasker, 2000; Su et al., 2015). A systematic review conducted by Solberg et al. (2022) identified 18 research studies that were based on the 14 subscales from the Brief COPE inventory but used the "grouping" of coping items (i.e., problem-focused, emotion-focused, and dysfunctional) for analysis. Problem-focused coping, emotion-focused coping, and dysfunctional coping are referred to as composite subscales. For the Brief COPE Inventory, Cronbach's alphas for the subscales ranged from .55 to .77, which was within the acceptable limits of .50 to .90 as determined by Carver (1997). The items by scale each demonstrated to be within the acceptable range with the majority receiving a Cronbach's alpha higher than the reporting by Carver (1997). Cronbach's alphas for the QRI-B indicated a .92 for the closeness subscale and a .83 for the conflict subscale, aligning with Bottomley and Neimeyer's (2018) findings.

Table 4

Scale Reliability Statistics

Scale	*M*	*SD*	*α*
PG-13-R	2.69	8.74	.89
Brief COPE Inventory			
Problem Focused Subscale	17.51	4.79	.76
Active Coping	4.75	1.52	.72
Planning	4.21	1.61	.72
Instrumental Support	4.32	1.58	.71
Emotion Focused Subscale	27	5.3	.55
Acceptance	5.86	1.72	.77
Emotional Support	4.75	1.6	.72
Humor	3.09	1.48	.75
Positive Reframing	4.22	1.66	.74

Religion	4.83	2.14	.77
Dysfunctional Subscale	14.91	4.25	.71
Denial	3.34	1.41	.75
Self-Distraction	5.08	1.77	.74
Substance Abuse	3.17	1.71	.75
Behavioral Disengagement	3.29	1.49	.76
Self-Blame	4.09	1.78	.74
Venting	4.35	1.49	.73
QRI-B Inventory			
Closeness Subscale	24.53	6.49	.92
Conflict Subscale	9.43	3.66	.83

Note. PG-13-R = Prolonged Grief Disorder-13-Revised; QRI-B = Quality of Relationship Inventory – Bereavement Version.

Analyses were conducted with the demographic variables and main study variables (i.e., severity of PGD, coping style, and relationship to the deceased prior to the loss) to determine if the variables were related. Pearson's product-moment correlations were utilized to assess main study variables and results are depicted in Table 5. A p-value of .01 was used to determine significance in order to reduce the threat of Type I error.

Results of the preliminary analysis suggested a weak positive relationship between problem-focused coping composite subscale (r = .21; p = .000) and PGD severity. More specifically, each of the subscales that fall under problem-focused coping demonstrated significant, but weak to moderate positive relationships with PGD severity; active coping (r = .24; p = .000), planning (r = .37; p = .000), and instrumental support (r = .26; p = .000). These findings indicate that as each of the problem-focused coping strategies scores increase, so does PGD severity. The emotion-focused coping composite subscale demonstrated a significant, but weak positive relationship with PGD severity (r = .20; p = .000). With regard to emotion-focused coping, acceptance also had significant, but weak negative association with PGD severity (r = -.24, p = .000) and positive re-framing demonstrated a weak negative association with PGD

severity (r = -.23; p = .000). These findings demonstrate that as participants endorsed acceptance and positive re-framing, PGD severity decreases. However, emotional support (r = .11), humor (r = .02), and religion (r = -.07) did not indicate any significant relationship(s) with PGD severity. Lastly, dysfunctional coping demonstrated a positive relationship with PGD severity (r = .53; p = .000). Denial (r = .49; p = .000), self-distraction (r = .43; p = .000), and self-blame (r = .57; p = .000) demonstrated positive associations with PGD severity. These preliminary findings suggest that as denial, self-distraction, and self-blame increase, so does PGD severity and there is greater strength in these relationships. Moreover, substance abuse (r = .17; p = .000), behavioral disengagement (r = .34; p = .000), and venting (r = .26; p = .000) depicted weaker positive associations with PGD severity.

Participant age and closeness indicated a positive correlation (r = .30; p = .000), indicating that as the participant age increased, closeness scores also increased. Furthermore, participant age demonstrated a negative relationship with the emotion-focused coping strategy, humor (r = -.32, p = .000). As participant's age increased, the endorsement of humor as a coping strategy decreased.

There were weak positive correlations between the problem-focused coping composite subscale (r = .24; p = .000) and the emotion-focused composite subscale (r = .27; p = .000) and conflict, suggesting that higher scores for conflict prior to the death loss indicated positive associations with problem-focused and emotion-focused coping styles. There was a weak positive correlation demonstrated between conflict and the dysfunctional coping composite subscale (r = .28; p = .000), suggesting that increases in conflict prior to the death loss demonstrated a significant relationship with increases in dysfunctional coping. More specifically, positive relationships were found among conflict and denial (r = .20; p = .000), substance abuse

(r = .20; p = .000), behavioral disengagement (r = .26; p = .000), self-blame (r = .26; p = .000), and venting (r = .19; p = .000). The higher the score of conflict with the deceased prior to the loss indicated increased scores in denial, substance abuse, behavioral disengagement, self-blame, and venting. These preliminary findings indicate that as dysfunctional coping strategies increased, so did conflict scores prior to the death loss. With regard to problem-focused coping, there were positive associations among conflict and planning (r = .23; p = .000) and instrumental support (r = .29; p = .000). Moreover, emotion-focused coping strategies including emotional support (r = .19; p = .000) and humor (r = .30; p = .000) depicted positive associations with conflict. Thus, as conflict increased, participants endorsed increases in planning, instrumental support, and emotional support.

According to the preliminary findings, there was a positive association between closeness and PGD severity (r = .33; p = .000), indicating that as closeness increases, so does PGD severity. There was not a significant association between PGD severity and conflict (r = .08). Emotion-focused coping strategies including acceptance (r = .24; p = .000), humor (r = -.17; p = .000), and religion (r = .14; p = .000) demonstrated associations with closeness. As closeness to the deceased prior to the loss increased, there was increased endorsement of acceptance and religion. However, as closeness increased, there was a decrease in the endorsement of humor as a coping strategy. Thirdly, the dysfunctional coping strategy of distraction demonstrated a weak positive correlation with closeness (r = .26; p = .000). The higher the scores of closeness to the deceased prior to the loss indicated increased use of distraction.

Main Analyses

The main analyses were performed using independent samples t-tests, simple linear regressions, analysis of variance (ANOVA), and multiple regression. The goal of independent

samples t-tests was to compare the means across the two independent groups (i.e., unexpected and natural loss) with relation to PGD severity. For simple linear regression, this study assessed if the independent variable, the type of loss (i.e., unexpected and violent or natural), was a predictor of coping strategies (the dependent variable). The goal of the first ANOVA was to examine differences between group means for PGD severity (the independent variable) and coping strategies (the dependent variable). The second ANOVA was performed to analyze differences between group means for relationship to the deceased (the dependent variable) and PGD severity (the independent variable). Lastly, multiple regression was utilized to assess if the variables, type of loss and coping strategies, were predictors of the dependent variable, PGD severity.

To determine PGD severity, scores from items of the PG-13-R were summed for each participant, according with the PG-13-R manual (Prigerson et al., 2021). For PGD severity, if the participant indicated a total score of 30 or above, the participant had met the criteria for PGD (Prigerson et al., 2021). Of the sample, 118 participants (62.1%) scored below 30 on the PG-13-R (M = 21.38, SD = 5.06) and 72 participants (37.9%) scored a 30 or above (M = 35.93, SD = 5.03). To determine the composite subscale scores of the coping strategies, the participant scores for problem-focused items (i.e., active coping, planning, and instrumental support), emotion-focused items (i.e., acceptance, emotional support, humor, positive re-framing, and religion), and dysfunctional items (i.e., denial, self-distraction, substance abuse, behavioral disengagement, self-blame, and venting) of the Brief COPE Inventory were categorized and summed aligning with the directions of other studies such as Cooper et al. (2008), Engler and Lasker (2000), and Su et al. (2015). Subscales were created by summing the two items per subscale, following the

directions of Carver (1997). The items of the QRI-B were categorized based on closeness or conflict and then summed, giving a total score for each subscale (Bottomley & Neimeyer, 2018).

Hypotheses Testing

The four hypotheses of the study were based on unexpected or violent loss versus natural loss, PGD severity, coping style, and the relationship to the deceased prior to the death loss. The analyses previously described provided the results for each of the hypotheses.

Research Question 1: Is there a significant group difference between unexpected or violent loss and natural loss on the severity of PGD? The PG-13-R evaluates an individual's severity of prolonged grief with 10 items that require responses on a 5-point Likert scale that ranges from "not at all" to "several times a day", which yields a total score ranging from 10 to 50 (Prigerson et al., 2021). Of the sample, 37.9% of participants (n = 72, M = 35.93, SD = 5.03) scored 30 or above on the PG-13-R and 62.1% of participants (n = 118, M = 21.38, SD = 5.06) scored below 30. The scores of the 10 items are summed to indicate a total score, demonstrating the individual's level of severity of prolonged grief. The results of this study indicated that all participants completed the PG-13-R. The PGD severity mean score for individuals bereaved by unexpected or violent loss was 27.29 and the mean score for natural loss was 26.22. These results suggest that the unexpected or violent loss participants reported higher PGD severity ratings than the natural loss participants.

To further compare the two groups on PGD severity, an independent samples t-test was conducted. The independent samples t-test did not indicate a statistically significant difference between the unexpected or violent loss group (M = 27.29, SD = 9.00) and natural loss group (M = 26.22, SD = 8.15) for PGD severity; t(188) = .820, p = .413. A two-tailed test with 188 degrees of freedom results in a critical t-value of ±1.96, suggesting a failure to reject the null hypothesis.

Results suggest that there is no difference in PGD severity based on scores above or below 30 as indicated on the PG-13-R between those bereaved by unexpected or violent loss and natural loss.

Research Question 2: Is there a significant group difference between unexpected or violent loss and natural loss on coping strategies? The Brief COPE Inventory assesses for problem-focused, emotion-focused, and dysfunctional coping strategies by having participants rate their coping experiences on a 28 item instrument with 14 subscales that indicate scores for the three coping strategies with responses ranging from "I haven't been doing this at all" to "I've been doing this a lot" on a 4-point Likert scale, resulting in a range from 2 to 8 (Carver, 1997). Each of the 14 subscales were summed to indicate the total score for the composite coping strategies (i.e., problem-focused, emotion-focused, and dysfunctional). Each of the participants completed the Brief COPE Inventory. The mean scores reported by participants bereaved by unexpected or violent loss for problem-focused coping was 17.30, emotion-focused coping was 26.58, and dysfunctional coping was 14.78. These mean scores suggest that individuals bereaved by unexpected or violent loss utilized emotion-focused coping most frequently. The mean scores reported by participants bereaved by natural loss was 17.85 for the problem-focused coping composite subscale, 27.69 for the emotion-focused coping composite subscale, and 15.14 for the dysfunctional coping composite subscale. The mean scores for natural loss indicated these participants endorsed emotion-focused coping more frequently. Overall, the mean scores reveal that emotion-focused coping is most frequently endorsed for all participants. To further compare coping strategies utilized by both groups, an independent samples t-test was performed.

The independent samples t-test did not indicate a statistically significant difference between the unexpected or violent loss group (M = 17.30, SD = 5.04) and the natural loss group (M = 17.85, SD = 4.35) with regard to problem-focused coping; t(188) = -.773, p = .440. The

independent samples t-test did not indicate a statistically significant difference between the unexpected or violent loss group (M = 26.58, SD = 5.67) and the natural loss group (M = 27.69, SD = 4.57) for the emotion-focused coping composite subscale; t(188) = -1.388, p = .167. The independent samples t-test for the dysfunctional coping subscale did not indicate a statistically significant difference between the unexpected or violent loss group (M = 14.78, SD = 4.32) and the natural loss group (M = 15.14, SD = 4.14); t(188) = -.563, p = .574. However, the independent samples-test suggested a statistically significant difference between the unexpected or violent loss group (M = 4.16, SD = 1.44) and the natural loss group (M = 4.67, SD = 1.50) with regard to venting; t(188) = -2.26, p = .025. This result suggests that the natural loss group endorsed venting more frequently than the unexpected or violent loss group.

A two-tailed test with 188 degrees of freedom results in a critical t-value of ±1.96, suggesting a failure to reject the null hypothesis for each of the coping strategies (i.e., problem-focused, emotion-focused, and dysfunctional). There is no difference between the composite subscales of problem-focused, emotion-focused, and dysfunctional coping strategies and the type of death loss. However, a second independent samples t-test analyzing the subscales with relation to the type of loss suggested a statistically significant difference between the unexpected or violent loss group and the natural loss group for venting. Results for this independent samples t-test indicated that individuals bereaved by natural loss utilize venting more frequently than those bereaved by unexpected or violent loss.

Research Question 3: Is there a significant group difference between lower versus higher PGD severity on the endorsement of dysfunctional coping strategies? To determine if a relationship exists between PGD severity and coping strategies, a one-way analysis of variance (ANOVA) was conducted. Dysfunctional coping, problem-focused coping, and emotion-focused

coping composite subscales were used as dependent variables. These dependent variables were assessed by the Brief COPE Inventory. The independent variable was PGD severity as assessed by the PG-13-R. PGD severity scores were placed into two groups with group 1 containing scores below 30 (n = 118, M = 21.38, SD = 5.06) and group 2 composed of scores above 30 (n = 72, M = 35.93, SD = 5.03). Prigerson et al. (2021) states that a score above 30 on the 10 items of the PG-13-R indicates that DSM-5-TR criteria is met for Prolonged Grief Disorder. A one-way ANOVA was performed to compare the effect of PGD severity on coping strategies. The omnibus test yielded statistically significant results, $F(1,188) = 25.51$, $p < .001$, indicating that the group that reported a score of 30 or above on PGD severity endorsed the dysfunctional coping composite subscale. Further, according to Cohen (1988), the effect size was small, $\eta^2 = .12$. There was no statistically significant difference between PGD severity and the emotion-focused coping composite subscale (p = .055). And there was not a statistically significant difference between PGD severity and the problem-focused coping composite subscale (p = .097). Results of this ANOVA are depicted in Table 6.

Table 6

Summary of One-Way ANOVA for Coping Strategies

Variable	Independent Variable	Sum of Squares	df	Mean Square	*F*	*p*	η^2
Dysfunctional Coping	Between Groups	407.956	1	407.956	25.51	.000**	0.12
	Within Groups	3006.697	188	15.993			
	Total	3414.653	189				
Problem-Focused Coping	Between Groups	63.392	1	63.394	2.78	0.097	0.01
	Within Groups	4282.085	188	22.777			
	Total	4345.479	189				
Emotion-Focused Coping	Between Groups	103.409	1	103.409	3.72	0.055	0.02
	Within Groups	5218.591	188	27.275			

	Total	5322	189

Note. **Results significant at the .01 level.

Follow-up ANOVAs were performed to explore any relationships between the dysfunctional subscales (i.e., denial, self-distraction, substance abuse, behavioral disengagement, self-blame, and venting) and PGD severity. An ANOVA yielded statistically significant results, $F(1,188) = 21.52$, $p < .001$, indicating that participants that scored above 30 on the PG-13-R ($M = 5.80$, $SD = 1.65$) endorsed higher scores in self-distraction coping strategies compared to participants that scored lower than 30 on the PG-13-R ($M = 4.63$, $SD = 1.70$). A second follow-up ANOVA revealed statistically significant results $F(1,188) = 23.62$, $p < .001$, indicating that participants that scored above 30 on the PG-13-R ($M = 3.94$, $SD = 1.45$) endorsed higher scores of denial than those that scored below 30 on the PG-13-R ($M = 2.97$, $SD = 1.25$). A third ANOVA yielded statistically significant results, $F(1,188) = 48.30$, $p < .001$ suggesting that participants that scored above 30 on the PG-13-R ($M = 5.13$, $SD = 1.84$) scored higher on self-blame than participants that scored below 30 on the PG-13-R ($M = 3.47$, $SD = 1.43$). There was no statistical significance indicated for PGD severity and substance abuse ($p = .437$), behavioral disengagement ($p = .002$), or venting ($p = .028$). Results of this ANOVA are depicted in Table 7.

Table 7

Summary of One-Way ANOVA of Dysfunctional Coping Subscales

Subscale	Independent Variable	Sum of Squares	*df*	Mean Square	*F*	*p*	η^2
Self-Distraction	Between Groups	61.208	1	61.208	21.52	.000**	.10
	Within Groups	534.608	188	2.844			
	Total	595.816	189				
Denial	Between Groups	42.062	1	42.062	23.62	.000**	.11
	Within Groups	334.702	188	1.78			
	Total	376.763	189				
Substance Abuse	Between Groups	1.803	1	1.803	0.61	0.437	.00
	Within Groups	557.992	188	2.968			

	Total	559.795	189				
Behavioral Disengagement	Between Groups	20.667	1	20.667	9.63	0.002	.05
	Within Groups	403.233	188	2.145			
	Total	423.9	189				
Venting	Between Groups	10.679	1	10.679	4.93	0.028	.02
	Within Groups	407.263	188	2.166			
	Total	417.942	189				
Self-Blame	Between Groups	123.86	1	123.86	48.30	.000**	0.2
	Within Groups	482.035	188	2.564			
	Total	605.895	189				

Note. **Results significant at the .01 level.

Research Question 4: Is there a significant group difference between lower versus higher PGD severity on the endorsement of closeness or conflict prior to the death loss? The QRI-B instrument contains 13 items that measure two subscales to assess the pre-death mourner-decedent relationship through a 4-point Likert scale wherein responses range from "not at all" to "very much" (Bottomley & Neimeyer, 2018). The items are organized based on subscale (i.e., closeness and conflict) and the scores are summed for a total score of each subscale (Bottomley & Neimeyer, 2018). The subscales, closeness and conflict, served as the independent variables. The dependent variable, PGD severity, utilized the groups mentioned previously; group 1 containing scores below 30 (n = 118, M = 21.38, SD = 5.06) and group 2 composed of scores above 30 (n = 72, M = 35.93, SD = 5.03). All participants completed the QRI-B. ANOVA was conducted to address if individuals with higher scores on conflict or closeness with the deceased prior to the loss experienced heightened PGD severity. The omnibus test yielded statistically significant results, $F(1,188) = 16.23$, $p < .001$ with a medium effect size ($\eta^2 = .08$), indicating that participants that scored 30 or higher on the PG-13-R (M = 26.87, SD = 5.78) reported higher scores of closeness to the deceased than participants that scored lower than 30 (M = 23.11, SD = 6.51). The results of the ANOVA are in Table 8.

Table 8

Summary of One-Way ANOVA of QRI-B and PGD Severity

Variable	Independent Variable	Sum of Squares	*df*	Mean Square	*F*	*p*	η^2
Closeness	Between Groups	633.799	1	633.799	16.23	.000**	.08
	Within Groups	7341.443	188	39.05			
	Total	7975.242	189				
Conflict	Between Groups	22.257	1	22.257	1.66	0.198	.01
	Within Groups	2512.485	188	13.364			
	Total	2534.742	189				

Note. **Results significant at the .01 level.

Two additional simple linear regressions and a multiple regression were conducted to assess predictability between variables. One simple linear regression was conducted to assess if unexpected or violent loss could be a predictor for PGD severity. The regression did not indicate a statistically significant difference for unexpected or violent loss to be a predictor of PGD severity, $p > .05$. The second simple linear regression was performed to assess if unexpected or violent loss is a predictor of dysfunctional coping. This second regression did not indicate a statistically significant difference for unexpected or violent loss to be a predictor of PGD severity, $p > .05$.

A multiple regression was performed to analyze whether participants bereaved by unexpected or violent loss that engaged in dysfunctional coping strategies endorsed increased PGD severity. Results indicated that of the predictor variables, only the dysfunctional coping composite subscale significantly predicted PGD severity, $F(2, 187) = 38.55$, $p < .001$, $R^2 = .292$. The unstandardized coefficient, B, for the dysfunctional coping composite subscale was equal to

1.09, suggesting that for each score increase of dysfunctional coping, there is a 1.09 score increase in PGD severity. Results for the multiple regression are shown in Table 9.

Table 9

Summary of Multiple Regression Analysis

	Unstandardized	Coefficients			
Variable	*B*	*SE*	β	*t*	*p*
Constant	11.085	1.979		5.59	.000**
Dysfunctional Coping	1.098	0.126	0.53	8.72	.000**
Type of Loss	-1.463	1.103	-0.08	-1.32	0.186

Note. Dependent variable: PGD Severity

Summary

The final analyses supported one of the four predicted hypotheses, although there were other significant results. Preliminary findings indicated that problem-focused, emotion-focused, and dysfunctional coping each had positive associations with PGD severity. Findings revealed that participants with higher PGD severity scores, who would qualify for a diagnosis of PGD, reported increased scores of dysfunctional coping, specifically with regard to self-distraction, denial, and self-blame. Those with higher scores on PGD severity had elevated scores on closeness to the deceased prior to the death loss. Analysis also demonstrated that dysfunctional coping could be used as a predictor to PGD severity. The only significant finding with regard to type of loss (i.e., unexpected and violent or natural loss) was that the natural loss group endorses venting more frequently than the unexpected and violent loss group.

CHAPTER FOUR

Discussion of Findings

This study was conducted to evaluate the severity of PGD, the influence of relationship to the deceased prior to the death loss, and coping strategies implemented to alleviate symptoms for individuals bereaved by unexpected or violent loss and natural loss. To examine these variables and answer the research questions, a brief demographic questionnaire, the Prolonged Grief Disorder 13-Revised (PG-13-R), the Brief COPE Inventory, and the Quality of Relationships Inventory-Bereavement Version (QRI-B) were utilized. Although the main analysis did not find significance for all of the research questions, this study contributes to the future of research on prolonged grief, type of loss, relationship to the deceased, and coping styles.

Correlational analysis suggested that the endorsement of problem-focused coping strategies increased PGD severity (r = .21). Specifically, active coping (r = .24), planning (r = .37), and instrumental support (r = .26) depicted positive associations with PGD severity. The preliminary findings demonstrated that as participants reported increases in scores of problem-focused coping strategies, the participants also indicated higher scores of PGD severity. Similarly, Zheng and Wuest (2021), provided that problem-focused coping demonstrated positive relationships with prolonged grief for Chinese parents. Furthermore, a study conducted by Fisher et al. (2020) revealed that as instrumental support increased, so did grief severity, noting that these findings are not causal, but associative. Moreover, Fisher et al. (2022) suggests that the use of instrumental support as a coping strategy for prolonged grief during COVID-19 resulted in additional stress as increased effort was required as compared to pre-pandemic times. Furthermore, instrumental support that was provided remotely rather than in-person during the pandemics decreased the effectiveness of the coping strategy (Majid et al., 2022). Interestingly,

Festinger (1954) argues that bereaved individuals seeking forms of social support may be engaging in social comparison. One could argue that each of these points offers rationale for the results depicting that as instrumental support increases, so does PGD severity.

Correlational analysis suggested that as conflict with deceased prior to the loss increased, so did the use of planning (r = .23) and instrumental support (r = .29). This finding suggests that conflict with the deceased prior to the loss results in the use of planning and instrumental support. Perhaps, those who experienced conflict with the deceased sought instrumental support and implemented planning due to the nature of the relationship or lack of resolution because these types of coping are used to develop solutions to a problem or modify the source of the stressor (Carver et al., 1989).

Surprisingly, emotion-focused coping demonstrated positive associations with PGD severity (r = .20). Although this finding is unexpected as it would be anticipated that emotion-focused coping would reduce PGD severity, a study conducted by Buqo et al. (2022) also found that approach coping described as "approaching reminders of the loss by thinking about them and then dwelling on the emotional response," which is similar to emotion-focused coping strategies, exacerbates complicated grief symptoms (p. 993). Additionally, a study that assessed coping strategies endorsed after newborn death suggested that increases in emotion-focused coping demonstrated a significant positive relationship with grief severity (r = .45) (Engler & Lasker, 2000). An additional explanation for the positive association between emotion-focused coping and PGD severity may be that the pandemic limited the opportunity of engaging in emotional support as described by Majid et al. (2022). Efforts to engage in emotion-focused coping may have resulted in additional stress, heightening PGD severity.

The emotion-focused subscales such as acceptance (r = -.24) and positive re-framing (r = -.23) depicted negative associations with PGD, suggesting that as participants endorsed acceptance and positive re-framing, PGD severity declined. Use of EFC is known to have different outcomes as time goes on. In the short-term, (i.e., directly after a terminal diagnosis), EFC functions as a buffer and provides space for an individual to accept traumatic events. If, however, EFC is used as a long-term coping mechanism the outcomes are poor as no action is taken to resolve issues or change the perspective for the individual. As expected, individuals that were able to accept the loss along with implementing positive re-framing, endorsed a decline in scores of PGD severity. Moreover, there was a positive association between conflict and emotional support (r = .19). This suggests that as scores increased in conflict with the deceased prior to the death, emotional support also increased. Likewise, closeness depicted positive associations with acceptance (r = .24) and religion (r = .14), which was similar to the findings of Buqo et al. (2022) that indicated approach-focused coping as a mediator of closeness to the deceased. However, closeness had a negative association with humor (r = -.17), suggesting that those who reported being close to the deceased prior to the loss, do not endorse humor as a coping strategy. Although the outcomes of correlational analysis suggest positive associations between problem-focused and emotion-focused coping strategies with PGD severity, Zheng and Wuest (2021) stated that coping strategies are not consistent across "all contexts or situations" (p. 114). This is consistent with the theory of coping by Folkman and Lazarus, who endorse the situational model of coping.

Preliminary findings determined a positive association between participant age and closeness to the deceased prior to the loss (r = .30; p = .000). However, in a similar but slightly different study, Sekowski and Prigerson (2021) suggested that neither interpersonal nor anaclitic

dependency to the deceased prior to the loss demonstrate significant relationships with age. The moderately positive correlation between age and closeness may be worth further exploration. Furthermore, correlational analysis demonstrated that as participant age increased, the use of humor as a coping strategy decreased (r = -.32, p = .000). This finding contradicts the results of Lund et al. (2009), which did not find a statistically significant relationship between the bereaved individual's age and use of humor as a coping strategy. Additionally, a study conducted by Keltner and Bonnano (1997) depicted no differences in the use of laughter for grief based on age. Perhaps, the correlation found in this study between age and humor suggests that as bereaved individuals age, they are less likely to engage in humor due to the seriousness of the loss.

The correlational analysis demonstrated a positive association between dysfunctional coping and PGD severity (r = .53). As expected, most of the dysfunctional coping subscales had positive associations with PGD severity including denial (r = .49), self-distraction (r = .43), self-blame (r = .57), substance abuse (r = .17), behavioral disengagement (r = .34), and venting (r = .26). These findings are similar to that of Wenn et al. (2019) who demonstrated that "suppression of emotions, thoughts, and images" along with the use of distractions were endorsed by bereaved participants with PGD (p. 146). Additionally, Fisher et al. (2022) notes that COVID-19 may have influenced the use of dysfunctional coping strategies due to quarantine guidelines. Furthermore, conflict demonstrated positive relationships with dysfunctional coping (r = .28), including the subscales: denial (r = .20), substance abuse (r = .20), behavioral disengagement (r = .26), self-blame (r = .26), and venting (r = .19).

This study sought to understand if there were differences between the type of loss and PGD severity (Research Question 1). For PGD severity, participants bereaved by unexpected or violent loss scored higher (M = 27.29) than participants bereaved by natural loss (M = 26.22).

However, further analysis did not compute any statistical differences between groups. This finding contradicts previous literature that concluded individuals bereaved by unexpected or violent loss experience increases in PGD severity (Boelen et al., 2015; Buckley et al., 2015; Doering et al., 2022). Furthermore, another study reported that unexpected loss was significantly related to PGD severity, yet there was a weak association (Sekowski & Prigerson, 2022). Similar to this study, Sekowski and Prigerson (2022) did not differentiate between the specific type of loss (e.g., homicide, suicide, warfare) in the analysis. This lack of differentiation between types of loss may have impacted these findings in this study.

The second research question sought to determine if coping strategies differed between unexpected or violent loss and natural loss. However, statistical analysis did not indicate a significant difference between type of loss and coping strategies. Further analysis indicated that venting was endorsed by individuals bereaved by natural loss. Prior studies have suggested a relationship between type of loss and coping; however, Knowles and O'Connor (2015) did not find a significant relationship between expected versus unexpected loss and coping strategies implemented to alleviate grief severity. The findings of this study align with a study conducted by Buckley et al. (2015), which suggested that the unexpectedness of loss did not indicate a significant relationship with regard to venting as a coping strategy. Thus, those who experienced natural loss may utilize venting more frequently than those bereaved by unexpected and violent death.

Results of this study suggested that participants who received a score that met the criteria for Prolonged Grief Disorder according to the DSM-5-TR (Prigerson et al., 2021), endorsed higher scores of dysfunctional coping strategies, confirming the third hypothesis for research question three. More specifically, participants who had a score of 30 or higher on the PG-13-R

endorsed higher scores for specific dysfunctional coping strategies such as self-distraction, denial, and self-blame. These results corroborate the findings by de la Morena and Cruzado (2013), who found that denial (p = .001) and self-blame (p = .004) demonstrated a significant relationship with prolonged grief. According to Fisher et al. (2020), denial and self-blame demonstrated association with grief severity. In a similar but slightly different vein, one study revealed that self-distraction is correlated with symptoms of CG in college students (Lipp & O'Brien, 2022). As noted previously, Maciejewski et al. (2016) states that there are no significant differences in criteria for PGD, CG, and PCBD. However, there is limited literature discussing the relationships between PGD severity and coping. The findings of this study not only support previous literature that dysfunctional coping strategies exacerbate PGD severity, but that denial, self-blame, and self-distraction specifically contribute to severity of prolonged grief.

In contrast to the fourth hypothesis of this study for research question four, participants that received scores within the criteria range for PGD (30 or higher) demonstrated increased scores in closeness to the deceased prior to the death loss. Bottomley and Neimeyer (2018) report that closeness to the deceased prior to the loss refers to the level of support, intimacy, and trust in the relationship. These findings demonstrate that those that felt closer to the deceased prior to the loss experienced would qualify for a diagnosis of PGD. On the other hand, conflict is described as the level of interpersonal friction occurring in the relationship prior to the death (Bottomley & Neimeyer, 2018). Perhaps, this discord before the death influences the severity of PGD for the bereaved individual. Interestingly, Smigelsky et al. (2020) suggested that both closeness and conflict contribute to grief severity. Moreover, these findings align with the work conducted by Sekowski and Prigerson (2022), which revealed that pre-loss closeness demonstrated a significant relationship with PGD severity (p = .001). Although the findings of the study are not

supportive of the hypothesis, they do offer further evidence to prior literature that indicates closeness prior to the death loss has a strong relationship with PGD severity. This information may provide greater context to mental health professionals working with bereaved individuals.

Lastly, results depicted that although type of loss is not a predictor of PGD severity, dysfunctional coping is a predictor of PGD severity. Similarly, Fisher et al. (2020) suggests that denial, behavioral disengagement, and self-blame (i.e., dysfunctional coping strategies) serve as predictors of grief severity. Similarly, a study conducted by Kokou-Kpolou et al. (2020) confirmed that dysfunctional coping is a predictor of Persistent Complex Bereavement Disorder. Other than Fisher et al. (2020) and Kokou-Kpolou et al. (2020), there is limited literature analyzing associations between coping strategies as defined by Carver (1997) and PGD based on the PG-13-R (Prigerson et al., 2021), emphasizing the importance of this finding. Dysfunctional coping as a predictor of PGD severity suggests that the use of coping strategies such as denial, self-distraction, substance abuse, behavioral disengagement, self-blame, and venting may be used as determinants of the prolonged grief that a bereaved individual may experience.

Implications of the Current Study

This study has contributed to a growing body of literature regarding Prolonged Grief Disorder. While there is an abundance of research that provides evidence on types of loss and PGD severity (Buckley et al., 2015; Burke & Neimeyer, 2013; Prigerson, 2004; Heeke et al., 2017), research regarding the impact of coping strategies on the severity of PGD is limited and warrants further investigation. The findings of this study provide counselors and counselor educators with valuable insight on PGD, coping, and the relationship to the deceased prior to the death loss.

Counselors that specialize in working with bereaved individuals can consider this information in treatment planning. For example, counselors may utilize the findings regarding dysfunctional coping to develop treatment interventions that target coping. More specifically, these treatment interventions may include assisting clients with replacing dysfunctional coping strategies with emotion-focused coping strategies such as acceptance and positive re-framing in order to reduce the symptoms and severity of PGD. Aligning with this recommendation, Szuhaney et al. (2021) suggests that mental health professionals working with prolonged grief may incorporate cognitive behavioral treatment (CBT) interventions and recommend that clients join support groups. Assisting individuals in employing positive coping strategies is a component of CBT (Burns & Nolen-Hoeksma, 1991). Moreover, recommending that clients with PGD join support groups could be considered as seeking emotional social support.

Dysfunctional coping strategies, including self-distraction, denial, and self-blame should be of focus in therapeutic treatment in order to reduce PGD severity. Counselors may assist clients with replacing dysfunctional coping strategies with problem-focused, which is perceived as the most beneficial coping strategy for those with PGD (de la Morena & Cruzado, 2013). Lastly, the finding that revealed that dysfunctional coping can be a predictor to PGD severity emphasizes the importance of counselors to assess and address coping strategies in therapy, ultimately resulting in the potential decrease of PGD severity.

Increasing counselor knowledge with regard to prolonged grief can allow for greater unconditional positive regard and empathy directed towards the client. For example, Lieberman (1993) suggests that mental health professionals that can reduce the psychological distance between themselves and the client increase a sense of identification and trust, in turn supporting

the effectiveness of therapy. Counselors may use this research in developing appropriate treatment plans along with their general approach working with bereaved individuals.

Additionally, findings from this study suggested that closeness prior to the death loss has a strong relationship with PGD severity. Counselors can utilize this information by validating and normalizing their client's experiences with PGD based on their closeness to the deceased. Furthermore, counselors may incorporate approaches that focus on meaning making wherein the bereaved individual re-defines their relationship with the deceased (Flesner, 2013). This can lead to greater understanding of the client's experiences with PGD. Secondly, meaning reconstruction is an intervention that may assist the bereaved individual in making sense of the death along with re-defining their relationship with the deceased (Neimeyer, 2019). Each of these interventions can be helpful for bereaved individuals that indicate a strong closeness to the deceased and may assist in reducing PGD severity.

Counselors rely on diagnostic criteria such as the DSM-5 in making an accurate diagnosis (Tyrer, 2018). According to CACREP (2016), counseling graduate programs must include "diagnostic process, including differential diagnosis and the use of current diagnostic classification systems" (Section 5, C. 2. d.). Counselor educators overseeing counseling graduate program ensure that CACREP standards are met for accreditation standards to be upheld. Thus, not only is it pertinent that counselors-in-training and counselors be able to assess for diagnosis but that counselor educators are up to date on diagnostic criteria to teach counselors-in-training. It is imperative that counselors and counselor educators understand the recent revisions of the DSM-5-TR (APA, 2022) including PGD in order to teach and practice conceptualizing clients with regard to diagnosis and treatment planning. Furthermore, CACREP (2016) stated that counselors-in-training utilize "evidence-based counseling strategies and techniques for

prevention and intervention" (Section 2, F. 1. j.). Counselor educators can teach about the findings of this study to counselors-in-training to provide a context of the experiences of individuals with prolonged grief along with emphasizing the importance of focusing on coping in treatment.

Research on prolonged grief can provide normalization and validation for bereaved individuals. One study suggests that "normal" grief lasts for a duration of six months to two years (Mughal et al., 2022); however, those that grieve for longer periods may feel aberrant. The results of a qualitative study that explored the experiences of adults bereaved in childhood suggested that support, therapy, and maintaining a connection with the deceased enhanced member's normalization of their grieving experience and provided validation of their grieving journeys (Koblenz, 2016). Generally speaking, grief research may provide bereaved individuals with great insight into their experiences. Moreover, the findings of this study may also assist bereaved individuals in developing awareness around coping strategies that impact grieving processes. The findings of this study indicated that individuals who would qualify for a diagnosis of PGD endorsed dysfunctional coping strategies. Bereaved individuals can use this information by considering their coping skills and then making efforts to modify coping strategies that may be prolonging their grief (i.e., denial, self-distraction, substance abuse, behavioral disengagement, self-blame, and venting). Furthermore, bereaved individuals that recognize the ineffectiveness of their coping strategies through prolonged grief may be more encouraged to pursue therapeutic treatment.

Several studies have considered the detrimental impact of grief on physical health (Kersting & Kroker, 2010; Stroebe et al., 2007). For example, prolonged grief has demonstrated effects on women's reproductive health (Kersting & Kroker, 2010). According to O'Connor

(2019), grief has detrimental implications on the body, often resulting in changing biomarkers; thus, grief research is pertinent to conceptualizing medical endpoints. Studies that focus on coping with grief with regard to resilience, suppression, or avoidance, could assist in understanding the physical implications of death loss (O'Connor, 2019). Thus, research on grief and more specifically, PGD, is necessary in the prevention of physical health ailments. Although this study did not reveal significant findings with regard to substance abuse as a coping strategy endorsed to alleviate prolonged grief, further research may examine the physical implications of substance use disorder for those experiencing extended grief.

Limitations

With regard to this study, generalizability is of concern as a limitation. Although participants indicated varying locations around the United States, the majority of participants were located in the southern United States. Thus, these findings cannot be generalized to all bereaved individuals in the United States. Moreover, the study did not consider bereaved individuals outside of the United States. Matthew (2021) compared western and eastern cultural rituals with regard to grief, suggesting that a lack of rituals may influence prolonged grief. It would be informative for future studies to incorporate samples with greater diversity with the potential of including cultural norms. This would allow for more insight into the experiences of individuals with PGD along with other influences that may impact the grieving process.

An additional limitation of the study is the reliance on self-report measures, which can pose a concern with regard to construct validity. Moreover, the utilization of survey as the method of data collection can also threaten internal validity as participants are responsible for their own interpretation of items. Additionally, recruitment of participants primarily relied on

distribution through social media channels, mental-health oriented listserv, and private practices, which may have limited the outreach. Heeke et al. (2017) notes that there is an overrepresentation of women in prolonged grief research due to women engaging in more emotional expression. The majority of the participants of the sample identified as white (n = 150) and or female (n = 151), demonstrating a lack of racial and gender diversity within the study. This limitation may have corresponded with the recruitment methods utilized, which included the distribution of a flyer through social media channels, mental health-oriented listservs, grief support groups, and counseling practices.

Thirdly, a limitation of this study was the lack of differentiation between unexpected and violent loss. While some research such as Nakajima et al. (2012) note that violent loss is considered sudden and unexpected, unexpected loss is not always violent. A study conducted by Bruera et al. (2015) analyzed predictors of unexpected loss with regard to palliative care, demonstrating that unexpected loss can be a result of a chronic illness. Some of the participants in this study who reported a natural loss selected that the death was unexpected. However, it is necessary to note that much of the literature surrounding unexpected or violent loss use these terms interchangeably. It is imperative that future work consider this component in order to recognize if those bereaved by unexpected loss that was due to natural circumstances utilize different coping strategies and or report deviations in PGD severity. It is specifically recommended that prospective studies focus on either unexpected or violent losses rather than including these terms together as this would provide further clarification with regard to the extensivity of grief experienced by bereaved individuals.

A fourth limitation was the low Cronbach's alpha on the emotion-focused composite subscale. The emotion-focused composite subscale indicated a Cronbach's alpha of .55, which is

lower than the acceptance reliability of .70 for research (Taber, 2018). The lower Cronbach's alpha for the emotion-focused composite subscale may have interfered with the inter-relatedness of items or heterogeneity of constructs (Tavakol & Dennick, 2011).

At the heart of this study were grief and death loss, which are sensitive subjects. Discussion of grief continues to be taboo and a vulnerable topic for many individuals. A study that analyzed bereaved individual's experiences with others when grieving a sudden loss revealed key themes including negative attitudes by others and social awkwardness (Pitman et al., 2018). The attitudes portrayed by others towards grieving individuals in addition to awkwardness of discussing grief could be considered a limitation of this study. This limitation was demonstrated during the recruitment process wherein some grief support group's administrators were unwilling to share this study's survey with their group members. Additionally, during this step of the study, a few bereaved individuals disclosed distress with relation to the survey. It is likely that grieving individuals refrained from starting or completing the survey due to fear of psychological distress or an unwanted emotional response.

Recommendations for Future Research

Despite the limitations of this study, the results have contributed to a growing body of literature regarding prolonged grief and unexpected or violent loss. Although a study conducted by Mathieu et al. (2022) suggested no significant differences in coping strategies based on the type of unexpected death, future studies should focus on the coping strategies and impact of the relationship to the deceased prior to the death loss for specific types of loss (e.g., homicide, suicide, accidents, chronic illness). Moreover, future research should examine differentiations between individuals bereaved by unexpected natural loss compared to unexpected violent loss. The findings of this study reinforce that closeness prior to the loss can influence PGD severity.

Some of the literature regarding grief mentions continuing bonds after the death loss. Closeness to the deceased has demonstrated a significant relationship with continuing bonds for individuals experiencing complicated grief (Hopf et al., 2022). Moreover, continuing bonds may be related to attachment style. A suggestion for research interested in exploring the relationship with the deceased prior to the death with relation to PGD severity may consider attachment styles with the deceased. There is some evidence indicating that attachment styles can impact the severity of PGD (Sekowski & Prigerson, 2022); however, due to the recent official introduction of PGD diagnostic criteria to the DSM-5-TR, further studies are warranted.

The findings of this study demonstrated positive relationships between PGD severity and dysfunctional coping. Participants that responded to the screening questionnaire with a diagnosis of a Substance Use Disorder were excluded from this study as this would potentially exacerbate the endorsement of the dysfunctional coping strategies. One study suggested that individuals experiencing complicated grief and who are diagnosed with a substance use disorder are less inclined to endorse adaptive coping strategies (Caparros & Masferrer, 2021). Thus, future studies should be conducted on bereaved individuals with PGD that rely on substances for coping.

Additionally, future research may examine age discrepancies with relation to PGD. To participate in this study, individuals had to be between the ages of 19-64. However, when collecting data, some individuals reached out to the researcher asking about the age criteria. Each of these individuals were over the age of 64. Furthermore, age demonstrated negative associations with humor, suggesting that as participants age increased, the use of humor as a coping strategy decreased. This warrants further investigation. A study that analyzed healthy coping and aging revealed that seeking social support was related to coping with the death of a

loved one (Dockendorff, 2014). It is suggested that future studies examine the differences in coping styles with relation to age and grief severity.

The results relied on participants that were only bereaved by one death loss and had not directly witnessed the death loss. Future research should consider the impact of multiple losses on PGD in addition to how witnessing death loss influences coping strategies. Szuhaney et al. (2021) notes that individuals that have lost more than one loved one may experience grief differently. Furthermore, Heeke et al. (2017) conducted a meta-analysis of the literature, which suggests that more than one loss may be associated with an increase in PGD severity. Thus, it would be interesting to see if multiple losses influenced PGD severity compared to those impacted by one loss.

An important consideration of current grief research is the impact of COVID-19 on severity and coping styles. Fisher et al. (2022) reviewed current grief literature and stated that the pandemic exacerbated grief severity along with influencing the coping strategies used. In this study, 4.2% of participants indicated a loss due to COVID-19 but analysis was not performed on differentiations based on specific type of loss. A study conducted by Majid et al. (2022) suggested that those that lost a loved one from COVID-19 utilized dysfunctional coping strategies more frequently than those bereaved by non-COVID deaths. Future studies should consider the influence of coping strategies utilized by those with PGD as a result of death loss due to COVID-19.

In the field of grief research, there is a point of contention with regard to PGD as a diagnosis for grieving individuals (Gravesen & Birkelund, 2021). Some argue that diagnostic criteria for grief creates a pathologizing of grief to which grief will no longer be viewed as a "normal" part of life (Prigerson et al., 2021). However, the findings of this study provide

evidence that prolonged grief is influenced by dysfunctional coping. The hope for this study is that by having severity ratings of PGD, future researchers will consider the diagnostic criteria as it can better equip mental health professionals in developing effective treatment modalities along with considering how other factors impact the grieving process.

Summary

This study sheds light on the coping strategies implemented by bereaved individuals that are experiencing heightened PGD severity. Specifically, the sample indicated the use of self-distraction, denial, and self-blame more frequently than any other coping strategy. This information regarding coping can assist counselors in creating treatment interventions that target dysfunctional coping with the intention of replacing such coping styles with more healthy coping strategies. Furthermore, the findings of this study demonstrated the importance of understanding closeness or conflict to the deceased prior to the death loss with relation to PGD severity. Bereaved individuals that meet the criteria for a DSM-5-TR diagnosis of Prolonged Grief Disorder demonstrated greater closeness to the deceased prior to the death loss and heightened scores of dysfunctional coping strategies. Overall, the findings of this study demonstrate the importance of clinicians understanding the recently added diagnosis of PGD to the DSM-5-TR. Moreover, insight on the coping strategies utilized by those with PGD and the relationship to the deceased prior to the death loss should be considered when developing treatment plans in order to alleviate PGD symptoms.

CHAPTER FIVE

Manuscript

Impact of Coping Strategies, Relationship to the Deceased, and Severity of Prolonged Grief Disorder on Individuals Bereaved by Unexpected Loss

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Impact of Coping Strategies, Relationship to the Deceased, and Severity of Prolonged Grief Disorder on Individuals Bereaved by Unexpected Loss

The loss of a significant other is an inevitable experience that results in a grief response. Prolonged Grief Disorder (PGD) is characterized as extensive yearning and longing for the deceased. The purpose of this study was to examine the severity of PGD among adults bereaved by unexpected or violent loss, assess the relationship with the deceased prior to death, and identify the coping strategies implemented to alleviate PGD. The sample included 190 bereaved individuals. Results indicated a statistically significant relationship between dysfunctional coping and PGD severity ($p < .001$). Self-distraction, denial, and self-blame demonstrated statistically significant relationships with PGD severity. Dysfunctional coping was determined to be a statistically significant predictor of PGD severity ($p < .001$). Increased closeness to the deceased prior to the death demonstrated higher scores of PGD severity ($p < .001$). This study can assist mental health professionals in developing effective treatment modalities for those with PGD.

Keywords: Prolonged Grief Disorder, unexpected loss, coping, bereavement

Introduction

The loss of a significant other, family member, or close friend is a momentous event that most people will experience at some point in their lifetime. According to the Centers for Disease Control and Prevention (CDC; 2022) over three million individuals died in the United States in 2020, impacting the mental health of hundreds of thousands of individuals. With the ongoing worldwide pandemic caused by COVID-19 along with other prominent causes of death in the United States such as heart disease, cancer, accidents, and stroke (CDC, 2022), developing an understanding of the implications of the type of death, grief severity, and symptomatology of disordered grief is pertinent to conceptualizing treatment for bereaved individuals.

Prolonged Grief Disorder (PGD) is located in the *Diagnostic and Statistical Manual of Mental Disorders,* fifth edition, text revision (DSM-5-TR) (APA, 2022) and has replaced other grief diagnoses that were previously used in classification systems. PGD is characterized by extensive yearning or longing for the deceased, along with cognitive, emotional, and behavioral symptoms (e.g., difficulty accepting the loss, difficulty moving on, and numbness) (Prigerson et al., 2009). Without appropriate therapeutic measures or implementation of effective coping strategies, PGD can extend the grieving process. For example, a study conducted by Boelen and Lenferink (2021) that compared bereaved individuals at one- and two-years post-loss, suggested that 71% of bereaved individuals that met criteria for PGD at one year were likely to have PGD in the second year. When considering PGD, it is critical to assess for other variables, such as the nature of the death and the relationship to the deceased, which can impact how one copes with the loss.

Unexpected death is described as sudden death that is not anticipated (Bruera et al., 2015). Cankay et al. (2009) stated that unexpected deaths can provoke heightened grief responses as there is less time to anticipate or prepare for the loss. Also referred to as unexpected death, violent death, which includes accidents, suicide, and homicide, has been correlated with grief severity (Kaltman & Bonanno, 2003). Unexpected or violent loss is consistently reported as a traumatic experience that increases the likelihood of psychiatric disorders (Keyes et al., 2014). For example, Djeltanik et al. (2020) found that approximately half of individuals bereaved from unnatural loss experienced symptoms of PGD. Furthermore, Buckley et al. (2015) discovered that six months post-loss, bereavement intensity was higher for those bereaved by a drawn-out or violent death. Furthermore, PGD has demonstrated implications with other mental health problems. Heeke et al. (2017) conducted a study that used meta-analyses to assess PGD and

revealed that individuals diagnosed with PGD (N = 923) that have been bereaved by an unexpected loss have high associations with suicidality (r = 0.41, p < 0.001). Smith and Ehlers (2021) found that of a sample of individuals bereaved by violent death, 20% of the sample experienced symptoms of PTSD and 24% of the sample reported symptoms of PGD. Examination of the relationship between unexpected or violent loss and PGD severity is pertinent in understanding the experiences of bereaved individuals. To process grief, bereaved individuals utilize coping strategies to alleviate symptoms that are a result of loss.

Coping is defined as "efforts to prevent or diminish threat, harm, and loss, or to reduce associated distress" (Carver & Connor-Smith, 2010, p. 685). Studies indicate that the cause of death as well as the relationship to the deceased affect the coping strategies implemented post-loss (Buckley et al., 2015; Kokou-Kpolou et al., 2020). Several studies have assessed the use of coping strategies that are used to combat symptoms of PGD. For example, one study suggested that caregivers diagnosed with PGD utilized problem-focused coping strategies such as active coping (M = 6.41; SD = 1.02), instrumental support (M = 6.41; SD = 1.06), planning (M = 6.32; SD = 1.01), and the emotion-focused coping strategy of acceptance (M = 6.20; SD = 1.29) (de la Morena & Cruzado, 2013). However, dysfunctional coping strategies such as denial (p = .003; η^2 = .98) and self-blame (p = .004, η^2 = .91) also increased the severity of PGD in caregivers (de la Morena & Cruzado, 2013). Furthermore, Fisher et al. (2020) found that individuals bereaved by a sudden or violent death used denial, behavioral disengagement, and self-blame, which resulted in negative bereavement outcomes and higher grief severity. Gaining insight into the coping strategies implemented by individuals with prolonged grief can assist in the development of treatment modalities that support coping strategies such as emotion-focused coping strategies

(i.e., that assist in regulating emotional distress related to the situation) and problem-focused coping strategies (i.e., developing solutions to resolve the stressor) (Carver et al., 1989).

The relationship as viewed through perceived closeness to the deceased or conflict with the deceased can influence the severity of symptoms and extensivity of grief. For example, Smigelsky et al. (2019) confirmed that the relationship closeness contributes to grief symptomatology. However, relationship conflict before death demonstrates a positive correlation with grief severity for bereaved college students with CG (Smigelsky et al., 2019). In relation to PGD, Heeke et al. (2017) suggested that the closeness of the relationship with the deceased was a significant correlate ($p < .001$) to PGD severity.

With the increase in disordered grief due to unexpected or violent loss, there continues to be an emphasis of PGD as a relevant diagnosis. The type of loss can influence the severity and extensivity of grief along with impacting how one copes with the grief. The purpose of this quantitative research study was to examine the severity of PGD among adults bereaved by unexpected or violent loss as compared to those bereaved by natural loss. Additionally, this study sought to assess the impact of the relationship to the deceased along with the coping strategies implemented to alleviate grief symptoms.

Research Questions

1. Is there a significant group difference between unexpected or violent loss and natural loss on the severity of PGD?
2. Is there a significant group difference between unexpected or violent loss and natural loss on coping strategies?
3. Is there a significant group difference between lower versus higher PGD severity on the endorsement of dysfunctional coping strategies?

4. Is there a significant group difference between lower versus higher PGD severity on the endorsement of closeness or conflict prior to the death loss?

Materials and Methods

Instruments

The PG-13-R evaluates the severity of prolonged grief with 10 items that require responses on a 5-point Likert scale that ranges from "not at all" to "several times a day", which yields a total score ranging from 10 to 50 (Prigerson et al., 2021). The scores of the 10 items are summed to indicate a total score, demonstrating the individual's level of severity of prolonged grief. For PGD severity, if the participant indicated a total score of 30 or above, the participant had met the criteria for PGD as suggested by Prigerson et al. (2021).

The Brief COPE Inventory assesses for problem-focused, emotion-focused, and dysfunctional coping strategies by having participants rate their coping experiences on a 28 item instrument with 14 subscales that indicate scores for the three coping strategies with responses ranging from "I haven't been doing this at all" to "I've been doing this a lot" on a 4-point Likert scale, resulting in a range from 2 to 8 (Carver, 1997). To determine the composite subscale scores of the coping strategies, the participant scores for problem-focused items (i.e., active coping, planning, and instrumental support), emotion-focused items (i.e., acceptance, emotional support, humor, positive re-framing, and religion), and dysfunctional items (i.e., denial, self-distraction, substance abuse, behavioral disengagement, self-blame, and venting) of the Brief COPE Inventory were categorized and summed aligning with the directions of other studies (Cooper et al., 2008); Su et al., 2015). Subscales were created by summing the two items per subscale (Carver, 1997).

The QRI-B instrument contains 13 items that measure two subscales (closeness or conflict) to assess the pre-death mourner-decedent relationship through a 4-point Likert scale wherein responses range from “not at all” to “very much” and scores are organized and summed for a total score to represent each subscale (i.e., closeness and conflict) (Bottomley & Neimeyer, 2018). The QRI-B closeness scale assesses the support and intimacy of the relationship prior to death (e.g., “To what extent could you count on this person to help you if a family member very close to you died”). The conflict scale recognizes the frequency and degree of interpersonal friction in the relationship prior to death (e.g., “How upset did this person sometimes make you feel?”) (Bottomley & Neimeyer, 2018).

Procedures

The survey was administered using Qualtrics software. The survey consisted of five parts which included a screening questionnaire, demographics survey, and three inventories; the PG-13-R inventory (Prigerson et al., 2021), the Brief COPE inventory (Carver, 1997), and the QRI-B (Bottomley & Neimeyer, 2018), with a total of 70 items that included multiple choice and slider questions. Participants agreed to an IRB approved information letter prior to accessing the survey. Participant responses were kept anonymous.

Demographic information was collected to provide a description of the sample. ANOVA and regression were performed to address the research questions and hypotheses of the study. Analyses were conducted with the demographic variables and main study variables (i.e., severity of PGD, coping style, and relationship to the deceased prior to the loss) to determine if the variables were related. Pearson’s *r* correlations were utilized to assess main study variables. A p-value of .01 was used to determine significance in order to reduce the threat of Type I error.

Participants

Participants for this study (N = 190) consisted of adults who were between the ages of 19-64 that experienced the loss of a partner/spouse, parent, child, or other significant person and considered themselves to be grieving. Participants were recruited through the use of snowballing and word-of-mouth through various counseling practices, grief support groups, mental health-oriented listservs, and social media channels. The study used two groups that were categorized after data collection was completed; one group consisted of participants that were bereaved by a natural loss and the second group was characterized by those that were bereaved by an unexpected or violent loss. For the purpose of this study, unexpected loss was defined as a loss occurring in an interval of less than one day with no forewarning (Kaltman & Bonanno, 2003). This study excluded individuals that were currently receiving inpatient services or residential treatment, and anyone diagnosed with a substance use disorder. Participants were excluded if they were bereaved by multiple losses or if they directly witnessed the death.

Statistical Analysis

The cleaning and screening of the data ensured that assumptions were met. Preliminary analyses of the data included an examination of assumptions. Descriptive and frequency statistics were conducted to identify the range, mean, median, and standard deviation of the data. All of the data met the standards for statistical assumptions and demonstrated normal distribution as outlined by Hair et al. (2010) who states that normal skewness lies between -2.00 and 2.00 in addition to kurtosis between -7.00 and 7.00. Data were analyzed using IBM SPSS (version 29). Each of the participants completed the PG-R-13, the Brief Cope Inventory, and the QRI-B. Descriptive statistics, independent samples t-test, simple linear regression, analysis of variance (ANOVA), and multiple regression were utilized for this study. Results are depicted in the provided charts.

Results

A total of 1,654 participants completed the survey in the spring of 2023. Of the participants, 1,464 were excluded for not meeting the requirements of the study. Descriptive analysis indicated a sample size of 190 participants that met all criteria for the study and who self-identified as being bereaved by a death loss that occurred at least 12 months prior to completing the survey. Participants indicated an average age of 37.39 (*SD* = 12.91). The median age of the sample was 41; 67.4% of the participants were under the age of 41 and 32.6% of the participants were over the age of 41. Majority of respondents (79.5%; *n* = 151) were female, most identified as heterosexual (84.2%; *n* = 160), and white (78.9%; *n* = 150). With regard to mental health disorders, 30% (*n* = 57) of participants indicated a mental disorder diagnosis. Specific descriptive statistics of participant relationship status and mental disorders are located in Table 1 with other demographic information.

Table 1

Demographic Characteristics of Study Population

Characteristic	*n*	%
Gender		
Male	38	20
Female	151	79.5
Transgender Male	1	0.5
Race		
Black or African American	16	8.4
White	150	78.9
Asian	9	4.7
Hispanic or Latino	9	4.7
Native American	5	2.6
Other	1	0.5
Age		
<41	128	67.4
>41	62	32.6
Relationship Status		

Single	37	19.5
Partnered	30	15.8
Married	91	47.9
Widowed	19	10
Divorced	11	5.8
Separated	2	1.1
Geographic Location		
Southern United States	105	55.3
Midwestern United States	31	16.3
Northeastern United States	24	12.6
Western United States	28	14.7
No response	2	1.1
Diagnosed with a Mental Disorder		
Yes	57	30
No	133	70
Mental Disorder Diagnosis		
Attention-Deficit Hyperactivity Disorder	8	8.6
Generalized Anxiety Disorder	35	37.6
Major Depressive Disorder	31	33.3
Grief	3	3.2
Bipolar Disorder	3	3.2
Posttraumatic Stress Disorder	9	9.7
Obsessive Compulsive Disorder	2	2.2
Trichotillomania	1	1.1
Premenstrual Dysphoric Disorder	1	1.1

Participant information regarding the type of loss is depicted in Table 2. Of the participants, 37.3% reported experiencing unexpected or violent loss (n = 71) and 62.6% reported bereavement by natural loss (n = 119). With regard to the relationship to the deceased, majority of the participants reported the loss of a parent (33.7%) or a spouse/partner (16.8%).

Table 2

Loss Characteristics of the Study Population

Characteristic	*n*	%
Given at least one day's notice prior to the loss		
No	71	37.4
Yes	119	62.6
Relationship to the deceased		

Spouse/Partner	32	16.8
Parent	64	33.7
Child	29	15.3
Sibling	14	7.4
Grandparent	11	5.8
Aunt/Uncle	6	3.2
Cousin	1	0.5
Close friend	28	14.7
Other	5	2.6
Type of death		
Homicide	4	2.1
Suicide	24	12.6
Accident	31	16.3
Natural disaster	8	4.2
Terrorism	3	1.6
Warfare	3	1.6
Natural causes	52	27.4
Chronic illness	56	29.5
COVID-19	8	4.2
Other	1	0.5

Results of the preliminary analysis suggested a weak positive relationship between the problem-focused coping composite subscale (r = .21; p = .000) and PGD severity. Specifically, each of the subscales that fall under problem-focused coping demonstrated significant positive relationships with PGD severity; active coping (r = .24; p = .000), planning (r = .37; p = .000), and instrumental support (r = .26; p = .000). These findings indicate that as each of the problem-focused coping strategies scores increase, so does PGD severity. The emotion-focused coping composite subscale demonstrated a significant positive relationship with PGD severity (r = .20; p = .000). With regard to emotion-focused coping, acceptance also had significant negative association with PGD severity (r = -.24, p = .000) and positive re-framing demonstrated a negative association with PGD severity (r = -.23; p = .000). These findings demonstrate that as participants endorsed acceptance and positive re-framing, PGD severity decreased.

Dysfunctional coping demonstrated a positive relationship with PGD severity (r = .53; p = .000). Denial (r = .49; p = .000), self-distraction (r = .43; p = .000), and self-blame (r = .57; p = .000) demonstrated positive associations with PGD severity. These preliminary findings suggest that as denial, self-distraction, and self-blame increase, so did PGD severity and there is greater strength in these relationships. Moreover, substance abuse (r = .17; p = .000), behavioral disengagement (r = .34; p = .000), and venting (r = .26; p = .000) depicted positive associations with PGD severity.

A positive correlation was demonstrated between conflict and the dysfunctional coping composite subscale (r = .28; p = .000), suggesting that increases in conflict prior to the death loss indicated a significant relationship with increases in dysfunctional coping. More specifically, positive relationships were found among conflict and denial (r = .20; p = .000), substance abuse (r = .20; p = .000), behavioral disengagement (r = .26; p = .000), self-blame (r = .26; p = .000), and venting (r = .19; p = .000). The higher the score of conflict with the deceased prior to the loss indicated increased scores in denial, substance abuse, behavioral disengagement, self-blame, and venting. With regard to problem-focused coping, there were positive associations among conflict and planning (r = .23; p = .000) and instrumental support (r = .29; p = .000). Moreover, emotion-focused coping strategies including emotional support (r = .19; p = .000) and humor (r = .30; p = .000) depicted positive associations with conflict. Thus, as conflict increased, participants endorsed increases in planning, instrumental support, and emotional support. There was a positive association between closeness and PGD severity (r = .33; p = .000), indicating that as closeness increases, so does PGD severity. Emotion-focused coping strategies including acceptance (r = .24; p = .000), humor (r = -.17; p = .000), and religion (r = .14; p = .000) demonstrated associations with closeness. As closeness to the deceased prior to the loss

increased, there was increased endorsement of acceptance and religion. However, as closeness increased, there was a decrease in the endorsement of humor as a coping strategy. Thirdly, the dysfunctional coping strategy of distraction demonstrated a weak positive correlation with closeness (r = .26; p = .000). The higher the scores of closeness to the deceased prior to the loss indicated increased use of distraction. Pearson r correlations are depicted in Table 3.

Table 3

Pearson's r Correlation Matrix of Main Study Variables

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
1. Age	-																					
2. Loss	.00	-																				
3. PGD Sev.	.08	-.06	-																			
4. PFC	-.10	.05	.21**	-																		
5. AC	-.05	.06	.24**	.78**	-																	
6. Plann.	.03	-.03	.37**	.79**	.53**	-																
7. IS	-.13	.02	.26**	.77**	.47**	.58**	-															
8. EFC	-.11	.10	.20**	.65**	.50**	.45**	.59**	-														
9. Accept.	.08	.05	-.24**	.23**	.28**	.09	.08	.46**	-													
10. ES	-.04	.02	.11	.61**	.46**	.44**	.64**	.72**	.29**	-												
11. Humor	-.32**	.07	.02	.23**	.13	.14*	.23**	.40**	-.04	.25**	-											
12. PR	-.16*	.12	-.23**	.66**	.38**	.28**	.29**	.44**	.36**	.30**	.20**	-										
13. Relig.	.09	-.01	-.07	.20**	.16*	.13	.12	.47**	.24**	.16*	-.08	.35**	-									
14. DC	-.14*	.04	.53**	.32**	.22**	.39**	.34**	.28**	-.27**	.20**	.26**	.01	-.11	-								
15. Denial	-.08	.03	.49**	.17*	.08	.28**	.27**	.15*	-.39**	.10	.14	-.09	-.01	.72**	-							
16. SD	-.05	-.11	.43**	.43**	.47**	.39**	.33**	.31**	.17*	.30**	.04	.11	-.05	.50**	.14	-						
17. SA	-.11	.08	.17*	.14	-.01	.21**	.18**	.18*	-.21**	.14*	.29**	.02	-.10	.74**	.41**	.08	-					
18. BD	-.13	.13	.34**	.06	-.02	.14*	.12	.09	-.38**	-.06	.31**	-.05	-.12	.70**	.48**	.00	.47**	-				
19. SB	-.10	.07	.57**	.29**	.23**	.32**	.37**	.46**	-.15*	.19**	.17*	-.02	-.08	.53**	.39**	.31**	.33**	.38**	-			
20. Vent.	-.11	.16*	.26**	.41**	.31**	.31**	.47**	.61**	.07	.46**	.15*	.15*	.00	.38**	.28**	.21**	.27**	.24**	.38**	-		
21. Conflict	-.07	.06	.08	.24**	.14	.23**	.29**	.27**	-.07	.19**	.30**	.08	.03	.28**	.20**	.11	.20**	.26**	.26**	.19**	-	
22. Closeness	.30**	-.12	.33**	.01	.07	.02	-.04	.12	.24**	.09	-.17*	-.02	.14*	-.01	-.05	.26**	-.12	-.13	.05	-.07	-.26**	-

Note. **p < 0.01. PGD Sev. = PGD Severity; PFC = Problem-Focused Coping; AC = Active Coping; Plann. = Planning; IS = Instrumental Support; EFC = Emotion-Focused Coping; Accept. = Acceptance; ES = Emotional Support; PR = Positive Re-framing; Relig. = Religion; DC = Dysfunctional Coping; SD = Self Distraction; SA = Substance Abuse; BD = Behavioral Disengagement; SB = Self Blame; Vent. = Venting

The independent samples t-test did not indicate a statistically significant difference between the unexpected or violent loss group (M = 27.29, SD = 9.00) and natural loss group (M = 26.22, SD = 8.15) for PGD severity; t(188) = .820, p = .413. Results suggest there is no difference in PGD severity based on scores above or below 30 as indicated on the PG-13-R between those bereaved by unexpected or violent loss and natural loss.

A second independent samples t-test did not indicate a statistically significant difference between the unexpected or violent loss group (M = 17.30, SD = 5.04) and the natural loss group (M = 17.85, SD = 4.35) with regard to problem-focused coping; t(188) = -.773, p = .440. The independent samples t-test did not indicate a statistically significant difference between the unexpected or violent loss group (M = 26.58, SD = 5.67) and the natural loss group (M = 27.69, SD = 4.57) for the emotion-focused coping composite subscale; t(188) = -1.388, p = .167. The independent samples t-test for the dysfunctional coping subscale did not indicate a statistically significant difference between the unexpected or violent loss group (M = 14.78, SD = 4.32) and the natural loss group (M = 15.14, SD = 4.14); t(188) = -.563, p = .574. However, the independent samples-test suggested a statistically significant difference between the unexpected or violent loss group (M = 4.16, SD = 1.44) and the natural loss group (M = 4.67, SD = 1.50) with regard to venting; t(188) = -2.26, p = .025. This result suggests that the natural loss group endorsed venting more frequently than the unexpected or violent loss group.

To determine if a relationship exists between PGD severity and coping strategies, a one-way ANOVA was conducted. PGD severity scores were placed into two groups with group 1 containing scores below 30 (n = 118) and group 2 composed of scores above 30 (n = 72). The omnibus test yielded statistically significant results, F(1,188) = 25.51, p < .001, indicating that the group that reported a score of 30 or above on PGD severity endorsed the dysfunctional

coping composite subscale. The effect size was small, $\eta^2 = .12$. Results of this ANOVA are depicted in Table 4.

Table 4

Summary of One-Way ANOVA for Coping Strategies

Variable	Independent Variable	Sum of Squares	*df*	Mean Square	*F*	*p*	η^2
Dysfunctional Coping	Between Groups	407.956	1	407.956	25.51	.000**	0.12
	Within Groups	3006.697	188	15.993			
	Total	3414.653	189				
Problem-Focused Coping	Between Groups	63.392	1	63.394	2.78	0.097	0.01
	Within Groups	4282.085	188	22.777			
	Total	4345.479	189				
Emotion-Focused Coping	Between Groups	103.409	1	103.409	3.72	0.055	0.02
	Within Groups	5218.591	188	27.275			
	Total	5322	189				

Note. **Results significant at the .01 level.

An additional ANOVA yielded statistically significant results, $F(1,188) = 21.52$, $p < .001$, indicating that participants that scored above 30 on the PG-13-R ($M = 5.80$, $SD = 1.65$) endorsed higher scores in self-distraction coping strategies compared to participants that scored lower than 30 on the PG-13-R ($M = 4.63$, $SD = 1.70$). A second follow-up ANOVA revealed statistically significant results $F(1,188) = 23.62$, $p < .001$, indicating that participants that scored above 30 on the PG-13-R ($M = 3.94$, $SD = 1.45$) endorsed higher scores of denial than those that scored below 30 on the PG-13-R ($M = 2.97$, $SD = 1.25$). A third ANOVA yielded statistically significant results, $F(1,188) = 48.30$, $p < .001$ suggesting that participants that scored above 30 on the PG-13-R ($M = 5.13$, $SD = 1.84$) scored higher on self-blame than participants that scored below 30 on the PG-13-R ($M = 3.47$, $SD = 1.43$). Results of this ANOVA are depicted in Table 5.

Table 5

Summary of One-Way ANOVA of Dysfunctional Coping Subscales

Subscale	Independent Variable	Sum of Squares	*df*	Mean Square	*F*	*p*	η^2
Self-Distraction	Between Groups	61.208	1	61.208	21.52	.000**	.10
	Within Groups	534.608	188	2.844			
	Total	595.816	189				
Denial	Between Groups	42.062	1	42.062	23.62	.000**	.11
	Within Groups	334.702	188	1.78			
	Total	376.763	189				
Substance Abuse	Between Groups	1.803	1	1.803	0.61	0.437	.00
	Within Groups	557.992	188	2.968			
	Total	559.795	189				
Behavioral Disengagement	Between Groups	20.667	1	20.667	9.63	0.002	.05
	Within Groups	403.233	188	2.145			
	Total	423.9	189				
Venting	Between Groups	10.679	1	10.679	4.93	0.028	.02
	Within Groups	407.263	188	2.166			
	Total	417.942	189				
Self-Blame	Between Groups	123.86	1	123.86	48.30	.000**	0.2
	Within Groups	482.035	188	2.564			
	Total	605.895	189				

Note. **Results significant at the .01 level.

An ANOVA was performed to address if participants with higher scores of conflict or closeness with the deceased prior to the loss experienced heightened PGD severity. The omnibus test yielded statistically significant results, $F(1,188) = 16.23$, $p < .001$ with a medium effect size ($\eta^2 = .08$), indicating that participants that scored 30 or higher on the PG-13-R ($M = 26.87$, $SD = 5.78$) reported higher scores of closeness to the deceased than participants that scored lower than 30 ($M = 23.11$, $SD = 6.51$). The results of the ANOVA are in Table 6.

Table 6

Summary of One-Way ANOVA of QRI-B and PGD Severity

Variable	Independent Variable	Sum of Squares	*df*	Mean Square	*F*	*p*	η^2
Closeness	Between Groups	633.799	1	633.799	16.23	.000**	.08
	Within Groups	7341.443	188	39.05			
	Total	7975.242	189				
Conflict	Between Groups	22.257	1	22.257	1.66	0.198	.01
	Within Groups	2512.485	188	13.364			
	Total	2534.742	189				

Note. **Results significant at the .01 level.

A multiple regression was performed to analyze whether participants bereaved by unexpected or violent loss that engaged in dysfunctional coping strategies endorsed increased PGD severity. Results indicated that of the predictor variables, only the dysfunctional coping composite subscale significantly predicted PGD severity, $F(2,187) = 38.55$, $p < .001$, $R^2 = .292$. The unstandardized coefficient, *B*, for the dysfunctional coping composite subscale was equal to 1.09, suggesting that for each score increase of dysfunctional coping, there is a 1.09 score increase in PGD severity. Results for the multiple regression are depicted in Table 7.

Table 7

Summary of Multiple Regression Analysis

Variable	Unstandardized *B*	Coefficients *SE*	β	*t*	*p*
Constant	11.085	1.979		5.59	.000**
Dysfunctional Coping	1.098	0.126	0.53	8.72	.000**
Type of Loss	-1.463	1.103	-0.08	-1.32	0.186

Note. Dependent variable: PGD Severity

Discussion

This study was conducted to evaluate the severity of PGD, the influence of relationship to the deceased prior to the death loss, and coping strategies implemented to alleviate symptoms for individuals bereaved by unexpected or violent loss and natural loss.

Correlational analysis suggested that the endorsement of problem-focused coping strategies increased PGD severity. Specifically, instrumental support depicted positive associations with PGD severity. Zheng and Wuest (2021) found that problem-focused coping demonstrated positive relationships with prolonged grief for Chinese parents. Moreover, Fisher et al. (2022) suggests that the use of instrumental support as a coping strategy for prolonged grief during COVID-19 resulted in additional stress as increased effort was required as compared to pre-pandemic times. Instrumental support that was provided remotely rather than in-person during the pandemics decreased the effectiveness of the coping strategy (Majid et al., 2022). Each of these points offers rationale for the results depicting that as instrumental support increases, so does PGD severity. Correlational analysis suggested that as conflict with deceased prior to the loss increased, so did the use of planning and instrumental support. Perhaps, those who experienced conflict with the deceased sought instrumental support and implemented planning due to the nature of the relationship or lack of resolve because these types of coping are used to develop solutions to a problem or modify the source of the stressor (Carver et al., 1989).

Surprisingly, emotion-focused coping demonstrated positive associations with PGD severity. Although this finding is unexpected as it would be anticipated that emotion-focused coping would reduce PGD severity, a study conducted by Buqo et al. (2022) also found that "approaching reminders of the loss by thinking about them and then dwelling on the emotional response," which is similar to emotion-focused coping strategies, exacerbates complicated grief

symptoms (p. 993). An additional explanation for the positive association between emotion-focused coping and PGD severity may be that the pandemic limited the opportunity of engaging in emotional support as described by Majid et al. (2022). Efforts to engage in emotion-focused coping may have resulted in additional stress, heightening PGD severity. There was a positive association between dysfunctional coping and PGD severity. As expected, most of the dysfunctional coping subscales had positive associations with PGD severity including denial, self-distraction, self-blame, substance abuse, behavioral disengagement, and venting. These findings are similar to that of Wenn et al. (2019) who demonstrated that "suppression of emotions, thoughts, and images" along with the use of distractions were endorsed by bereaved participants with PGD (p. 146). Additionally, Fisher et al. (2022) notes that COVID-19 may have influenced heightened use of dysfunctional coping strategies since individuals were limited with coping strategies due to quarantine guidelines.

This study sought to understand if there were differences between the type of loss and PGD severity. There were no statistical differences between groups. This finding contradicts previous literature that concluded individuals bereaved by unexpected or violent loss experience increases in PGD severity (Buckley et al., 2015; Doering et al., 2022). Furthermore, another study reported a weak association between unexpected loss and PGD severity (Sekowski & Prigerson, 2022). However, Sekowski and Prigerson (2022) did not differentiate between the specific type of loss (e.g., homicide, suicide, warfare) in the analysis. The lack of differentiation between types of loss may have impacted the findings in this study.

With regard to the second research question, findings suggested that venting was endorsed by individuals bereaved by natural loss. Noted as a rarity in grief literature, Knowles and O'Connor (2015) also found no relationship between the type of loss and coping strategies

implemented to alleviate grief severity. The findings of this study align with a study conduct by Buckley et al. (2015), which suggested that the unexpectedness of loss did not indicate a significant relationship with regard to venting as a coping strategy. Thus, those who experienced natural loss may utilize venting more frequently than those bereaved by unexpected and violent death.

Results of this study suggested that participants who received a score that met the criteria for PGD according to the DSM-5-TR (Prigerson et al., 2021), endorsed higher scores of dysfunctional coping strategies including self-distraction, denial, and self-blame. These results corroborate the findings by de la Morena and Cruzado (2013), who found that denial (p = .001) and self-blame (p = .004) demonstrated significant relationships with prolonged grief. Fisher et al. (2020) also found that denial and self-blame demonstrated association with grief severity. However, there is limited literature discussing the relationships between PGD severity and coping. The findings of this study not only support previous literature that dysfunctional coping strategies exacerbate PGD severity, but that denial, self-blame, and self-distraction specifically contribute to severity of prolonged grief.

Findings for research question four suggested that participants that received scores within the criteria range for PGD demonstrated increased scores in closeness to the deceased prior to death. However, Smigelsky et al. (2020) suggested that both closeness and conflict contribute to grief severity. These findings align with the work conducted by Sekowski and Prigerson (2022), which revealed that pre-loss closeness demonstrated a significant relationship with PGD severity (p = .001). Although the findings of the study are not supportive of the hypothesis, they do offer further evidence to prior literature that indicates closeness prior to the death loss has a strong relationship with PGD severity.

Lastly, results depicted that although type of loss is not a predictor of PGD severity, dysfunctional coping is a predictor of PGD severity. Similarly, Fisher et al. (2020) suggests that denial, behavioral disengagement, and self-blame serve as predictors of grief severity. Few studies analyze coping strategies and PGD severity, emphasizing the importance of this finding. Dysfunctional coping as a predictor of PGD severity suggests that the use of coping strategies such as denial, self-distraction, substance abuse, behavioral disengagement, self-blame, and venting may be used as determinants of the prolonged grief that a bereaved individual may experience.

Implications of the Current Study

This study has contributed to a growing body of literature regarding PGD. While there is an abundance of research that provides evidence with regard to types of loss and PGD severity (Buckley et al., 2015; Heeke et al., 2017), research assessing the impact of coping strategies on the severity of PGD is limited and warrants further investigation. The findings of this study provide counselors and other mental health professionals with valuable insight on PGD, coping, and the relationship to the deceased prior to the death loss. This information should be considered in treatment planning. For example, treatment interventions may include assisting clients with replacing dysfunctional coping strategies with problem-focused or emotion-focused coping strategies in order to reduce the symptoms and severity of PGD, which is perceived as the most beneficial coping strategy for those with PGD (de la Morena & Cruzado, 2013). Dysfunctional coping strategies, including self-distraction, denial, and self-blame should be of focus in therapeutic treatment in order to reduce PGD severity. Lastly, the finding that revealed that dysfunctional coping can be a predictor to PGD severity emphasizes the importance of assessing and addressing coping strategies in therapy, ultimately resulting in the potential

decrease of PGD severity. Furthermore, increasing knowledge with regard to prolonged grief can allow for greater unconditional positive regard and empathy directed towards the client. Additionally, findings from this study suggested that closeness prior to the death loss has a strong relationship with PGD severity. This information can validate and normalize bereaved individual's experiences with PGD based on their closeness to the deceased. Furthermore, mental health professionals may incorporate approaches that focus on meaning making wherein the bereaved individual redefines their relationship with the deceased (Flesner, 2013). This can lead to greater understanding of the client's experiences with PGD. This intervention can be helpful for bereaved individuals that indicate a strong closeness to the deceased and may assist in reducing PGD severity. Bereaved individuals can use these findings by considering their coping skills and then making efforts to modify the coping strategies that may be prolonging their grief. Furthermore, bereaved individuals that recognize the ineffectiveness of their coping strategies through prolonged grief may be more encouraged to pursue therapeutic treatment.

Several studies have considered the detrimental impact of grief on physical health (Stroebe et al., 2007). According to O'Connor (2019), grief has detrimental implications on the body, often resulting in changing biomarkers; thus, grief research is pertinent to conceptualizing medical endpoints. Studies that focus on coping with grief with regard to resilience, suppression, or avoidance, could assist in understanding the physical implications of death loss (O'Connor, 2019). Research on grief and more specifically, PGD, is necessary in the prevention of physical health ailments.

Limitations

With regard to this study, generalizability is of concern. Although participants indicated varying locations around the United States, the majority of participants were located in the

southern United States. Moreover, the majority of the participants of the sample identified as white and or female, demonstrating a lack of racial and gender diversity within the study. Thus, these findings cannot be generalized to all bereaved individuals. This limitation may have corresponded with the recruitment methods utilized and warrants further investigation. It would be interesting for future studies to incorporate samples with greater diversity with the potential of including cultural norms. An additional limitation of the study is the reliance on self-report measures, which can pose a concern with regard to construct validity. The utilization of survey as the method of data collection can also threaten internal validity as participants are responsible for their own interpretation of items. Thirdly, a limitation of this study was the lack of differentiation between unexpected and violent loss. While some research such as Nakajima et al. (2012) note that violent loss is considered sudden and unexpected, unexpected loss is not always violent. A study conducted by Bruera et al. (2015) noted that unexpected loss can be a result of a chronic illness. Some of the participants in this study who reported a natural loss selected that the death was unexpected. Much of the literature surrounding unexpected or violent loss use these terms interchangeably. It is specifically recommended that prospective studies focus on either unexpected or violent losses rather than including these terms together as this would provide further clarification with regard to the extensivity of grief experienced by bereaved individuals.

At the heart of this study were grief and death loss, which are sensitive subjects. Pitman et al. (2018) suggested that negative attitudes by others and social awkwardness contribute to individual's processes of grieving sudden loss. These components may serve as limitations for this study. Perhaps grieving individuals refrained from starting or completing the survey due to fear of psychological distress or an unwanted emotional response.

Future Recommendations for Research

Despite the limitations of this study, the results have contributed to a growing body of literature regarding prolonged grief and unexpected or violent loss. Future studies should focus on the coping strategies and impact of the relationship to deceased prior to the death loss for specific types of loss (e.g., homicide, suicide, accidents, chronic illness) in addition to comparing unexpected natural loss to unexpected violent loss with consideration of age. Moreover, research may examine if Substance Use Disorder contributes to the extensivity of PGD. Lastly, it would be informative to see if multiple losses influenced PGD severity compared to those impacted by one loss.

An important consideration of current grief research is the impact of COVID-19 on severity and coping styles. A review of the literature conducted by Fisher et al. (2022) discusses that the pandemic exacerbated grief severity along with implicating the use of coping strategies. Future studies research might consider the influence of coping strategies utilized by those with PGD as a result of death loss due to COVID-19.

This research study provides insight on the coping strategies implemented by bereaved individuals that are experiencing heightened PGD severity. Furthermore, the bereaved individuals reported the use of self-distraction, denial, and self-blame more frequently than any other coping strategy. This information regarding coping can assist counselors in creating treatment interventions that target dysfunctional coping with the intention of replacing such coping styles with healthier coping strategies. The findings of this study emphasize the importance of understanding the level of closeness or conflict to the deceased prior to the death loss, which can influence PGD severity. Bereaved individuals that meet the criteria for a DSM-5-TR diagnosis of PGD demonstrated greater closeness to the deceased prior to the death loss and

heightened scores of dysfunctional coping strategies. Overall, the findings of this study demonstrate the importance of understanding PGD as a diagnosis along with the multiple factors that can affect an individual's ability to process grief. These findings can validate and normalize the extensivity and disordered grief that bereaved individuals experience, further encouraging them to seek therapeutic services.

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Appendix A

AUBURN
UNIVERSITY
COLLEGE OF EDUCATION

DEPARTMENT OF
SPECIAL EDUCATION, REHABILITATION, AND COUNSELING

INFORMATION LETTER
for a Research Study entitled:
"Impact of Coping Strategies, Relationship to the Deceased, and Severity of Prolonged Grief Disorder on Individuals Bereaved by Unexpected Loss"

You are invited to participate in a research study to assess the impact of Prolonged Grief Disorder severity, relationship to the deceased, and coping strategies implemented by those bereaved by unexpected loss. The study is being conducted by Emma Quadlander, M.S., ALC, NCC under the direction of Dr. Jill Meyer, professor in the Auburn University Department of Special Education, Rehabilitation, and Counseling. You were selected as a possible participant because you indicated that you have experienced an unexpected death loss, more than one year has passed since that loss, and you are between the ages of 19 and 64.

What will be involved if you participate? If you decide to participate in this research study, you will be asked to complete a Qualtrics survey. The survey is available online. Your total time commitment will be approximately twenty minutes.

Are there any risks or discomforts? There is some psychological risk of participating in this study as participants are asked to respond to questions related to their loss as a result of death. To minimize these risks, we will provide you with mental health resources, including grief support groups, and crisis hotlines prior to and after the completion of the survey. You are responsible for any costs associated with medical treatment.
Grief Support Groups: GriefShare, griefshare.org; My Grief Angels, mygriefangels.org
Crisis Hotlines: Crisis Text Line, text HOME to 741741; National Suicide and Crisis Hotline, call 988; Substance Abuse and Mental Health Services Administration National Helpline, 1-800-622-4357

Are there any benefits to yourself or others? There are no direct benefits for participants. If you participate in this study, you can expect to engage in a survey that could provide insight into grief outcomes. You may feel like you have contributed to your community by providing this information. Additionally, this information will help to further treatment approaches for bereaved individuals. We cannot promise you that you will receive any or all of the benefits described.

Will you receive compensation for participating? Upon completion of the survey, you will be offered the opportunity to submit your name into a raffle for one of 20 Amazon gift cards worth $25.00

Are there any costs? There is no cost associated with your participation in this study.

If you change your mind about participating, you can withdraw at any time during the study by closing the survey. Your participation is completely voluntary. Your decision about whether to participate or to stop participating will not jeopardize your future relations with Auburn University, the College of Education.

ALLOW SPACE for AU IRB STAMP

Your privacy will be protected. Any information obtained in connection with this study will remain anonymous. Information obtained through your participation may be used to fulfill an educational requirement, presented at a professional conference, and potentially be published in a academic journals.

If you have questions about this study, *please* contact the principal investigator, Emma Quadlander, at elq0002@auburn.edu. Dr. Jill Meyer, the faculty advisor principal investigator, is also available to answer questions through email at jmm0079@auburn.edu.

If you have questions about your rights as a research participant, you may contact the Auburn University Office of Research Compliance or the Institutional Review Board by phone (334)-844-5966 or e-mail at IRBadmin@auburn.edu or IRBChair@auburn.edu.

HAVING READ THE INFORMATION PROVIDED, YOU MUST DECIDE WHETHER OR NOT YOU WISH TO PARTICIPATE IN THIS RESEARCH STUDY. BY SELECTING "I AGREE", YOU ARE CONSENTING TO PARTICIPATION IN THE STUDY.

The Auburn University Institutional Review Board has approved this Document for use from 02/07/2023 to ----------
Protocol # 22-525 EX 2212

Appendix B

Screening Questionnaire

1. Are you currently receiving treatment at an inpatient or residential facility (e.g., a facility that you stay at overnight and are continuously monitored)?
    a. Yes
    b. No
2. Are you diagnosed with a Substance Use Disorder (e.g., drug or alcohol addiction)?
    a. Yes
    b. No
3. Have you experienced more than one death loss within the last year?
    a. Yes
    b. No
4. Of the loss that you have experienced, did you directly observe the death?
    a. Yes
    b. No
5. Have you experienced the loss of a loved one, family member, close friend, or other significant person within the last year?
    a. Yes
    b. No
6. Are you between the ages of 19 and 64?
    a. Yes
    b. No

Appendix C

Demographic Questionnaire

1. What is your age? (Fill in the blank)
2. Which of following best describes your gender identity?
    a. Female
    b. Male
    c. Genderqueer/ Gender Nonconforming
    d. Transgender Male
    e. Transgender Female
    f. Prefer not to answer
3. Which of these best describes your current sexual orientation?
    a. Asexual
    b. Bisexual
    c. Gay/Lesbian
    d. Heterosexual/Straight
    e. Pansexual
    f. Queer
    g. A sexual orientation not listed here
    h. Prefer not to answer
4. What is your race?
    a. Black/African
    b. White
    c. Asian

    d. Hispanic/Latino
    e. Native American
    f. Pacific Islander
    g. Other
5. What is your highest degree?
    a. Grade school completed
    b. Some high school (no diploma)
    c. High school graduate
    d. Some college credit (no degree)
    e. Trade/technical/vocational training
    f. Associate degree
    g. Bachelor's degree
    h. Graduate degree
6. What is your relationships status?
    a. Single
    b. Partnered
    c. Married
    d. Widowed
    e. Divorced
    f. Separated
7. What is your location?
    a. Southern United States (e.g., TX, GA, SC)
    b. Midwestern United States (e.g., IL, KS, ND)

c. Northeastern United States (e.g., NY, PA, RI)

d. Western United States (e.g., CA, AZ, NM)

8. Have you been diagnosed with a mental disorder?

    a. Yes

        i. Please write your diagnosis here: (Fill in the blank)

    b. No

9. Please indicate your relationship to the loved one, family member, close friend, or other significant person that is deceased.

    a. Spouse/Partner

    b. Parent

    c. Child

    d. Close Friend

    e. Other Significant Person (please specify): (Fill in the blank)

10. Were you given at least one day's notice that the loss was going to occur?

    a. Yes

    b. No

11. Was the loss of this individual violent (i.e., loss due to suicide, homicide, accident)?

    a. Yes

    b. No

12. Please indicate the type of death:

    a. Homicide

    b. Suicide

    c. Accident

d. Natural disaster
e. Terrorism
f. Warfare
g. Natural causes
h. Chronic illness
i. Other (please specify): (Fill in the blank)

13. Please indicate the response that best reflects your experience related to grief. “Intense yearning/longing or preoccupation with the deceased that you experience”
    a. Never
    b. Seldom
    c. Sometimes
    d. Frequently
    e. Always

Appendix D

Incentives Survey

By submitting my email I verify that I would like to be entered into the raffle for one of 20, Amazon gift cards worth $25.00.

Email:

Appendix E

Prolonged Grief Disorder (PG-13-Revised)

Holly G. Prigerson, Ph.D., Jiehui Xu, M.S., Paul K. Maciejewski, Ph.D.

Q1. Have you lost someone significant to you? (Yes/No)

Q2. How many months has it been since your significant other died? (Fill in the blank)

For each item below, please indicate how you currently feel?

Since the death, or as a result of the death…	Not at all	Slightly	Somewhat	Quite a bit	Overwhelmingly
Q3. Do you feel yourself longing or yearning for the person who died?	1	2	3	4	5
Q4. Do you have trouble doing the things you normally do because you are thinking so much about the person who died?	1	2	3	4	5
Q5. Do you feel confused about your role in life or feel like you don't know who you are anymore (i.e., feeling like that part of you has died)?	1	2	3	4	5
Q6. Do you have trouble believing that the person who died is really gone?	1	2	3	4	5
Q7. Do you avoid reminders that the person who died is really going?	1	2	3	4	5
Q8. Do you feel emotional pain (e.g., anger, bitterness, sorrow) related to the death?	1	2	3	4	5
Q9. Do you feel that you have trouble re-engaging in life (e.g., problems engaging with friends, pursuing interests, planning for the future)?	1	2	3	4	5
Q10. Do you feel emotionally numb or detached from others?	1	2	3	4	5

Q13. Have the symptoms above caused significant impairment in social, occupational, or other important areas of functioning? (Yes/No)

Appendix F

Brief COPE

Carver, 1997

	I haven't been doing this at all	A little bit	A medium amount	I've been doing this a lot
1. I've been turning to work or other activities to take my mind off things.	1	2	3	4
2. I've been concentrating my efforts on doing something about the situation I'm in.	1	2	3	4
3. I've been saying to myself "this isn't real".	1	2	3	4
4. I've been using alcohol or other drugs to make myself feel better.	1	2	3	4
5. I've been getting emotional support from others.	1	2	3	4
6. I've been giving up trying to deal with it.	1	2	3	4
7. I've been taking action to try to make the situation better.	1	2	3	4
8. I've been refusing to believe that it has happened.	1	2	3	4
9. I've been saying things to let my unpleasant feelings escape.	1	2	3	4
10. I've been getting help and advice from other people.	1	2	3	4
11. I've been using alcohol or other drugs to help me get through it.	1	2	3	4
12. I've been trying to see it in a different light, to make it seem more positive.	1	2	3	4
13. I've been criticizing myself.	1	2	3	4
14. I've been trying to come up with a strategy about what to do.	1	2	3	4
15. I've been getting comfort and understanding from someone.	1	2	3	4
16. I've been giving up the attempt to cope.	1	2	3	4

17. I've been looking for something good in what is happening.	1	2	3	4
18. I've been making jokes about it.	1	2	3	4
19. I've been doing something to think about it less, such as going to movies, watching TV, reading, daydreaming, sleeping, or shopping.	1	2	3	4
20. I've been accepting the reality of the fact that it has happened.	1	2	3	4
21. I've been expressing my negative feelings.	1	2	3	4
22. I've been trying to find comfort in religion or spiritual beliefs.	1	2	3	4
23. I've been trying to get advice or help from other people about what to do.	1	2	3	4
24. I've been learning to live with it.	1	2	3	4
25. I've been thinking hard about what steps to take.	1	2	3	4
26. I've been blaming myself for things that happened.	1	2	3	4
27. I've been praying or meditating.	1	2	3	4
28. I've been making fun of the situation.	1	2	3	4

Appendix G

Quality of Relationships Inventory – Bereavement Version

Bottomley and Neimeyer, 2018

Directions: Please select the item that corresponds with each question to describe your relationship with you deceased loved one.

	Not at all	A little	Quite a bit	Very much
1. How often did you need to work to avoid conflict with this person?	1	2	3	4
2. To what extent could you count on this person for help with a problem?	1	2	3	4

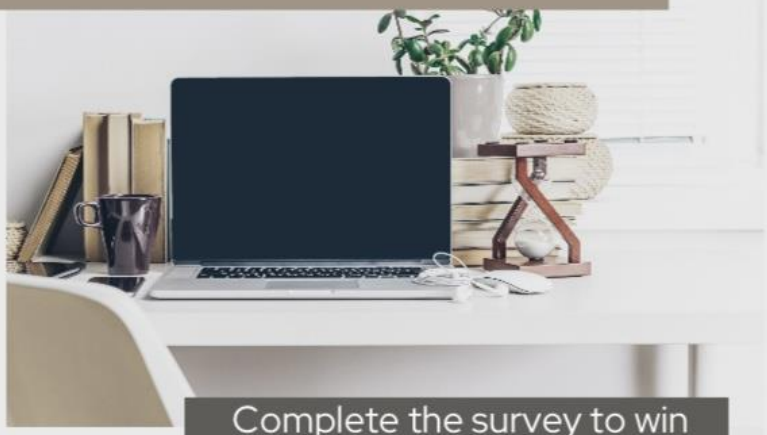
3. How upset did this person sometimes make you feel?	1	2	3	4
4. How much did this person make you feel guilty?	1	2	3	4
5. To what extent could you count on this person to help you if a family member very close to you died?	1	2	3	4
6. How positive a role did this person play in your life?	1	2	3	4
7. How significant was this relationship in your life?	1	2	3	4
8. If this person were still alive, how close would you relationship be with this person in 10 years?	1	2	3	4
9. If this person were still alive, how much would you miss this person if the two of you could not see or talk with each other for a month?	1	2	3	4
10. To what extent could you count on this person to listen to you when you were angry with someone else?	1	2	3	4
11. How angry did this person make you feel?	1	2	3	4
12. To what extent could you really count on this person to distract you from your worries when you feel under stress?	1	2	3	4
13. How often did this person try to control or influence your life?	1	2	3	4

Appendix H

Have you experienced the loss of a loved one?

The Auburn University Institutional Review Board has approved this Document for use from 12/05/2022 to ---------- Protocol # 22-525 EX 2212

The purpose of this dissertation study is to understand the impact of coping strategies, relationship to the deceased, and Prolonged Grief Disorder!



Conducted by Emma Quadlander, M.S., ALC, NCC

Complete the survey to win one of 20 Amazon gift cards worth $25.00

Access the survey through the QR code below:

Participants must be between the ages of 19-64 and have experienced a death. The survey should take 20 minutes to complete and all information is anonymous.
If you have questions, please email elq0002@auburn.edu

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Table 5

Pearson's r Correlation Matrix of Main Study Variables

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
1. Age	-																					
2. Loss	.00	-																				
3. PGD Sev.	.08	-.06	-																			
4. PFC	-.10	.05	.21**	-																		
5. AC	-.05	.06	.24**	.78**	-																	
6. Plann.	.03	-.03	.37**	.79**	.53**	-																
7. IS	-.13	.02	.26**	.77**	.47**	.58**	-															
8. EFC	-.11	.10	.20**	.65**	.50**	.45**	.59**	-														
9. Accept.	.08	.05	-.24**	.23**	.28**	.09	.08	.46**	-													
10. ES	-.04	.02	.11	.61**	.46**	.44**	.64**	.72**	.29**	-												
11. Humor	-.32**	.07	.02	.23**	.13	.14*	.23**	.40**	-.04	.25**	-											
12. PR	-.16*	.12	-.23**	.66**	.38**	.28**	.29**	.44**	.36**	.30**	.20**	-										
13. Relig.	.09	-.01	-.07	.20**	.16*	.13	.12	.47**	.24**	.16*	-.08	.35**	-									
14. DC	-.14*	.04	.53**	.32**	.22**	.39**	.34**	.28**	-.27**	.20**	.26**	.01	-.11	-								
15. Denial	-.08	.03	.49**	.17*	.08	.28**	.27**	.15*	-.39**	.10	.14	-.09	-.01	.72**	-							
16. SD	-.05	-.11	.43**	.43**	.47**	.39**	.33**	.31**	.17*	.30**	.04	.11	-.05	.50**	.14	-						
17. SA	-.11	.08	.17*	.14	-.01	.21**	.18**	.18*	-.21**	.14*	.29**	.02	-.10	.74**	.41**	.08	-					
18. BD	-.13	.13	.34**	.06	-.02	.14*	.12	.09	-.38**	-.06	.31**	-.05	-.12	.70**	.48**	.00	.47**	-				
19. SB	-.10	.07	.57**	.29**	.23**	.32**	.37**	.46**	-.15*	.19**	.17*	-.02	-.08	.53**	.39**	.31**	.33**	.38**	-			
20. Vent.	-.11	.16*	.26**	.41**	.31**	.31**	.47**	.61**	.07	.46**	.15*	.15*	.00	.38**	.28**	.21**	.27**	.24**	.38**	-		
21. Conflict	-.07	.06	.08	.24**	.14	.23**	.29**	.27**	-.07	.19**	.30**	.08	.03	.28**	.20**	.11	.20**	.26**	.26**	.19**	-	
22. Closeness	.30**	-.12	.33**	.01	.07	.02	-.04	.12	.24**	.09	-.17*	-.02	.14*	-.01	-.05	.26**	-.12	-.13	.05	-.07	-.26**	-

Note. **p < 0.01. PGD Sev. = PGD Severity; PFC = Problem-Focused Coping; AC = Active Coping; Plann. = Planning; IS = Instrumental Support; EFC = Emotion-Focused Coping; Accept. = Acceptance; ES = Emotional Support; PR = Positive Re-framing; Relig. = Religion; DC = Dysfunctional Coping; SD = Self Distraction; SA = Substance Abuse; BD = Behavioral Disengagement; SB = Self Blame; Vent. = Venting.