The Dissertation Committee for Ryan Patrick Douglas Certifies that this is the approved version of the following dissertation:

An Examination of the Relationship between Attachment and Loss: The Role of Meaning Making

Committee:

Christopher McCarty, Supervisor

Deborah Jacobvitz

Keenan Pituch

Alissa Sherry

Leslie Moore

An Examination of the Relationship between Attachment and Loss: The Role of Meaning Making

by

Ryan Patrick Douglas, B.A.; M.Ed.

Dissertation

Presented to the Faculty of the Graduate School of

The University of Texas at Austin

in Partial Fulfillment

of the Requirements

for the Degree of

Doctor of Philosophy

The University of Texas at Austin

August 2014

Dedication

I dedicate my dissertation work to all my friends and family members who have lost loved ones and suffered through grief over that loss. Lea Ann, my parents and parents-in-law, my grandparents, Rob, my sisters-in-law, my niece and nephew, Beth, and others were often on my mind as I explored the topic of grief over these last few years.

Acknowledgements

I owe a great deal of thanks and gratitude to the following individuals:

First to my partner Lea Ann for her unending patience, support, encouragement, and love; for distracting me at the right times and reminding me of what is truly important; and for sharing this adventure of graduate school and parenthood with me. I am grateful beyond words. To my son for being an amazing human being, taming my anxiety about this project and helping me keep my priorities in line, I thank you and hope I can return the favor in years to come.

To my advisor Dr. Chris McCarthy for his levity, knowledge, patience, support, and wisdom. To my mentors and teachers: Dr. Leslie Moore, Dr. Alissa Sherry, Dr. Frank Richardson, Dr. David Drum, and Dr. Michele Guzman for their support, encouragement, and for guiding my academic interests in important directions. I owe special thanks to Dr. Keenan Pituch for his patience and willingness to help me work through statistical issues, and for providing clear and useful instruction that allowed me learn statistical methods that I initially though were incomprehensible. To my supervisors: Dr. Hammel, Dr. Renner, Dr. White, Dr. Laby, Dr. Childs, Dr. Damer, and Dr. Hill for their guidance and wisdom and for having more confidence in me than I had in myself at times.

Thanks to my classmates Jensen, Mercedes, Alicia, Katie, Drew, Sally, Colleen and many others for their concern, help, gossip, and for sharing this crazy process with me these last few years. To my friends Rob, Bree, Beth, Liz, and Amy for their encouragement, curiosity, and for reminding me that there is life after school. To my brothers-in-law for distracting me with comic books and mixology at just the right times.

An enormous thanks goes to my parents, Ron and Linda, for always being there when I need them, helping me be who I am today, and doing all they can to help us get through the last few years of graduate school. I also owe a great deal of thanks to my

mother-in-law Carol for her encouragement, support, and humor. Without your help this last year would have been a lot more stressful and a lot less productive. Thank you.

Finally, to my sisters Lauren, Erin, and Megan, some of my best friends in the world, for their support, love, and childcare; for reminding me that not everyone in the world thinks or talks like a psychologist; and for helping me have a life outside of school. You are all appreciated and loved.

An Examination of the Relationship between Attachment and Loss: The Role of Meaning Making

Ryan Patrick Douglas, Ph.D.

The University of Texas at Austin, 2014

Supervisor: Christopher McCarthy

This dissertation examined the relationship between attachment insecurity and complicated grief by testing a path model of variables that were hypothesized to mediate this relationship. Three meaning-making variables were tested as potential mediators: benefit-finding, sense-making, and positive reappraisal. First, a series of principal components analyses were performed to determine the factor structure of these meaning-making variables. After these constructs were identified, a series of hierarchical regression analyses were conducted to determine the unique contribution of each of the primary variables in predicting either complicated grief or one of the meaning-making variables. As hypothesized, some of the attachment and meaning-making variables were highly associated with complicated grief. Attachment insecurity variables were also associated with some of the meaning-making variables suggesting that attachment may have some influence on how individuals use meaning-making strategies in the midst of a

loss. These variables were then entered into a path analysis that accounted for other relevant risk factors. It was found that, contrary to the main hypothesis, the meaning-making variables did not appear to mediate the relationship between attachment insecurity and complicated grief. Multiple regression was used to determine the relative impact of meaning-making and attachment variables on complicated grief because these variables have not been previously included in one statistical model. The results suggested that both meaning-making and attachment insecurity variables can play an important role as risk factors for complicated grief and that these relationships are still present after accounting for the closeness that an individual reported towards the deceased. It was concluded that both sets of variables, attachment and meaning-making, should be included in models of the development of complicated grief and that both may have clinical implications in terms of how to approach counseling for individuals struggling with complicated grief. More research on this topic is needed to look at similar research questions within specific populations. It was also suggested that in the future, researchers need to find better ways to measure meaning-making constructs because the current findings suggest that meaning-making may be even more multifaceted than has been suggested in previous literature.

Table of Contents

List of Tables

List of Figures

INTRODUCTION

Bereavement is a universal stressor that most individuals will face more than once in their lifetime. While this experience is shared by all, reactions to bereavement are varied. These grief reactions are shaped by many factors including personality traits, specific characteristics of the loss, cultural variables, and the mourner's history of mental health and previous loss. Grief is often painful and difficult, but it is also typically includes resilience, effective coping, and a relatively timely return to normal activities (Bonanno, Wortman, and Neese, 2004). However, in a significant subset of reported cases, grief is more intense or chronic and can involve intense yearning, unremitting sadness, sleeplessness, weight change, and a variety of other severe symptoms (Bonanno, Wortman, and Neese, 2004; Zhang, El-Jawahri, and Prigerson, 2006). These types of grief reactions, often called complicated, persistent, complex, prolonged, or chronic grief, can be detrimental to an individual's mental health (Gillies and Neimeyer, 2006; Bonanno et al., 2007, Prigerson et al., 2009).

Complicated grief can have many consequences for sufferers. For instance, individuals who suffer from complicated grief are more likely to experience suicidality (Latham and Prigerson, 2004). In one study the self-reported rate of suicide attempts (direct or indirect) for complicated grievers was 9% (Szanto et al., 2006). This is much higher than the typical average of less than 1% in the general population. Grieving individuals in general also have a heightened risk of developing additional mental health problems like major depression (Stroebe and Stroebe, 1993) or anxiety disorders (Jacobs,

Hansen, Kasl, Ostfeld, Berkmann, & Kim 1990), and have a heightened mortality risk due to stress-related conditions like heart disease and accidents (Stroebe and Stroebe, 1993).

While the problem of severe grief is significant, research indicates that individuals struggling with complicated grief are more likely to benefit from counseling than those experiencing normal grief (Bonanno and Lillienfeld, 2008). Therefore, it is important to understand the problem of severe grief in greater detail in order to help clinicians develop better interventions for the diverse population of individuals facing severe grief. A great deal of research has been conducted in order to better identify complicated grief reactions and understand risk factors associated with these reactions (Neimeyer, Prigerson, and Davies, 2002; Prigerson et al., 2009; Lobb et al., 2010). Scholars working from constructivist (Gillies and Neimeyer, 2006), cognitive-behavioral (Boelen, Van Den Lout, and Van Den Bout, 2006), and attachment (Bowlby, 1980; Parkes, 2006; Parkes and Prigerson, 2010) theoretical frameworks have all contributed to understanding the problems of complicated grief.

One important risk factor for complicated grief that has been identified is insecure attachment. The link between attachment and grief severity is an important one to understand because the quality of one's attachment relationships influences how they perceive and cope with significant relational events in life (Bowlby, 1969/1982; Bretherton and Munholland, 1999). Insecure attachment, especially attachment anxiety, has been associated with more severe grief reactions (Shear and Shair, 2005; Lobb et al.,

2010; Jerga, Shaver, and Wilkinson, 2011).

While this link is present in the literature, researchers have not examined potential mediators that might help explain the relationship between attachment characteristics and grief reactions. Attachment, as a core part of human development, is related to many aspects of psychological functioning, and therefore might be associated with a number of potential mediators.

One specific aspect of coping with bereavement that could potentially mediate this relationship is meaning-making or one's ability to make sense of and find benefits in highly stressful situations. Like attachment, meaning-making has been identified as a key aspect of adjustment to bereavement (Lobb et al. 2010). Meaning-making processes like being able to make sense of, find positive aspects in, or grow as the result of a major loss are associated with less severe grief reactions (Gillies and Neimeyer, 2006).

Meaning-making processes seem relevant to attachment because attachment-based working models of self and other shape how we engage in and make sense of our relational world (Collins, Ford, Guichard and Allard, 2006). Therefore, it seems reasonable to suggest that attachment might play an important role in our ability to make meaning of highly stressful events. This is especially pertinent for bereavement because the death of a loved one can represent a major threat to a relationship with an attachment figure. The purpose of the present study is to investigate whether or not finding meaning in the midst of bereavement might be one way that attachment influences grief outcomes.

REVIEW OF THE LITERATURE

The primary focus of this dissertation will be on examining the relationship between attachment security and grief severity. It is hoped that including control variables and potential mediator variables in a model of the relationship between attachment and grief will contribute to a better understanding to the relationship between these variables. Several factors that might contribute to this relationship will be examined, and the primary focus will be on how meaning-making processes might contribute to our understanding of the relationship between attachment and grief.

Before reviewing these variables it is helpful to establish a basic model of how the primary constructs might be related. Such a model will help guide the presentation of information in this section, and serve as a reference point as the complete model of interrelationships is developed. The basic model depicted below in Figure 1 shows the potential mediating role of meaning-making in shaping grief outcomes with attachment insecurity as a predictor variable. According to this model, one reason that grief severity may be higher in individuals with insecure attachment is that these individuals are less successful at finding meaning in or making sense of their loss. In other words the model indicates that attachment insecurity influences an individual's ability to fully integrate and cope with their loss, which may contribute to more severe grief symptoms. In the following review all of the components in Figure 1 will be reviewed.

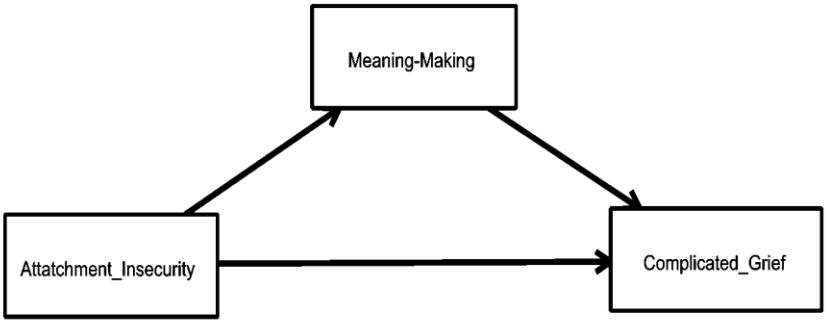


Figure 1. The proposed relationships between attachment, meaning-making, and grief

The path model presented in Figure 1 provides a general outline of the key relationships in this study. Other pertinent variables will be discussed and added to the model, and a full model will be presented later in this review. Before exploring the more complete model with all control variables, it is important to establish the importance of the key relationships depicted in Figure 1. The first variable in the model above that requires explanation is grief severity, which will be operationalized as complicated grief symptomatology. In the following section complicated grief will be reviewed, and the relationship between complicated grief and attachment will be examined.

A Brief Overview of Grief

Before discussing severe grief reactions it is important to establish that grief itself is not pathological. A normal grief reaction typically involves a relatively short period of distress followed by adjustment after a significant loss. Grief can include a range of cognitive, emotional, and behavioral changes commonly including emotional numbness,

sadness, anger, guilt, insomnia, and loss of appetite among many other symptoms (American Psychiatric Association, 2000; 2013).

Theories of normal grief have included stages of grieving (Kubler-Ross, 1969), grieving tasks (Worden, 1991), or typical coping strategies (Gillies and Neimeyer, 2006; Stroebe and Schut, 1999) that people experience during the grieving process. Psychological theories of grief date back to Freud in his essay "Mourning and Melancholia" (1917), and have continued to be developed to the present day. A change in the understanding of bereavement has occurred over time including the shift away from theories that imply a final detachment from the deceased towards theories that involve continuing bonds with the deceased (Stroebe and Schut, 2005). These theories address the lack of finality in the grieving process, and the possibility that individuals still relate to the deceased in different ways after their loss as opposed to needing to replace the deceased with another important figure in order to move on from grief. Other theoretical controversies exist about the nature of grief such as whether or not severe grief is distinct from depression (Prigerson et al, 2009). It is clear then that grief theories have not answered every question about the grieving process. Grief is quite complex, varying greatly across individuals and cultures, and cannot be reduced to one set of stages or one type of coping. Though this complexity exists, it is useful to briefly review some current theories of grief in order to ground the contribution of this study into theory.

One recent theory of grief that has gained support in the literature is the dual process model presented by Stroebe and colleagues (Stroebe and Schut, 1999). The dual

process model proposes that coping with bereavement requires not only mourning and coming to terms with the loss, but also requires the griever to oscillate between coping with their loss and carrying on in their normal life tasks. This creates two sets of stressors that the griever must face: those associated with grief and those associated with carrying on with their life. Stroebe and colleagues propose that this process of oscillation helps ensure that both sets of needs get met, preventing individuals from becoming chronic grievers through focusing only on the loss or becoming avoidant grievers by focusing only on other life tasks. The dual process model has a great deal of room for individual differences, and emphasizes that healthy coping occurs when individuals are able to move back and forth between grief-related tasks and normal life tasks.

Another recent theory called meaning reconstruction theory has been proposed by Neimeyer and colleagues, and is based on constructivist theory (Gillies and Neimeyer, 2006). In summary, this theory focuses on the importance of the narrative process in making sense of and finding meaning in loss. Grief is conceptualized as a process that requires the individual to assimilate their loss into their worldview by creating narratives about the meaning of the loss or of the deceased person. If the loss does not fit with the individual's worldview then a process of accommodation is thought to occur in which the individual's worldview is altered. Through this process individuals are thought to adjust to the loss. This theory will be described in more detail later in this review.

Regardless of the theory of grief, it is true that continued feelings of sadness and longing or other changes from normal functioning may remain after a period of months to

years after a significant loss. It is generally agreed that in a normal grieving process these changes do not create significant long-term impairment for the individual in terms of family, work, or other social functioning (Neimeyer, Burke, Mackay, and Stringer, 2010). However, sometimes grief is unremitting and/or severe which can become pathological to the point that it disrupts normal functioning for an extended period of time (Prigerson et al., 2009). These complicated grief reactions pose a more serious problem to mental health that may require intervention (Latham and Prigerson, 2004; Prigerson et al, 2009). For the purposes of the current study it is this more severe form of grief symptomatology that will be the focus.

Complicated Grief

Complicated grief, which is also called persistent complex bereavement, prolonged grief disorder, chronic grief, or unresolved grief, is thought to be a distinct syndrome that occurs in a portion of bereaved individuals (Horowitz et al, 1997; Prigerson et al., 2009). Complicated grievers have difficulty coping with bereavement to the point that grief has a significant impact on their daily life for months and years after the death of a loved one. Complicated grief reactions typically involve intense yearning for the deceased or refusal to accept the loss along with intense sadness, isolation, and avoidance that do not appear to lessen even after a period of months after the death (Prigerson et al., 2009). Factors such as the age of the deceased, violence, and the suddenness of death along with personality variables such as insecure attachment or mental health history are all thought to play a role in the development of complicated

grief (Neimeyer, Prigerson, and Davis, 2002). It is estimated that 10 to 20% of bereaved individuals will suffer from a complicated grief reaction (Bonanno, Wortman, and Neese, 2004; Zhang, El-Jawahri, and Prigerson, 2006). Complicated grief is associated with a range of mental health problems, social and occupational problems, and the lessening of personal well-being (Ott, 2003; Zhang, El-Jawahri, and Prigerson, 2006).

Though complicated grief has similarities to depression and posttraumatic stress disorder, researchers have found that only a portion of individuals who experience complicated grief meet criteria for those disorders (Prigerson and Maciejewski, 2005). In order to better identify and serve individuals facing complicated grief reactions, researchers have proposed empirically-derived diagnostic criteria for complicated grief (Horowitz et al, 1997; Prigerson et al., 2009).

Using item response theory, Prigerson et al. (2009) deciphered twelve main symptoms of complicated grief and created diagnostic criteria proposed for use by practitioners. Some of these symptoms are: difficulty accepting the loss, difficulty trusting others since the loss, avoidance of reminders of the loss, emotional numbness, and feeling that life is empty or meaningless. In another study, Horowitz et al. (1997) separated proposed symptoms into two categories: intrusive and avoidant symptoms. These symptoms include intrusive memories or fantasies about the deceased, distressing yearnings for the deceased to still be alive, severe feelings of loneliness, and loss of interest in normal responsibilities. In addition to symptoms, both sets of diagnostic criteria propose that for an individual to be diagnosed with complicated grief the loss they

suffered must not be recent. Six months is a commonly used amount of time passed since the death of a loved one in studies of complicated grief (Prigerson et al., 2009).

Researchers propose that using more specific criteria to identify traumatic or complicated responses to bereavement will help clinicians better identify clients who need treatment (Prigerson et al. 2009). Different sets of proposed diagnostic criteria have been published in the literature with varying degrees of empirical support. In response to these proposals the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) included a diagnosis of Persistent Complex Bereavement Disorder as a diagnosis that can be given as a type of Other Specified Trauma - and Stressor-Related Disorder. This diagnosis is based on the proposed diagnostic criteria discussed above although experts (Boelen and Prigerson, 2012) have criticized the DSM-5 diagnosis for lack of empirical foundation. While there is controversy over how to formalize the diagnosis of complicated grief reactions, there is consensus among researchers that complicated grief reactions occur, and that individuals suffering form complicated grief can benefit from clinical intervention.

This is important because a number of reviews and meta-analyses have suggested that grief therapy has significantly lower effectiveness than psychotherapy in general with effect sizes ranging from .11 to .43 (Bonanno and Lillienfeld, 2008; Neimeyer, 2000; Kato and Mann, 1999; Allumbaugh and Hoyt, 1999). Additionally, Anderson (1999) found that 38% of participants in grief therapy would have most likely been better off with no treatment (as cited in Neimeyer, 2000), which is much higher than the rate in

the general population of therapy clients. However, in another meta-analysis, Currier, Neimeyer, and Berman (2008) found that grief therapy in studies targeted at individuals in severe distress was significantly more effective than therapy in studies that did not select subjects based on symptom severity. Therefore, it seems that individuals suffering from complicated grief may benefit from counseling or other forms of intervention whereas other grievers may not need psychological intervention.

For the purposes of the current study, grief severity will be operationalized as the degree with which participants endorse complicated grief symptoms. In order to assess this grief severity Prigerson et al.'s (2009) measure, the Prolonged Grief Disorder – 13, will be used. This measure is based on empirically derived symptoms of prolonged grief disorder, which is a prominent conceptualization of complicated grief. This measure will be described in the method section. Recent data has indicated that although complicated grief is thought of as a distinct syndrome that has diagnostic utility, this syndrome can be understood as being the extreme end of a grief continuum. This appears to be the case because the primary differences between normal grief and complicated grief are in duration and intensity (Holland, Neimeyer, Boelen, and Prigerson, 2008). Therefore, it makes sense to conceptualize the severity of grief on one continuum with heightened complicated grief symptomatology being the severe end of an individual's reaction to loss.

I will now turn to established risk factors of complicated grief with particular emphasis on attachment as an important personality variable to consider in the

development of complicated grief symptomatology.

Risk Factors for Complicated Grief

As previously noted, a number of risk factors are associated with the development of complicated grief. Some of these risk factors have been found consistently in empirical studies of complicated grief, while others have been found less consistently. Variables that have been identified as risk factors for complicated grief include the nature of the death (traumatic, unexpected, or sudden), the presence of concurrent stressors, a history of mental health issues in the mourner, the level of dependency on the deceased, the quality of the relationship to the deceased, the inability to make sense or meaning from the loss, and a history of attachment insecurity (Lobb et al., 2010). Other factors that have been suggested as risk factors, but which have not been consistently associated with grief outcomes include time since the loss, gender, socioeconomic status, neuroticism, intellectual ability, and cultural or religious background (Stroebe, Folkman, Hansson, and Shut, 2006).

It makes sense that a great number of variables all contribute to how one reacts to bereavement, and that grief reactions can vary in intensity across the lifespan of one individual based on that individual's set of internal resources and current set of external stressors. Therefore, determining who is at risk of developing a more severe grief reaction is a complex undertaking.

Several of the risk factors listed above are important to assess in the present study. Attachment and meaning-making coping have already been identified as key constructs

to consider in understanding grief severity, and will be reviewed in detail later. Some of the variables that serve as risk factors are related to attachment such as the relationship quality with the deceased and dependency on the deceased. Evidence for the important role of dependency on the deceased comes from a longitudinal study of partner loss (Bonanno et al., 2002). Since this variable seems to be important in the context of romantic relationships but may not be as important in other contexts it will not be included in the current model. However, relationship quality with the deceased has been measured in studies of partner loss (Carr et al., 2000) and studies that did not specify a type of relationship to the deceased (Jerga, Shaver, and Wilkinson, 2011). In both types of studies greater perceived quality of the relationship to the deceased served as risk factor in the development of complicated grief.

Other risk factors that are important to assess are the time since the loss, the history of mental health issues, and the nature of the loss. Time since the loss is important to assess because in a normal grief reaction the severity of grief symptomatology decreases as time passes. Another reason to assess the time since the loss is its potential role in predicting the type of coping strategies that the bereaved uses to cope with the loss (Gillies and Neimeyer, 2006). This role of time since the loss will be covered in the section on meaning-making.

The nature of the loss in terms of suddenness and whether the loss was perceived as traumatic is a strong predictor of complicated grief symptoms. In one study individuals with a close family member that committed suicide developed complicated grief

symptoms that were twice as severe on average than the symptoms of more distant relatives (Mitchell, Kim, Prigerson, and Mortimer-Stephans, 2004). Similar results have been found for relatives of individuals who died in the September 11th terrorist attacks (Shear, Jackson, Essock, Donahue, and Felton, 2006).

Finally, an individual's history of mental health issues plays an important role in the development of complicated grief symptoms. Specifically, individuals with a history of anxiety disorders, depression, suicide attempts, and childhood separation anxiety have all been found to have a higher risk of developing complicated grief symptoms (Lobb et al., 2010; Stroebe, Folkman, Hansson, and Schut, 2006; Vanderwerker, Jacobs, Parkes, and Prigerson, 2006). For this reason it is important to assess whether individuals have a previous mental health diagnosis, have received mental health services, or have taken psychoactive medication.

The combination of the variables described above and the primary variables of interest in this study by no means represent every factor that influences the course of grief, but assessing these variables will hopefully provide an adequate method of differentiating grief outcomes. In the next section attachment theory and research will be reviewed with specific emphasis on the relationship between attachment and grief.

Attachment Theory

Before discussing the importance of attachment in the grief process, some basic information about attachment theory will be reviewed. Attachment is an adaptive process that begins in infancy and continues throughout the lifespan (Bowlby, 1969/1982; 1973).

Attachment theory originated with British psychoanalyst John Bowlby in the second half of the twentieth century as he sought to explain behaviors and internal states associated with children's separations from their primary caregivers. Contrary to the prevailing psychoanalytic concepts of his time, which emphasized fantasy was a major source of distress in children, Bowlby asserted that the quality of the actual relationship with the caregiver was of primary importance in shaping children's' behavior toward caregivers and emotional ties with others (Bretherton, 1992).

Building on this theory Ainsworth, Blehar, Waters, and Wall (1978) conducted research with infants in whom they deciphered patterns of attachment present between an infant and his or her caregiver. These categories are secure, anxious/resistant, and avoidant. They represent different behavioral strategies that children employ to get attachment needs met and/or ways that children cope with their caregivers not meeting these needs (Ainsworth et al., 1978; Bowlby, 1973; Weinfield, Sroufe, Egeland & Carlson, 1999). Attachment behavior is thought to alert the caregiver to the child's needs in order to ensure the child's survival; however, differences in the caregiver's behavior towards the child elicit different attachment-related behaviors in the child (Bowlby, 1969/1982; 1973; Ainsworth et al., 1978).

Attachment bonds are theorized to differ from other relationships in that they have four specific features: 1) the attachment figure (i.e. parent, romantic partner, etc.) serves as a figure to which close proximity is sought in times of distress, 2) once this proximity is attained the individual actively resists separating, 3) the attachment figure serves as a

safe haven in these times of distress, and 4) the attachment figure serves as a secure base from which an individual can separate to explore the outside world and a secure base to return to when the attachment system is activated (Hazan & Zeifman, 1999; Mikulincer, Gillath, & Shaver 2002). Children who are generally able to have these needs met form secure attachments to their caregivers, whereas children who do not have these attachment needs met may form insecure attachments (Weinfield, Sroufe, Egeland & Carlson, 1999).

Children become securely attached when they have a caregiver who is attentive, readily available, able to provide comfort, and accepting with regard to their needs and calls for help (Ainsworth et al., 1978; Weinfield, Sroufe, Egeland & Carlson, 1999). Children in the secure category learn that they are cared for and loved, and therefore are more able to express their needs, explore, and express negative emotions.

Insecure attachment arises as a response to different types of caregiver behaviors (Bowlby, 1969/1982; 1973; Ainsworth et al., 1978). Children become avoidantly attached when they experience their caregivers as rejecting in ways such as consistently neglecting to answer cries for help or being uncomfortable with closeness. These children learn that certain types of expression are unacceptable, and in order to adapt they may ignore the caregiver or suppress negative expression in order to prevent negative behavior from the caregiver. Anxious/ambivalent attachment occurs when the caregiver is inconsistently responsive or unable to provide consistently good care for their children. These children learn that they need to increase their proximity to the caregiver in order to get attention

when the caregiver is able to give it and may act in ways that draw the caregiver's attention towards them.

While attachment styles are adaptive behavioral strategies in infancy and childhood, their salience for adults was not apparent until researchers started to measure adult attachment in the 1980s. Among the first researchers to create such a measure were Hazan and Shaver (1987). In order to examine the similarities between adult and child attachment organizations, they devised a self-report measure with categories based on those of Ainsworth et al. (1978). This questionnaire focused on the respondent's most important romantic relationship.

Secure adults identified with the statement, "I find it relatively easy to get close to others and am comfortable depending on them and having them depend on me. I don't worry about being abandoned or about someone getting too close to me" on a forced-choice questionnaire (Hazan & Shaver, 1987). Avoidantly attached adults were characterized more by statements about feeling that their partners want more than they are able to provide, discomfort with closeness, and difficulty with trust. Anxious/ambivalently attached adults were characterized more by statements that they worry their partner will leave them, their partner does not really love them, and that they are disappointed that others do not want to be as close as they would like to be in relationships.

Hazan and Shaver (1987) found that adults in their two studies fit into the three attachment categories measured in roughly the same percentages as the estimated

percentages of children that had been measured in previous studies. The researchers also found that these differences in adult attachment styles were related to different general views about relationships. Secure individuals selected items that described love as ebbing and flowing, anxious individuals selected items that described falling in love easily, and avoidant individuals selected items that described skepticism about the idea of true love. Hazan and Shaver (1987) also found that avoidant individuals were more likely to fear intimacy and intense emotions, whereas anxious/ambivalent individuals were more likely to experience intense emotions, jealousy, and obsession. These attitudes and feelings about adult relationships are thought to be influenced by the individual's history with attachment figures, especially parents or caregivers (Cassidy, 2000; Black & Schutte, 2006).

The continuity of attachment style from early attachment experiences into adulthood is dependent upon cognitive working models of self and other (Bowlby, 1973). Working models, also called internal working models or models of representation, are thought to guide how a person perceives and selects relationships with important others (Cassidy, 2000; Pietromonanco & Barrett, 2000). Based on an individual's experiences with important figures in their lives such as parents and peers, these models develop over time (Cassidy, 2000), and then are thought to guide how an individual makes sense of and approaches important relationships throughout their life. Their perception of and engagement in relationships with important others are thought to be guided by these working models.

Individuals are thought to develop separate working models of self and working models of others. While working models are conceptualized as fairly stable schemas, Bowlby (1969/1982) did not see them as rigid molds. Models may be influenced by an individual's changing environment, new situations, emotions, and motivations (Bretherton & Munholland, 1999). Though models are based on past relationships, an improvement in an individual's romantic relationship or other important relationship may enhance their attachment security, thus influencing a change in the way they interact with others and perceive themselves. This includes the possibility of attachment-related changes after a significant loss that might impact working models of self or other.

While these models are somewhat malleable, they do exert a considerable influence on relationship quality. Collins, Ford, Guichard and Allard (2006) found that working models of insecure attachment contribute to individuals' expectations of negative relationship outcomes whereas working models of secure attachment contribute to more positive expectations. However, understanding working models within specific contexts is important because working models have been theorized to be hierarchical (Pietromonaco & Barrett, 2000). According to a hierarchical understanding of working models it is possible for an individual to have a general model based on their assumptions related to attachment history, but also to have relationship-specific models based on experiences within that relationship.

This specificity is important to consider when examining the relationship between attachment and grief. While a person may have a generalized attachment style or

tendency to interact with others in certain ways based on attachment history, their relationship with a specific deceased person may be somewhat different than that general working model (Jerga, Shaver, and Wilkinson, 2011). For instance, a person may experience secure attachment relationships based on parental and peer relationships, but have a very strained relationship with a romantic partner that is characterized by avoidance. This specific relationship model would be important to understand in assessing the impact of attachment on their grieving process. For this reason it is important to carefully assess attachment. It may be useful to collect information about an individual's generalized attachment using a self-report measure aimed at important relationships in general, and to collect information about an individual's specific attachment characteristics with the deceased by using an attachment measure that is written specifically to apply to that one person. Such a strategy has been used before in examining the relationship between grief and attachment (Jerga, Shaver, and Wilkinson, 2011), and this strategy proved useful in understanding nuances in this relationship.

Attachment and Grief

The relationship between attachment and grief has historical roots in early attachment literature. Bowlby (1960) wrote an early, formative paper on the influence of childhood attachment on the experience of loss. Over time this theory grew as he developed a stage theory of grief, and as attachment researchers investigated patterns of grief based his theory (Bowlby, 1986; Fraley and Shaver, 1999). Attachment theorists have suggested that individuals who have attachment insecurity marked by anxiety are

more likely to experience chronic grief after a significant loss, whereas individuals whose attachment is marked by avoidance are more likely to experience a delayed grief reaction. According to this theory both types of grief are unhealthy (Parkes, 2006).

Subsequent research has examined whether or not these patterns are actually present in the general population (Field and Sundin, 2001; Uren and Wastell, 2002; Wayment and Vierthaler, 2002; Fraley and Bonanno, 2004; Parkes, 2006; Shear et al., 2007; Wijngaards-de Meji et al., 2007; Mancini, Robinaugh, Shear, and Bonanno, 2009; Field, Orsini, Gavish and Packman, 2009; Jerga, Shaver, and Wilkinson, 2011). This line of research has had mixed findings with regard to the impact of attachment on the experience of grief. The vast majority of studies that examine attachment anxiety support the notion that attachment anxiety is associated with more intense grief symptomatology (Field and Sundin, 2001; Wayment and Vierthaler, 2002; Fraley and Bonanno, 2004; Jerga, Shaver, and Wilkinson, 2011).

Attachment avoidance, however, has not been consistently associated with delayed grief or any other type of grief pattern. Wijngaards-de Meji et al. (2007) found a moderate correlation of .28 between avoidant attachment and grief severity. However, Fraley and Bonanno (2004) found the opposite, with avoidantly attached individuals appearing much more resilient to grief than their anxious counterparts. Mancini et al. (2009) suggest that this disparity might be attributable to the moderating effect of relationship quality. They suggest that avoidantly attached individuals who experience higher relationship quality, though they may experience distress in the immediate

aftermath of the loss, might be able to use avoidance as a coping strategy in the long-run because of their tendency to be more self-reliant.

One difficulty in assessing the impact of attachment insecurity, especially avoidance, on grief severity is the use of heterogeneous attachment measures, relationships represented, and grief measures. A recent, well-designed study (Jerga, Shaver, and Wilkinson, 2011) that attempts to address some of these problems found an association between attachment avoidance and complicated grief symptoms. The authors suggested that previous studies might have failed to find this relationship due to inconsistency with regard to the specificity of the attachment being measured (i.e. attachment to the deceased versus attachment in general). They also address the wide differences in attachment measures and grief measures across past studies, and suggest the use of newer, more reliable measures.

In their study, Jerga, Shaver, and Wilkinson (2011) examined the impact of both attachment in general, or trait attachment, and specific attachment to the deceased as measured by two separate attachment scales. In addition to measuring attachment separately, they also included two types of grief measures in order to separate more typical grief symptoms from complicated grief symptoms. Overall they found that general and specific attachment together account for approximately 18% of the variance in prolonged grief symptoms, supporting previous findings that attachment is an important variable to consider in understanding severe grief reactions.

Using this nuanced approach the authors also found that individuals high in

attachment anxiety were more susceptible to severe (or complicated) grief symptoms, but were not any more susceptible to normal grief symptoms. This indicates that attachment anxiety might be associated with more severe symptoms like intrusive ideation about the deceased, prolonged difficulty with everyday activities, and grief lasting longer than six months. This was true for both general and specific attachment. Individuals high in general attachment avoidance also tended to endorse more prolonged grief symptoms, but fewer normal grief symptoms. However, with regard to the specific attachment to the deceased, attachment avoidance did not seem associated with either type of grief symptomatology. The authors pointed out that these individuals may have had a less intense bond with the deceased, leaving them with less of a need to grieve as compared to their counterparts with attachment anxiety (Jerga, Shaver, and Wilkinson, 2011). However, it is also possible that individuals with avoidant styles may simply have chosen to respond to items based on relationships that were not perceived as emotionally arousing in order to avoid attachment-related distress.

The literature on attachment and grief is still growing and controversies like the nature of the relationship between avoidance and grief still need further exploration. Specifically, it would be useful to replicate some of the techniques used by Jerga, Shaver, and Wilkinson (2011), and to include more control variables and potential mediators in the analysis to add to their findings. It is also important to further examine the role of avoidant attachment in shaping grief reactions. Regardless of the controversies and areas of the literature that have been unexplored, it has been established that attachment can play a key role in shaping our reaction to the loss of important others.

Now that the relationship between attachment and grief is established, I will turn potential mediator variables from the meaning-making literature. After reviewing the role of meaning-making in coping with loss, other important variables to include in the path model will be explored.

Meaning-Making and Stress

Meaning-making is a multifaceted construct that represents a number of theoretically distinct forms of coping and meaning-related outcomes. Meaning-making encompasses many coping strategies. The basic theory behind meaning-making is that severe stressors like grief and trauma represent a threat to a person's ability to make sense of their world (Park, 2010; Folkman, 2008). In the case of complicated grief it is thought that the loss can represent a failure on the part of the bereaved individual to integrate their loss into a meaningful context (Neimeyer and Anderson, 2002).

The search for meaning in the context of loss is often a major component of the grieving process (Davis, Nolen-Hoeksema, and Larson, 1998; Neimeyer, 2000). It is estimated that approximately 70 to 85% of bereaved individuals undergo some search for meaning after their loss (Neimeyer, 2000). The process of finding meaning in loss is multifaceted. It can involve automatic processes such as intrusive ideation, unconscious changes in priorities, conscious coping strategies, perceptions of personal growth, and changes to identity (Neimeyer, 2000; Park, 2008; 2010).

The roots of meaning-making constructs can be found in many areas of psychology including: psychodynamic theory, cognitive-behavioral therapy, existential

psychology, and various religious understandings of psychology (Aldwin, 2007; Gillies and Neimeyer, 2006; Pargament, 1997). One important foundation of meaning-based coping theories is the previously covered concept of internal working models (Park and Folkman, 1997). Using this concept from attachment theory some meaning-making theorists have suggested that working models or schemas help us make sense of the world. Therefore these internal models are the foundation of our ability to cope with stress by making meaning of situations through either making sense of them in the context of working models or other schemas or by making changes to meaning-making systems themselves to accommodate significant events like loss or trauma (Park and Folkman, 1997).

Recent research on meaning-making has been influenced by the positive psychology movement, which seeks to explore human strengths and the benefits of positive psychological states such as happiness (Folkman and Moskowitz, 2000; Park, Lechner, Antoni, and Stanton, 2009). Meaning-related constructs have been useful for positive psychologists because they provide an understanding of how individuals find positive interpretations or positive emotions in the midst of severe life-stressors. This line of research has attempted to provide an empirical basis for meaning-focused constructs by examining a number of distinct ways that individuals make meaning, and by looking at the correlates of these meaning-making attempts such as optimism (Linley and Joseph, 2005; Park, 2010).

The search for a better empirical foundation of meaning-making has produced

theory and research on many related constructs including: meaning-focused coping (Folkman, 2008), meaning-making (Park, 2010), meaning reconstruction (Gillies and Niemeyer, 2006), benefit-finding (Lechner, Tennen, and Affleck, 2009), stress-related growth (Park, Cohen, and Murch, 1996), and posttraumatic growth (Tedeschi and Calhoun, 1995) among others. These constructs can all be broadly understood as addressing the idea that individuals can experience growth or find meaning through adversity, especially in highly stressful or traumatic situations that are viewed as negative or damaging.

A Model of Meaning-Making

In the following section I will explain a theoretical model that is useful in understanding meaning-making. Meaning-making is an umbrella term for a collection of similar constructs that mostly fit into a common theoretical understanding of when and why meaning is made (Park, 2010). In summary, this theory proposes that there are two different levels of meaning: 1) the global or overall assumptions of meaning that we have about the world around us, and 2) the situational meaning that we attach to specific events in our daily lives. Meaning-making attempts are thought to occur when these two levels of meaning are perceived to be in conflict and need to be reconciled in order to resolve stress (Park and Folkman, 1997).

A definition of meaning-making found in the literature is "the restoration of meaning in the context of highly stressful situations" (Park, 2010). Park and Folkman (1997) and Park (2008; 2010) created a theoretical model of meaning-making to

summarize the findings of researchers in meaning-related areas of the literature. In this model they describe two levels of meaning that individuals use to navigate daily life: global meaning and situational meaning.

Global meaning refers to an individual's worldview, values, or internal representations about the world (Collie and Long, 2005; Park and Folkman, 1997). An individual's global sense of meaning is how he or she makes sense of life in general and ascribes meaning to events in his or her surroundings. Examples of global meaning-making structures include attachment-based internal working models, core beliefs of self-schemas, or assumptions about the outside world (Park, 2008; Park and Folkman, 1997).

Situational meaning refers to how the individual appraises the meaning of a particular experience (Park and Folkman, 1997). This appraisal process involves trying to fit the experience into one's global meaning structure in such a way that it makes sense. If global and situational meaning converge then the individual is not faced with additional stress related to any problems with making sense of their stressor. However, in some highly stressful situations, such as a major loss, trauma, or an unexpected failure, the individual's global and situational meaning do not converge and the individual faces a challenge in trying to make sense of the stressful event (Park, 2005; Park and Folkman, 1997).

Figure 2 shows a recent model of this theory provided by Park (2008). As seen in Figure 2, when individuals are unable to fit a stressful experience into their global meaning structure they tend to employ meaning-making strategies in order to alleviate the

conflict between the two levels of meaning. For example, Gillies and Neimeyer (2006) have suggested that individuals are more likely to engage in sense-making forms of meaning-making (such as asking questions like "why?" or "why me?") in the immediate aftermath of loss.

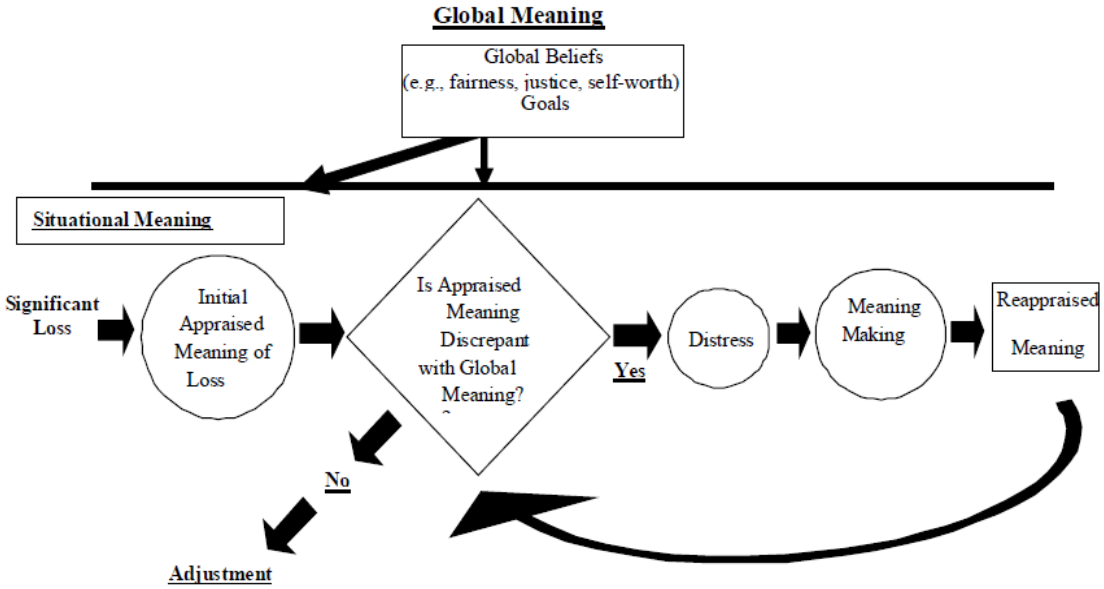


Figure 2. A model of meaning-making from Park, 2008

In a test of this model with bereaved college student participants, Park (2008) calculated bivariate correlations between various aspects of the model including positive and negative affect, distress, coping strategies, amount of intrusive thoughts, self-reported search for meaning, and different types of global beliefs. She found that individuals who reported conflict between global and situational meaning were more likely to engage in meaning-making efforts, and that the severity of the perceived difference between global and situational meaning was positively related to the amount of distress experienced.

Park (2008) also found that individuals who reported greater discrepancy between situational and global meaning experienced more intrusive thoughts about their loss, which may be indicative of automatic meaning-making processes.

In addition to the aspects of this model that have been discussed thus far it is important to make a distinction between meaning-making processes themselves and the outcome of these meaning-making processes, which Park (2010) refers to as "meanings made." Because this area of literature contains many related constructs it is easy to confuse a meaning-making process, such as positive reappraisal or the process of benefit-finding, with the outcome of these process, such as specific found benefits. Meaning-making constructs, and the measures based on these constructs, have addressed both of these aspects of the meaning-making model. For the purposes of the proposed study, since the question is whether or not making meaning of a situation leads to less severe grief, the focus will be on actual meanings made or meaning-making outcomes. This is an important distinction because examining meanings made indicates whether or not having found meaning relates to grief severity. It does not show, however, whether engagement in the meaning-making process itself is related to grief outcomes.

Park (2010) conducted a major review of this general model of meaning-making, incorporating numerous studies that examined all aspects of the model. This review indicated that the existing literature largely supports the idea that most individuals engage in some type of meaning-making process when faced with severe stressors, and that many of these meaning-making processes are successful. The hypothesis that violations of

global meaning are related to distress is also firmly supported by existing literature, and these violations also tend to result in meaning-making processes. However, evidence seems to indicate that violations of global meaning rarely have the effect of "shattering assumptions" of the global meaning-making structure. Instead these violations often result in minor shifts in global meaning.

Overall, evidence for the effectiveness of meaning-making attempts was mixed. One way to conceptualize this is that meaning-making efforts have been shown to boost positive affect (Folkman, 2008), but boosting positive affect alone does not necessarily reduce distress in every situations because people often report co-occurring positive and negative affect. Therefore, it is important to look at whether meaning-making is useful in specific contexts such as bereavement as opposed to generalized distress of any kind.

Another important point is that meaning-making is not a universal phenomenon. Some individuals do not report using meaning-making attempts in the wake of major stressors, and lack of meaning-making is not necessarily associated with greater distress. However, when surveyed, most individuals do report some attempt to find meaning in loss or trauma (Davis, Wortman, Lehman, and Silver, 2000). The general picture given by Park (2010) is that the understanding of meaning-making presented in Figure 2 is partially supported, but some aspects of the model, such as the efficacy of some meaning-making strategies, have not been adequately researched or have mixed empirical support.

A related construct that has provided additional empirical support for the role of meaning-making as a coping process is the construct of meaning-focused coping. This

similar construct was developed out of the stress and coping literature as an addition to the transactional model of stress (Lazarus and Folkman, 1984). In exploring the role of positive emotions in the coping process, Folkman and colleagues (Folkman, 2008; Folkman and Moskowitz, 2000) proposed the construct of meaning-focused coping as an additional way that individuals cope with severe stressors such as loss or terminal illness. Folkman and colleagues (Folkman, 1997; Folkman and Moskowitz, 2000; Park, Folkman, and Bostom, 2001) conducted research with HIV positive men and their partners or caregivers and found that the caregivers of these men often reported both positive and negative affect, even in the context of suffering and bereavement (Folkman, 1997; Folkman and Moskowitz, 2000).

In exploring the presence of positive affect in this sample, Folkman and Moskowitz (2000) reported a number of coping processes that might boost positive affect or serve as protective factors in times of severe distress. Folkman (1997) found that caretakers of HIV positive men often found something positive about the negative event or adjusted their interpretation of the significance of the event after it occurred. Folkman and Moskowitz (2000) also report that these caretakers often found meaning in ordinary events or memories that highlighted their role in providing dignity and comfort to their loved one. These processes were positively correlated to positive affect in this sample (Folkman and Moskowitz, 2000).

Folkman (1997; 2008) labeled these coping processes “meaning-focused” because they help put suffering and stress into a context that typically involves reflection about

the meaning of the situation. The role of meaning-focused coping is supportive of positive emotions that can help lessen perceptions of distress and boost the ability to cope well with stress. Some of the specific forms of meaning-focused coping that have been examined are: finding benefits during negative situations, changing priorities, adapting goals, finding meaning in everyday events, and positively reappraising the stressful situation (Folkman and Moskowitz, 2007; Park, 2010).

In the context of complicated grief these coping strategies are likely to be beneficial because they support the resolution of conflicts in situational and global meaning (Folkman and Moskowitz, 2000). Individuals dealing with complicated grief are likely to experience isolation, difficulties with emotion regulation, and difficulty confronting their loss (Prigerson et al., 2009), all of which inhibit coping. Alternatively, the use of meaning-focused coping strategies may be useful in boosting positive emotions, which might lead to more adaptive coping efforts and less perceived stress about the loss (Folkman, 2008). It is hoped that these processes actually lead to meanings made in terms of finding positive aspects of loss or reappraising the meaning of the loss. However, the outcomes of these meaning-making processes was not assessed by Folkman and colleagues to the degree that the use of meaning-making processes itself was assessed because the scale used to assess meaning-focused coping is more indicative of engagement in meaning making processes rather than outcomes.

Other researchers have examined meaning-focused coping with a number of stressors. Parker and Lee (2007) found that meaning-focused coping in physically abused

women served as protective factor against distress. In a study involving recent tumor surgery patients, Boehmer, Luszcynska, and Schwarzer (2007) found that meaning-focused coping was associated with a higher perceived quality of life. In another study of cancer patients, Boehmer (2007) found that individuals who reported a lower felt age were more likely to engage in meaning-focused coping, whereas individuals with higher reported felt age were more likely to use avoidant coping. Finally, in a study of college students, Douglas, Shah, and McCarthy (2010) found that regardless of the type of stressor reported, if individuals endorsed an event as being highly stressful, they were more likely to endorse meaning-focused coping strategies. The overall picture in the current literature is that meaning-focused coping is often used in and can be useful in highly stressful situations.

Meaning-Making and Bereavement

Several researchers have examined these meaning-making strategies in the context of bereavement. One theory used in grief counseling has been developed that summarizes the meaning-making process in the context of loss. Meaning reconstruction is a theory of meaning-making that is specific to loss (Gillies and Neimeyer, 2006), and proposes ways for a grief counselor to help clients construct meaning in the midst of loss. Neimeyer and colleagues (Gillies and Neimeyer, 2005; Keesee, Currier, and Neimeyer, 2008; Neimeyer, Baldwin, and Gillies, 2006) have produced research and theory that support the idea that meaning-making is an important part of the grieving process. They focus on three primary meaning-making outcomes (meanings made), which will be

explained below: sense-making, benefit-finding, and identity change (Neimeyer, 2000). In exploring these constructs, Davis, Wortman, Lehman, and Silver (2000) and Neimeyer (2006) found that these processes occur spontaneously for many bereaved individuals. However, in cases of complicated grief, individuals are often unable to find meaning or make sense of the loss in a satisfactory way even after trying to do so for a long period of time, which can lead to more distress (Niemeyer, 2000; Prigerson et al., 2009).

One important way that individuals attempt to make meaning in the context of loss is through sense-making, or attempts to understand the loss. Sense-making refers primarily to attempts to fit the loss into one's worldview or to find ways to explain the loss (Davis, Nolen-Hoeksema, and Larson, 1998; Gillies and Neimeyer, 2006). Another important way in which meaning can be made is through benefit-finding, or searching for positive aspects of the loss such as strengthened relationships with family, personal growth, or an end to suffering (Davis, Nolen-Hoeksema, and Larson, 1998; Folkman, 2008; Gillies and Neimeyer, 2006). Finally, some individuals make meaning by incorporating the loss into their identity in such a way that their identity is changed. Examples of this type of meaning-making are changes in level of resilience, independence, optimism and other personality characteristics that shape identity (Gillies and Neimeyer, 2006).

Benefit-finding and sense-making have both been the subject of many empirical studies. These dimensions of meaning-making in the context of loss have been found to be distinct forms of meaning-making that occur for different reasons and at different

times in the grieving process (Davis, Nolen-Hoeksema, and Larson, 1998). Identity change, like benefit-finding, is thought to be a long-term outcome of searching for meaning in loss (Gillies and Neimeyer, 2006).

Sense-making has been found to be most useful to bereaved individuals soon after the loss occurred (Davis, Nolen-Hoeksema, and Larson, 1998; Neimeyer and Anderson, 2002). If bereaved individuals are still trying to make sense of their loss after about six months the process can become ruminative and unhelpful. Specifically, Davis, Nolen-Hoeksema, and Larson (1998) found that sense-making efforts within the first month were very common, and that within the first six months sense-making was related to lower levels of distress. However, after the sixth month significantly fewer individuals were involved in sense-making efforts, and sense-making after this point in time was no longer related to lower distress.

Benefit-finding has been found to be a useful strategy for bereaved individuals over a longer period of time than sense-making. Davis, Nolen-Hoeksema, and Larson (1998) reported that benefit-finding seemed to be related to long-term adjustment to the loss and better coping strategies. However, benefit-finding has also been found to correlate with optimism (Neimeyer, 2005) raising questions about whether this form of meaning-making is useful because of the process of finding benefits in the context of loss or because of underlying personality traits that protect against distress.

When individuals find benefits in the loss, grow spiritually, change character traits such as patience, or change goals, these outcomes are thought to be changes in

identity (Gillies and Neimeyer, 2006). Individuals who report stress-related growth or posttraumatic growth often describe themselves as more resilient, confident, and wiser than they were before the loss or trauma (Gillies and Neimeyer, 2006; Park and Fenster, 2004). Identity reconstruction is thought to be a long-term aspect of the grieving process that is unlikely to take place immediately after the loss.

Summary of Meaning-Making

The meaning-making processes discussed in this review may all be useful to individuals dealing with complicated grief reactions. However, the meaning-making process, much like the broader coping process, is individualized and cannot be generalized to all individuals. Different individuals may benefit from different meaning-making strategies based on a range of factors. As I have discussed, some meaning-making processes are practical short term coping strategies, such as sense-making or reordering priorities, aimed at immediate stress relief. Other forms of meaning-making are long-term change processes that may happen over a period of months or years, such as growth out of stress or experiencing a change in identity. However, each of these strategies serves the purpose of making sense of the loss, finding something positive in the loss, or changing something about one's self in the aftermath of the loss.

It is important to point out that while meaning-making, meaning-focused coping, and meaning reconstruction are usually conceptualized as cognitive and emotional processes within an individual, these processes also occur within a cultural, familial, and/or religious framework (Neimeyer, 2000). Much of the literature on meaning-making

tends to neglect this relational aspect, perhaps because of measurement and theoretical challenges inherent in understanding meaning in its fuller context (Neimeyer, 2000; Park, 2010). Therefore, while it is important to evaluate the role of meanings made while coping with severe stressors like bereavement, it is also important to keep in mind that these processes do not occur in the same way across individuals and that meaning-making is often a social process.

Meaning-Making as Mediator

The important role of meaning-making constructs in the aftermath of loss has been described, as has the negative relationship between meaning-making and complicated grief. Individuals who experience severe grief reactions are likely to be less successful at making meaning than those experiencing normal grief reactions (Currier, Holland, and Neimeyer, 2006; Keese, Currier, and Neimeyer, 2008). Thus it makes sense that in Figure 1 meaning-making is a predictor of grief severity.

The relationship between attachment insecurity and meaning-making is less empirically supported. Park (2010) suggested a possible theoretical link between working models and meaning-making, and Uren and Wastell (2010) suggested that sense of coherence, a variable related to meaning-making, is influenced by attachment. Attachment theory proposes that early attachment experiences are a source of our ability to make sense of the world via the development in internal working models. Therefore, it makes sense to hypothesize that as attachment insecurity increases, the ability to successfully make sense of or find benefit in a loss could be hindered by maladaptive

working models based in insecure attachment, and that this could lead to more intense grief.

Variables that Influence Meaning-Making

The literature on meaning-making and growth through adversity has examined a number of variables that may be important in understanding meaning-making in the coping process. Researchers have examined many personality variables including neuroticism, openness to experience, agreeableness, conscientiousness, optimism, attachment security, and strength of religious faith (Linley and Joseph, 2004; Neimeyer, Baldwin, and Gillies, 2006; Park, 1998). In addition to these personality variables, sex, severity of stressor, and types of symptomatology have been examined in order to determine if differences may relate to meaning-making or growth through adversity.

Recent meta-analyses have attempted to summarize the findings related to many of these moderating variables (e.g. Helgeson, Reynolds, and Tomich, 2006; Linley and Joseph, 2004; Prati and Pietrantoni, 2009). However, the majority of studies reviewed look at growth outcomes such as posttraumatic growth instead of meaning based coping. No major meta-analysis has been conducted on the role of these variables in the meaning-making process. However, the outcome-focused meta-analyses provide some important information about personality and growth, which relates to meaning-making processes.

One of the primary variables that moderates the relationship between stress and growth is optimism. Across many studies of posttraumatic growth, stress-related growth and benefit-finding it appears that an individual's level of optimism has an impact on

whether or not she or he report positive outcomes (Helgeson, Reynolds, and Tomich, 2006; Park, 1998; Prati and Pietrantoni, 2009). In a meta-analysis of the posttraumatic growth literature, Prati and Pietrantoni (2009) found a moderate effect size for the impact of optimism on reported posttraumatic growth. Similar findings have been reported for benefit-finding (Helgeson, Reynolds, and Tomich, 2006) and stress-related growth (Park, 1998). Based on these studies it appears that optimism impacts most forms of meaning-making including benefit-finding and identity changes such as personal growth. Strength of religious faith appears to have a similar relationship to growth outcomes. Strength of faith was found to be a significant moderator in previous literature reviews of benefit-finding (Helgeson, Reynolds, and Tomich, 2006) and posttraumatic growth (Prati and Pietrantoni, 2009).

With regard to most other moderating variables the findings have been mixed. In some studies, sex is a relevant variable with women tending to report more benefit-finding than men (Helgeson, Reynolds, and Tomich, 2006). However, in other studies this relationship does not exist (Linley and Joseph, 2004). Similar findings have been reported for race. In some studies non-white individuals were more likely to report benefit-finding activity (Helgeson, Reynolds, and Tomich, 2006), however these differences are not consistently found in the literature.

To summarize, it appears that optimism and religious faith are consistently related to reports of finding meaning either as personal growth or as finding benefits. Demographic variables, such as sex, have shown mixed results as potential moderators of

the relationship between stress and finding meaning.

Measurement of Meaning-Making

No widely accepted measure of meaning-based coping exists. The literature on meaning-making utilizes a range of measurement strategies including previously established coping scales, measurement of similar constructs like sense of coherence, and individual items to assess different types of meaning-making (Park, 2010). In addition to these strategies some scales of meaning-making outcomes have been used such as scales measuring constructs like stress-related growth, posttraumatic growth, and benefit-finding.

Another complicating factor is that meaning-making has been conceptualized as both a conscious and unconscious, automatic process. Therefore, in some studies rumination has been taken as evidence of unconscious meaning-making processes (Park, 2010). Some have tried to differentiate meaning-focused rumination from negative rumination, but no reliable measurement of that difference is available to my knowledge. In most studies meaning-making has been viewed as a conscious or mostly conscious process and questions about the process are asked directly of the respondent.

Measurement of coping, especially meaning-based coping, is difficult to accurately obtain because individuals' recollections of how they coped with past stressors have been found to correlate highly with their current functioning (Aldwin, 2007). In other words, self-reported recollections of past stress and coping are likely to be highly influenced by present circumstances. Another problem that has been identified in the

posttraumatic growth literature is that individuals often present a more positive view of themselves than is found if they are asked about concrete positive changes like increased positive relationships or life satisfaction (Frazier et al., 2009). This finding is not consistent across all meaning-making measures, but it does add to the need to be cautious when operationalizing meaning-making processes. Recollections of meaning-making are also complicated by the fact that meaning-based coping can be somewhat abstract and difficult to describe or remember (Park, 2010).

One strategy for simplifying the measurement of meaning-making is to ensure that measurement is geared towards a specific aspect of the model of meaning-making. Therefore, in the current study all meaning-making items will be framed as meanings made instead of coping processes utilized by the participant. Another benefit of looking at meanings made as opposed to meaning-making as a coping process is that specific benefits can be addressed instead of asking about the overall process of finding benefits. It is hoped that using this strategy will reduce some of the uncertainty related to recalling how meaning was made in the midst of bereavement.

Given the difficulties in measuring meaning-making, it is prudent to be cautious and use only measures that have the best possible psychometric properties. Past researchers have used subscales from predominant coping measures that assess positive reappraisal, scales aimed at assessing global meaning or assumptions, scales aimed at measuring the aftermath of meaning-making like the stress-related growth, discrete items to measure specific types of meaning-making, or qualitative techniques in order to

operationalize meaning–making. All of these methods are limited, but each has some strengths.

In the current study meaning-making was measured using a different approach. Instead of picking one of the established ways of operationalizing meaning-making, a group of scales was factor analyzed in order to determine which might provide the best measurement of meaning-making. Principal components analysis was used to conduct an exploratory factor analysis of three different sets of meaning-focused questions in order to determine: 1) whether or not items load onto the same meaning-making factor, and 2) which items perform the best in order to get the most accurate measurement of meaning-making. These three sets of items correspond to three of the most prevalent forms of meaning-based coping: sense-making, benefit-finding, and positive reappraisal.

A Revised Model

Now that the hypothesized mediating role of meaning-making has been described, the correlates of meaning-making have been presented, and the risk factors for complicated grief are understood, it is possible to propose a revised path model based on the basic mediation relationship presented in Figure 1. Important variables that have been explored thus far are the specific attachment to the deceased, general attachment, meaning-based coping variables, relationship quality, time since the loss, whether the loss was traumatic, mental health history, optimism, and strength of religious faith.

Attachment insecurity, especially anxiety, has been established as an important risk factor for complicated grief (Wayment and Vierthaler, 2002; Fraley and Bonnano, 2004;

Jerga, Shaver, and Wilkinson, 2011). It is important to replicate these studies to support existing evidence and compile more information about the controversies in this area of inquiry. It also seems plausible that since not every person who is high in attachment anxiety or avoidance develops complicated grief that there may be other factors that explain a significant amount of variance in the relationship between attachment and grief. Another possibility is that some of these variables work in combination with attachment to create a heightened risk for complicated grief. Identifying these variables would be an important extension of the literature on attachment and grief.

In order to explore this possibility I will evaluate a path model that proposes specific interrelationships between the variables described above. Figure 3 presents a full model with all pertinent relationships accounted for:

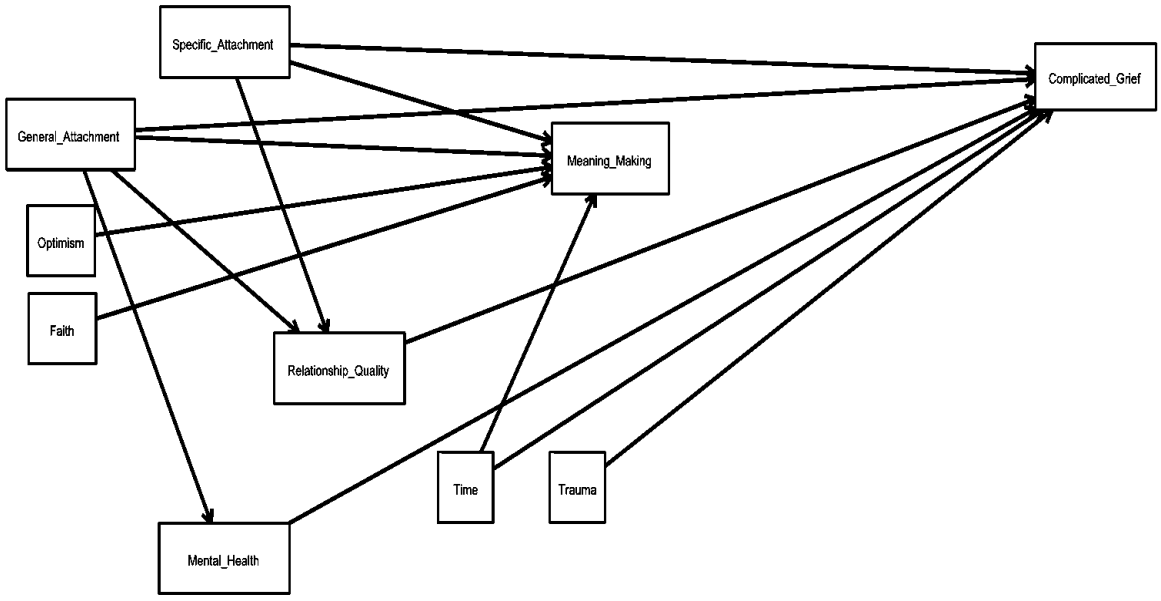


Figure 3. Full model of attachment, meaning, and grief

This path model will be tested using observed variable path analysis. In order to investigate the possible mediating role of meaning-making in the relationship between attachment and grief severity it is necessary to include many control variables to ensure that the observed relationships between variables are attributable to the hypothesized predictor variable and not one of these other control variables. The meaning-making variable will be split into multiple variables if this is found necessary in the factor analysis of meaning-making scales.

General Research Questions

1. Are the meaning-making constructs measured in the study distinct constructs or are they better accounted for by an underlying meaning-making factor or factors?
2. Does accounting for both specific and general attachment better explain the relationships between attachment insecurity and grief severity?
3. Do the meaning-making variables partially mediate the relationship between attachment insecurity and grief severity?
4. If no mediation is found, which combination of variables appears to best predict the development of complicated grief? Does this hold across different types of loss?

METHOD

Current Study

Based on the previous review of the literature, this study attempts to contribute to literature focused on understanding the dynamics of severe grief reactions. Specifically, the possible mediating role of meaning-making was explored as an important factor in understanding the relationship between attachment insecurities and complicated grief. By learning more about these processes it is hoped that clinicians can better identify bereaved individuals who might benefit from mental health services, and decide which strategies might be effective with different types of clients. The broad purpose of the study is to examine the predictors of complicated grief in order to identify possible relationships between these predictors. The primary goal of the study is to add to our understanding of the relationship between attachment and grief by examining a path model that tests whether meaning-making variables mediate the relationship between attachment and grief. Several other research questions were proposed and examined to supplement this analysis.

Participants

The author initially attempted to obtain a sample of adults in the community who have received services from grief counseling agencies in the Central Texas area. Three large agencies that provide grief services, and two major hospitals in Central Texas were contacted in order to obtain permission to solicit participation from clients of these

agencies. The researcher obtained permission from and created a plan of action with the three grief support agencies. These included Hospice of Austin, The Christi Center, and My Healing Place. The two hospitals contacted did not give permission to solicit participation in the study.

Participation was solicited from the three community agencies that provide grief counseling, and smaller grief support agencies were contacted in order to find more participants. However, over the course of a three month period only four participants were obtained using this strategy. Therefore, it was deemed necessary to utilize a student sample recruited from the Department of Educational Psychology subject pool at the University of Texas at Austin in order to attain the number of participants needed to conduct a path analysis.

Potential participants were asked screening questions for a number of research studies at the beginning of the semesters in which data was collected. The criteria for participation in this study were asked in the form of a screening question to ensure that participants who completed the survey would be appropriate for the study. In order to be selected for participation in this study a potential participant first endorsed that that they had experienced the death of parent or parental figure, sibling, close family member, close friend, or relationship partner. They also endorsed that the loss occurred some time between 6 months and 3 years before completing the survey. Finally, they endorsed that they were willing to complete a survey related to their loss. These were the criteria for participation in the study.

The sample consisted of 356 undergraduate and graduate students from the Department of Educational Psychology subject pool at the University of Texas at Austin. Students in this subject pool come from a range of academic specialties, but have been referred to the subject pool because they are registered in an undergraduate educational psychology course that encourages participation in research. Students are not forced to participate in subject pool research, but may have an alternative assignment if they chose not to participate in a survey. Demographic variables were collected from the participants who agreed to participate in the study. The percentages do not always equal 100% due to missing data.

The sample was 65% female, and 32% male. No participant endorsed gender-transgendered. The average age of the participants was 21.7 years with a standard deviation of 4.4 years. This mean and standard deviation may have been slightly impacted by a handful of participants who were older than most undergraduate students. The vast majority of participants reported an age between 18 and 22 years of age. With regard to relationship status, 41% of the sample were not currently in a romantic relationship, 17% reported that they were in a casual relationship, 37% reported that they were in a serious relationship, and the remaining 3% reported that they were either engaged or married. With regard to education, 95% of the sample were currently working on a bachelor's degree while less than 1% (two participants) reported that they were working on a graduate degree. With regard to ethnicity, 30% of the sample described themselves as Hispanic/Latino with 81% of that portion of the sample describing themselves as Mexican, Mexican-American, or Chicano. The remaining 7% of the

Hispanic/Latino participants endorsed a wide range of ethnicities including Puerto Rican, Spanish, and various South American ethnicities. With regard to race, 62% of the sample described themselves as white/caucasian, 19% described themselves as Asian or Asian-American, 2% described themselves as Black or African-American, less than 1% described themselves as Hawaiian or Pacific Islander, and less than 1 % described themselves as American Indian or Alaskan Native. Another 11% described themselves as "other" which consisted mostly of Hispanic/Latino participants who wrote their ethnicity in the text box for race – other. Two "other" participants described themselves as Arab or Middle-Eastern.

Table 1. Participant Demographics

	N	% of sample
Sex		
Male	111	32%
Female	231	65%
Ethnicity		
Hispanic/Latino	105	30%
Mexican/Chicano	81	23%
Puerto Rican	2	.01%
Spanish	10	.03%
Other	13	.04%
Race		
American Indian or Alaska Native	3	.01%
Asian or Asian American	69	19%
Black or African American	6	2%
Native Hawaiian or Pacific Islander	5	.01%
White or Caucasian	222	62%
Other	38	11%

Table 2. Types of Losses in the Sample		
	N	% of sample
Parents	28	8%
Partner	2	1%
Close Friend	74	22%
Sibling	9	3%
Child	0	0%
Other:	224	66%
Grandparent	164	49%
Aunt/Uncle	40	11%
Cousin	17	5%
Misc	3	1%

In terms of time since the loss occurred 32% of the sample reported a loss that occurred within 6 to 12 months prior to completing the survey, 36% reported a loss that occurred 12 to 24 months prior to the survey, and 33% reported a loss that occurred 24 to 36 months prior to the survey. The types of loss reported by participants can be seen in table 2.

Data was collected over the course of two semesters in order to obtain a large enough sample. The vast majority of the participants met the criteria for the study; however, after reviewing the responses 28 participants were cut or one of two reasons: 1) not meeting the study's loss criteria or 2) failure to compete more than 90% of the survey. The remaining 328 participants were included in the data analysis. In some cases specific information about the closeness of the relationship, asked in the form of open-ended questions, was lacking. In those cases I chose to accept that the participant did indeed experience a significant loss as they had indicated in the screening question. Participants were not cut from the study unless they clearly indicated that they did not

meet criteria by identifying the loss of someone who was clearly not an attachment figure in their life or by stating that they had not experienced a death loss.

Power and Sample Size

It is difficult to evaluate power for principal components analyses and a complicated path model due to the large number of assumptions being made about population parameters. However, sample size guidelines for both types of analyses exist. Kline (2010) and others suggest that for structural equation models a sample size of at least five observations per each parameter estimated in the model is adequate, and that an overall sample size over 200 is considered large enough. The number of observations per estimated parameter in the path model in this study is approximately 9. Therefore, it is assumed that an adequate sample size to detect significant effects was obtained. Sample size is also a consideration since factor analysis was used to determine the underlying structure of the meaning-making variables. Enough participants were attained to meet the ratio of twenty participants per variable.

Additionally, an estimate of power can be obtained for an overall regression model including all possible predictors of complicated grief using g*power (Faul, Erdfelder, Lang, & Buchner, 2007). An estimate of the sample size needed for the largest possible regression model would also demonstrate the power needed for any of the smaller regression models performed in order to establish the conditions for mediation. An alpha level of 0.01 and a two tailed test was used.

For the overall effect of all predictors on grief severity it is difficult to estimate the effect size because past studies have not included all of the variables that were included in this study. However, this study is most similar to the Jerga, Shaver, and Wilkinson (2011) study that reported an observed R squared value of .375 for the overall model. This value converts into a Cohen's f squared effect size value of .60, and this value was used in the power analysis. For a multiple regression analysis with sixteen predictors (the total number possible in the study), where the predicted effect size is .60 and where one wants to detect a predictor that accounts for at least 5% unique variance in the outcome, the required sample size to achieve power of .80 is approximately 28. Using a much more conservative effect size of .05, the sample size need to achieve a power of .80 is 238. Therefore, the obtained N of 327 is sufficient to reach an acceptable power of .80 for this study.

Measures

Participants were administered a set of measures and a demographic inventory developed for the study. This demographic inventory was used to collect information about participant characteristics such as gender, age, race, time since the loss, and mental health treatment history. The full demographic inventory can be viewed in Appendices A and E. Additional information was collected using the measures described below that can also be found in the appendices. The order of administration of the survey was counter-balanced with half of the participants randomly assigned to complete the loss section and

related measures first while the other half of the participants were assigned to complete the demographic survey and non-loss related portions of the survey first.

Attachment Measures

General Attachment

General attachment, or the overall style of attachment, was assessed using the Experiences in Close Relationships – Revised (ECR-R; Fraley, Waller, and Brennan, 2000). The ECR-R is a 36-item scale that measures attachment anxiety and attachment avoidance on two separate scales. An example of item content focused on anxiety includes statements about worrying that important others will leave. An example that focuses on avoidance is having a feeling of difficulty about being open with important others. The ECR-R is one of the most widely used and accepted measures of adult romantic attachment. Although this measure is written in such a way that it focuses primarily on romantic partners, the authors indicate that it is acceptable and easy to change the wording of the items so that it pertains to important others instead of romantic partners exclusively (Fraley, 2005).

The ECR-R measures attachment avoidance and attachment anxiety on two continuous scales. Previous self-report measures of attachment have categorized respondents into distinct attachment styles or patterns. However, current research indicates that self-report measures that conceptualize attachment as two separate continuums are more precise than measures that place respondents into distinct attachment categories (Fraley and Spieker, 2003; Fraley, 2005).

Reliability for the ECR-R, as measured by Cronbach's alpha has typically been in the .90 range (Fraley, Waller, and Brennan, 2000; Fraley 2005). In a recent study that used the ECR-R with bereaved individuals to examine mediating processes in the grief process, the Cronbach's alphas for the anxiety and avoidance subscales were .93 and .94 respectively (van der Houwen, Stroebe, Schut, Stroebe, and van den Bout, 2010). Reliability values in the current study were .93 for the anxiety scale and .94 for the avoidance scale.

The ECR-R also has demonstrated construct, discriminant, and convergent validity (Sibley, Fischer, and Liu, 2005). The ECR-R was created by entering a number of previously validated attachment measures into an item response theory analysis to determine which items produce the most information (Fraley, Waller, and Brennan, 2000). Subsequent researchers have subjected these scales to a confirmatory factor analysis and determined that they accurately measure the intended constructs (Sibley, Fischer, and Liu, 2005). Discriminant and convergent validity come from studies of the ECR-R that also measured their performance on a measure of state anxiety and avoidance and another widely used attachment measure, the Relationship Questionnaire (RQ). Respondent's ECR-R scores were only mildly correlated with diary ratings of anxiety and avoidance indicating discriminant validity, but were more highly correlated with scores on the RQ indicating convergent validity (Sibley, Fischer, and Liu, 2005).

Specific Attachment

Specific attachment, or the attachment to the specific deceased individual, was assessed using the Experiences in Close Relationships – Relationship Structures scale (ECR-RS; Fraley, Heffernan, Vicary, and Brumbaugh, 2011). The ECR-RS is a 9-item scale that includes an anxiety subscale and an avoidance subscale. It measures attachment across multiple relationships by asking the respondent to answer the same nine items for their mother, father, romantic partner, and best friend. The ECR-RS produces separate scores for each of these individuals as well as an overall composite score for attachment anxiety and for avoidance. This scale can also be used to measure attachment towards one specific individual by simply identifying that individual in the directions.

The ECR-RS is a relatively new scale and has only been used in a few studies; however, the authors have established reliability across two samples including one with an N over 20,000 (Fraley, Heffernan, Vicary, and Brumbaugh, 2011). For the attachment anxiety subscale with regard to one individual, Cronbach's alpha ranged from .83 to .91. The Cronbach's alpha for the avoidance subscale with regard to one individual ranged from .85 to .92. For the overall scales of all relationships the alpha for attachment anxiety ranged from .80 to .85 and for attachment avoidance the alpha was .88 in both samples. Reliability values in the current study were .88 for the anxiety scale and .83 for the avoidance scale.

The authors of the ECR-RS have not addressed specific types of validity at this time; however, some information about validity can be inferred. Discriminant validity

may be shown by correlations between the ECR-R and the ECR-RS which show low to moderate correlations between specific attachment scales on the ECR-RS and general attachment on the ECR-R (Fraley, Heffernan, Vicary, and Brumbaugh, 2011). These values ranged from .10 for the correlation between the ECR-R anxiety subscale and the ECR-RS anxiety subscale (father) to .66 for the correlation between the ECR-R anxiety subscale and the ECR-RS anxiety subscale (partner). Most values were in the .10 to .30 range. Other evidence for validity may be that the items were derived from previously validated and well-accepted measures of attachment giving the items some inherent construct validity their representativeness of attachment functions. Specific evidence that ECR-RS subscales represent state measures of attachment is limited at this time.

Meaning-Making Measures

As noted in the literature review no widely accepted measure of meaning-making exists. Meaning-making is a complex process that is difficult to assess. For the purposes of this study meaning-making was measured as an outcome variable, or a meaning made. This decision was made because the ultimate goal of the study is to detect whether meaning-making has impacted grief severity. By asking participants to report the degree of success with meaning-making, as opposed to asking which processes they use, it is hoped that the impact of failing to make meaning was also detected.

This study will only address conscious meaning-making processes. This decision was made because of inherent difficulty present in trying to differentiate automatic or unconscious meaning-making processes from ruminative processes. Though automatic

meaning-making processes may contribute to grief outcomes, it is difficult to determine if this contribution is negative or positive.

The survey included three different scales of meaning-based constructs. Each instrument attempts to assesses a different form of meaning-making that has been found important in the meaning-making or meaning-focused coping literature. These types of meaning-making are benefit-finding, sense-making, and positive reappraisal. Principal components analysis was used to determine if some or all of the items on these three scales load onto an underlying meaning-making factor. The outcome of this analysis will be presented in the results section.

Benefit-Finding

The first meaning-making scale to be used is The Benefit-Finding Scale (BFS; Tomich and Helgeson, 2002; 2004). I will use the 14-item version created by Tomich and Helgeson (2004). The BFS was designed to assess benefit-finding in women who have survived breast cancer; but the items lend themselves to other major life stressors and are easily adaptable. An author was contacted and gave permission for the items to be reworded for the current study (Helgeson, personal communication, October 3, 2011).

Because the BFS has not been used with a bereaved population in the past it is important to get some information about reliability and validity with this population. Cronbach's alpha was calculated to determine internal consistency. Validity was assessed by looking at the correlation of the items and total BFS score with a discreet item often used to assess benefit-finding in bereavement literature. The item, "While grieving the

loss of a loved one people sometimes find some benefit or positive aspect in the experience. Have you found any benefit from your experience of loss?" was assessed on a 5-point Likert-type scale. This item was included along with the BFS in order to help assess construct validity.

The BFS uses the stem "Having experienced the loss of my important other..." followed by a series of potential benefits found. Items refer to the death leading the respondent to develop more acceptance, gratefulness for daily life, and strengthened relationships among other benefits. One sample item states "having experience the loss of my important other has made me more productive." These items are rated on a 5-point Likert-type scale that ranges from "none" to "a great deal". The reliability coefficients for the 14 item version of the BFS for women with breast cancer were been between .92 and .93 (Tomich, Helgeson, and Vache, 2005; Tomich and Helgeson, 2006). Reliability for the current study will be discussed along with the factor analysis results. The authors do not specifically address validity, but some evidence comes from a factor analysis in which the BFS was distinguished from two other measures of social and personal resources that might help individuals cope with breast cancer. The BFS emerged as a separate factor when all other types of resources loaded onto a single factor. Construct validity, therefore, is suggested because all 14 BFS items loaded onto a single factor.

Sense-Making

The next form of meaning-making to be assessed is sense-making. Sense-making is simply the ability to make sense of a stressful event by integrating it into one's

worldview (Gillies and Neimeyer, 2006). In most previous literature, sense-making has been assessed using a single question that asks the degree to which the participant has been able to make sense of their loss rated on a Likert-type scale (Currier, Holland, and Neimeyer, 2006; Park, 2010). In observed variable path analysis it is problematic to have a variable assessed by only one item, therefore based on existing research about sense-making, items were created that will comprise a Sense-Making Scale modeled after the Benefit-Finding Scale.

Davis, Nolen-Hoeksema, and Larson (1998) differentiated benefit-finding and sense-making by asking open-ended questions in a series of post-loss interviews with family members who used Hospice. As a part of this process they identified multiple ways in which sense-making can occur. A number of sense-making statements emerged including: that the loss was predictable, that it is a part of the cycle of life, that it is attributable to god or fate, that the deceased person had accepted their own death, that death just happens, that the bereaved expected or prepared for the loss, and that it helped the bereaved person grow. Of these types of responses the first four were the most frequently coded by the researchers.

Gillies and Neimeyer (2006) also address commonly found styles of sense-making that were derived from interview data. In addition to the styles mentioned above they discuss how the initial phases of sense-making tend to relate to concrete explanation of the death, and then over time shift to more personal forms of sense-making like trying to fit the loss into a religious worldview.

Assessing each of these forms of sense-making might improve the accuracy of measurement over having one sense-making item. Therefore, I have created a scale aimed at assessing these various forms of sense-making. A sample item from the scale is "the loss of my important other was meant to be or it was fate." The full scale can be found in Appendix J. After collecting data, these items were factor analyzed to determine whether they measure a unitary construct. Results of the factor analysis will be discussed in the results section.

In order to get some information about reliability, Cronbach's alpha was calculated. Construct validity was assessed by looking at the correlations of the Sense-Making Scale with the more commonly used single sense-making item. This item was included along with the Sense-Making Scale in order to compare responses on that single item with the new items. Another way to assess validity is by correlating sense-making and benefit-finding. Since these two constructs are understood in the literature to be distinct varieties of meaning-making they should not be highly correlated. Reliability and validity results will be presented along with results of the sense-making factor analysis.

Positive Reappraisal

The final meaning-making construct to assess is positive reappraisal which has been used in previous research examining self-reported reappraisal of all kinds of stressors (Lazarus, 1999; Folkman, 2008). Folkman (2007) has described positive reappraisal as one of the core aspects of meaning-focused coping; therefore, it is important to assess this process in the current sample. The Ways of Coping

Questionnaire-Revised (WOCQ-R; Folkman and Lazarus, 1985) includes a subscale to measure positive reappraisal. This subscale has been used to assess meaning-focused coping in previous studies (Folkman, 1999; Folkman and Moskowitz, 2000; 2007). In the current study positive reappraisal was understood to represent successfully reappraising the loss rather than attempting to use reappraisal as a coping process.

Participants describe a particularly stressful event and then rate items on a five-point Likert-type scale. In this study participants were asked to think about their loss when answering these items. Items include references to growing as a person in a good way and finding importance in life. The reliability of the positive reappraisal subscale was .79 when it was assessed in a community sample (Folkman, Lazarus, Dunkel-Schetter, DeLongis, and Gruen, 1986). In more recent studies that used positive reappraisal as the primary measure of meaning focused coping, baseline alpha was .79 (Park, Folkman, and Bostrom, 2001) and .83 (Folkman, 1997). Both of these studies have samples composed of HIV positive men and their caregivers. Cronbach's alpha for the current study is .83.

Evidence for the construct validity of the positive reappraisal subscale comes from a series of factor analyses conducted first with the complete sample of 750, then with a random sample of 150, then confirmed with another random sample of 150 (Folkman, Lazarus, Dunkel-Schetter, DeLongis, and Gruen, 1986). The construct of positive reappraisal emerged as salient in this process. Evidence for discriminant validity

comes from the intercorrelations between the positive reappraisal subscale and other subscales on the WOCQ-R, which range from the low to moderate range.

Complicated Grief

The Prolonged Grief Disorder – 13 (PG-13; Prigerson et al., 2009) is the most recent version of Prigerson et al.'s (1995) Inventory of Complicated Grief (ICG). It is intended to identify individuals with "prolonged grief disorder" which is a name for complicated grief that Prigerson et al. (2009) used in their proposed diagnostic criteria for the DSM-5. The authors indicate that the PG-13 can also be used to assess severity on a continuum, which is how it was used in the current study.

Eleven of the thirteen items on the PG-13 are rated on a five point Likert-type scale on which "1" represents less severity in terms of either the presence of certain feelings or less time spent experiencing certain symptoms (see Appendix L). The other two items are yes/no questions about specific facets of prolonged grief disorder. In order for an individual to be considered for a prolonged grief disorder diagnosis based on the PG-13 they must meet five criteria: 1) they must have experienced bereavement; 2) they must have responded "at least once a day" or "several times a day" on the two items addressing separation distress; 3) they must report that the loss occurred over 6 months ago; 4) they must respond with "at least once a day," "several times a day," "quite a bit," or "overwhelmingly" to at least five of the nine symptom items; and 5) they must answer yes to an item about having impairment in social activity, occupational performance, or other significant domains in their lives. A severity of grief score ranging from 11 to 55

can also be obtained by calculating the total of all the non-dichotomous items (Schaal, Elbert, and Neuner, 2009).

The PG-13 was created using the same items that appear on the nineteen-item ICG. The ICG, which was developed by Prigerson et al. (1995), has shown evidence of reliability with high internal consistency (Cronbach's alpha = .94) and an adequate test-retest reliability of .80. Cronbach's alpha for the current study was .91. Prigerson et al. (1995) have also shown evidence for concurrent validity with the Texas Revised Inventory of Grief (r = .87), the Grief Measurement Scale (r = .70), and the Beck Depression Inventory (r = .67). The ICG and its alternate forms are among the most commonly used measures of complicated grief in the literature.

Control Variable Measures

Optimism

Participants' level of optimism was assessed using the Life Orientation Test – Revised version (LOT-R; Sheier, Carver, and Bridges, 1994). The LOT-R is a 10-item scale that can assess an individual's level of dispositional optimism, and is one of the most commonly used measures of optimism. The LOT-R consists of four filler items, three positively worded items and three negatively worded items. In order to get a total optimism score, the three positive items are added to the reverse scores of the negative items (see Appendix D). Statements are rated on a five-point Likert scale ranging from "strongly agree" to "strongly disagree." The LOT-R has demonstrated evidence of internal consistency reliability (Cronbach's alpha = .78) and adequate test-retest

reliability (r = .68 - .79; Sheier, Carver, and Bridges, 1994). Cronbach's alpha for the current study was .81. It has also demonstrated adequate convergent and discriminant validity with measures of neuroticism, anxiety, and previous measures of optimism.

Strength of Religious Faith

Participants' strength of religious faith at baseline was operationalized by obtaining their score on the Santa Clara Strength of Religious Faith Questionnaire (SCSORF; Plante & Boccaccini, 1997). The SCSORF is a ten-item scale that evaluates the participants' strength of religious faith by asking about the frequency of use and importance of religious practices in their life. The items are rated on a four-point Likert-type scale with anchors ranging from "strongly disagree" to "strongly agree." The higher an individual scores on the SCSORF the higher their strength of religious faith.

The SCSORF has high internal reliability (Cronbach's alpha = .95) with undergraduate populations (Plante & Boccaccini, 1997). Cronbach's alpha for this current study was .98. It also has demonstrated construct validity (r = -.83) observed by correlating the SCSORF and the Belief in Personal Control Scale (Berrenberg, 1987).

Relationship Rating Form

Relationship quality was operationalized using the Relationship Rating Form (RRF; Davis and Latty-Mann, 1987). The RRF is a 68-item scale that assesses multiple aspects of relationship quality. It is unique in that it can be used in the context of romantic relationships or friendships. The RRF includes twenty short scales measuring

various aspects of relationships. The short scales load onto seven global relationship characteristics. Global characteristics of relationships measured by the RRF are viability, intimacy, care, passion, satisfaction, conflict, and commitment.

The structure of the RRF is complex, but for the purposes of the current study only the global satisfaction scale was used to get an estimate of participants' perception of the quality of their relationship to the deceased. In the RRF, satisfaction with the relationship is composed of four subscales. Theses are success in the relationship, enjoyment in the relationship, reciprocity in the relationship, and esteem felt as a result of the relationship. These four subscales include 11 items. The authors indicate that items can be rated on either a 9-point or 7-point scale. Since most scales being presented in this survey have seven or fewer response options a 7-point version was used to keep the response options as consistent as possible.

Reliability for the satisfaction scale has been found to be high with Cronbach's alphas ranging from .90 to .93 across three different studies (Davis and Latty-Mann, 1987; Davis, Todd, and Demney, 1988; Davis, 2002). In the current study, Cronbach's alpha was .95. Test-retest reliability has been found to be acceptable at .73. Content validity was established by having outside raters judge whether items fit into their content domains (Davis, 2002). Evidence for predictive validity as also been established for the global scales which have been found predictive of long-term satisfaction and relationship stability (Davis, 2002).

Procedure

Consent to proceed with this study was obtained from the Institutional Review Board at the University of Texas at Austin. After subject pool participants were assigned to the study they were contacted via email with information about the study and asked whether they wanted to complete the study. If the participant responded in the affirmative, then they were sent a link to the survey via e-mail. Informed consent was obtained from participants on the first page of the survey. A debriefing statement was also provided on the last page of the survey, and participants interested in the results of the study had the option to indicate whether or not they want to receive a summary of the results. Participants who do want the results were asked to email the researcher separately requesting results. These emails have been saved in order to keep a record of these participants separate from the data collection. After successful completion of the study the results will be e-mailed to participants.

Research Questions and Analyses

In order to investigate the relationships between attachment insecurities, meaning-making, and complicated grief the current study will follow four phases of data analyses.

Research Question 1:

1a. Is the sense-making measure psychometrically adequate?

1b. Does the Benefit-Finding Scale retain its psychometric properties in this sample and with changes?

1c. What is the best way to conceptualize meaning-making in the path model? How many meaning-making constructs are present in the data?

In phase one, three principal components analyses were conducted for the meaning-making variables. First, separate principal components analyses were conducted on the Benefit-Finding Scale and Sense-Making Scale to determine whether they each actually measure unitary constructs.

Then a separate principal components analysis was conducted using the items from all three meaning-making scales in order to determine if meaning-making can be treated as a unitary construct or if it is multifaceted. The plan was to determine whether or not an underlying meaning-making factor could be found across the various meaning-making items or if the scales should be treated as separate variables. It was hypothesized that sense-making and benefit-finding would not load onto the same factor, but it is important to determine if these meaning-making constructs share an underlying factor that can be used to simplify the data analysis.

Research Question 2:

2. *What are the interrelationships between all the variables observed in the study?*

In phase two, the relationships between all variables in the study were examined using correlations. Examining the individual relationships between all variables helps to establish whether it is important to include these variables in subsequent analyses as control variables. Descriptive statistics were also examined. Normality was assessed by

inspecting skewness and kurtosis values. Scatterplots of residuals were examined to assess for homoscedasticity and linearity. Outliers were also removed at this point. Participants with 10% or more missing data will be excluded from further data analyses.

Research Question 3:

3a. Are the conditions for mediation present in the current study?

3b. If not, are there other pertinent tests that could be performed such as an overall multiple regression to identify the variables most associated with grief severity?

3c. How is this data similar and different than past studies on attachment and grief?

In phase three, relationships between variables that are fundamental in building the proposed mediation model shown in Figure 1 were examined. Before conducting the observed variable path analysis it is important to assess whether the conditions needed for mediation are present. In order to determine whether significant relationships exist, hierarchical multiple regression analyses were conducted for all the pertinent variables including their respective control variables in order to examine the unique relationships between each variable and the intended outcome. This procedure was used for every family of predicted relationships in the proposed mediation including for the effects of the four attachment variables on grief severity, for the four attachment variables on the meaning-making variables, and for the meaning-making variables on grief severity.

Although I am not using Baron and Kinney's (1986) steps to test for mediation, it is still useful to examine whether or not the model meets criteria for mediation. The

relationships that were tested are as follows: 1) grief severity as predicted by general attachment anxiety and attachment avoidance separately; 2) grief severity as predicted by specific attachment anxiety and attachment avoidance separately; 3) grief severity as predicted by the endorsement of meaning-making variables; 4) meaning-making as predicted separately by general attachment anxiety and attachment avoidance; and 5) meaning-making as predicted separately by specific attachment anxiety and attachment avoidance.

Each set of relationships was tested in a hierarchical regression model including pertinent control variables. Before performing these analyses, the assumptions for multiple regression were assessed. In addition to examining linearity, normality, and homoscedasticity, multicollinearity of predictor variables is important to assess in order to ensure that the variables are not overlapping and inflating the probability of Type II error. Multicollinearity was diagnosed by examining the tolerance statistic and variance inflation error (Cohen et al., 2003).

In order to pursue the next phase, it was required that the conditions for mediation were met with at least one meaning-making variable and either general or specific attachment as an exogenous variable. These conditions include that an attachment variable significantly predicts grief severity, that an attachment variable significantly predicts a meaning-making variable, and that a meaning-making variable significantly predicts grief severity.

Research Question 4:

4a. Does meaning-making mediate the relationship between attachment insecurity and grief severity?

4b. Is this path model adequate or is there a better competing model?

In phase four, path analysis was used to test the mediation model presented in Figure 2. Path analysis was selected because it allows the examination of the relationships between multiple exogenous and exogenous variables and the estimation of indirect effects. In order to estimate the direct and indirect effects presented in the path model in Figure 2 I will use LISREL developed by Jöreskog and Sörbom (2006). LISREL can compute direct, indirect, and total effects and indicate the goodness of fit for a path model based on multiple fit indicators. Direct effects represent the effect of one variable in the model directly on another variable, and can be represented by beta coefficients. Indirect effects represent the effect of one variable on another through a third mediating variable. The total effect is the sum of both direct and indirect effects.

Direct effects that are present in the model are:

1. The direct effect of optimism on the meaning-making variables (positive reappraisal, benefit-finding, and sense-making)
2. The direct effect of strength of religious faith on the meaning-making variables
3. The direct effect of general attachment anxiety on the meaning-making variables

4. The direct effect of general attachment avoidance on the meaning-making variables
5. The direct effect of specific attachment anxiety on the meaning-making variables
6. The direct effect of specific attachment avoidance on the meaning-making variables
7. The direct effect of time since the loss on the meaning-making variables
8. The direct effect of general attachment anxiety on grief severity
9. The direct effect of general attachment anxiety on mental health history
10. The direct effect of general attachment anxiety on relationship quality
11. The direct effect of general attachment avoidance on grief severity
12. The direct effect of general attachment avoidance on mental health history
13. The direct effect of general attachment avoidance on relationship quality
14. The direct effect of specific attachment anxiety on grief severity
15. The direct effect of specific attachment avoidance on grief severity
16. The direct effect of time since the loss on grief severity
17. The direct effect of relationship quality on grief severity
18. The direct effect of mental health history on grief severity
19. The direct effect of traumatic loss on grief severity

Indirect effects that are present in the model are:

1. The indirect effect of optimism on grief severity through the meaning-making variables

2. The indirect effect of strength of religious faith on grief severity through the meaning-making variables
3. The indirect effect of general attachment anxiety on grief severity through the meaning-making variables
4. The indirect effect of general attachment avoidance on grief severity through the meaning-making variables
5. The indirect effect of specific attachment anxiety on grief severity through the meaning-making variables
6. The indirect effect of specific attachment avoidance on grief severity through the meaning-making variables
7. The indirect effect of time since the loss on grief severity through the meaning-making variables

In addition to assumptions of regression analysis, path analysis includes additional assumptions. These include that the exogenous variables are uncorrelated with the disturbance terms, causal flow is in one direction in the model, exogenous variables are reliably measured, and the inclusion of all pertinent variables into the model (Tate, 1998). These assumptions were addressed by adding multiple control variables into this model, testing for reliability, and phrasing the survey in such a way that the causal flow is clearly unidirectional.

After estimating the model, fit statistics were examined in order to detect the goodness of fit of the path model. Multiple fit indices were calculated by contrasting the

actual correlation matrix with the model-implied correlation matrix. It has been recommended that in order to make the best interpretation of the fit of the model, it is best to use a combination of fit indices and to determine the overall pattern observed in these fit indices (Tate, 1998). Chi-square is a widely used measure of fit; however, due to its instability related to sample size it is wise to use other fit indicators (Tate, 1998). A non-significant chi-square indicates that there is no difference between the observed and model-implied correlation matrices. Root mean square error of estimation (RMSEA) is commonly used fit that approximates the fit of a model. Adequate fit is indicated by values below .05 and models with values above .10 have poor fit (Tate, 1998). Other fit indices used in the current study were the standardized root mean square residual (SRMR), which should be less than .08 or .10, the normed fit index (NFI), which should be greater than .95, and the comparative fit index (CFI), which should be greater than .90. For the model to be considered adequate these fit indices must indicate good fit.

RESULTS

A total of 356 participants completed the survey, but after screening the responses only 328 participants were found to have: 1) met criteria for the study, and 2) adequately completed the survey. Therefore 28 cases were cut from further analysis at this point. Next, the data were screened for outliers and for violations of the assumptions of normality, linearity, homoscedasticity, and multicollinearity. Univariate outliers were detected by using the criterion of the absolute value of z being no greater than 3.29. Eight data points were found to be univariate outliers, and these scores were manually adjusted to match the next closest score that did not exceed the criterion. Additionally, one multivariate outlier was detected using the Mahalanobis distance measure in SPSS Version 22. This participant's responses were removed from further analysis. This reduced the overall number of participants to 327.

Several variables exhibited skewness and/or kurtosis, but this was not present to a degree that would be concerning in terms of performing the planned analyses. Scatterplots were assessed for linearity, and no curvilinear relationships were detected. Heteroscedasticity was observed in the bivariate scatterplots, but because of the sample size and the robustness of regression to this assumption it was not considered problematic. Multicollinearity was not observed in the regression analyses.

After reviewing the responses of these 327 participants it was found that .53% of the values were missing with 37.46% of the participants having at least one missing value. Therefore, it was decided to use multiple imputation to account for the missing

data. Multiple imputation a is process available in SPSS that can replace missing values based on calculations of replacement values that will produce a dataset that is most similar to the original dataset. The default method available in SPSS was used. The program runs multiple datasets and imputes values in the place of missing values in each of these datasets. The result is five datasets in addition to the original data. Many analyses can be conducted using an aggregate of these datasets that is thought to be roughly equivalent to the values that would be present in the original dataset if it were not missing values. The imputed data did not differ greatly from the original dataset with missing values. Whenever possible the following data analyses use the pooled data across the five imputations; however, SPSS does not allow the use imputed data for all types of analyses. The aggregate dataset was used whenever possible. Cases in which the original dataset or another data replacement strategy was used will be noted below.

Principal Components Analyses

The first set of research questions addresses the psychometric properties of two of the meaning-making measures that were used in the study: the Sense-Making Scale and the Benefit-Finding Scale. SPSS cannot use aggregate data from a multiple imputation procedure to calculate principal components analyses. Instead the data reported in the following section are based on the original dataset, and another data replacement strategy was used to verify the results. The expectation-maximization (EM) algorithm was used to create correlation matrices based on replaced data. These correlation matrices were then used to run a separate principal components analyses for the purpose of comparison to the

results presented in this section. After each principal components analysis is described the EM algorithm data will then be discussed.

Principal components analyses were conducted on the Benefit-Finding Scale and Sense-Making Scale in order examine their factor structure. Specifically, these principal components analyses were selected in order to determine whether or not these two scales each measure a single, meaningful construct, to locate and remove items that do not measure these constructs, and to assist in labeling any factors that are identified. The factor scores for these scales, as well as those of all other scales that were analyzed using principal components analysis, were computed as the total raw score of each subscale. In addition to principal components analyses, reliability and validity analyses were conducted on these two measures in order to determine whether they should be used in subsequent analyses. Finally, in the interest of parsimony, a third principal components analysis was conducted on all of the meaning-making items together in order to verify whether separate scales of meaning-making should be used or if an underlying meaning-making dimension or dimensions may exist across the separate scales.

Sense-Making Scale Results

As noted in the method section, the Sense-Making Scale is an original scale composed for this study based on previous sense-making research (Gillies and Neimeyer, 2006; Davis, Nolen-Hoeksema, and Larson, 1998). The nine items of the Sense-Making Scale were analyzed using a principal components analysis with direct oblimin rotation in order to determine factor structure. This rotation was selected for all of the principal

components analyses because of the high likelihood that if multiple factors were present in the data that these factors would be correlated. For the Sense-Making Scale this analysis yielded two factors explaining a total of 65.47% of the total variance for the set of all items after extraction. Item communalities ranged from 53% to 85% with an average of 65% of their variance in common with the other items. The Kaiser-Meyer-Olkin measure and Bartlett's test both indicate that the items were related adequately enough to proceed with factor analysis with a KMO value of .86 and Bartlett's test significant at the .01 level.

Table 3. Initial pattern matrix for the Sense-Making Scale

Item	Factor 1 (general sense-making)	Factor 2 (religious sense-making)
1. The loss of my important other was predictable in some ways.	**.85**	.14
2. Death is just a part of life. It happens to everyone sooner or later.	**.71**	-.04
3. The loss of my important other was a part of God's plan.	-.08	**-.95**
4. The loss of my important other was meant to be or it was fate.	.17	**-.66**
5. My important other is better off now.	.25	**-.63**
6. Religious or cultural practices have helped me understand the loss of my important other.	-.13	**-.94**
7. I know that my important other was at peace with or prepared for their death.	.55	-.35
8. I understand what caused my important other to pass away.	**.70**	.05
9. I understand why my important other had to pass away.	**.75**	-.18

The first principal components analysis yielded two factors based on Cattell's Scree test (1966) and the general guideline of keeping factors with eigenvalues above 1.0. The first factor appeared to be composed of items that represent general forms of sense-making. The second factor appeared to be composed of items that represent religious forms of sense-making. For all principal components analyses that were conducted in this study, the cut-off of .40 was used to identify factor loadings and a cut-off of .32 was used to identify cross-loadings. Using these guidelines, four sense-making items loaded clearly onto each of the two principal components with one item cross-loading onto both principal components (see Table 3). Because this is an indication that the Sense-Making Scale is composed of two factors, it was decided to cut the single item that cross-loaded onto both principal components in order to derive two different scales for subsequent analyses. Therefore, item 7 was removed and then another principal components analysis was run to ensure that the factor structure was retained.

Upon inspection of the new pattern matrix after deleting item 7, it was found that the general structure was retained, and the overall amount of variance explained by the items (67%) was roughly the same as before eliminating items. This confirmed the decision to split the scale into two subscales for further analysis: the general sense-making subscale and the religious sense-making subscale. The component correlation for these two principal components was .40.

Table 4. Revised pattern matrix for the Sense-Making Scale

Item	Factor 1 (religious sense-making)	Factor 2 (general sense-making)
1. The loss of my important other was predictable in some ways.	-.12	**.83**
2. Death is just a part of life. It happens to everyone sooner or later.	.06	**.72**
3. The loss of my important other was a part of God's plan.	**.95**	-.08
4. The loss of my important other was meant to be or it was fate.	**.67**	.17
5. My important other is better off now.	**.63**	.25
6. Religious or cultural practices have helped me understand the loss of my important other.	**.94**	-.14
8. I understand what caused my important other to pass away.	-.01	**.80**
9. I understand why my important other had to pass away.	.20	**.76**

Reliability was tested by using Cronbach's alpha to assess internal consistency. Cronbach's alpha for the general sense-making subscale was adequate at .80. Cronbach's alpha for the religious sense-making subscale was adequate at .84. Convergent validity was assessed by correlating each scale with the single sense-making item that has been used in many previous studies. All intercorrelations between meaning-making scales and subscales that were used for the purpose of estimating validity can be found in Table 5 below. The Pearson correlation for the sense-making single item and the general sense-making subscale was .51, which was statistically significant ($p < .001$), and the correlation for the sense-making single item and the

religious sense-making subscale was .29, which was also statistically significant ($p < .001$) although not highly suggestive of construct validity. It is possible that these items measure another religious coping construct that is not highly correlated with sense-making as it has been traditionally conceptualized.

Discriminant validity was assessed by correlating the subscales of the Sense-Making Scale with the single benefit-finding item and with the Positive Reappraisal subscale of the Ways of Coping Questionnaire. The correlations for the general sense-making subscale were .30 with the benefit-finding item and .35 for positive reappraisal. Both were statistically significant ($p < .001$), but were not as strong as the relationship between the sense-making item and the general sense-making subscale ($r = .51$). This suggests that the general sense-making subscale is more strongly related to the traditional measure of sense-making than it is to other meaning-making constructs.

Table 5. Correlations of meaning-making scales for construct and discriminant validity

	1	2	3	4	5	6	7	8
1. Sense-making item	1	.51**	.29**	.37**	.14*	.21**	0.09	.27**
2. General sense-making		1	.53**	.30**	.26**	.26**	.15**	.35**
3. Religious meaning-making			1	.28**	.32**	.30**	.27**	.57**
4. Benefit-finding item				1	.42**	.43**	.21**	.52**
5. Benefit-finding behaviors					1	.58**	.52**	.65**
6. Benefit-finding attitudes						1	.47**	.52**
7. Benefit-finding family							1	.46**
8. Positive reappraisal								1

*Significant at .05 ** Significant at .01

The same was not true of the religious sense-making subscale with correlations of .28 for the benefit-finding item and .57 for the positive reappraisal. Both correlations were statistically significant at the .01 level and were as strong or stronger than the correlation between the religious sense-making subscale and the single sense-making item. This suggests that the religious sense-making subscale is a weak measure of the construct of sense-making as it has been conceptualized in previous literature. In fact, the religious sense-making subscale appears to be more highly related to positive reappraisal ($r = .57$) than it is to general sense-making ($r = .53$). However, from a theoretical point of view the scale seems to capture a set of religious ways to cope with loss that are not addressed in other areas of the survey. It may be that this scale measures a separate religious appraisal of loss construct. Therefore, these items were included in the overall principal components analysis in order to determine if more information about the nature of this scale can be discovered.

The results of the EM algorithm data for the Sense-Making Scale yielded an identical factor structure and similar factor loadings. Therefore, it was assumed that the missing data in the original dataset did not skew the results of this principal components analysis.

Benefit-Finding Scale Results

The Benefit-Finding Scale was tested to determine if the unitary structure found in previous samples of individuals with chronic illnesses would be retained in the current sample of bereaved individuals (Tomich and Helgeson, 2002; 2004). The original

fourteen items of the Benefit-Finding Scale were analyzed using a principal components analysis with direct oblimin rotation. This analysis yielded three principal components with eigenvalues greater than 1.0, but the scree plot suggests only two principal components. The three principal components explained a total of 61.8% of the total variance after rotation for the set off all 14 items. Communalities ranged from 42% to 72% with most items having approximately 60% of their variance in common with the other items. The Kaiser-Meyer-Olkin measure (.91) and Bartlett's test ($p < .001$) both indicate that the items were related adequately enough to proceed with factor analysis.

Since multiple components were suggested instead of the anticipated single benefit-finding factor, it is necessary to perform subsequent analysis to examine the nature of the Benefit-Finding Scale in this study. Upon examination of the initial pattern matrix, the first factor seemed to be related to specific benefit-finding behaviors such as reported increases in patience or self-control after the loss. The second factor was composed of items that reflected changes in attitudes such as increased acceptance or gratefulness. The third factor was very specifically related to three items that reflected an increased sensitivity to family issues since the loss. Two items did not have factor loadings of over .40 on any of the three principal components and were cut from the scale (see Table 6).

Table 6. Initial pattern matrix for the Benefit-Finding Scale

Item: Having experienced the loss of my important other...	Factor 1	Factor 2	Factor 3
1. has made me more sensitive to family issues.	-.10	.05	.86
2. has led me to be more accepting of things.	-.05	**.81**	.11
3. has taught me how to adjust to things I cannot change.	-.14	**.91**	.05
4. has made me a more responsible person.	.30	.39	.24
5. has made me realize the importance of planning for my family's future.	.25	.10	**.52**
6. has brought my family closer together.	.20	.11	**.50**
7. has made me more productive.	**.74**	-.05	.20
8. has helped me take things as they come.	.11	**.73**	.00
9. has helped me to budget my time better.	**.83**	-.09	.14
10. has made me more grateful for each day.	.28	.35	.17
11. has taught me to be patient.	**.70**	.18	-.01
12. has taught me to control my temper.	**.80**	.08	-.12
13. has renewed my interest in participating in different activities.	**.84**	-.06	.01
14. has led me to cope better with stress and problems.	.47	.48	-.30

The two items that did not load onto any principal component were removed, and a second principal components analysis was conducted on the remaining 12 items to ensure that the same factor structure remained after removing the other items. This analysis yielded the same three principal components with eigenvalues greater than 1.0 that were present in the first analysis. The item that had previously cross-loaded onto two principal components was still cross-loaded so it was decided to cut this item to get clear measures of each of the underlying constructs.

A principal components analysis was then run on the remaining 11 items and the same three principal components emerged (see Table 7). The three principal components explained a total of 65.40% of the total variance for the set of all 11 items. Communalities ranged from 40% to 71% with an average of approximately 60% of their variance in common with the other items. The Kaiser-Meyer-Olkin measure and Bartlett's test both indicated that the items were still related adequately enough to proceed with factor analysis.

The factors were identical to those present in the previous analysis. Because the scree test suggested only two factors, and because of the specificity of the third principal component, it is possible that the third factor is unnecessary for assessing benefit-finding in this sample. All items were entered into the overall principal components analyses to decide whether or not the family benefit factor emerges as an important construct in the measurement of meaning-making. This analysis will be described in the next section, but the result of this process yielded two primary benefit-finding subscales: a benefit-finding behaviors subscale and a benefit-finding attitudes subscale. Cronbach's alpha for these subscales was .87 and .79 respectively.

Table 7. Revised pattern matrix for the Benefit-Finding Scale

Item: Having experienced the loss of my important other...	Factor 1	Factor 2	Factor 3
1. has made me more sensitive to family issues.	-.12	-.01	**.89**
2. has led me to be more accepting of things.	-.01	**.81**	.11
3. has taught me how to adjust to things I cannot change.	-.08	**.93**	-.02
5. has made me realize the importance of planning for my family's future.	.25	.15	**.45**
6. has brought my family closer together.	.13	.02	**.67**
7. has made me more productive.	**.75**	-.03	.14
8. has helped me take things as they come.	.14	**.73**	-.02
9. has helped me to budget my time better.	**.84**	-.07	.09
11. has taught me to be patient.	**.71**	.20	-.02
12. has taught me to control my temper.	**.79**	.06	-.08
13. has renewed my interest in participating in different activities.	**.86**	-.04	-.04

The Pearson correlation for these two variables was .58, which was statistically significant ($p < .001$). The benefit-finding behaviors subscale was significantly correlated with the single benefit-finding item ($r = .42$; $p < .001$) and the benefit-finding attitudes subscale was also significantly correlated with the single benefit-finding item ($r = .43$; $p < .001$) suggesting that both scales are related to the construct of benefit-finding as it has been measured in previous research. Discriminant validity was suggested by correlating the single sense-making item with the two subscales of the Benefit-Finding Scale. The correlations (.14 for the benefit-finding behaviors subscale and .21 for the benefit-finding attitudes subscale) were both statistically significant ($p < .001$), but were not as strong as the relationship between the benefit-finding subscales and the benefit-finding item. This

also suggests that these subscales are broadly related to meaning-making, but more specifically related to a traditional measure of benefit-finding than to a traditional measure of sense-making.

The results of the principal components analysis conducted using the EM algorithm data was slightly different in the case of the Benefit-Finding Scale. Using this data set, the second and third factor (benefit-finding attitudes and benefit-finding through family) appeared to load onto the same factor. This was still the case after eliminating non-loading items and the single item that was cross-loaded on both the behavior and attitude subscale. However, when using a procedure that forced the system to seek three factors, the same three factors emerged that were present in the initial analysis: benefit-finding behaviors, benefit-finding attitudes, and benefit-finding through family. The items loaded onto the same factors that were described above. Additionally, in the two factor solution provided by the EM algorithm data, the second factor is less interpretable than the three factor solution originally obtained using the original data because it includes both the family items and the attitude items. It is unclear from a theoretical point of view how these items are related more than the items of the attitudes and behaviors subscales. A strong theoretical argument for using this two factor solution could not be found. Therefore it was decided to retain the three factor solution that indicated three subscales of the Benefit-Finding Scale: benefit-finding behaviors, benefit-finding attitudes, and benefit-finding through family.

Overall Factor Analysis for Meaning-Making Scales

Another research question related to determining whether or not separate meaning-making measures are necessary in this study. Three meaning-making scales were administered. However, because the use of multiple measures can complicate the planned path analysis, and because it is unclear whether each of these scales actually measure distinct meaning-making constructs, it was decided to conduct an overall principal components analysis with all of the meaning-making items in order to determine if a more parsimonious solution could be used as an overall measure of meaning-making. All 30 items of the Benefit-Finding Scale, Sense-Making Scale, and Positive Reappraisal subscale of the Ways of Coping Questionnaire were entered into a principal components analysis using direct oblimin rotation. This procedure yielded six principal components with eigenvalues greater than 1.0. These six principal components explained a total of 64.04% of the total variance for the set of all 30 items after rotation. Communalities ranged from 46% to 85% with items having an average of approximately 64% of their variance in common with the other items. The Kaiser-Meyer-Olkin measure (.91) and Bartlett's test ($p < .001$) both indicate that the items were related adequately enough to proceed with factor analysis.

Generally, the results of this principal components analysis are consistent with the results of the previous two analyses on the Benefit-Finding and Sense-Making Scales. No single factor emerged that appeared to be a strong measure of meaning-making across the scales; therefore, it was decided to retain separate scales that assess different aspects of

meaning-making instead of trying to create one broad measure of meaning-making that would simplify data analyses. The results of this analysis can be seen in Table 8.

Five items cross-loaded onto two separate factors. Of the remaining items, most appear to load onto factors that correspond to constructs that have already been identified in the previous path analyses or to the established positive reappraisal construct. Unexpectedly, the positive reappraisal subscale did not hold together as a single factor. Two positive reappraisal items with religious content loaded onto the same principal component as the religious sense-making items. This suggests a possible religious coping variable that is measured across these two scales.

Despite this surprise, the results generally fit with previously established factors. The principal components appear to roughly correspond to the following constructs respectively: 1) benefit-finding behaviors; 2) general sense-making; 3) religious meaning-making and religious coping; 4) benefit-finding attitudes; 5) benefit-finding through family support; and 6) positive reappraisal. The first two factors appear to be the strongest measures in terms of the overall variance accounted for by these items which is 44% of the total variance; therefore, benefit-finding behaviors and general sense-making will be thought of as the primary meaning-making measures with other scales being included for exploratory purposes only.

The results of the EM algorithm data for the Sense-Making Scale yielded an identical factor structure and similar factor loadings. Therefore, it was assumed that the missing data did not skew the results of this principal components analysis.

Table 8. Pattern matrix for all meaning-making items

Item	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
Benefit-Finding Scale						
1. Having experienced the loss of my important other has made me more sensitive to family issues.	-.08	-.06	.07	.05	**.80**	.16
2. Having experienced the loss of my important other has led me to be more accepting of things.	.04	.04	-.03	**.75**	.14	-.01
3. Having experienced the loss of my important other has taught me how to adjust to things I cannot change.	-.09	.08	-.01	**.84**	.06	-.01
4. Having experienced the loss of my important other has made me a more responsible person.	.27	-.08	.01	.41	.19	.15
5. Having experienced the loss of my important other has made me realize the importance of planning for my family's future.	.30	.12	.07	.10	**.54**	.00
6. Having experienced the loss of my important other has brought my family closer together.	.17	.02	-.28	.12	**.47**	-.04
7. Having experienced the loss of my important other has made me more productive.	**.73**	-.02	.03	-.01	.15	.08
8. Having experienced the loss of my important other has helped me take things as they come.	.07	.00	-.06	**.70**	-.04	.08
9. Having experienced the loss of my important other has helped me to budget my time better.	**.73**	.04	-.07	-.05	.15	.07
1. Having experienced the loss of my important other has made me more grateful for each day.	.16	-.13	-.26	.31	.14	.18
11. Having experienced the loss of my important other has taught me to be patient.	.645	.09	-.11	.21	.02	-.03
12. Having experienced the loss of my important other has taught me to control my temper.	**.75**	.05	-.06	.14	-.09	-.04
13. Having experienced the loss of my important other has renewed my interest in participating in different activities.	**.79**	-.01	.10	.04	.03	.06
14. Having experienced the loss of my important other has led me to cope better with stress and problems.	.41	.01	.00	.50	-.29	.07
Sense-Making Scale						
1. The loss of my important other was predictable in some ways.	.03	**.82**	.13	-.01	.07	-.03

2. Death is just a part of life. It happens to everyone sooner or later.	-.15	.68	.02	.12	-.12	.27
3. The loss of my important other was a part of God's plan.	-.04	.08	**-.88**	.05	-.03	-.03
4. The loss of my important other was meant to be or it was fate.	.07	.33	-.55	-.04	-.08	-.06
5. My important other is better off now.	.02	.40	**-.55**	-.07	.07	-.07
6. Religious or cultural practices have helped me understand the loss of my important other.	-.03	-.03	**-.91**	.05	.02	.03
7. I know that my important other was at peace with or prepared for their death.	.13	**.63**	-.28	-.14	.11	.02
8. I understand what caused my important other to pass away.	-.02	**.73**	.02	.11	-.01	.03
9. I understand why my important other had to pass away.	.13	**.75**	-.14	.03	-.04	.03
Positive Reappraisal						
1. I changed or grew as a person in a good way.	.00	.20	-.01	.15	.01	**.76**
2. I came out of the experience better than I went in.	.06	.28	-.01	.14	-.60	**.67**
3. I found new faith.	.10	-.08	**-.67**	.01	-.11	.27
4. I rediscovered what is important in life.	-.03	-.06	-.20	.15	.29	**.60**
5. I prayed.	-.03	-.18	**-.86**	.09	.08	.05
6. I changed something about myself.	.15	-.02	-.04	-.05	.13	**.70**
7. I was inspired to do something creative.	.51	-.08	-.05	-.13	-.12	**.46**

Primary Analyses

Now that the methods of measurement have been examined, I will turn to the primary analyses. These consist of the correlations, regression analyses, and path analysis. The goal of this series of analyses is to determine whether or not any of the identified meaning-making variables mediate the relationship between attachment insecurities and prolonged grief symptoms.

Intercorrelations Between Variables

The intercorrelations among the variables that were used in the regression analyses are presented in Table 9. Consistent with previous findings, the two general attachment dimensions were significantly correlated in the positive direction (r = .42), as were the two specific attachment dimensions (r = .36). All attachment dimensions except for specific attachment avoidance were significantly positively correlated with complicated grief symptoms. These findings are consistent with the findings of Jerga, Shaver, and Wilkinson (2011).

As expected, all of the meaning-making variables were significantly positively correlated with each other. Positive reapprasial, benefit-finding behaviors, and benefit-finding related to family support were all uncorrelated with the intensity of grief symptoms. However, benefit-finding attitudes (r = -.11), general sense-making (r = -.26), religious meaning-making (r = -.13), the benefit-finding individual item (r = -.19), and the sense-making individual item (r = -.40) were all significantly correlated with prolonged grief symptoms, and were all in the expected direction.

Control variables were all correlated in the direction that would be expected given previous research findings with the exception of time since the loss. Surprisingly, time since the loss was not significantly correlated with any other variable.

Table 9. Intercorrelations between variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1. PG-13	(7.86)	.26**	.34**	.33**	-.04	-.09	.19**	.36**	-.30**	.01	.04	-.03	.01	-.11*	.02	-.26**	-.13*	-.19**	-.40**
2. ECRR-Anx		(22.04)	.42**	.36**	.18**	-.01	.21**	.05	-.35**	.02	-.18**	.09	.10	.08	-.01	-.08	-.02	.02	-.09
3. ECRR-Avd			(19.41)	.29**	.18**	-.06	.14*	.05	-.29**	-.06	-.11*	-.10	-.08	-.12*	-.21**	-.05	-.08	-.15**	-.13*
4. ECRRS-Anx				(2.66)	.36**	.06	.11*	.20**	-.17**	-.08	-.45**	-.06	.01	-.02	-.10	-.21**	-.14*	-.03	-.20**
5. ECRRS-Avd					(4.86)	-.01	.06	-.17**	-.03	-.11*	-.56**	-.09	-.06	-.08	-.04	.06	.03	.02	-.01
6. Time						(2.38)	-.04	.07	-.04	-.04	.02	.07	.09	.11	.06	-.10	-.09	.09	-.06
7. Mental Health							(1.74)	.14**	-.24**	-.18**	-.05	-.13*	-.11*	-.02	-.01	-.10	-.14*	-.04	-.14*
8. Trauma								(4.56)	-.14*	-.07	-.15**	-.12*	-.11*	-.05	-.06	-.66**	-.26**	-.20**	-.43**
9. LOT-R									(4.32)	.03	.05	.07	.07	.05	.11*	.11*	.10	.18**	.20**
10. SOF										(9.50)	.18**	.54**	.27**	.23**	.27**	.23*	.70**	.18**	.13*
11. RRF											(9.53)	.12*	.03	.05	.08	.18**	.17**	.02	.13*
12. WOCC-PR												(5.69)	.66**	.53**	.47**	.35**	.57**	.51**	.26**
13. BFS-Beh													(5.13)	.59**	.52**	.25**	.32**	.42**	.15**
14. BFS-Att														(2.28)	.49**	.24**	.29**	.42***	.20**
15. BFS-Fam															(2.33)	.14*	.26**	.21**	.09
16. SMS-Gen																(5.16)	.53**	.30**	.52**
17. SMS-Rel																	(4.59)	.28***	.29**
18. BF item																		(1.08)	.37**
19. SM item																			(1.08)
Scale Mean	20.18	64.39	53.66	5.02	14.23	4.37	8.82	12.97	19.83	26.20	51.43	22.79	17.33	10.67	10.94	16.55	13.07	2.86	3.37

Note. *Significant at .05 ** Significant at .01

Standard deviations included on the diagonal

Hierarchical Regression Analyses

A series of hierarchical regression analyses were conducted to further examine the relationship between a) general and specific attachment and prolonged grief, b) general and specific attachment and the meaning-making variables, and c) the meaning-making variables and prolonged grief. The purpose of this set of analyses was to determine whether or not the conditions for mediation might be met in order to decide whether to proceed with the planned path analysis. Because SPSS does not report beta weights for aggregate data, the beta weights reported in this section are based on the original data before imputing missing values. In each case where a statistically significant R squared value was obtained, this value was also significant in each of the five iterations; therefore, using the original data should not skew the results towards greater significance.

Analysis of Attachment Functioning as a Predictor of Grief Severity

In order to determine the unique contribution of each of the four attachment scales in the prediction of grief severity, four hierarchical regression analyses were conducted. Each analysis was composed of two steps. In the first step, time since the loss, relationship quality, mental health history, traumatic loss, and all but one of the four attachment scales were entered into a model with grief severity as the dependent variable. The remaining attachment scale was then entered in step two in order to see the unique impact of each attachment scale on grief severity while controlling for all the other pertinent variables. In this set of analyses general attachment anxiety and specific attachment avoidance were not significant predictors of grief severity when controlling

for the other variables. General attachment avoidance was a significant predictor of grief severity even when controlling for the other pertinent variables ($\beta = .23$, $p < .001$). Specific attachment anxiety was also a significant predictor of grief severity when controlling for the other pertinent variables ($\beta = .30$, $p < .001$). For complete beta weight tables see Appendix O.

Table 10. Summary of R squared and R squared change in hierarchical regression analyses for attachment variables predicting grief

	Grief	
	R Squared	R Squared Change
Step 1	.36***	
Step 2 (ECRR-anxiety)	.37	.01
Step 1	.32***	
Step 2 (ECRR-avoidance)	.37***	.04
Step 1	.31***	
Step 2 (ECRRS-anx)	.37***	.06
Step 1	.37***	
Step 2 (ECRRS-avd)	.37	.00

Note. * = p < .05; ** = p < .01; *** = p < .001
Analysis 1, Step 1 = ECRR - avoidance, ECRRS - anxiety, ECRRS - avoidance, Time since loss, RRF, Mental Health History, Traumatic Loss
Analysis 1, Step 2 = ECRR - avoidance, ECRRS - anxiety, ECRRS - avoidance, Time since loss, RRF, Mental Health History, Traumatic Loss, ECRR - anxiety
Analysis 2, Step 1 = ECRR - anxiety, ECRRS - anxiety, ECRRS - avoidance, Time since loss, RRF, Mental Health History, Traumatic Loss
Analysis 2, Step 2 = ECRR - anxiety, ECRRS - anxiety, ECRRS - avoidance, Time since loss, RRF, Mental Health History, Traumatic Loss, ECRR - avoidance
Analysis 3, Step 1 = ECRR - anxiety, ECRR - avoidance, ECRRS - avoidance, Time since loss, RRF, Mental Health History, Traumatic Loss
Analysis 3, Step 2 = ECRR - anxiety, ECRR - avoidance, ECRRS - avoidance, Time since loss, RRF, Mental Health History, Traumatic Loss, ECRRS – anxiety
Analysis 4, Step 1 = ECRR - anxiety, ECRR - avoidance, ECRRS - anxiety, Time since loss, RRF, Mental Health History, Traumatic Loss
Analysis 4, Step 2 = ECRR - anxiety, ECRR - avoidance, ECRRS - anxiety, Time since loss, RRF, Mental Health History, Traumatic Loss, ECRRS – avoidance

Analysis of Attachment Functioning as a Predictor of Meaning-Making

A similar set of hierarchical regression analyses were conducted to determine whether any of the four attachment variables were significant predictors of one of the forms of meaning-making that was measured in the study. In the first step of each regression analysis, a model was created that included all pertinent control variables including time since the loss, optimism, and strength of faith. In step two the remaining attachment variable was entered. An analysis was conducted for each attachment variable separately. The dependent variable was one of the five meaning-making variables and each was rotated through the analysis separately. Because there are four attachment variables and five meaning-making variables, this process was repetitive. It included twenty separate regression analyses in order to address every combination of attachment and meaning-making. Findings were considered significant if the p value was below .01. Significant findings are reported here.

Attachment variables made several contributions to the prediction of meaning-making. General attachment anxiety was a significant predictor of positive reappraisal ($\beta = .17$, $p = .009$) and benefit-finding attitudes ($\beta = .20$, $p = .007$). However, these relationships were positive indicating that the greater the level of attachment anxiety, the greater the level of these two forms of meaning-making. General attachment avoidance was a predictor of less ability to endorse benefit-finding attitudes ($\beta = -.19$, $p = .007$). Specific attachment anxiety was a significant predictor of general sense-making ($\beta = -.26$, $p < .001$), and specific attachment avoidance was a significant predictor of both general

sense-making ($\beta = .21$, $p = .001$) and religious meaning-making ($\beta = .17$, $p = .001$). For the complete beta weight tables see Appendix O.

Table 11. Summary of R squared and R squared change in hierarchical regression analysis for attachment variables predicting benefit-finding behaviors, benefit-finding attitudes, general sense-making, and religious meaning-making

	WOCC-PR		BFS-Behaviors		BFS-Attitudes		SMS-General		Religious MM	
	R Squared	R Squared Change	R Squared	R Squared Change	R Squared	R Squared Change	R Squared	R Squared Change	R Squared	R Squared Change
Step 1	.30***		.14***		.10***		.15***		.52***	
Step 2 (ECRR-anx)	.32	.02**	.15	.02*	.13	.03**	.15	.00	.52	.00
Step 1	.31***		.13***		.10***		.15***		.51***	
Step 2 (ECRR-avd)	.32	.01	.15	.02*	.13	.03**	.15	.00	.52	.00
Step 1	.32***		.15***		.13***		.10***		.50***	
Step 2 (ECRRS-anx)	.32	.00	.15	.00	.13	.00	**.15****	.05***	.52	.01**
Step 1	.32***		.15***		.13***		.11***		.49***	
Step 2 (ECRRS-avd)	.32	.00	.15	.00	.13	.00	**.15***	.04***	.52	.02***

Note. * = $\underline{p} < .05$; ** = $\underline{p} < .01$; *** = $\underline{p} < .001$

The approach to analysis was to run four separate multiple regression analyses for each dependent variable. Each of the five meaning-making variables were tested as a dependent variable. In each analysis one of the attachment variables was entered in the second step to determine the unique contribution of that variable to the prediction of each specific form of meaning making. In each of the twenty regression analyses optimism, strength of faith, and relationship quality were entered in step 1. Three of the four attachment variables were also entered in step 1. In step 2 the remaining attachment variable was added to the model.

Analysis of Meaning-Making as a Predictor of Complicated Grief

A final set of five hierarchical regression analyses was conducted with grief severity as the dependent variable in order to detect the unique impact of each of the six meaning-making variables. In the first step of this model, all of the important control variables were included, which consisted of optimism, strength of faith, times since the loss, relationship quality, mental health history, traumatic loss, all four attachment variables, and five of the six meaning-making variables. In the second step the remaining meaning-making variable was entered in order to detect the contribution of each of these variables separately.

Of the five meaning making variables, only benefit-finding behaviors ($\beta = .24$, $p < .001$) and benefit-finding attitudes ($\beta = -.29$, $p < .001$) were significant predictors of grief severity while controlling for all the other variables in the model. The remaining meaning-making variables did not appear to make a significant contribution to the prediction of grief severity while controlling for all of the pertinent control variables.

Table 12. Summary of R squared and R squared change in hierarchical regression analysis for meaning making variables predicting grief

	Grief	
	R Squared	R Squared Change
Step 1	.65***	
Step 2 (Positive Reappraisal)	.65	.00
Step 1	.39***	
Step 2 (BFS-Behaviors)	.42**	.03
Step 1	.37***	
Step 2 (BFS-Attitudes)	.42***	.05
Step 1	.42***	
Step 2 (SMS-General)	.42	.00
Step 1	.42***	
Step 2 (Religious MM)	.42	.00

Note. * = $p < .05$; ** = $p < .01$; *** = $p < .001$
Analysis 1, Step 1 = ECRR - anxiety, ECRR - avoidance, ECRRS - anxiety, ECRRS - avoidance, Time since loss, RRF, Mental Health History, Traumatic Loss, LOT-R, Faith, BFS - behaviors, BFS - Attitudes, SMS, Religious MM
Analysis 1, Step 2 = ECRR - anxiety, ECRR - avoidance, ECRRS - anxiety, ECRRS - avoidance, Time since loss, RRF, Mental Health History, Traumatic Loss, LOT-R, Faith, BFS - behaviors, BFS - Attitudes, SMS, Religious MM, WOCC - PR
Analysis 2, Step 1 = ECRR - anxiety, ECRR - avoidance, ECRRS - anxiety, ECRRS - avoidance, Time since loss, RRF, Mental Health History, Traumatic Loss, LOT-R, Faith, WOCC - PR, BFS - Attitudes, SMS, Religious MM
Analysis 2, Step 2 = ECRR - anxiety, ECRR - avoidance, ECRRS - anxiety, ECRRS - avoidance, Time since loss, RRF, Mental Health History, Traumatic Loss, LOT-R, Faith, WOCC - PR, BFS - Attitudes, SMS, Religious MM, BFS - behaviors
Analysis 3, Step 1 = ECRR - anxiety, ECRR - avoidance, ECRRS - anxiety, ECRRS - avoidance, Time since loss, RRF, Mental Health History, Traumatic Loss, LOT-R, Faith, WOCC - PR, BFS - behaviors, SMS, Religious MM
Analysis 3, Step 2 = ECRR - anxiety, ECRR - avoidance, ECRRS - anxiety, ECRRS - avoidance, Time since loss, RRF, Mental Health History, Traumatic Loss, LOT-R, Faith, WOCC - PR, BFS - behaviors, SMS, Religious MM, BFS - Attitudes

Path Analyses

Results of the hierarchical regression analyses were moderately suggestive of the possible mediation proposed in Figure 1, therefore it was decided to proceed with the planned analysis. Before presenting the model, the pertinent relationships will be reviewed. Two attachment variables, general attachment avoidance and specific attachment anxiety, were significant predictors of grief severity while controlling for other important variables. General attachment anxiety and general attachment avoidance were both significant predictors of benefit-finding attitudes. Both specific attachment anxiety and specific attachment avoidance were significant predictors of general sense-making while controlling for other variables in the model. Finally, benefit-finding behaviors and benefit-finding attitudes were predictors of grief severity while controlling for other pertinent variables. A modified version of the proposed model (Figure 2) was tested using these variables along with the pertinent control variables. This model included general attachment anxiety, general attachment avoidance, specific attachment anxiety, specific attachment avoidance, general sense-making, benefit-finding behaviors, benefit-finding attitudes, relationship quality, optimism, strength of faith, mental health history, traumatic loss, and grief severity. Time since the loss was omitted because it was uncorrelated with other variables. This version of the path model can be seen in Figure 4.

The path model tests are based on the intercorrelation matrix of aggregate data across all five imputations and used maximum likelihood estimation as conducted in LISREL 8.8 (Joreskog & Sorbom, 1992). An adequate fit to the data was not obtained in

the original hypothesized model (χ^2 = 560.95, p < .01; RMSEA = .16; SRMR = .13; CFI = .54; NFI = .53).

However, LISREL provides suggestions for modifications to the model based on the suggested changes in chi squared values. Several modifications were suggested, but most did not make theoretical sense. Six paths were added based on the modification suggestions, and are shown as darker paths in Figure 5. These were: 1) a path between general attachment general attachment anxiety and optimism, 2) a path between general attachment avoidance and optimism, 3) a path between general attachment anxiety and specific attachment avoidance, 4) a path between general attachment avoidance and specific attachment avoidance, 5) a path between specific attachment anxiety and relationship quality, and 6) a path between specific attachment avoidance and relationship quality. This revised model was then tested. The revised model (see Figure 5) provided a marginally better, but still inadequate, fit (χ^2 = 363.11, p < .01; RMSEA = .13; SRMR = .11; CFI = .71; NFI = .70). This suggests that the hypothesized model was not adequately supported by the data.

Figure 4. Original Path Model

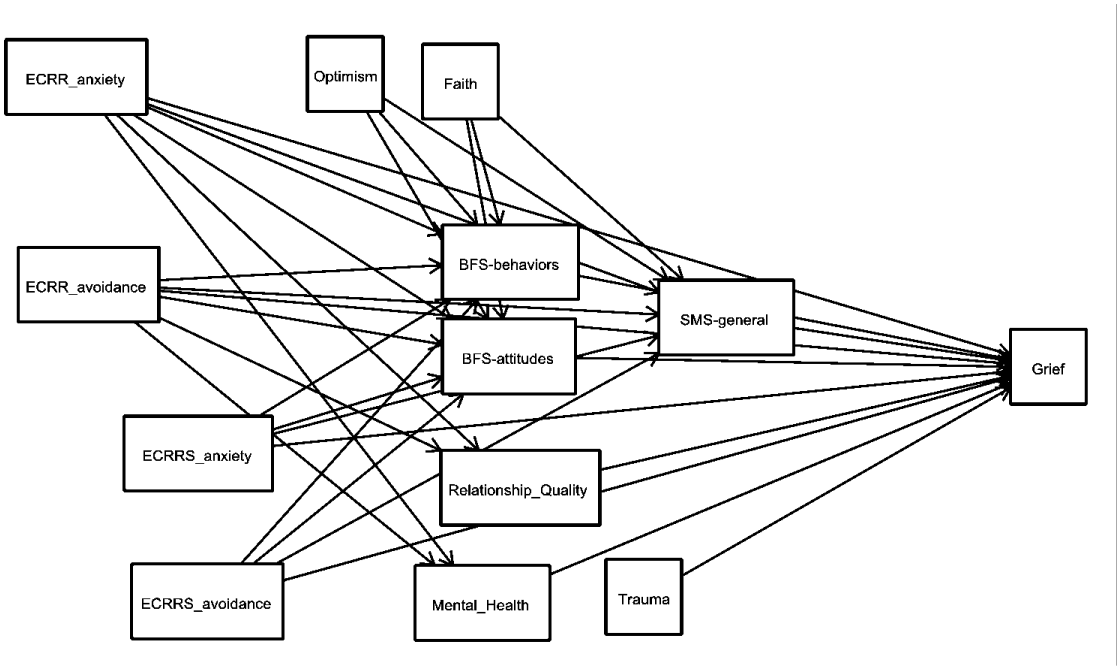
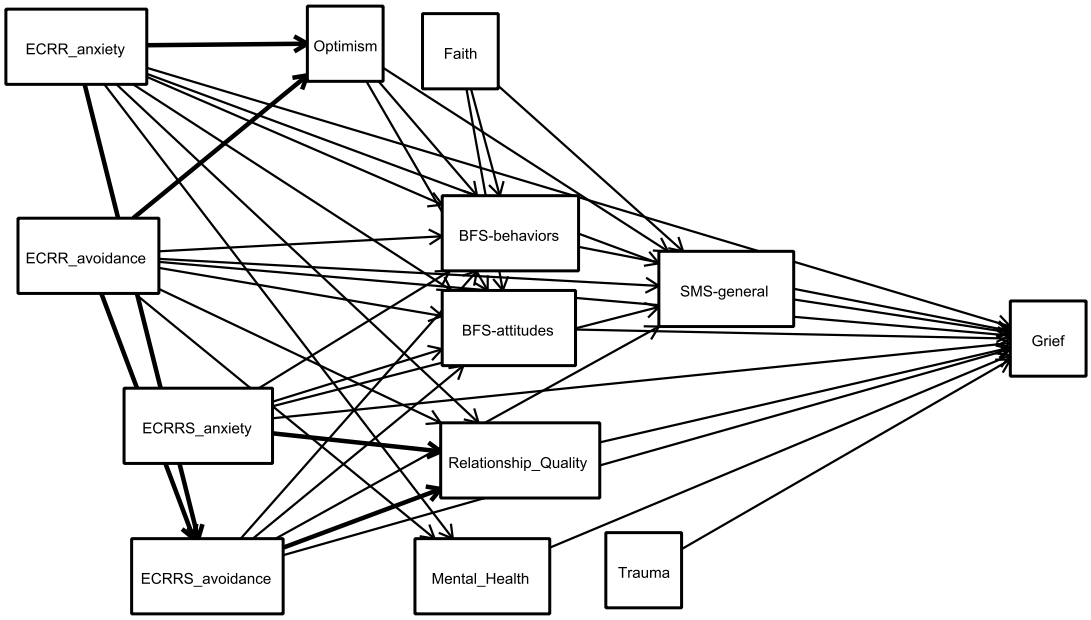


Figure 5. Path model with LISREL-suggested modifications



Exploratory Analyses

Replication of Previous Findings

Because the proposed path model did not fit the data, several exploratory analyses were conducted to further understand the data. The first exploratory analysis was a partial replication of the Jerga, Shaver, and Wilkinson (2011) study. This study first suggested the importance of including both general and specific attachment in the study of grief reactions through demonstrating that the inclusion of both general and specific attachment insecurities improved the prediction of complicated grief in a multiple regression model.

In order to replicate their findings, a hierarchical regression was conducted based on their data analysis strategy to determine whether general and specific attachment insecurities were uniquely related to complicated grief symptoms after controlling for a similar set of other major predictors. In Jerga, Shaver, and Wilkinson's (2011) study, age, gender, time since loss, traumatic loss, and general and specific attachment insecurity variables were included. Additionally, Jerga, Shaver, and Wilkinson (2011) included an attachment strength variable that was not collected in this sample. They also included two relationship quality variables, which were a care subscale and a conflict subscale from the Relationship Rating Form.

In the present study only the overall relationship satisfaction subscale was collected so it was not possible to replicate both of their relationship quality variables. In

this partial replication, age, gender, time since loss, traumatic loss, and general and specific attachment insecurity variables, and relationship quality were included in the hierarchical regression. Variables were entered in the same sequence of steps as Jerga, Shaver, and Wilkinson (2011). Overall results are presented in Table 13.

The final regression model was significant, $F (9, 241) = 14.76$, $p < .001$, and accounted for 36.40% of the variance. In the first step, age, gender, time since loss, and traumatic loss were entered into the model, R squared = .14, $F (4, 241) = 9.583$, $p < .001$. Traumatic loss was a significant predictor of complicated grief ($\beta = .36$, $p < .001$), but age, gender, and time since the loss did not have a significant relationship with grief symptoms.

In the second step general attachment anxiety and general attachment avoidance were both entered, R squared = .28, $F (6, 241) = 15.185$, $p < .001$. Both general attachment anxiety ($\beta = .15$, $p = .016$) and general attachment avoidance ($\beta = .29$, $p < .001$) were significantly related to complicated grief symptoms, and accounted for 14.0% of the variance.

Table 13. Hierarchical regression analysis predicting complicated grief based on Jerga, Shaver, and Wilkinson (2011)

	Beta step 1	Beta step 2	Beta step 3	Beta step 4	*F* **Δ**
Age	.02	.03	.04	.05	9.58
Gender	.05	.07	.07	.06	
Time since loss	-.10	-.08	-.10	-.11*	
Traumatic loss	.36***	.33***	.27***	.32***	
General anxiety		.15*	.09	.10	22.85
General avoidance		.29***	.26***	.24***	
Specific anxiety			.26***	.32***	7.98
Specific avoidance			.07	.025	
Relationship quality				.26***	14.07
	R^2 = .14***	R^2 **Δ** = .14***	R^2 **Δ** = .05***	R^2 **Δ** = .04***	R^2 = .34***

Note.* = p < .05; ** = p < .01; *** = p < .001

In the third step specific attachment anxiety and specific attachment avoidance were entered, R squared = .33, F (8, 241) = 14.06, p < .001. Specific attachment anxiety (β = .26, p < .001) was significantly related to complicated grief symptoms, but not specific attachment avoidance. This step accounted for 4.60% of the variance.

In the final step, relationship quality was entered, R squared = .36, F (9, 241) = 14.76, p < .001. Relationship quality (β = .26, p < .001) was significantly related to complicated grief symptoms and accounted for 3.90% of the variance.

In the final model, time since the loss, traumatic loss, general attachment avoidance, specific attachment anxiety, and relationship quality were significantly associated with complicated grief symptoms. Time since the loss was negatively associated with complicated grief symptoms. General attachment anxiety and specific attachment avoidance were unrelated to complicated grief in the final model.

Overall Regression Model

Another exploratory analysis was focused on the overall prediction of grief severity based on all of the variables measured in the study. Multiple regression was used to create a model that included all the variables measured in the study including: all four attachment variables, optimism, strength of faith, relationship quality, mental health history, traumatic loss, time since the loss, and all five meaning-making variables measured in the study. Additionally, the specific benefit-finding and sense-making items were included as predictors in order to determine if their relationship with grief severity differs from the Benefit-Finding and Sense-Making Scales that were used in the primary analysis. Results are presented in Table 14.

The regression model was significant, $F(18, 206) = 9.74$, $p < .001$, and accounted for 48.30% of the variance. General attachment avoidance ($\beta = .20$, $p = .001$), specific attachment anxiety ($\beta = .27$, $p < .001$), traumatic loss ($\beta = .26$, $p = .001$), relationship quality ($\beta = .22$, $p = .004$), benefit-finding attitudes ($\beta = -.31$, $p < .001$), benefit-finding related to family support ($\beta = .15$, $p = .026$), and the single sense-making item ($\beta = -.29$, $p < .001$) were all significant predictors of complicated grief.

Table 14. Overall multiple regression analysis predicting complicated grief

	Beta weight
General anxiety	.09
General avoidance	.20***
Specific anxiety	.27***
Specific avoidance	-.09
Time since loss	-.10
Mental health	.06
Traumatic loss	.26***
Relationship quality	.22**
Optimism	-.09
Strength of faith	.09
Benefit-finding single item	.06
Benefit-finding - behaviors	.14
Benefit-finding - attitudes	-.31***
Benefit-finding - family support	.15*
Sense-making single item	-.29***
General sense-making	.16
Religious sense-making	-.08
	R^2 = .48

Note. = $p < .05$; ** = $p < .01$; *** = $p < .001$

Prediction of Complicated Grief while Controlling for the Closeness of the Relationship

In addition to the quantitative measures that were collected from participants, several open ended questions were included in the survey. One of these questions asked about the context of the loss and information about the departed loved one. After reviewing these responses, participants were coded based on their reported closeness to the deceased. This was based both on the type of relationship (parent, partner, etc.) and on their description of the relationship in open-ended responses. Due to the nature of the sample, many of the deaths that were reported were of grandparents, aunts, uncles, or other relatives who may or may not serve a primary attachment function in the participants' lives. For this reason it was decided to code based on the description of the relationship instead of using the relationship category alone to analyze the data.

I sorted participants into two categories: 1) those for whom I could be certain that the loss was of an important or close figure in their life, and 2) those for whom the deceased seemed less close. Parents and relationship partners were almost all included in the closeness category, but for friends, grandparents, and others, the categorization was based primarily on the participant's description of their relationship and grief. Eighty-two participants reported a very close relationship to the deceased and the remaining two hundred and forty-five either reported a less close relationship or did not provide enough information to determine the closeness of the relationship.

In the next analysis, I separately ran the overall multiple regression for both sets of participants in order to determine if predictors of prolonged grief differ across the two groups based on their closeness to the deceased. Results are presented in Table 15.

The regression model for the participants who reported less close relationships to the deceased was significant, F (18, 149) = 6.26, $p < .001$, and accounted for 46.20% of the variance. In this model, specific attachment anxiety ($\beta = .36$, $p < .001$), traumatic loss ($\beta = .20$, $p = .036$), relationship quality ($\beta = .24$, $p = .015$), time since the loss ($\beta = -.19$, $p = .009$), benefit-finding behaviors ($\beta = .30$, $p = .002$), benefit-finding attitudes ($\beta = -.34$, $p < .001$), general sense-making ($\beta = .21$, $p = .046$), and the single sense-making item ($\beta = -.25$, $p = .002$) were all significant predictors of complicated grief.

The regression model for the participants who reported very close relationships to the deceased was also significant, F (18, 56) = 3.84, $p < .001$, and accounted for 47.70% of the variance. In this model, only general attachment avoidance ($\beta = .45$, $p = .006$) and the single sense-making item ($\beta = -.43$, $p = .008$) were significant predictors of complicated grief.

Table 15. Multiple regression analysis predicting complicated grief separated by closeness of relationship

	Betas for Less Close	Betas for Very Close
General anxiety	.12	-.03
General avoidance	.10	.45**
Specific anxiety	-.09	.05
Specific avoidance	.35***	-.01
Time since loss	-.19**	-.06
Mental health	-.01	.06
Traumatic loss	.20*	.25
Relationship quality	.24*	.27
Optimism	-.11	.01
Strength of faith	.06	.23
Benefit-finding single item	-.09	.22
Benefit-finding - behaviors	.30**	-.17
Benefit-finding - attitudes	-.34***	-.27
Benefit-finding - family support	.06	.25
Sense-making single item	-.25**	-.43**
General sense-making	.21*	.18
Religious sense-making	-.22	-.13
	R^2 = .46	R^2 = .48

Note.* = p < .05; ** = p < .01; *** = p < .001

DISCUSSION

Overview of Significant Findings

The main purpose of this study was to examine the relationships between attachment insecurities, meaning-making variables, and several control variables that are associated with the development of complicated grief. It is also hoped that this study contributes to a better understanding of factors that might be important to address in therapeutic interventions for complicated grief by furthering our understanding of risk factors. Specifically, the current study sought to examine the possibility that meaning-making variables mediate the relationship between attachment and complicated grief. A path model of these relationships was tested in which meaning-making variables with an established relationship to grief were hypothesized to account for some of the variance in the established relationship between attachment insecurities and complicated grief symptoms.

The overall hypothesis was that meaning-making coping variables would mediate the relationship between attachment insecurities and complicated grief symptoms due to a theorized influence of attachment insecurity on the ability to make sense of and cope with major losses like bereavement. This relationship between attachment and meaning-making has not been directly tested in the grief literature before, but has been proposed based on the theoretical link between internal working models of attachment and meaning-making variables (Park, 2010; Uren and Wastell, 2010). Attachment insecurity was hypothesized to indirectly impact a griever's success in using meaning-making

coping through the influence of internal working models of self and other that develop based on early attachment experiences. The current study sought to find evidence to support this hypothesized relationship between attachment, meaning-making, and grief, but unfortunately evidence to support this hypothesis was not found.

Even though the main hypothesis was not supported, several significant findings in this study may shed light on the factors that influence the development of severe grief reactions. There was some support for all of the relationships depicted in Figure 1. In line with previous research, it was found that both attachment insecurities and some meaning-making variables, including benefit-finding attitudes, benefit-finding behaviors, and sense making when asked as a single question, were associated with the development of complicated grief. These findings were not surprising given that they have been established in a great deal of previous literature.

The relationship between attachment insecurities and meaning-making variables has not been shown in previous literature. In the current study there appears to be at least a modest relationship between these two sets of variables. General attachment anxiety was significantly associated with positive reappraisal and benefit-finding attitudes although these relationships were in the opposite direction of what was hypothesized. This suggests that general attachment anxiety could promote meaning-making in some ways. General attachment avoidance was significantly associated with benefit-finding attitudes in the expected direction, suggesting that the more avoidantly attached someone is, the less they are able to utilize these types of benefit-finding.

Specific attachment insecurities were also associated with meaning-making outcomes. Specific attachment anxiety was significantly associated with general sense making, suggesting that higher specific attachment anxiety to the deceased is associated with less ability to make sense of the loss. Specific attachment avoidance was also significantly associated with general sense making and with religious meaning-making suggesting that the higher the specific attachment avoidance to the deceased, the more likely an individual was to report having successfully made sense of their loss.

These findings suggest complex relationships between attachment and meaning-making variables that do not all fit with the overall hypothesis that attachment insecurity in general is predictive of less ability to engage in meaning-making after loss. However, the findings are logical and support the broader idea that attachment qualities do inform our ability to make sense of major losses. In this case it seems that the presence of one of the forms of attachment insecurity might promote some forms of meaning-making, but inhibit other forms of meaning-making. Overall, the findings do not provide strong support for the broader theory that working models of self and other based on early attachment experiences plays a major role in determining how individuals make sense of their losses. Instead it seems possible that working models might play a small role in shaping an individual's meaning-making, but other factors, including their specific relationship to the individual who died, may play a larger role in contributing to how they cope with their loss.

The lack of evidence for the proposed mediation could be explained by a number of issues. First, it is important to consider the possibility that attachment and meaning-making processes are relatively distinct and less related than was hypothesized. Although previous theory has suggested a link between these two sets of variables, it is possible that attachment-based working models of self and other do not have a significant impact on one's ability to engage in meaning-making processes. Other variables such as culture, religious orientation, major personality traits, and intellectual ability might all have a strong influence on one's ability to engage in successful meaning-making, and these variables might have a more direct impact on meaning-making than attachment insecurity. However, it is also possible that a relationship between attachment insecurity and meaning-making exists but was not detected in the current study due to measurement or design issues. Possible reasons why this could have been the case will be addressed in the limitations section.

Although the path analysis did not support the hypothesized model of how attachment and meaning-making factors influence severe grief, several other results do add to our knowledge of the factors that shape grief reactions and point to avenues for continued investigation. First, this study makes a unique contribution to the literature on complicated grief because no other study identified in the literature has incorporated both attachment variables and meaning-making variables into a regression model of predictors of complicated grief related to the loss of a adult attachment figure. Uren and Wastell (2010) examined both attachment and sense of coherence as related to perinatal loss, but

that is the only other study found that included both attachment and meaning-making in one model.

In the current study, both attachment variables and meaning-making variables appeared to be significantly related to the severity of reported grief symptoms. General attachment avoidance, specific attachment anxiety, traumatic loss, relationship quality, benefit-finding attitudes, family support, and sense-making (when asked as a single item) were all significantly associated with the severity of reported grief. The fact that both attachment and meaning-making variables were significantly related to grief in the same model suggests that both may be important to address when working with an individual who is struggling with a severe or complicated grief reaction. Further clinical implications will be addressed below.

It is also notable that this finding held up when looking at the factors that are related to grief across differing levels of closeness to the deceased. Although the specific variables that were significantly associated with grief outcomes were different in the subgroup of participants that described a close relationship with the deceased, both general attachment avoidance and sense-making (when asked as a single item) were still significantly associated with the severity of reported grief. This suggests that regardless of the type of loss or closeness to the deceased, one's attachment orientation and ability to make sense of one's loss both play a significant role in how well one adjusts to the loss of an important other.

These findings indicate that future research in this area should account for the impact of attachment, meaning-making, and other important predictor variables when examining the factors that shape grief outcomes. The literature in this area tends to be divided with attachment researchers looking at one set of variables and meaning-making researchers looking at another set of variables. If the goal of both bodies of research is to better predict, understand, and treat complex or severe grief reactions, then it seems reasonable that researchers should examine all the pertinent variables when making statements about what kinds if things lead to severe grief or what types of interventions would be best to treat individuals suffering from severe grief reactions.

In addition to research implications, these findings have some important implications for clinical practice. The finding that both attachment and appraisal processes are significantly associated with grief outcomes suggests that clinicians need to assess and address both of these factors in addition to other important aspects of a client's grief reaction. One concern is that clinicians working from divergent theoretical orientations might miss important factors that maintain an individual's grief. For instance, clinicians working with a client in a psychodynamic/attachment framework might focus more on the relationship and attachment issues while focusing less on some of the basic appraisal processes like how an individual explains their loss, whether or not they accept it, or whether they are able to identify positive aspects of their loss. On the other hand, clinicians working from a cognitive or constructivist point of view might focus more on these appraisal processes and less on the attachment and relationship

quality aspects of that person's relationship to the deceased, which may be significantly contributing to that individual's grief. The results of this study suggest that a thorough assessment of all of these possible contributors to grief severity is needed to shape appropriate interventions.

Another important finding of this study is the wide range of meaning-making constructs that emerged from the principal components analyses. Previous studies have often used two items to assess the constructs of benefit-finding and sense-making; however, the results of this study suggest that this strategy might miss some important aspects of how mourners make meaning in the context of loss. The variables that emerged through factor analyzing the various meaning-making measures included religious or spiritual sense-making, meaning-making related to family, and meaning-making attitudes in addition to more traditional benefit-finding and sense-making constructs. These are all aspects of the meaning-making process that might not be adequately captured in a single item. Therefore, the results of this study suggest that improved measurement of meaning-making constructs is vital if future research is going to be able to truly understand the process of how individuals make meaning out of major life experiences such as bereavement.

Additional Findings

In addition to the general measurement issues, path analysis results, and overall trends discussed above, several other results were obtained in the current study. Principal components analyses were used to test hypotheses about the measurement of meaning-

making constructs and hierarchical regression analyses were used to establish the significant relationships needed to test for mediation. These analyses provide information about the nature of the meaning-making variables and the unique contributions of a range of predictors of complicated grief. Pertinent results of these analyses will now be reviewed.

Implications for the Measurement of Meaning-Making

This study used and factor analyzed the Benefit-Finding Scale with a new population. Unlike the factor structure that was reported in individuals with terminal illness (Tomich and Helgeson, 2004), the Benefit-Finding Scale used in the current study appeared to be comprised of three factors: benefit-finding behaviors, benefit-finding attitudes, and benefit-finding related to family support. Additionally, a new measure was created to assess sense-making processes based on previous research about the most common types of sense-making. This scale yielded two factors: general sense-making and religious meaning-making. As both the Benefit-Finding Scale and the Sense-Making Scale were analyzed using exploratory factor analysis, future research is needed to confirm these factor structures in different samples and across different populations. The current results suggest that both benefit-finding and sense-making are multifaceted constructs that may require more sophisticated forms of measurement than the single items used in past grief research or even the brief scales that have been designed.

Variables Associated with Complicated Grief

General attachment insecurities have been shown to be significantly associated with grief in past research (Field and Sundin, 2001; Wayment and Vierthaler, 2002; Fraley and Bonanno, 2004; Jerga, Shaver, and Wilkinson, 2011), which is why this was a fundamental relationship to test for this study. General attachment anxiety was expected to be associated with complicated grief symptoms. However, while these two variables were significantly correlated, it was found that when general attachment anxiety was entered into a regression model with other important control variables that it was not significantly associated with complicated grief severity.

This was surprising given past findings, but there are a couple of reasons why this might have occurred in the current study. First, when looking at the responses it was found that this sample may not have included as many individuals with high attachment anxiety as would be found in the general population. Additionally, a similar trend was observed in a previous student sample (Jerga, Shaver, and Wilkinson, 2011) that looked at general attachment as related to grief outcomes. Jerga, Shaver, and Wilkinson (2011) observed a relationship between general attachment anxiety and complicated grief symptoms, but not between general attachment anxiety and normal grief symptoms. So perhaps one reason for finding a weak relationship between general attachment anxiety and complicated grief is related to a combination of positive skew in the amount of general attachment anxiety in this sample and positive skew in the amount of complicated grief symptoms in this sample. If more individuals who reported highly anxious

attachment and more individuals who reported severe complicated grief were included in the sample, then different results might have been obtained.

General attachment avoidance was associated with complicated grief even after controlling for other important variables. This result is important because it provides more support for the hypothesis that attachment avoidance can be associated with severe grief reactions which has not been consistently shown in previous research. Building on work by Jerga, Shaver, and Wilkinson (2011), participants' specific attachment to the deceased was assessed in addition to general attachment. Specific attachment anxiety was found to be significantly associated with complicated grief while specific attachment avoidance was not significantly associated with grief outcomes after controlling for other potential predictors of grief outcome. This finding makes sense because individuals who reported specific attachment avoidance would be less likely to value the relationship which impacts the degree to which they experience grief after their loss. Overall, two of the four attachment variables were found to be significantly associated with complicated grief which is supportive of previous findings that attachment is indeed an important factor to consider when assessing an individual's risk of developing persistent or pathological grief reactions.

Another established relationship in the literature is that of meaning-making variables and grief outcomes. Research generally shows that individuals who are unable to successfully engage in meaning-making around their loss are more prone to develop complicated grief symptoms. This study sought to extend these findings by assessing a

variety of potential meaning-making variables rather than asking two discrete questions as has often been done in past research (Park, 2010). Using hierarchical regression it was found that benefit-finding behaviors and benefit-finding attitudes were both significantly associated with complicated grief outcomes after statistically controlling for other predictor variables. It is also important to note that this analysis included other major types of meaning-making derived from the three scales that were included in the survey; however, the single item measures of meaning-making were not included in that analysis. As noted above the single sense-making item was also significantly associated with grief outcomes. These results suggest that at least benefit-finding, and possibly sense-making, are important predictors of adjustment to loss. Individuals who do not report having found some benefit in their loss or having made sense of their loss tend to struggle with more complicated grief symptoms than individuals who report successful benefit-finding or sense-making. This is in line with previous results that used different measures of meaning-making and adds to the literature that suggests that meaning-making variables are important in the understanding of grief outcomes.

Limitations

Although I consider the results to be interesting and clinically useful, several limitations should be noted. Perhaps the most important limitation is related to measurement. As has been cited in similar grief studies, it is impossible to be completely certain that a person's attachment orientation after a loss is the same as it was before the loss. A very significant loss can sometimes result in a change in attachment by increasing

the level of attachment anxiety or avoidance that a person has towards others in their life. While this is thought to be relatively unusual, it is possible. It is also possible that a person's specific attachment could be changed after a loss based on a person's view of the relationship. These measures could be affected by idealizing the deceased or conversely minimizing the importance of the relationship. In order to be certain that this is not occurring, it would be necessary to measure attachment and attitudes about the relationship before and after the loss. This would require much larger sample sizes and longer periods of time that were unavailable in the current study.

Similarly, it is not possible to be entirely certain of the accuracy of a person's recollected meaning-making outcomes after their loss due to the possible influence of hindsight bias. Again it is possible that because a person could engage in idealization or minimization of the relationship that this would affect how they report to have coped with the loss. It is also possible that individuals simply do not recall how they used meaning-making strategies in the midst of a loss because some meaning-making may take place automatically (e.g. rumination). Individuals may not always recognize these processes so the measurement tools are limited in detecting all types of meaning-making that can take place after a loss. Without actually observing participants before their loss, during the initial grieving process, and then again after a period of months or years, it is difficult to know if their reported meaning-making strategies and attachment insecurities can be considered to accurately measure their functioning prior to the loss or in its immediate aftermath.

Another factor that might bias the measurement of attachment and meaning-making as well as other variables is conformity bias. Participants might respond to questions about their attitudes towards the deceased and towards their grief in general in a way that they consider to be more socially acceptable thus leading to inaccurate measurement. Every attempt was made to minimize this type of bias as much as possible by asking several survey items prior to introducing the loss component of the study, promoting the anonymous and non-judgmental nature of the online survey, encouraging honesty and openness at multiple points in the survey, and allowing participants to complete the survey in more than one sitting if needed. However, it is still possible to have obtained responses that are inaccurate because of a fear of breaking from social norms about being respectful to the deceased or perceived pressure to present a socially acceptable view of how they coped with their loss.

In terms of the non-significant findings with regard to the main hypothesis that meaning-making mediates the relationship between attachment and complicated grief, several limitations might have hindered the ability to detect this relationship. It is possible that this relationship might be observed using different methods including longitudinal data that obtains pre- and post-loss measures of attachment and assesses meaning-making at different points in time to reduce the influence of bias related to the participants' state of mind when they complete the survey at one time point. Past research has suggested that current functioning has a significant impact on one's self-report of past coping; therefore, assessing meaning-making at multiple time points might lead to more accurate

assessment of the actual processes being used by participants. Additionally, several other issues make this potential mediation relationship difficult to capture in survey research including the long timeframe over which the theorized influence of attachment on meaning-making occurs and the possibility that the processes can occur outside of consciousness making it hard to assess the impact using self-report measures.

The heterogeneous nature of the losses represented in the study is another potential limitation. Because of the age range that was captured in this sample, most of the losses were of grandparents, aunts and uncles, and parents. Close friend and romantic partner losses were rare in this sample. If it had been possible to obtain a sample of participants that all fit into one loss category such as partner loss, then the results would probably have been quite different in some important ways including how informative the results are about factors that shape individuals' grief related to any specific type of loss. Instead, these results must be interpreted a bit more cautiously and with the knowledge that results with a population of grievers that all suffered a similar loss might lead to different results. Another limitation related to the heterogeneous loss types represented in this sample is that this could help explain why general attachment anxiety, a variable that has been shown to be highly related to complicated grief in past research, was not significantly associated with complicated grief in this sample. Perhaps the types of loss that were dominant in this study did not represent enough of a threat to the attachment system on average to show the relationship between attachment anxiety and grief. If more of the losses had been with individuals closer to the participants such as primary

caregivers or partners then the relationship between attachment anxiety and grief might have been stronger.

Finally, the age and life experience of this student sample limit the generalizability of these results. The sample characteristics are similar to those of similar studies that have been completed with student samples in the past; however, age, education level, and a range of other demographic variables have the potential to play important roles in both how one copes with loss and the likelihood that one will have experienced significant grief. Although the results of this survey do point to some areas that might be useful to explore both clinically and in future research, more research is needed to determine whether similar results might be found in different populations.

Clinical Implications

As noted earlier, this study has several implications for clinical practice. Previous research has suggested that grief counseling may have limited utility with individuals coping with normal grief, but can be useful for individuals struggling with complicated grief (Neimeyer and Currier, 2009). Specific interventions that have received some empirical support include behavioral activation approaches, writing or retelling about the loss, supporting sense-making efforts, and examining beliefs related to self-blame or responsibility for the loss (Neimeyer and Currier, 2009). A wide range of theoretical foundations have informed treatment of complicated grief including cognitive, constructivist, and attachment perspectives.

One of the primary viewpoints in the literature is meaning reconstruction, which focuses on methods of promoting meaning-making to cope with complicated grief. The results of the present study add to the existing evidence that sense-making and benefit-finding are important processes in the development of grief. These meaning-making processes may be valuable to integrate into therapeutic interventions such as those proposed by meaning reconstruction theory; however, the results also suggest that clinicians need to carefully asses the types of meaning-making used by their clients because participants reported a wide range of meaning-making activities that do not easily fit into the existing categories of sense-making and benefit-finding that are often the focus of meaning reconstruction.

The results of this study suggest that a wide variety of meaning-making processes are used. Clinicians should find ways to explore these ways of interpreting loss and coping with loss with their clients before utilizing approaches that may conflict with existing forms of meaning-making. Given that these processes are often influenced by culture, it is important for clinicians to obtain a good understanding of their clients' perspective and where they are struggling rather than relying on the theoretical conceptualization of sense-making and benefit-finding that may overlook some of the nuanced ways that individuals find meaning in bereavement. Sense-making can be as simple as gaining a better understanding of medical terminology or as complex as investigating theological understandings of death and the afterlife. The variety of

meaning-making processes found in this study suggests that it is important not to oversimplify these processes when working with clients.

Additionally, as discussed earlier, the current study found evidence that both attachment processes and meaning-making processes contribute to complicated grief. Given that this is the case, clinicians need to find ways to assess for the impact of each variable and clinically address each variable in a meaningful way. Approaches that rely solely on meaning reconstruction without accounting for issues related to the attachment relationship may miss important aspects of what is impeding recovery from a major loss. Conversely, approaches focused exclusively on honoring the deceased, examining the relationship with the deceased, or fostering better relationships with survivors might miss important aspects of how a griever makes sense of their loss, such as excessive self-blame or guilt about aspects of the loss, that need to be addressed using cognitive techniques.

Finally, the results of the current study suggested that individuals with general attachment avoidance can be at risk for experiencing heightened complicated grief symptoms after a loss, but that this was not true for individuals who report attachment avoidance specifically to the deceased. This helps to address some of the controversy in past literature about whether attachment avoidance is a protective factor or risk factor for developing complicated grief, and whether or not this population might benefit from clinical interventions. The current study seems to suggest that individuals with attachment avoidance who view the relationship with the deceased as close or good may

be at risk of developing more severe grief symptoms for which therapeutic interventions might be appropriate. Individuals who report strong avoidance towards the deceased are most likely not good candidates for grief counseling unless other factors such as trauma exposure are contributing to a severe grief presentation.

Future Directions

This study was designed to explore the possibility of mediating factors in the established relationship between attachment and grief. Although mediation was not shown in the tested path model, it is still worthwhile to further explore the relationships between factors that appear to predict more negative grief outcomes. Specifically, looking at possible interactions between variables that result in more pathological grief could be a promising route of investigation. For instance, it is possible that attachment insecurities might moderate the relationship between coping variables such as meaning-making and grief outcomes. This and other possible interactions could be tested in follow-up studies to get a more complete understanding of the relationships between predictors of complicated grief.

More work also needs to be done to describe and analyze the differences in predictors and grief outcomes for individuals across various types of loss. This study primarily relied on participants who were grieving the loss of grandparents, extended family members, and parents. However, whenever possible, narrowing the focus to a specific sub-population of grievers might help establish clinically useful norms for what to expect within these groups. It might also be the case that some of the mediation or

moderation effects related to meaning-making could be present in some parts of this population but not in others depending on the intensity of the attachment bonds. Therefore, future research aimed at testing similar hypotheses across various populations of grievers is essential to fully understand the possible interactions between various predictors of complicated grief symptoms.

Future studies could extend on these findings by examining the relationships between attachment variables, meaning-making variables, and grief outcomes within the subset of this population that have struggled with grief for longer periods of time. There may be differences in those participants that reported a recent loss versus those reporting on a loss that is years old which could have implications for the main relationships in the study.

Additionally, future research could look more carefully at other variables that might be related to adjustment to the loss in addition to the level of complicated grief symptomology present in the sample. For example, studies that assess the impact of loss on engagement in social activities, hours spent outside of the residence, relationships with family and friends, work or school performance, and other measures of well-being while still taking into account similar predictors of complicated grief could yield interesting results about the impacts of grief on both psychological and practical domains of functioning.

Conclusion

Previous research on complicated grief has suggested that a range of variables have an important impact on the severity of experienced grief. Attachment and meaning-making variables have been examined separately in many studies but rarely included in the same analysis. The present study looked at the combined impact of these two sets of variables along with other relevant predictors of grief severity. Results suggested that both sets of variables are important factors in the development of complicated grief, and should be considered when tailoring clinical interventions. Additionally, this trend was found across different levels of closeness to the deceased. Unlike some previous studies of attachment and grief, this study found support for the hypothesis that attachment avoidance is related to complicated grief symptoms. The primary hypothesis that meaning-making variables mediate the relationship between attachment and grief was not supported, but several new directions of inquiry were identified. Finally, the results suggest that new developments are needed in the measurement of meaning-making constructs because these variables appear to be more complex than has often been assumed by previous measures of meaning-making in grief research. This study utilized new instruments for measuring these constructs, which yielded multiple meaning-making factors in addition to the ones that have been researched to date.

APPENDICES

Appendix A: Demographic Questionnaire

1. What is your gender?

O Male O Female O Transgender (F to M) O Transgender (M to F)

2. How old are you? (Number of years)

3. What is your month and year of birth?

4. Which of the following best describes your current relationship status?

O Single, not dating
O Single, in a casual relationship
O Single, in a serious relationship
O Engaged to be married
O Married, living with spouse
O Married, geographically separated
O Married, separated
O Divorced
O Widowed

5. Which of the following best describes your highest level of education?

O Some High School
O High School Diploma or GED
O Some College, no degree
O Associate's Degree
O Technical School Certification
O Bachelor's Degree
O Some Graduate School
O Graduate Degree

6. How many years of education have you completed?

7. What is your current income? (last 12 months)

O $0 - $14,999
O $15,000 - $29,999
O $30,000 - $44,999
O $45,000 - $59,999
O $60,000 - $74,999
O $75,000 - $89,999
O $90,000 or higher

8. Are you Hispanic/Latino?

O No O Yes

9. If you selected yes please select below all that apply:

O Cuban
O Dominican
O Mexican/Mexican-American/Chicano
O Puerto Rican
O Spanish/Basque

O Other, please specify:

10. What is your race?

O White or Caucasian
O American Indian or Alaska Native
O Native Hawaiian or other Pacific Islander
O Black or African-American
O Asian or Asian-American

O Other, please specify:

The questions in the next sections will address some of your characteristics in relationships and attitudes about life in general. Please answer all the questions as openly and honestly as you can.

Appendix B: Experiences in Close Relationships Scale – Revised

The statements below concern how you feel in emotionally intimate relationships including romantic relationships, family relationships, and friendships that serve an important role in your life. We are interested in how you *generally* experience these relationships, not just in what is happening in a current relationship. Respond to each statement by clicking a circle to indicate how much you agree or disagree with the statement.

	Strongly Disagree						Strongly Agree
1. I'm afraid that I will lose the love of important others in my life.	O	O	O	O	O	O	O
2. I often worry that important others will not want to stay with me.	O	O	O	O	O	O	O
3. I often worry that important others don't really love me.	O	O	O	O	O	O	O
4. I worry that important others won't care about me as much as I care about them.	O	O	O	O	O	O	O
5. I often wish that important other's feelings for me were as strong as my feelings for them.	O	O	O	O	O	O	O
6. I worry a lot about my relationships.	O	O	O	O	O	O	O
7. When important others are not in sight, I worry that they might become more interested in someone else.	O	O	O	O	O	O	O
8. When I show my feelings for important others, I'm afraid they will not feel the same about me.	O	O	O	O	O	O	O
9. I rarely worry about important others leaving me.	O	O	O	O	O	O	O
10. Important others make me doubt myself.	O	O	O	O	O	O	O
11. I do not often worry about being abandoned.	O	O	O	O	O	O	O
12. I find that important others don't want to get as close as I would like.	O	O	O	O	O	O	O
13. Sometimes important others change their feelings about me for no apparent reason.	O	O	O	O	O	O	O
14. My desire to be very close sometimes scares people away.	O	O	O	O	O	O	O
15. I'm afraid that once an important other gets to know me, he or she won't like who I really am.	O	O	O	O	O	O	O
16. It makes me mad that I don't get the affection and support I need from important others.	O	O	O	O	O	O	O
17. I worry that I won't measure up to other people.	O	O	O	O	O	O	O
18. Important others only seem to notice me when I'm angry.	O	O	O	O	O	O	O
19. I prefer not to show important others how I feel deep down.	O	O	O	O	O	O	O

20. I feel comfortable sharing my private thoughts and feelings with important others.	O	O	O	O	O	O	O
21. I find it difficult to allow myself to depend on important others.	O	O	O	O	O	O	O
22. I am very comfortable being close to important others.	O	O	O	O	O	O	O
23. I don't feel comfortable opening up to important others.	O	O	O	O	O	O	O
24. I prefer not to be too close to important others.	O	O	O	O	O	O	O
25. I get uncomfortable when an important other wants to be very close.	O	O	O	O	O	O	O
26. I find it relatively easy to get close to my important others.	O	O	O	O	O	O	O
27. It's not difficult for me to get close to important others.	O	O	O	O	O	O	O
28. I usually discuss my problems and concerns with important others.	O	O	O	O	O	O	O
29. It helps to turn to important others in times of need.	O	O	O	O	O	O	O
30. I tell some of my important others just about everything.	O	O	O	O	O	O	O
31. I talk things over with important others.	O	O	O	O	O	O	O
32. I am nervous when important others get too close to me.	O	O	O	O	O	O	O
33. I feel comfortable depending on important others.	O	O	O	O	O	O	O
34. I find it easy to depend on important others.	O	O	O	O	O	O	O
35. It's easy for me to be affectionate with important others.	O	O	O	O	O	O	O
36. Important others really understand me and my needs.	O	O	O	O	O	O	O

ECR-R Scoring: The first 18 items are the attachment anxiety scale. The second 18 items are the attachment avoidance scale. The scale scores were obtained by averaging the responses to each scale separately (i.e. the average of 1-18 for anxiety and the average of 19-36 for avoidance). Before obtaining these averages items 9, 11, 20, 22, 26, 27, 28, 29, 30, 31, 33, 34, 35, and 36 were reverse scored. Items were scored on a 1-7 scale with higher scores representing higher endorsement of the item.

Appendix C: Life Orientation Test – Revised

The next ten questions pertain to your attitudes about life in general. Please be as honest and accurate as you can. Try not to let your response to one statement influence your responses to other statements. There are no "correct" or "incorrect" answers. Answer according to your own feelings, rather than how you think "most people" would answer.

	I agree a lot	I agree a little	I neither agree nor disagree	I DISagree a little	I DISagree a lot
1. In uncertain times I usually expect the best.	O	O	O	O	O
2. It's easy for me to relax. (Filler item)	O	O	O	O	O
3. If something can go wrong for me, it will. (Reverse scored item)	O	O	O	O	O
4. I'm always optimistic about the future.	O	O	O	O	O
5. I enjoy my friends a lot. (Filler item)	O	O	O	O	O
6. It's important for me to keep busy (Filler item)	O	O	O	O	O
7. I hardly ever expect things to go my way. (Reverse scored item)	O	O	O	O	O
8. I don't get upset too easily. (Filler item)	O	O	O	O	O
9. I rarely count on good things happening to me. (Reverse scored item)	O	O	O	O	O
10. Overall, I expect more good things to happen to me than bad.	O	O	O	O	O

LOT-R Scoring: Items 2, 5, 6, and 8 are filler items that were not scored. Responses to scored items were coded so that high values imply optimism, and then scored on a 1-5 scale with the overall average representing the degree of dispositional optimism.

Appendix D: Santa Clara Strength of Religious Faith Questionnaire

The next ten questions are about religious faith. Please indicate your level of agreement (or disagreement) for each statement.

	Strongly Disagree	Disagree	Agree	Strongly Agree
1. My religious faith is extremely important to me.	O	O	O	O
2. I pray daily.	O	O	O	O
3. I look to my faith as a source of inspiration.	O	O	O	O
4. I look to my faith as providing meaning and purpose in my life.	O	O	O	O
5. I consider myself active in my faith or church.	O	O	O	O
6. My faith is an important part of who I am as a person.	O	O	O	O
7. My relationship with God is extremely important to me.	O	O	O	O
8. I enjoy being around others who share my faith.	O	O	O	O
9. I look to my faith as a source of comfort.	O	O	O	O
10. My faith impacts many of my decisions.	O	O	O	O

SCSORF Scoring: Higher average scores indicate higher self-reported strength of religious faith.

Appendix E: Mental Health History

The following questions pertain to your mental health history. Remember all responses given on this survey are confidential. This information will not be shared with anyone, and the researchers will not trace this information back to any specific individual.

1. Have you ever had a mental health diagnosis such as alcoholism, substance abuse, depression, bipolar disorder, post-traumatic stress disorder, obsessive-compulsive disorder, panic disorder or panic attacks, an anxiety disorder, a personality disorder, schizophrenia, schizoaffective disorder, or another type of mental health concern?

O Yes O No

2. Have you thought that you might have a mental disorder of some kind, but never received a diagnosis?

O Yes O No

3. Are you currently or have you ever received counseling, group therapy, couples counseling, family therapy, or individual therapy services from a mental health service provider for any problem including the concerns listed above or other struggles such as divorce or relationship issues? (Note: This question excludes any current bereavement counseling.)

O Yes O No

3a. If so, how much experience have you had in counseling or therapy?

O Very Little (fewer than 10 sessions or 1-3 months)
O Moderate (between 10-50 sessions or 3-12 months)
O A Great Deal (more than 50 sessions or over 12 months)

4. Have you ever been prescribed and taken psychoactive medication (antidepressants, mood stabilizers, anti-anxiety drugs, antipsychotics, etc.)?

O Yes O No

4a. If so, how much experience have you had with psychoactive medications?

O Very Little (have taken them for 6 months or less)
O Moderate (have taken them for 6 months to 2 years)
O A Great Deal (have taken them for more than 2 years)

5. Have you ever experienced a mental health problem that has led to some kind of crisis intervention such as hospitalization, intensive outpatient treatment, or substance detoxification and/or rehabilitation?

O Yes O No

6. Has a family member of yours ever had a mental disorder such as alcoholism, substance abuse, depression, bipolar disorder, post-traumatic stress disorder, obsessive-compulsive disorder, panic disorder or panic attacks, an anxiety disorder, a personality disorder, schizophrenia, schizoaffective disorder, or any other type of mental health concern?

O Yes O No

7. Has your family's history included multiple family members who have had substance abuse, anxiety, depression, or other mental health problems?

O Yes O No

Mental Health History Scoring:

Participants received one point each if they answered yes on items 1-7. Items 3a and 4a were not included in this score. Higher scores indicate more significant or frequent mental health concerns.

Appendix F: Information about Your Loss

The questions on the remainder of the survey will be focused on your loss and grief. Please try to answer all questions as openly and honestly as possible. Remember that if you need to take a break you can save the survey and continue later.

1. Please indicate your relationship with your important other who passed away:

O Your Parent
O Your Partner or Spouse
O Your Close Friend
O Your Sibling
O Your Child
O Your Other Relative, Specify:

2. Please briefly describe the circumstance surrounding your loss. Include information such as how you found out about their death, the cause of your important other's passing (if known), and how you have coped with the loss since their passing.

3. How long has it been since your important other passed away?

O 6-9 months
O 10-12 months
O 13-15 months
O 16-18 months
O 19-21 months
O 22-24 months
O 24-36 months

4. How old was your important other at the time of the loss?

5. Sometimes the loss of an important other can be especially hard because it is very sudden. To what degree did you experience this loss as being sudden?

O Not at all O Not very much O A little O A lot O A great deal

6. Sometimes the loss of an important other can be especially hard because it is very unexpected. To what degree did you experience this loss as being unexpected?

O Not at all O Not very much O A little O A lot O A great deal

7. Sometimes the loss of an important other can be especially hard because it is violent or horrific in some way. To what degree did you experience this loss as being violent or horrific?

O Not at all O Not very much O A little O A lot O A great deal

8. Sometimes the loss of an important other is traumatic for the reasons described in the previous questions and for other reasons. To what degree did you experience this loss as being traumatic?

O Not at all O Not very much O A little O A lot O A great deal

Appendix G: Experiences in Close Relationships –Relationship Structures

The statements below concern how you felt about your important other. Please respond to each statement by clicking a circle to indicate how much you agree or disagree with the statement.

	Strongly Disagree						Strongly Agree
1. It helped to turn to this person in times of need	O	O	O	O	O	O	O
2. I usually discussed my problems and concerns with this person.	O	O	O	O	O	O	O
3. I talked things over with this person.	O	O	O	O	O	O	O
4. I found it easy to depend on this person.	O	O	O	O	O	O	O
5. I didn't feel comfortable opening up to this person.	O	O	O	O	O	O	O
6. I preferred not to show this person how I feel deep down.	O	O	O	O	O	O	O
7. I often worried that this person didn't really care for me.	O	O	O	O	O	O	O
8. I was afraid that this person would abandon me.	O	O	O	O	O	O	O
9. I worried that this person wouldn't care about me as much as I cared about him or her.	O	O	O	O	O	O	O

ECR-RS Scoring: Scoring is identical to the ECR-R. Items 1-4 were summed for the specific attachment anxiety score. Items 4-9 were summed for the specific attachment avoidance score.

Appendix H: Relationship Rating Form – Global Satisfaction

Please answer the following questions about your relationship with your important other who passed away. To answer the questions, click the number between 1 and 7 that best reflects your feelings about your relationship with this person.

	Not at all	Very Little	Slightly (or rarely)	A fair amount	A great deal	Strongly (almost always)	Completely or extremely
S1. Were you happy in your relationship with this person?	O	O	O	O	O	O	O
S2. Did your relationship with this person satisfy your needs?	O	O	O	O	O	O	O
S3. Was your relationship with this person a success?	O	O	O	O	O	O	O
E1. Did you enjoy doing things with this person more than with others?	O	O	O	O	O	O	O
E2. Did you enjoy doing things with this person that you otherwise would not enjoy?	O	O	O	O	O	O	O
E3. Did you enjoy this person's company?	O	O	O	O	O	O	O
R1. Did this person share the same feeling for you that you had for him/her?	O	O	O	O	O	O	O
R2. Did this person really care about you as a person?	O	O	O	O	O	O	O
R3. Did you feel that this person cared for you as much as you cared for him/her?	O	O	O	O	O	O	O
E1. Did this person make you feel worthwhile and special?	O	O	O	O	O	O	O
E2. Did this person make you feel proud of yourself?	O	O	O	O	O	O	O

RRF Scoring: S = Success items, E = Enjoyment items, R = Reciprocity items, E = Esteem items Items were scored on a 1-7 scale with higher values representing more endorsement of the item. The total overall score is the global satisfaction which represented relationship quality.

Appendix I: Single Benefit-finding Item and Benefit-Finding Scale

While grieving the loss of an important other people sometimes find some benefit or positive aspect in the experience. Have you found any benefit from your experience of loss?

O None O Very Little O A Little O A Lot O A Great Deal

Please briefly describe how you found benefits from your loss:

Please rate the following items based on your level of agreement with each statement. Click the box that describes how much you agree with each statement:

Having experienced the loss of my important other...	None	Not very much	A little	A lot	A great deal
1. has made me more sensitive to family issues	O	O	O	O	O
2. has led me to be more accepting of things.	O	O	O	O	O
3. has taught me how to adjust to things I cannot change.	O	O	O	O	O
4. has made me a more responsible person.	O	O	O	O	O
5. has made me realize the importance of planning for my family's future.	O	O	O	O	O
6. has brought my family closer together.	O	O	O	O	O
7. has made me more productive.	O	O	O	O	O
8. has helped me take things as they come.	O	O	O	O	O
9. has helped me to budget my time better.	O	O	O	O	O
10. has made me more grateful for each day.	O	O	O	O	O
11. has taught me to be patient	O	O	O	O	O
12. has taught me to control my temper.	O	O	O	O	O
13. has renewed my interest in participating in different activities.	O	O	O	O	O
14. has led me to cope better with stress and problems.	O	O	O	O	O

BFS Scoring: Items were scored 0-4 with "None" being the lowest score.

Appendix J: Discrete Sense-making Item and Sense-Making Scale

After a major loss individuals sometime have a hard time accepting the reality of the loss or finding ways to make sense of the loss. How much sense have you been able to make of your loss?

O None O Very Little O A Little O A Lot O A Great Deal

Please briefly describe how you made sense of or came to understand your loss:
(This open response item may be used for exploratory analysis.)

The following statements represent different ways that individuals try to make sense of loss. Please rate the statements below based how useful these ways of understanding loss were to you during your grief.

	None	Not very much	A little	A lot	A great deal
1. The loss of my important other was predictable in some ways.	O	O	O	O	O
2. Death is just a part of life. It happens to everyone sooner or later.	O	O	O	O	O
3. The loss of my important other was a part of God's plan.	O	O	O	O	O
4. The loss of my important other was meant to be or it was fate.	O	O	O	O	O
5. My important other is better off now.	O	O	O	O	O
6. Religious or cultural practices have helped me understand the loss of my important other.	O	O	O	O	O
7. I know that my important other was at peace with or prepared for their death.	O	O	O	O	O
8. I understand what caused my important other to pass away.	O	O	O	O	O
9. I understand why my important other had to pass away.	O	O	O	O	O

SMS Scoring: Items will be scored 0-4 with "None" being the lowest score.

Appendix K: Ways of Coping Questionnaire – Positive Reappraisal subscale

Please rate the following items based on your level of agreement with each statement. Click the box that describes how much you agree with each statement:

	None	Not very much	A little	A lot	A Great Deal
1. Changed or grew as a person in a good way.	O	O	O	O	O
2. I came out of the experience better than when I went in.	O	O	O	O	O
3. Found new faith.	O	O	O	O	O
4. Rediscovered what is important in life.	O	O	O	O	O
5. I prayed.	O	O	O	O	O
6. I changed something about myself.	O	O	O	O	O
7. I was inspired to do something creative.	O	O	O	O	O

WOCQ Scoring: Items are rated on a 0-4 scale with higher scores indicating more endorsement of each coping strategy. The overall total score was used to represent positive reappraisal.

Appendix L: Prolonged Grief Disorder - 13

Part 1: Instructions: We would like you to answer a few questions about your grief. For each item, indicate your answer by clicking the appropriate box.					
Response options:	Not at all	At least once	At least once a week	At least once a day	Several times a day
1. In the past month, how often have you felt yourself longing or yearning for the person you lost?	O	O	O	O	O
2. In the past month, how often have you had intense feelings of emotional pain, sorrow, or pangs of grief related to the lost relationship?	O	O	O	O	O
3. For questions 1 or 2 above, have you experienced either of these symptoms at least daily and after 6 months have elapsed since the loss?		O Yes		O No	
Response options:	Not at all	At least once	At least once a week	At least once a day	Several times a day
4. In the past month, how often have you tried to avoid reminders that the person you lost is gone?	O	O	O	O	O
5. In the past month, how often have you felt stunned, shocked, or dazed by your loss?	O	O	O	O	O
Part 2 Instructions: For each item, please indicate how you currently feel Circle the number to the right of each question to indicate how you feel.					
Response options:	Not at all	Slightly	Somewhat	Quite a bit	Overwhelmingly
6. Do you feel confused about your role in life or feel like you don't know who you are (i.e., feeling that a part of yourself has died)?	O	O	O	O	O
7. Have you had trouble accepting the loss?	O	O	O	O	O
8. Has it been hard for you to trust others since your loss?	O	O	O	O	O
9. Do you feel bitter over your loss?	O	O	O	O	O
10. Do you feel that moving on (e.g., making new friends, pursuing new interests) would be difficult for you now?	O	O	O	O	O
11. Do you feel emotionally numb since your loss?	O	O	O	O	O
12. Do you feel that life is unfulfilling, empty, or meaningless since your loss?	O	O	O	O	O
Part 3 Instructions: For the following item, place a check mark for your answer.					
13. Have you experienced a significant reduction in social, occupational, or other important areas of functioning (e.g., domestic responsibilities)?		O Yes		O No	

PG-13 Scoring: All continuous items were scored on a 0-4 scale with higher scores representing higher grief severity. Dichotomous items will not be included in analyses.

Appendix M: Informed Consent

The purpose of this study is to examine how several factors, including experiences in relationships, coping, and individual personality traits, might be related to mourning and loss. As a participant in this study, you will be asked to answer questions about yourself, your relationships, and some questions about your loss and grief. The information will help researchers better understand factors that might influence the grieving process. You may perceive that some of the questions are personal in nature. Please note that we are just trying to assess different aspects of how people experienced their loss. This information will only be available to the researchers, and information will be kept completely confidential. Researchers must store study responses for three years. Any presentation or publication of this data will be in group form only. No individual answers will be released or published. Answering the questions on this questionnaire will take approximately 30 to 45 minutes to complete. It is preferred that you complete the survey in one session, but if you need to take a break you may save your progress and return to the survey at a later time.

If you are a University of Texas at Austin student and you experience distress while completing the survey, you can speak with a counselor at the University of Texas Counseling and Mental Health Center (UTCMHC) if you wish to do so. The UTCMHC can be contacted at 512-471-3515 during normal business hours or 24-hour telephone counseling is available at 512-471-2255. If you are not a University of Texas at Austin student, but wish to speak with a counselor related to your participation in the study please contact Ryan Douglas at stressresearcher@gmail.com for a list of service provider who may be able to assist you.

The information you provide will be collected anonymously and your response will be kept confidential as your name will not be requested. If you are using a public computer to complete the survey, it is recommended that you clear the internet browser history and remove any individual internet cookies so that your responses will not be accessed by a different user. Your participation is strictly voluntary and you can withdraw from the study at any time. Completion of the survey indicates your voluntary consent to participate in this study and that you are at least 18 years old. Please address any questions or concerns that you have to Ryan Douglas at stressresearcher@gmail.com.

Completion of the survey indicates you have read the information above and any questions that you asked have been answered to your satisfaction. This study has been processed by the Office of Research Support. If you have questions about your rights as a study participant, or are dissatisfied at any time with any aspect of this study, you may contact - anonymously, if you wish – the Office of Research Support by phone at (512) 471-8871 or email at orsc@uts.cc.utexas.edu.

If you agree to participate simply press the arrow button at the bottom of the screen. If you choose not to participate, just exit the study. If you are a University of Texas at Austin student, and you would like to receive credit but do not want to participate in this study, please talk to your instructor about completing the alternative assignment. The alternative assignment should be equivalent in time and effort that would be needed to participate in this study.

Your participation in this study is greatly appreciated. Thank you for your time.

For further information, please contact:

Ryan P. Douglas, M.Ed., Ph.D. Candidate
The University of Texas at Austin
Department of Educational Psychology, Counseling Psychology Program
1 University Station D5800
Austin, TX 78712
Email: stressresearcher@gmail.com

Appendix N: Debriefing Document

If you are a University of Texas student taking this for credit please send me an e-mail at the address stated below notifying me that you have completed the survey. Include the password "complete" in your e-mail. After I receive this e-mail I will send you a participation receipt and enter your participation.

For all participants:

If you have experienced distress as a result of your participation in this study, please feel free to contact me at stressresearcher@gmail.com at your earliest convenience. We can discuss your situation and whether or not it might be necessary to contact a counselor to assist with any problems.

If you have questions about your rights as a research participant, you may contact the University of Texas at Austin Institutional Review Board (512) 471-8871, orsc@uts.cc.utexas.edu.

If you are interested in the results of the study and would like a summary of the results when the study is concluded please send an e-mail to me at stressresearcher@gmail.com. Please type "Results Summary Request" in the title of your e-mail. I will save these e-mails and send you a summary of the findings upon the conclusion of the study.

Please again accept my appreciation for your participation in this study.

Any questions regarding this study may be directed to the researcher, Ryan Douglas at stressresearcher@gmail.com. Thank you for your help today!

Appendix O: Beta Tables for Hierarchical Regression Analyses

Table 16. Summary of beta values for attachment variables predicting grief

Variable	Beta Weight
Analysis 1: Effect of general attachment anxiety of grief severity	
Step 1	
ECRR-avoidance	.26***
ECRRS-anxiety	.32***
ECRRS-avoidance	.02
Time	-.11*
Relationship Quality	.26***
Mental Health	.08
Trauma	.34***
Step 2	
ECRR-avoidance	.23***
ECRRS-anxiety	.30***
ECRRS-avoidance	.02
Time	-.11*
Relationship Quality	.26***
Mental Health	.07
Trauma	.33***
ECRR-anxiety	**.08**
Analysis 2: Effect of general attachment avoidance on grief severity	
Step 1	
ECRR-anxiety	.17**
ECRRS-anxiety	.34***
ECRRS-avoidance	.05
Time	-.12*
Relationship Quality	.28***
Mental Health	.08

Trauma	.33***
Step 2	
ECRR-anxiety	.08
ECRRS-anxiety	.30***
ECRRS-avoidance	.02
Time	-.11*
Relationship Quality	.26***
Mental Health	.07
Trauma	.33***
ECRR-avoidance	**.23*** **

Analysis 3: Effect of specific attachment anxiety on grief severity

Step 1	
ECRR-anxiety	.14*
ECRR-avoidance	.27***
ECRRS-avoidance	.09
Time	-.09
Relationship Quality	.19**
Mental Health	.08
Trauma	.38***
Step 2	
ECRR-anxiety	.08
ECRR-avoidance	.23***
ECRRS-avoidance	.02
Time	-.11*
Relationship Quality	.26***
Mental Health	.07
Trauma	.33***
ECRRS-anxiety	**.30*** **

Analysis 4: Effect of specific attachment avoidance on grief severity

Step 1	

ECRR-anxiety	.08
ECRR-avoidance	.24***
ECRRS-anxiety	.31***
Time	-.11*
Relationship Quality	.25***
Mental Health	.07
Trauma	.32***
Step 2	
ECRR-anxiety	.08
ECRR-avoidance	.23***
ECRRS-anxiety	.30***
Time	-.11*
Relationship Quality	.26***
Mental Health	.07
Trauma	.33***
ECRRS-avoidance	**.02**

Table 17. Summary of beta values for attachment variables predicting meaning-making variables

Variable	PR	BFS-behaviors	BFS-attitudes	SMS-general	SMS-religious
Effect of general attachment anxiety on meaning-making variables					
Step 1					
ECRR-avoidance	-.06	-.11	-.19**	.01	-.04
ECRRS-anxiety	.00	.02	-.01	-.28***	-.12*
ECRRS-avoidance	-.01	-.02	-.03	.21***	.17***
Optimism	.04	.07	.01	.10	.08
Faith	.53***	.31***	.27***	.22***	.69***
Time	.11*	.12*	.08	-.05	-.05
Step 2					
ECRR-avoidance	-.11	-.16*	-.19**	.00	-.04
ECRRS-anxiety	-.04	-.01	-.05	-.26***	-.12*
ECRRS-avoidance	.01	-.02	-.04	.21***	.17***
Optimism	.09	.11	.06	.08	.08
Faith	.53***	.30***	.26***	.22***	.70***
Time	.11*	.12*	.07	-.05	-.05
ECRR-anxiety	**.17****	**.16***	**.20****	**-.05**	**-.01**
Effect of general attachment avoidance on meaning-making variables					
Step 1					
ECRR-anxiety	.13*	.10	.13	-.05	-.02
ECRRS-anxiety	-.05	-.03	-.07	-.26***	-.13*
ECRRS-avoidance	-.02	-.03	-.05	.21***	.17***
Time	.12*	.13*	.09	-.05	-.05
Optimism	.10	.13*	.09	.08	.08
Faith	.53***	.31***	.26***	.22***	.70***
Step 2					
ECRR-anxiety	.17**	.16*	.20**	-.05	-.01
ECRRS-anxiety	-.04	-.01	-.05	-.26***	-.12*

ECRRS-avoidance	-.01	-.02	-.04	.21***	.17***
Time	.11	.12*	.07	-.05	-.05
Optimism	.09	.11	.06	.08	.08
Faith	.53***	.30***	.26***	.22***	.70***
ECRR-avoidance	**-.11**	**-.16***	**-.19****	**.00**	**-.04**

Effect of specific attachment anxiety on meaning-making variables

Step 1					
ECRR-anxiety	.16*	.15*	.18**	-.11	-.04
ECRR-avoidance	-.11	-.16*	-.19**	.03	-.05
ECRRS-avoidance	-.03	-.03	-.06	.13*	.13**
Time	.11*	.12	.07	-.08	-.07
Optimism	.09	.11	.07	.10	.09
Faith	.53***	.30***	.26***	.22***	.70***
Step 2					
ECRR-anxiety	.17*	.16*	.20**	-.05	-.01
ECRR-avoidance	-.11	-.16*	-.19**	.00	-.04
ECRRS-avoidance	-.01	-.02	-.04	.21***	-.17***
Time	.11	.12*	.07	-.05	-.05
Optimism	.09	.11	.07	.08	.08
Faith	.53***	.30***	.26***	.22***	. 70***
ECRRS-anxiety	**-.04**	**-.01**	**.05**	**-.26*****	**-.12***

Effect of Specific Attachment Avoidance on Meaning Making Variables

Step 1					
ECRR-anxiety	.17*	.16*	.19**	-.05	.00
ECRR-avoidance	-.11	-.16*	-.19**	.02	-.03
ECRRS-anxiety	-.04	-.02	-.07	-.18**	-.06
Time	.11*	.13*	.08	-.06	-.07
Optimism	.09	.11	.06	.10	.09
Faith	.53***	.31***	.26***	.20***	.68***
Step 2					

ECRR-anxiety	.17*	.16*	.20**	-.05	-.01
ECRR-avoidance	-.11	-.16*	-.19**	.00	-.04
ECRRS-anxiety	-.04	-.01	-.05	-.26***	-.12*
Time	.11	.12*	.07	-.05	-.05
Optimism	.09	.11	.06	.08	.08
Faith	.53***	.30***	-.26***	.22***	.70***
ECRRS-avoidance	**-.01**	**-.02**	**-.04**	**.21*** **	**.17*** **

Table 18. Summary of beta values for meaning-making predicting complicated grief

Variable	Beta Weight
Analysis 1: Positive reappraisal predicting grief	
Step 1	
ECRR-anxiety	.07
ECRR-avoidance	.19**
ECRRS-anxiety	.26***
ECRRS-avoidance	-.09
Mental Health	.09
Trauma	.27***
Optimism	-.14*
Faith	.10
Relationship Quality	.19*
Time	-.10
BFS-behaviors	.21**
BFS-attitudes	-.30***
SMS-general	.03
Religious Meaning-Making	-.11
Step 2	
ECRR-anxiety	.08
ECRR-avoidance	.18**
ECRRS-anxiety	.26***
ECRRS-avoidance	-.10
Mental Health	.10
Trauma	.27***
Optimism	-.14*
Faith	.11
Relationship Quality	.19*
Time	-.10

BFS-behaviors	.24**
BFS-attitudes	-.29***
SMS-general	.04
Religious Meaning-Making	-.09
Positive Reappraisal	-.07

Analysis 2: Benefit-finding behaviors predicting grief

Step 1	
ECRR-anxiety	.08
ECRR-avoidance	.18**
ECRRS-anxiety	.26***
ECRRS-avoidance	-.10
Mental Health	.09
Trauma	.26**
Optimism	-.14*
Faith	.11
Relationship Quality	.18*
Time	-.08
Positive Reappraisal	.06
BFS-attitudes	-.22**
SMS-general	.04
Religious Meaning-Making	-.11
Step 2	
ECRR-anxiety	.08
ECRR-avoidance	.18**
ECRRS-anxiety	.26***
ECRRS-avoidance	-.10
Mental Health	.10
Trauma	.27***
Optimism	-.14*
Faith	.11

Relationship Quality	.19*
Time	-.10
Positive Reappraisal	-.07
BFS-attitudes	-.29***
SMS-general	.04
Religious Meaning-Making	-.09
BFS-behaviors	.24**

Analysis 3: Benefit-finding attitudes predicting grief

Step 1	
ECRR-anxiety	.05
ECRR-avoidance	.22***
ECRRS-anxiety	.27***
ECRRS-avoidance	-.08
Mental Health	.09
Trauma	.24**
Optimism	-.14*
Faith	.10
Relationship Quality	.19*
Time	-.11
Positive Reappraisal	-.13
BFS-behaviors	.13
SMS-general	-.02
Religious Meaning-Making	-.08
Step 2	
ECRR-anxiety	.08
ECRR-avoidance	.18*
ECRRS-anxiety	.26***
ECRRS-avoidance	-.10
Mental Health	.10
Trauma	.27***

Optimism	-.14*
Faith	.11
Relationship Quality	.19*
Time	-.10
Positive Reappraisal	-.07
BFS-behaviors	.24**
SMS-general	.04
Religious Meaning-Making	-.09
BFS-attitudes	-.29***

Analysis 4: General sense-making predicting grief

Step 1	
ECRR-anxiety	.07
ECRR-avoidance	.19**
ECRRS-anxiety	.26***
ECRRS-avoidance	-.10
Mental Health	.10
Trauma	.25***
Optimism	-.14*
Faith	.11
Relationship Quality	.19*
Time	-.10
Positive Reappraisal	-.06
BFS-behaviors	.24**
BFS-attitudes	-.29***
Religious Meaning-Making	-.08
Step 2	
ECRR-anxiety	.08
ECRR-avoidance	.18**
ECRRS-anxiety	.26***
ECRRS-avoidance	-.10

Mental Health	.10
Trauma	.27***
Optimism	-.14*
Faith	.11
Relationship Quality	.19*
Time	-.10
Positive Reappraisal	-.07
BFS-behaviors	.24**
BFS-attitudes	-.29***
Religious Meaning-Making	-.09
SMS-general	.04

Analysis 5: Religious meaning-making predicting grief

Step 1	
ECRR-anxiety	.08
ECRR-avoidance	.19**
ECRRS-anxiety	.26***
ECRRS-avoidance	-.11
Mental Health	.10
Trauma	.26***
Optimism	-.14*
Faith	.06
Relationship Quality	.18*
Time	-.09
Positive Reappraisal	-.09
BFS-behaviors	.25**
BFS-attitudes	-.29***
SMS-general	.01
Step 2	
ECRR-anxiety	.08
ECRR-avoidance	.18**

ECRRS-anxiety	.26***
ECRRS-avoidance	-.10
Mental Health	.10
Trauma	.27***
Optimism	-.14*
Faith	.11
Relationship Quality	.19*
Time	-.10
Positive Reappraisal	-.07
BFS-behaviors	.24**
BFS-attitudes	-.29***
SMS-general	.04
Religious Meaning-Making	-.09

REFERENCES

Ainsworth, M., Blehar, M., Waters, E., & Wall, S. (1978). *Patterns of attachment: A psychological study of the strange situation*. Hillsdale, NJ: Erlbaum.

Aldwin, C. (2007). *Stress, coping, and development: An integrative perspective* (2nd edition). New York, NY: Guilford Press.

American Psychiatric Association. (2000*). Diagnostic and statistical manual of mental disorders (4th edition, text revision)*. Washington, DC: American Psychiatric Association.

American Psychiatric Association. (2013*). Diagnostic and statistical manual of mental disorders (5th edition)*. Washington, DC: American Psychiatric Association.

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic and statistical considerations. *Journal of Personality and Social Psychology, 51*, 1173-1182.

Black, K., & Schutte, E. (2006). Recollections of being loved: Implications of childhood experiences with parents for young adults' romantic relationships. *Journal of Family Issues, 27*(10), 1459-1480. Retrieved from PsycINFO database.

Boehmer, S. (2007). Relationships between felt age and perceived disability, satisfaction with recovery, self-efficacy beliefs and coping strategies. *Journal of Health Psychology, 12*(6), 895-906. Retrieved from PsycINFO database.

Boehmer, S., Luszczynska, A., & Schwarzer, R. (2007). Coping and quality of life after tumor surgery: Personal and social resources promote different domains of quality of life. Anxiety, Stress & Coping: An International Journal, 20(1), 61-75. Retrieved from PsycINFO database.

Boelen, P. A., van den Bout, J., & van den Hout, M. A. (2006). Negative cognitions and avoidance in emotional problems after bereavement: A prospective study. *Behaviour Research And Therapy,44*(11), 1657-1672. doi:10.1016/j.brat.2005.12.006

Bonanno, G., Wortman, C., & Nesse, R. (2004). Prospective patterns of resilience and maladjustment during widowhood. *Psychology and Aging, 19*(2), 260-270. Retrieved from PsycINFO database.

Bonanno, G. A., Neria, Y., Mancini, A., Coifman, K. G., Litz, B., & Insel, B. (2007). Is there more to complicated grief than depression and posttraumatic stress disorder? A test of incremental validity. *Journal of Abnormal Psychology, 116*(2), 342-351. doi:10.1037/0021-843X.116.2.342

Bonanno, G. A., & Lilienfeld, S. O. (2008). Let's be realistic: When grief counseling is effective and when it's not. *Professional Psychology: Research and Practice, 39*(3), 377-378. doi:10.1037/0735-7028.39.3.377

Bonanno, G. A., Wortman, C. B., Lehman, D. R., Tweed, R. G., Haring, M., Sonnega, J., & Nesse, R. M. (2002). Resilience to loss and chronic grief: A prospective study from pre-loss to 18-months post-loss. *Journal of Personality And Social Psychology, 83*(5), 1150-1164. doi:10.1037/0022-3514.83.5.1150

Bowlby, J. (1960). Grief and mourning in infancy and early childhood. *The Psychoanalytic Study of the Child, VX*, 3-39.

Bowlby, J. (1969/1982). *Attachment and loss, Vol. 1: Attachment.* New York: Basic Books.

Bowlby, J. (1973). *Attachment and loss, Vol. 2: Separation.* New York: Basic Books.

Bowlby, J. (I980). *Attachment and loss, Vol. 3: Loss, sadness and depression*. New York: Basic Books.

Bowlby, J. (1988). *A secure base: Parent-child attachment and healthy human development*. New York: Basic Books.

Brennan, K., Clark, C., & Shaver, P. (1998). Self-report measurement of adult attachment: An integrative overview. *Attachment theory and close relationships* (pp. 46-76). New York: Guilford Press.

Bretherton, I. (1992). The origins of attachment theory: John Bowlby and Mary Ainsworth. *Developmental Psychology, 28*, 759-775.

Bretherton, I., & Munholland, K. (1999). Internal working models in attachment relationships: A construct revisited. *Handbook of attachment: Theory, research, and clinical applications* (pp. 89-111). New York: Guilford Press.

Carr, D., House, J. S., Kessler, R. C., Nesse, R. M., Sonnega, J., & Wortman, C. (2000). Marital quality and psychological adjustment to widowhood among older adults: A longitudinal analysis. *The Journals of Gerontology: Series B: Psychological Sciences And Social Sciences, 55B*(4), S197-S207. Retrieved from PsycINFO database.

Cassidy, J. (2000). Adult romantic attachments: A developmental perspective on individual differences. *Review of General Psychology, 4*(2), 111-131. Retrieved from PsycINFO database.

Cattell, R. B. (1966). The scree test for the number of factors. *Multivariate Behavioral Research, 1(2),* 245-276.

Cohen, J., Cohen, P., West, S.G., & Aiken, L.S. (2003). *Applied multiple regression/correlation analysis for the behavioral sciences* (3rd ed.). Hillsdale, NJ: Erlbaum.

Collie, K., & Long, B. (2005). Considering 'Meaning' in the Context of Breast Cancer. *Journal of Health Psychology, 10*(6), 843-853. Retrieved from PsycINFO database.

Collins, N., Ford, M., Guichard, A., & Allard, L. (2006). Working models of attachment and attribution processes in intimate relationships. *Personality and Social Psychology Bulletin, 32*(2), 201-219. Retrieved from PsycINFO database.

Currier, J. M., Neimeyer, R. A., & Berman, J. S. (2008). The effectiveness of psychotherapeutic interventions for bereaved persons: A comprehensive quantitative review. *Psychological Bulletin, 134*(5), 648-661. doi:10.1037/0033-2909.134.5.648

Davis, C., Nolen-Hoeksema, S., & Larson, J. (1998). Making sense of loss and benefiting from the experience: Two construals of meaning. *Journal of Personality and Social Psychology, 75*(2), 561-574. Retrieved from PsycINFO database.

Davis, C., Wortman, C., Lehman, D., & Silver, R. (2000). Searching for meaning in loss: Are clinical assumptions correct?. *Death Studies, 24*(6), 497-540. Retrieved from PsycINFO database.

Davis, K. E. (2001). The Relationship Rating Form (RRF): A measure of characteristics of romantic relationships and friendships. In J. Touliatos, B. Perlmutter, & G. Holden (Eds.), *Handbook of family measurement techniques (Vol 1, 2nd ed.).* Thousand Oaks, CA: Sage.

Davis, K. E. & Latty-Mann (1987). Love styles and relationship quality: A contribution to validation. *Journal of Social and Personal Relationships, 4,* 409-428.

Davis, K. E., Todd, M. J., & Denneny, J. B. (1988). Personal networks, friendship, and love relationships over the life cycle. *Social & Behavioral Sciences Documents, 18*(1)

Douglas, R., Shah, M., and McCarthy, C. (2010). The relationship of meaning-focused coping to stressor severity and type. Poster presented at the annual meeting of the American Psychological Association, San Diego, CA, August 13, 2010.

Faul, F., Erdfelder, E., Lang, A., & Buchner, A. (2007). G*Power 3: A flexible statistical power analysis program for the social, behaviors, and biomedical sciences. *Behavior Research Methods, 39,* 175-191.

Field, N. P., & Sundin, E. C. (2001). Attachment style in adjustment to conjugal bereavement. *Journal Of Social And Personal Relationships,* 18(3), 347-361. doi:10.1177/0265407501183003

Field, N. P., Orsini, L., Gavish, R., & Packman, W. (2009). Role of attachment in response to pet loss. *Death Studies, 33*(4), 334-355. doi:10.1080/07481180802705783

Folkman, S. (2008). The case for positive emotions in the stress process. *Anxiety, Stress and Coping: An International Journal, 21*(1), 3-14. Retrieved from PsycINFO database.

Folkman, S. & Lazarus, R. (1988). *The ways of coping questionnaire*. Palo Alto, CA: Consulting Psychologists Press.

Folkman, S., Lazarus, R. S., Dunkel-Schetter, C., DeLongis, A., & Gruen, R. J. (1986). Dynamics of a stressful encounter: Cognitive appraisal, coping, and encounter outcomes. *Journal Of Personality And Social Psychology, 50*(5), 992-1003. doi:10.1037/0022-3514.50.5.992

Folkman, S., & Moskowitz, J. (2000). Positive affect and the other side of coping. *American Psychologist, 55*(6), 647-654. Retrieved from PsycINFO database.

Folkman, S., & Moskowitz, J. (2007). Positive affect and meaning-focused coping during significant psychological stress. In Hewstone; M., Schut; H. de Wit, J., Van Den Bos; K., Stroebe, M., (Eds.) *The scope of social psychology: Theory and applications* (pp. 193-208). New York, NY US: Psychology Press. Retrieved from PsycINFO database.

Fraley, R. (2005). *Information on the Experiences in Close Relationships-Revised (ECR-R) Adult Attachment Questionnaire.* Retrieved November 15, 2011, from University of Illinois at Urbana-Chamaign, Psychology Website: http://internal.psychology.illinois.edu/~rcfraley/measures/ecrritems.htm

Fraley, R., & Bonanno, G. A. (2004). Attachment and loss: A test of three competing models on the association between attachment-related avoidance and adaptation to bereavement. *Personality and Social Psychology Bulletin, 30*(7), 878-890. doi:10.1177/0146167204264289

Fraley, R., Heffernan, M. E., Vicary, A. M., & Brumbaugh, C. (2011). The experiences in close relationships—relationship structures questionnaire: A method for assessing attachment orientations across relationships. *Psychological Assessment, 23*(3), 615-625. doi:10.1037/a0022898

Fraley, R., & Shaver, P. (1999). Loss and bereavement. Attachment theory and recent controversies concerning "grief work" and the nature of detachment: 735-59. In Cassidy and Shaver (Eds), *Handbook of Attachment. Theory, Research, and Clinical Applications*, New York: Guilford Press

Fraley, R. C., & Spieker, S. J. (2003). Are infant attachment patterns continuously or categorically distributed? A taxometric analysis of strange situation behavior. *Developmental Psychology, 39,* 387-404. Retrieved from PsycINFO database.

Fraley, R., Waller, N. G., & Brennan, K. A. (2000). An item response theory analysis of self-report measures of adult attachment. *Journal Of Personality And Social Psychology, 78*(2), 350-365. doi:10.1037/0022-3514.78.2.350

Freud, S. (1917). Mourning and melancholia. In *The Standard Edition of the Complete Psychological Works of Sigmund Freud, Volume XIV (1914-1916): On the History of the Psycho-Analytic Movement, Papers on Metapsychology and Other Works*, 237-258

Gillies, J. & Neimeyer, R. (2006). Loss, grief, and the search for significance: Toward a model of meaning reconstruction in bereavement. *Journal of Constructivist Psychology, 19*, 31-67.

Hazan, C., & Shaver, P. (1987). Romantic love conceptualized as an attachment process. *Journal of Personality and Social Psychology, 52*(3), 511-524.

Hazan, C., & Zeifman, D. (1999). Pair bonds as attachments: Evaluating the evidence. *Handbook of attachment: Theory, research, and clinical applications* (pp. 336-354). Guilford Press.

Helgeson, V., Reynolds, K., & Tomich, P. (2006). A meta-analytic review of benefit finding and growth. *Journal of Consulting and Clinical Psychology, 74(*5), 797-816. Retrieved from PsycINFO database.

Holland, J., Neimeyer, R., Boelen, P., & Prigerson, H. (2009). The underlying structure of grief: A taxometric investigation of prolonged and normal reactions to loss. *Journal of Psychopathology and Behavioral Assessment, 31*(3), 190-201. Retrieved from PsycINFO database.

Horowitz, M., Siegel, B., Holen, A., & Bonanno, G. (1997). Diagnostic criteria for complicated grief disorder. *The American Journal of Psychiatry, 154*(7), 904-910. Retrieved from PsycINFO database.

Jacobs S, Hansen F, Kasl S, Ostfeld A, Berkman L, & Kim K. (1990). Anxiety disorders during acute bereavement: Risk and risk factors. *Journal of Clinical Psychiatry, 51*:269–274. Retrieved from the Google Scholar database.

IBM Corp. Released 2013. IBM SPSS Statistics for Windows, Version 22.0. Armonk, NY: IBM Corp.

Jerga, A. M., Shaver, P. R., & Wilkinson, R. B. (2011). Attachment insecurities and identification of at-risk individuals following the death of a loved one. *Journal of Social and Personal Relationships, 28*(7), 891-914. doi:10.1177/0265407510397987

Jöreskog, K.G. & Sörbom, D. (2006). LISREL 8.8 for Windows [Computer software]. Lincolnwood, IL: Scientific Software International, Inc.

Kato, P. M., & Mann, T. (1999). A synthesis of psychological interventions for the bereaved. *Clinical Psychology Review, 19*, 275–296. Retrieved from PsycINFO database.

Keesee, N. J, Currier, J. M. & Neimeyer, R. A. (2008). Predictors of grief following the death of one's child: The contribution of finding meaning. Journal of Clinical Psychology, 64, 1145-1163.

Kline, R. B. (2011). *Principles and practice of structural equation modeling, 3rd Edition.* New York: Guilford Press.

Kubler-Ross, E. (1969). *On death and dying*. London: Macmillan.

Latham, A. E., & Prigerson, H. G. (2004). Suicidality and bereavement: Complicated grief as psychiatric disorder presenting greatest risk for suicidality. *Suicide and Life-Threatening Behavior, 34*(4), 350-362. doi:10.1521/suli.34.4.350.53737

Lazarus, R. (1999). *Stress and emotion: A new synthesis.* New York: Springer Publishing.

Lazarus, R., & Folkman, S. (1984). *Stress, appraisal, and coping.* New York: Springer Publishing.

Lechner, S., Tennen, H., & Affleck, G. (2009). Benefit-finding and growth. In Lopez, J. & Snyder, C. (Eds.) *Oxford handbook of positive psychology (2nd ed.)* (pp. 633-640). New York, NY: Oxford University Press. Retrieved from PsycINFO database.

Linley, P., & Joseph, S. (2004). Positive change following trauma and adversity: A review. *Journal of Traumatic Stress, 17*(1), 11-21. Retrieved from PsycINFO database.

Lobb, E. A., Kristjanson, L. J., Aoun, S. M., Monterosso, L., Halkett, G. B., & Davies, A. (2010). Predictors of complicated grief: A systematic review of empirical studies. *Death Studies, 34*(8), 673-698. doi:10.1080/07481187.2010.496686

Mancini, A. D., Robinaugh, D., Shear, K., & Bonanno, G. A. (2009). Does attachment avoidance help people cope with loss? The moderating effects of relationship quality. *Journal of Clinical Psychology, 65*(10), 1127-1136. doi:10.1002/jclp.20601

Mikulincer, M., Gillath, O., & Shaver, P. (2002). Activation of the attachment system in adulthood: Threat-related primes increase the accessibility of mental representations of attachment figures. *Journal of Personality and Social Psychology, 83*(4), 881-895.

Mitchell, A. M., Kim, Y., Prigerson, H. G., & Mortimer-Stephens, M. (2004). Complicated grief in survivors of suicide. *Crisis: The Journal of Crisis Intervention and Suicide Prevention, 25*(1), 12-18. doi:10.1027/0227-5910.25.1.12

Neimeyer, R. (2000). Searching for the meaning of meaning: Grief therapy and the process of reconstruction. *Death Studies, 24*, 541-558. Retrieved from PsycINFO.

Neimeyer, R. (Ed.) (2001). *Meaning reconstruction and the experience of loss*. Washington, DC: American Psychological Association.

Neimeyer, R. (2005). Complicated grief and the quest for meaning: A constructivist contribution. *Omega Journal of Death and Dying, 52*(1), 37-52. Retrieved from PsycINFO database.

Neimeyer, R. A. (2006). Complicated grief and the reconstruction of meaning: Conceptual and empirical contributions to a cognitive-constructivist model. *Clinical Psychology: Science and Practice, 13*, 141-145.

Neimeyer, R. & Anderson, A. (2002). Meaning reconstruction theory. In N. Thompson (Ed.), *Loss and grief: A guide for human service practitioners* (pp.45-64). Basingstoke (UK) and New York, NY: Palgrave.

Neimeyer, R. A., Baldwin, S. A., & Gillies, J. (2006). Continuing bonds and reconstructing meaning: Mitigating complications in bereavement. *Death Studies, 30*(8), 715-738. doi:10.1080/07481180600848322

Neimeyer, R., Burke, L., Mackay, M., & van Dyke Stringer, J. (2010). Grief therapy and the reconstruction of meaning: From principles to practice. *Journal of Contemporary Psychotherapy, 40*(2), 73-83. Retrieved from PsycINFO database.

Neimeyer, R., Prigerson, H., & Davies, B. (2002). Mourning and meaning. *American Behavioral Scientist, 46*, 235-251.

Ott, C. (2003). The impact of complicated grief on mental and physical health at various points in the bereavement process. *Death Studies, 27*(3), 249-272. Retrieved from PsycINFO database.

Pargament, K. (1997). *The psychology of religion and coping: Theory, research, practice*. New York, NY: Guilford Press.

Park, C. L. (1998). Stress-related growth and thriving through coping: The roles of personality and cognitive processes. *Journal Of Social Issues, 54*(2), 267-277. doi:10.1111/0022-4537.651998065

Park, C. (2008). Stress-related growth and thriving through coping: The roles of personality and cognitive processes. *Journal of Social Issues, 54*(2), 267-277. Retrieved from PsycINFO database.

Park, C. (2005). Religion as a meaning-making framework in coping with life stress. *Journal of Social Issues, 61*(4), 707-729. Retrieved from PsycINFO database.

Park, C. (2008). Testing the meaning-making model of coping with loss. *Journal of Social and Clinical Psychology, 27*(9), 970-994. Retrieved from PsycINFO database.

Park, C. (2010). Making sense of the meaning literature: An integrative review of meaning-making and its effects on adjustment to stressful life events. *Psychological Bulletin, 136*(2), 257-301. Retrieved from PsycINFO database.

Park, C., & Ai, A. (2006). Meaning-making and Growth: New Directions for Research on Survivors of Trauma. *Journal of Loss and Trauma, 11*(5), 389-407. Retrieved from PsycINFO database.

Park, C., Cohen, L., & Murch, R. (1996). Assessment and prediction of stress-related growth. *Journal of Personality, 64*(1), 71-105. Retrieved from PsycINFO database.

Park, C., & Fenster, J. (2004). Stress-related growth: Predictors of occurrence and correlates with psychological adjustment. *Journal of Social and Clinical Psychology, 23*(2), 195-215. Retrieved from PsycINFO database.

Park, C., & Folkman, S. (1997). Meaning in the context of stress and coping. *Review of General Psychology, 1*(2), 115-144. Retrieved from PsycINFO database.

Park, C., Folkman, S., & Bostrom, A. (2001). Appraisals of controllability and coping in caregivers and HIV+ men: Testing the goodness-of-fit hypothesis. *Journal of Consulting and Clinical Psychology, 69*(3), 481-488. Retrieved from PsycINFO database.

Park, C., Lechner, S., Antoni, M., & Stanton, A. (2009). *Medical illness and positive life change: Can crisis lead to personal transformation?*. Washington, DC: American Psychological Association.

Parker, G., & Lee, C. (2007). Relationships among abuse characteristics, coping strategies, and abused women's psychological health: A path model. *Journal of Interpersonal Violence, 22*, 1184-1198. Retrieved from PsycINFO database.

Parkes, C. M., & Prigerson, H. G. (2010). *Bereavement: Studies of grief in adult life (4th edition)*. New York: Routledge/Taylor & Francis Group.

Parkes, C. M. (2006). *Love and Loss: the roots of Grief and its Complications*. New York: Routledge.

Pietromonaco, P., & Barrett, L. (2000). The internal working models concept: What do we really know about the self in relation to others? *Review of General Psychology, 4*(2), 155-175.

Plante, T. G., & Boccaccini, M. T. (1997). The Santa Clara Strength of Religious Faith Questionnaire. *Pastoral Psychology, 45*(5), 375-387. Retrieved from PsycINFO database.

Prati, G., & Pietrantoni, L. (2009). Optimism, social support, and coping strategies as factors contributing to posttraumatic growth: A meta-analysis. *Journal of Loss and Trauma, 14*(5), 364-388. Retrieved from PsycINFO database.

Prigerson, H., Horowitz, M., Jacobs, S., Parkes, C., Aslan, M., Goodkin, K, Raphael, et al. (2009). Prolonged grief disorder: Psychometric validation of criteria proposed for DSM-V and ICD-11, *PLoS Medicine*, *6*(8), 1-12.

Prigerson, H., & Maciejewski, P. (2005). A call for sound empirical testing and evaluation of criteria for complicated grief proposed for DSM-V. *Omega: Journal of Death and Dying*, *52*(1), 9-19. Retrieved from PsycINFO database.

Prigerson, H., Maciejewski, P., Reynolds, C., Bierhals, A., Newsom, J., Fasiczka, A., et al. (1995). Inventory of Complicated Grief: A scale to measure maladaptive symptoms of loss. *Psychiatry Research*, *59*(1-2), 65-79. Retrieved from PsycINFO database.

Prigerson, H., Horowitz, M., Jacobs, S., Parkes, C., Aslan, M., Goodkin, K, Raphael, et al. (2009). Prolonged grief disorder: Psychometric validation of criteria proposed for DSM-V and ICD-11, *PLoS Medicine*, *6*(8), 1-12.

Scheier, M. F., Carver, C. S., & Bridges, M. W. (1994). Distinguishing optimism from neuroticism (and trait anxiety, self-mastery, and self-esteem): A reevaluation of the Life Orientation Test. *Journal of Personality and Social Psychology*,*67*(6), 1063-1078. doi:10.1037/0022-3514.67.6.1063

Shear, K., Monk, T., Houck, P., Melhem, N., Frank, E., Reynolds, C., & Sillowash, R. (2007). An attachment-based model of complicated grief including the role of avoidance. *European Archives Of Psychiatry And Clinical Neuroscience, 257*(8), 453-461. doi:10.1007/s00406-007-0745-z

Shear, K. M., Jackson, C. T., Essock, S. M., Donahue, S. A., & Felton, C. J. (2006). Screening for Complicated Grief among Project Liberty Service Recipients 18 Months after September 11, 2001.*Psychiatric Services*, *57*(9), 1291-1297. doi:10.1176/appi.ps.57.9.1291

Sibley, C. G., Fischer, R., & Liu, J. H. (2005). Reliability and Validity of the Revised Experiences in Close Relationships (ECR-R) Self-Report Measure of Adult Romantic Attachment. *Personality and Social Psychology Bulletin*, *31*(11), 1524-1536. doi:10.1177/0146167205276865

Simon, N. M., Shear, K. M., Thompson, E. H., Zalta, A. K., Perlman, C., Reynolds, C. F., & Silowash, R. (2007). The prevalence and correlates of psychiatric comorbidity in individuals with complicated grief. *Comprehensive Psychiatry, 48*(5), 395-399. doi:10.1016/j.comppsych.2007.05.002

Stroebe, M., Folkman, S., Hansson, R. O., & Schut, H. (2006). The prediction of bereavement outcome: Development of an integrative risk factor framework. *Social Science & Medicine,63*(9), 2440-2451. doi:10.1016/j.socscimed.2006.06.012

Stroebe, M. & Stroebe, W. (1993). The mortality of bereavement. In: Stroebe, M., Stroebe, W, and Hansson R., (eds.). *Handbook of Bereavement: Theory, Research, and Intervention. Cambridge*.(175-195). New York: University Press.

Stroebe, M., & Schut, H. (1999). The dual process model of coping with bereavement: Rationale and description. *Death Studies, 23*(3), 197-224. doi:10.1080/074811899201046

Szanto, K., Shear, K., Houck, P. R., Reynolds, C., Frank, E., Caroff, K., & Silowash, R. (2006). Indirect self-destructive behavior and overt suicidality in patients with complicated grief. *Journal Of Clinical Psychiatry, 67*(2), 233-239. doi:10.4088/JCP.v67n0209

Tedeschi, R., & Calhoun, L. (1995). *Trauma & transformation: Growing in the aftermath of suffering.* Thousand Oaks, CA: Sage Publications, Inc.

Tomich, P. L., & Helgeson, V. S. (2002). Five years later: A cross-sectional comparison of breast cancer survivors with healthy women. *Psycho-Oncology, 11,* 154-169.

Tomich, P. L., & Helgeson, V. S. (2004). Is finding something good is the bad always good? Benefit-finding among women with breast cancer. *Health Psychology, 23,* 16-23.

Tomich, P. L, Helgeson, V. S., & Vache, E. J. N. (2005). Perceived growth and decline following breast cancer? A comparison to age-matched controls 5-years later. *Psycho-Oncology, 14,* 1018-1029.

Tomich, P. L., & Helgeson, V. S. (2006). Breast cancer recurrence and cognitive adaptation theory: Are there limits? *Journal of Consulting and Clinical Psychology, 74,* 980-987.

Van der Houwen, K., Stroebe, M., Schut, H., Stroebe, W., & van den Bout, J. (2010). Mediating processes in bereavement: The role of rumination, threatening interpretations, and deliberate grief avoidance. *Social Science & Medicine, 71*(9), 1669-1676. doi:10.1016/j.socscimed.2010.06.047

Vanderwerker, L. C., Jacobs, S. C., Parkes, C., & Prigerson, H. G. (2006). An exploration of associations between separation anxiety in childhood and complicated grief in later life. *Journal of Nervous And Mental Disease, 194*(2), 121-123. doi:10.1097/01.nmd.0000198146.28182.d5

Wayment, H. A., & Vierthaler, J. (2002). *Attachment style and bereavement reactions*. *Journal of Loss And Trauma, 7*(2), 129-149. doi:10.1080/153250202753472291

Weinfield, N., Sroufe, L., Egeland, B., & Carlson, E. (1999). The nature of individual differences in infant-caregiver attachment. *Handbook of attachment: Theory, research, and clinical applications* (pp. 68-88). New York: Guilford Press.

Wijngaards-de Meij, Leoniek; Stroebe, Margaret; Schut, Henk; Stroebe, Wolfgang; van den Bout, Jan; van der Heijden, Peter G. M.; Dijkstra, Iris. Patterns of attachment and parents' adjustment to the death of their child. *Personality and Social Psychology Bulletin, Vol 33*(4), Apr, 2007. pp. 537-548.

Worden, J.W. (1991). *Grief counseling and grief therapy: A handbook for the mental health practitioner.* New York: Guilford Press.

Zhang, B., El-Jawahri, A., & Prigerson, H. (2006). Update on bereavement research: Evidence-based guidelines for the diagnosis and treatment of complicated bereavement. *Journal of Palliative Medicine, 9*(5), 1188-1203. Retrieved from PsycINFO database.