4-20-2016

The Effect of Childhood Loss on the Relations Between Resilience and Grief Among Bereaved Emerging Adults

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THE EFFECT OF CHILDHOOD LOSS ON THE RELATIONS BETWEEN RESILIENCE AND GRIEF AMONG BEREAVED EMERGING ADULTS

by

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A Thesis

Submitted in Partial Fulfillment of the

Requirements for the Degree of

Master of Science

Major: Psychology

The University of Memphis

May 2016

Abstract

Previous grief research has centered on one-time point, without considering how loss may occur across developmental periods. Taking a lifespan approach, the current study divided 441 bereaved emerging adults into three groups: those who experienced death in childhood, in emerging adulthood, or during both developmental periods. Differences between the groups on circumstances of the loss, cumulative trauma, cumulative loss, trait resilience, and grief symptomatology were examined. Significant group differences for time since loss, relationship to the deceased, cumulative trauma, cumulative loss, and grief symptomatology were found. A moderation model was conducted to determine the direct effect of resilience on grief and how this association differed based on loss group status. Although there was a direct effect of resilience on grief, the relationship between trait resilience and grief symptomatology did not differ based on group status. Findings highlight the universal impact of resilience on grief despite circumstances of the loss.

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The Effect of Childhood Loss on the Relations between Resilience and Grief among Bereaved Emerging Adults

In the United States, over two and a half million people die each year (Murphy, Xu, & Kochanek, 2012). With each death, countless individuals are left to mourn the loss of their loved ones. There are varieties of ways that individuals respond to death, both adaptively and maladaptively, and these grief reactions are highly personalized. There are also opportunities for individuals to overcome maladaptive responses and display resilience following a loss. While research on resilience in the bereavement field has grown (Bonanno et al., 2002; Greff & Human, 2004; Hurd, 2004; Boerner & Jopp, 2010; Mancini & Bonanno, 2010), there are limited studies investigating the relationship between resilience, the timing of the loss, and maladaptive grief patterns.

Most studies assess resilience as a trajectory of grief outcomes or a single response to loss without considering the multiple extrinsic circumstances surrounding the death (i.e., relationship to the deceased, type of death, cumulative trauma, time since loss, etc.) (Boerner & Jopp, 2010; Bonanno et al., 2002; Greff & Human, 2004; Hurd, 2004; Mancini & Bonanno, 2010). Therefore, it is unknown whether resilience accounts for variability in grief outcomes, or whether aspects of the death itself contribute to maladaptive functioning. Furthermore, there is a lack of research on how the timing of the loss affects the relation between resilience and maladaptive grief patterns. It is important to know what role, whether adaptive or maladaptive, experiencing an early death plays in one's ability to cope with a loss in emerging adulthood (i.e., the developmental period from ages 18-24). The current study examines the interaction between resilience and maladaptive grief expressed by emerging adults who have lost a loved one during

different developmental periods in order to expand the literature on grief across the lifespan and investigate how intrinsic variables associated with resilience may be beneficial after a loss.

Maladaptive Grief

Weiss (2002) suggested that normative reactions to a death take on two forms, protest and despair. The protest form of grief consists of preoccupation with the loss, waves of pain, agitation, and tension. The despair form of grief represents an individual's decreased attentiveness to the environment and physiological arousal. Although these characteristic reactions often manifest in most people who endure a loss, it is those that experience a sense of persistent yearning, disbelief and resisting acceptance of the death for at least six months to the point of functional impairment that follow a maladaptive pattern of bereavement (Prigerson et al., 2009; Shear & Shair, 2005, p. 253).

This pattern of grief is now a proposed *International Classification of Diseases, 11th edition* (ICD-11) disorder known as prolonged grief disorder (PGD). It includes unique symptoms from other disorders, although it has yet to be recognized as its own diagnostic unit (Schaal, Dusingizemungu, Jacob, Neuner, & Elbert, 2012). These symptoms are physical or emotional suffering because of an unfulfilled desire for reunion with the deceased, avoidance of reminders of the deceased, disbelief or trouble accepting the death, a perception that life is empty or meaningless without the deceased, bitterness or anger related to the loss, emotional numbness, feeling stunned, dazed, or shocked, feeling that part of oneself had died along with the deceased, difficulty trusting others, and difficulty moving on with life (Prigerson et al., 2009). However, it is important to note that many of these symptoms in isolation can significantly impair functioning and have harmful effects (Friedman, 2013; Stroebe, Schut, & Stroebe, 2007). Although the rates of each individual PGD symptom is unknown, in studies examining the

diagnosis of PGD within emerging, college-aged adults, the rates for this disorder range from .5% to 19% (Balk et al., 2010; Herberman Mash, Fullerton, & Ursano, 2013; Varga, McClam, & Hassane, 2015). Furthermore, approximately 30-40% of undergraduate students have experienced a loss within the last two years (Balk, 1997; Balk, Walker, & Baker, 2010; Neimeyer, Laurie, Mehta, Hardison, & Currier, 2008; Smyth, Hockemeyer, Heron, Wonderlich, & Pennebaker, 2008; Walker, Hathcoat, & Noppe, 2012); therefore, more studies investigating maladaptive grief reactions within the period of emerging adulthood are needed to understand the unique challenges these individuals face.

Adulthood Loss Outcomes

Negative outcomes associated with maladaptive grief include significant distress and impairment, poorer quality of life, excess medical morbidity, and higher suicide rates (Stroebe et al., 2007). Grief, in general, can include impairments in physical functioning, such as chills, diarrhea, fatigue and profuse sweating, as well as intense, long-lasting psychological reactions such as fear, anger, and/or sorrow (Balk, 1999). Further, bereavement can affect an individual's cognitive functioning, such as memory distortions and attention deficits (Balk, 1999; Friedman, 2013). In addition to these physical and cognitive manifestations of grief, other symptoms include sadness, tearfulness, insomnia, and decreased appetite (Friedman, 2013). For emerging adults who are going through the distinctive developmental period from ages 18–24 (Arnett, 2000), novel challenges, such as increased stress related to school and finances, are common (Edwards, Hershberger, Russell, & Markert, 2001; Nonis, Hudson, Logan, & Ford, 1998). Therefore, it is not surprising that grief in emerging adulthood is associated with academic difficulties and trouble meeting developmental milestones, occupational responsibilities, and social obligations (Balk & Vesta, 1998; Hardison, Neimeyer, & Lichstein, 2005). Emerging

adults also experience intense and prolonged grief, health issues, increased physician visits, and more substance use following a loss (Brent, Melham, Donohoe, & Walker, 2009; Melhem et al., 2004; Parkes, 1987; Stroebe & Stroebe, 1987). The college environment of many emerging adults may worsen these responses to a death. That is, emerging adult students are often geographically distant from their regular support systems, feel unsupported by their peers, have high academic demands, and easy access to drugs or alcohol (Janowiak, Meital, & Drapkin, 1995; Servaty-Seib & Taub, 2010).

Childhood Loss Outcomes

While the maladaptive grief reactions of adults have garnered some empirical attention, less is known about the grief reactions of children following the loss of a loved one; however, there is evidence to suggest that children's grief reactions are substantially different from adults' reactions (Himebauch, Arnold, & May, 2008). In some cases, children's grief can manifest sporadically and they may start grieving again at new developmental stages as their understanding of death and their general worldview shifts. A fully mature understanding of death requires integrating the principles of irreversibility, finality, nonfunctionality, universality, and causality (Himelstein, Hilden, Boldt, & Weissman, 2004). These principles are often influenced by personal, cultural, and experiential factors, and seem to be grasped around eight or nine years of age (Corr & Balk, 1996; Himelstein et al., 2004). An incomplete understanding of death during childhood can affect how a child perceives a loss. For example, misunderstanding the irreversibility of death may prevent the detachment of personal ties to a deceased loved one, and not grasping the universality and causality of death could lead to views that death is a punishment, which may cause guilt and shame (Himelstein et al., 2004).

When considering the distinctive emotions and stressors that children facing death experience, it is not surprising that children endure significant distress and negative outcomes after a loss. Studies on bereaved siblings, in general, have reported emotional problems, such as feelings of sadness, guilt, anxiety, and symptoms of depression (Hutton & Bradley, 1994; Mahon & Page, 1995; McCown & Davies, 1995; Nobris & Hellstrom, 2005). Bereaved siblings are also at increased risk for depression in adulthood (Harris, Brown, & Bifulco, 1990; Reinherz, Giaconia, Hauf, Wasserman, & Silverman, 1999). Parentally bereaved children also have more mental health problems than non-bereaved youth, including depression, anxiety, and behavior difficulties (Lutzke, Ayers, Sandler, & Barr, 1997; Melhem, Moritz, Walker, Shear, & Brent, 2007). Furthermore, Brent, Melham, Masten, Porta, and Payne (2012) found that youth who experienced the sudden death of a parent had lower educational expectations and career goals 5 years later compared to a control group of non-bereaved peers. These negative effects on school performance were also shown in a sample of high school students who experienced a parent or sibling's death (Abdelnoor & Hollins 2004). In addition, adolescents that have experienced the death of friend have been shown to have increased amounts of depression, substance use, and suicidal ideation (Balk, 2008; Servaty & Hayslip, 2001). Although the effects of experiencing a death in childhood are evident, few studies have examined how emerging adults continue to be affected by this early loss.

Dual Process Model of Bereavement

For youth, a process of grief, loss, and restoration can continue throughout childhood and adolescence as the understanding of death involves the interplay of developmental phases and experiences during which the permanence of the loss evolves with increasing cognitive understanding (Di Ciacco, 2008; Ribbens-McCarthy, 2005). This interplay of grief, loss, and

restoration, known as the Dual Process Model of Coping with Bereavement (DPM), was developed by Stroebe and Schut (1999) to describe good versus poor adaptation to a death. DPM defines two categories of stressors associated with bereavement, those that are loss- versus restoration-oriented. Loss-orientation refers to the bereaved person's concentration on, appraisal and processing of some aspect of the loss experience itself and incorporates coping processes to help manage the loss. It involves a painful dwelling on, even searching for the lost person, a phenomenon that lies at the heart of grieving. Restoration-orientation refers to the focus on secondary stressors that accompany new roles, identities, and challenges related to the altered status of living without a loved one. These stressors often include the need to master new tasks, make important decisions, and meet new role expectations. DPM specifies a dynamic coping process, namely, a regulatory process called oscillation. Oscillation is the idea that, at times, the bereaved will confront aspects of loss, while at other times, will avoid the loss. In addition, sometimes there will be a "time out," when the person is not grieving (Stroebe & Schut, 1999).

Children who experience grief early in life, within a supportive environment of adults who provide them with knowledge, insight and understanding, will have the capacity to cope with grief and loss and will likely develop emotional strength and resilience to overcome the stressors specifically related to the restoration-orientation aspect of DPM. This may ultimately help them overcome the yearning associated with loss-orientation (Dyregrov, Wikander, & Vigerust, 1999). However, if childhood grief is not acknowledged and supported, it can become a risk factor potentially leading to maladaptive grief and mental health problems in later life (Fauth, Thompson, & Penny, 2009). These different responses to loss may account for why a childhood death could either help, which would lead to resilience from maladaptive grief, or

hurt, which would produce a maladaptive grief response, in an emerging adult who has been through an early life loss.

Resilience from Loss in Adulthood

As noted by Weiss (2008), grief can be expressed through a persistent awareness of a disruption in an individual's life. This disruption in functioning implicates grief as an experience that can be impacted by resilience. Disruption in homeostasis triggers individuals to adapt body, mind, and spirit to stressful life circumstances. The ability to cope with these events is influenced by both adaptive and maladaptive reactions to unbalanced homeostasis (Connor & Davidson, 2003). Richardson (2002) proposed the following model demonstrating how an individual may react to this disruption leading to one of four outcomes: (1) the disruption represents an opportunity for resilience and this growth leads to a higher level of homeostasis; (2) baseline homeostasis returns, just to get past the disruption; (3) costly recovery, or loss resulting in the establishment of a lower level of homeostasis; or (4) maladaptive strategies are used to cope with stressors, and dysfunction is apparent. Therefore, resilience is best defined as successful adaptation to disruptions, or adversities within one's life (Zautra, Hall, & Murray, 2010).

Similar to Richardson's (2002) model of resilience, trait resilience is defined as the capacity to transcend, navigate through, and spring back from adversity (Block & Block, 1980; Block & Kremen, 1996). Here, active coping strategies are important when facing stressful life events in order to protect individuals from adverse effects. Ong, Fuller-Rowell, and Bonanno (2010) suggest that trait resilience operates by buffering the loss-related stressors in bereaved individuals explained in the Dual Process Model (Stroebe & Schut, 1999). Ong et al. (2010) assessed the effect of trait resilience on positive emotions following the loss of a spouse. The results of this study indicated that lower trait resilience scores prior to loss were associated with

reduced levels of positive emotion post-loss. Additionally, positive emotions present amid high levels of negative emotions in grieving adults lead to better psychological outcomes (Bonanno & Keltner, 1997; Bonanno, Moskowitz, Papa, & Folkman, 2005).

Positive adaptation has been demonstrated in many bereaved adults, while others are plagued with overwhelming grief (Bonanno et al., 2002). Boerner & Jopp (2010) suggest that resilient individuals are less distressed by the loss, which limits its negative impact. For example, in a sample of bereaved spouses followed from pre-loss through 18 months' post-loss, almost half showed no clinical depression at any point in the study, yet when they were questioned about their functioning soon after the loss, about 75% of those showing resilience reported intense yearning as well as pangs of powerful grief at some point in the earliest months of bereavement (Bonanno et al., 2002). Additionally, all but one of the bereaved individuals exhibiting resilient functioning had intrusive thoughts about the loss and ruminated about their loved one shortly after the death. What was unique about the resilient individuals was their ability to manage grief symptoms so that they did not interfere with maintenance of healthy functioning. From the Dual Process Model perspective, a death can result in alternating between positive and negative aspects of the loss; therefore, allowing resilient outcomes to arise out of this devastating experience (Stroebe & Schut, 1999). Surprisingly, this type of resilience is often evident in bereaved individuals, as many experience minimal grief in response to a loss (Bonanno, 2004). Although multiple studies have investigated these trajectories of resilience in adults who have encountered a specific death (i.e., of a child or spouse), few studies have examined the interplay of resilience and grief symptomatology in a sample of emerging adults who have endured a larger variety of losses.

Additionally, grief research investigating resilience has been focused on adulthood as a whole (Bonanno, 2004; Bonanno & Keltner, 1997; Bonanno et al., 2005), without investigating emerging adulthood as a unique developmental period. It has been purported that emerging adulthood is the age of new life possibilities (Arnett, 2000), meaning that emerging adults often make dramatic changes in their lives, as they become free of their family environment (Arnett, 2000). Masten, Obradović, and Burt (2006) offer substantial evidence that emerging adulthood may be a critical period for the expression of resilience, as this is a time when positivity is very high and individuals expect promising outcomes in their futures. However, it is unknown how experiencing a loss effects these high levels of resilience or how resilience differs based on whether emerging adults have endured a loss during this time of new life possibilities, or during their childhood.

Resilience from Loss in Childhood

Transactional models posit dynamic person-environment processes that underlie adaptation across time (Sandler, Wolchik, & Ayers, 2008). Applied to childhood loss, a transactional framework recognizes that youth must adapt to the disruptions and restructuring of their environments that happen as a result of death (Sandler et al., 2008). This model proposes that risk and protective qualities of the post-loss environment influence the satisfaction of children's basic needs in ways that can either enhance or impair their ability to successfully negotiate later-life challenges and display resilience. Specifically, risk and protective factors can influence the extent to which future interactions with the environment are perceived as stressful. This perception affects one's emotional and biological regulatory responses, which ultimately influence long-term mental and physical health (Sandleret al., 2008). For instance, several researchers have reported that adults who experienced early parental loss were more likely to be

well adjusted if they had a good quality, affectionate, and stable relationship with their surviving parent (Grenklo et al., 2013; Wener-Lin & Biank, 2013). Further fostering resilience, Wolchik, Coxe, Tein, Sandler, and Ayers (2008) conducted a six-year follow-up study with parentally bereaved children. Controlling for youth age, time since death, and cause of death, intrapersonal coping processes explained a moderate amount of variance in intrinsic variables, such as personal strength and embracing new roles, two areas that are commonly associated with resilience.

To date, studies have frequently examined childhood loss and its effect on adult psychopathology (Harris et al., 1990; Reinherz et al., 1999), with few, if any, studies investigating trait resilience within adults who have experienced a childhood loss. However, some studies have evaluated resilience across time in regards to other traumatic stressors. For instance, Suzuki, Geffner, and Bucky (2008) discovered that victims of childhood exposure to IPV may find meaning within their traumatic events and evolve their attitudes and behaviors as they mature. Further, in a study of ninety-three emerging adults (ages 18–25) who had faced child maltreatment, hierarchical regression analyses were conducted to examine the direct and interactive effects of resilience on depression symptoms. When internal resilience was added to the model, it made a significant contribution to depression scores over and above child maltreatment (physical, sexual, and emotional abuse; emotional neglect). In addition, there was a significant Sexual Abuse by Resilience interaction, in which high resilience was associated with a reduction in depression scores at higher levels of sexual abuse (Goldstein, Faulkner, & Wekerle, 2013). Similarly, Daniels and colleagues (2012) found that trait resilience mediated the relationship between childhood trauma and posttraumatic adjustment. Although these studies did not specifically investigate death, each supports the notion that childhood adversity can lead to

an increased amount of adulthood resilience; however, studies with emerging adults who have experienced a childhood loss need to be conducted in order to confirm the impact of this adverse experience on later resilience.

Circumstances Surrounding the Loss

Type of Loss. To assess what contributes to resilience and grief symptomatology following a loss, Boerner and Jopp (2010) examined circumstances surrounding the death as potential predictors. They found that resilience is unlikely if the death of a loved one is sudden and/or violent. Recently, Kristensen, Weisæth, and Heir (2012) reviewed literature on the psychological consequences of sudden or violent loss and resilient factors for grief and mental health outcomes. These researchers established a consensus among the literature that the sudden nature of a loss hinders bereaved relatives from bidding a final farewell to their loved one. They found within the literature that individuals who have experienced a violent loss, as opposed to a natural loss, have greater difficulties in making meaning from the death. Similarly, Coleman and Neimeyer (2006) found that traumatic losses (homicide, suicide, and accidental deaths) were associated with greater grief distress than anticipated or sudden, natural deaths.

Time since Loss. In terms of time since death, for most people, maladaptive grief decreases with time (Ott, Lueger, Kelber, & Prigerson, 2007). From the Dual Process Model perspective, there will gradually be less attention to loss-oriented stressors and more restoration-oriented tasks. For instance, when one is first experiencing a loss, there is little consideration paid to forming a new identity without the loved one and more focus is on the events surrounding the death and yearning for the loved one to be by the mourner's side (Stroebe & Schut, 2010). As time passes, attention to these tasks will diminish (Caserta & Lund, 2007; Richardson & Balaswamy, 2001). Therefore, time since the death is an important aspect to

consider in determining whether the recency of the death is accounting for increased maladaptive grief.

Relationship to the Deceased. Resilience and grief may also be impacted by kinship. Previous research indicates that relationships with the deceased that were close, supportive, confiding and dependent were associated with an increased risk of grief symptoms. Further, adults bereaved by the suicide of a family member experienced nearly twice the level of grief symptoms as distantly related survivors (Lobb et al., 2010). Any loss can elicit a grief response in children, but certain deaths may bring on unique stressors for bereaved youth (Corr, 2010). For example, parental death can lead to decreased economic resources, change in residence, less contact with friends and neighbors, increased responsibilities, and less time with the surviving parent who may be personally grieving (Wolchik et al., 2009). Managing these loss-related stressors can lead surviving caregivers to spend less time with children, be less supportive of them, and reinforce children's positive behaviors less frequently (Wolchik, Ma, Tein, Sandler, & Ayers, 2008). Beyond parental death, youth who have lost a sibling may experience a ''double loss'' due to the death of their brother or sister, coupled with the unavailability of parents who are overwhelmed with grief (Sood, Razdan, Weller, & Weller, 2006). Children grieving the loss of a sibling may also suffer sibling guilt related to remorse about being healthy and surviving (Noppe & Noppe, 2004). In a qualitative study investigating siblings who lost a brother or sister to cancer, emotional problems expressed by the siblings were loneliness, anxiety, anger & jealousy (Nolbris & Helstrom, 2005). The loss of these unique relationships in childhood may explain why a childhood death could be harmful to later adult functioning due to the unique loss-related stressors faced by children. Alternatively, loss-related stressors may contribute to

children's ability to build internal resilience due to the adversity associated with these types of losses.

Cumulative Trauma. The early death of a loved one increases one's exposure to other stressors, both during childhood and later in life (Sandler et al., 2008). These negative life events serve as an important mediator of the relation between death reactions and mental health outcomes (Thompson, Kaslow, Price, Williams, & Kingree, 1998). The occurrence of negative life events following parental death can increase the risk of parenting difficulties and interfere with the parent-child relationship (Wolchik, Tein, Sandler, & Ayers, 2006). Similar ''cumulative adversity'' theories (e.g., Hertzman, 1999) suggest that childhood parental death can increase the risk of adverse long-term physical health outcomes through exposure to additional life stressors, which over time contribute to dysregulation and the breakdown of bodily systems. Therefore, it is important to consider cumulative traumas when investigating relations between resilience and grief.

Cumulative Loss

Cumulative loss, or multiple losses over one's life, can represent a substantial threat to the individuals' identity and may result in increasing distress (Ryan, Coughlan, Shahid, & Aherne, 2011). It has been found by multiple studies of grief that cumulative losses in a relatively short period of time can produce feelings and emotions that compound and "accumulate" with each new loss (Bonanno et al., 2005; Cherney & Verhey, 1996; Kaufman & Kaufman, 2005; Sikkema, Hansen, Kochman, Tate, & Difranceisco, 2004). In order to control for this "accumulation" of emotions due to multiple losses, cumulative loss should be investigated in relation to resilience and grief.

The Current Study

Previous studies have considered the impact of death during childhood and adulthood, but there remain many gaps to address in bereavement research. The current study aims to provide a more comprehensive evaluation of how emerging adults are grieving and what may help them through this mourning process. By controlling for extrinsic death-related variables, such as time since the loss, type of loss, relationship to the deceased and cumulative trauma and loss, the mourner has experienced, this study can carefully consider whether resilience is specifically accounting for decreased maladaptive grief, which has been identified in previous studies (e.g., Boerner & Joppp, 2010; Bonanno et al., 2002; Greff & Human, 2004; Hurd, 2004; Mancini & Bonanno, 2010). Furthermore, there is limited research on how a childhood loss affects adulthood maladaptive grief. It is important to know whether experiencing an earlier loss acts as a protective factor or a risk factor in one's ability to cope with a loss in emerging adulthood in order to realize the weight an earlier loss may have on one's life. In addition, grief is often analyzed in the context of psychopathology, with only a handful of studies assessing the role of resilience. Therefore, investigating which trait-based resilience factors play a role in decreasing maladaptive grief can help researchers and clinicians understand how to foster resilience in individuals who are struggling after a loss.

First, the relation between resilience and maladaptive grief expressed by emerging adults who have lost a loved one during different developmental periods (childhood: under 18 years of age; emerging adulthood: 18-24 years of age) will be examined. It is hypothesized that resilience and grief will vary depending on whether the participant experienced a childhood loss, an adulthood loss, or a combination of losses across these two developmental periods. Specifically, due to the time passed since the loss, which allows for the adoption of coping strategies, it is

expected that those who went through a loss during childhood will have higher resilience levels and fewer maladaptive grief reactions than those who experienced a loss during adulthood. For individuals who faced both a childhood and adulthood loss, a clear hypothesis regarding resilience and grief does not emerge. Given the Dual Process Model (Stroebe & Schut, 1999), it is possible that experiencing a childhood loss will provide a protective aspect to an adulthood loss such that those who went through a childhood loss will have more resilience and fewer maladaptive grief reactions in relation to the loss they experienced as an adult. This may occur because adults who have already gone through an earlier loss likely developed coping strategies in response to the childhood death. On the other hand, due to the multiple negative outcomes associated with experiencing a loss during childhood (Harris et al., 1990; Hutton & Bradley, 1994; Mahon & Page, 1995; McCown & Davies, 1995; Nobris & Hellstrom, 2005; Reinherz et al., 1999), it may be that an earlier loss decreases resilience in adulthood and the cumulative nature of multiple losses leads to more maladaptive grief reactions.

Once differences between the loss groups are assessed, it is hypothesized that there will be an inverse association between resilience and grief, such that those with more resilience will have less grief, controlling for the type of death, relationship to the deceased, time since the death, cumulative trauma and losses. It is further hypothesized that group status, i.e., whether participants have experienced a childhood loss, adulthood loss, or both losses, will moderate the strength of the effect between resilience and grief. Similar to the previous hypotheses, it is expected that the childhood loss group will display more resilience leading to less grief symptomatology, the adulthood loss group will show less resilience leading to more grief symptomatology, and an a priori hypothesis does not emerge for the combined losses group.

Therefore, an exploratory approach will be taken to determine the moderating effects for those individuals in the group that experienced childhood plus adulthood losses.

Method

Procedures

Upon receiving IRB approval, students from the University of Memphis were recruited to the study through the Department of Psychology subject pool system. The psychology subject pool consists of undergraduate psychology students who are invited to participate in a variety of research studies as part of their academic experience. Participants were informed that all aspects of the study would be done online, that it would take approximately one and a half hours to complete, and that they would receive psychology course credit as compensation for their time and effort. Participants self-selected into a general study about risk and resilience and completed the consent procedures prior to the administration of the survey from a computer of their choosing. As all elements of the project took place online, participants did not meet with study staff members at any point during the study in order to maximize anonymity and privacy.

In addition to providing demographic information, participants completed a battery of self-report measures that assessed their childhood and adulthood experiences with loss and trauma, as well as their current psychosocial functioning. Given that some of the questionnaires include items on sensitive, potentially distressing topics, a list of local and national mental health, counseling and support resources was made available to all participants at the beginning of the survey. The contact information for the principal investigator was also provided to participants in the event that they had questions or concerns about the information gathered during the study.

Participants

The sample included 441 emerging adults between the ages of 18 and 24 (*M* = 19.61 years, *SD* = 1.67) who had lost a loved during the course of their life. Participants came from a diverse range of racial and ethnic backgrounds, with 56.7% identifying as White, 33.3% as Black, 4.3% as Bi-racial/Multi-racial, 4.1% as Latino/Latina, and 1.6% as Asian. Nearly half (46.0%) of participants were currently enrolled in their first year of college and the majority were female (77.1%). This sample differed by whether the loss of their loved one occurred during childhood, with no losses in emerging adulthood (childhood loss group; n = 263), or during emerging adulthood. Participants who experienced a loss during emerging adulthood were then subdivided into groups based on those who had experienced a loss during childhood, in addition to their emerging adulthood loss (both losses group; n = 99), and those who only experienced a loss during emerging adulthood (emerging adulthood group; n = 79). See Table 1 in Appendix A for demographics by loss group.

Measures

Demographics. A demographics questionnaire was administered to each participant to ascertain basic background information, such as age, gender, ethnicity, and education.

Childhood Traumatic Events Scale. On the Childhood Traumatic Events Scale (CTES) (Pennebaker & Susman, 1988; see Appendix B for full measure), participants were asked whether certain traumatic events had occurred before the age of 18 (childhood) and/or after the age of 18 (adulthood), and if so, how traumatic each event had been (1, not at all, to 7, extremely). In addition, participants were asked how many instances of each trauma they were subjected to and how old they were when the most distressing incidence of each type of trauma occurred. The events included “death of a very close friend or family member,” “major upheaval

between parents" (e.g., separation or divorce), "traumatic sexual experience," "victim of violence," "extreme illness or injury," and "other major upheaval." A cumulative trauma total score was calculated by summing the number of times each traumatic event occurred in both childhood and adulthood, without including traumatic events surrounding a loss. Cumulative loss total score was calculated by summing the number of times a loss occurred in both childhood and adulthood. The instrument has been shown to have good reliability and validity (Pennebaker & Susman, 1988; Wegner & Pennebaker, 1993).

Connor-Davidson Resilience Scale (CD-RISC). The CD-RISC (Connor & Davidson, 2003 see Appendix B for full measure) is a 25-item self-report measure of trait resilience that assesses the ability to cope with stress and adversity. Participants responded according to a five-point Likert scale, ranging from not true at all to true nearly all of the time. Items were summed to create a total score, with higher scores indicating more resilience. The CD-RISC has adequate internal consistency, test-retest reliability, and convergent and divergent validity (Connor & Davidson, 2003). The CD-RISC measures the following subscales of trait resilience: competence/tenacity, trust in one's instincts/tolerance of negative affect, positive acceptance of change/secure relationships, control, and spirituality. In this sample, Cronbach's α on the CD-RISC was .96.

Prolonged Grief (PG-13). The PG-13 (Prigerson et al., 2009; see Appendix B for full measure) assesses the extent and severity of grief symptoms (e.g., yearning for the deceased, feelings of emotional numbness/ detachment from others, feeling that a part of oneself died along with the deceased) and provides criteria for identifying individuals qualifying for a diagnosis of prolonged grief disorder. Identified symptoms must be associated with functional and social impairment and must have been present for at least 6 months. Respondents rate the frequency

with which they experience each item on a 5-point Likert scale, ranging from "not at all" to "several times/day," or, "not at all" to "overwhelmingly." The total score is a sum of item responses ranging from 11 to 55, with higher totals indicating more maladaptive grief reactions. The PG-13 has a demonstrated association with severity of depressive symptoms and a general measure of grief suggesting a valid, yet distinct, assessment of emotional distress (Prigerson & Maciejewski, 2009; Prigerson et al., 2009). The PG-13 has high internal consistency (Cronbach's $\alpha = 0.94$) and test–retest reliabilities (.80), and demonstrated internal consistency and convergent and criterion validity (Prigerson et al., 2009). For the current study, participants who marked that they experienced a loss at any point in their life on the Childhood Traumatic Events Scale completed the PG-13. At the beginning of the questionnaire, participants were asked about situational aspects of the loss such as their relationship to the deceased, time since the death, how old they were at the time of the loss, how old the deceased was at the time of the loss, and how the deceased died. In this sample, Cronbach's α on the PG-13 was .92.

Data Analytic Plan

Means, correlations, and standard deviations were computed for all variables in IBM's Statistical Package for the Social Sciences (SPSS) 22.0. Pearson correlations were first computed to determine the associations between each of the variables in the model and which control variables should be included in the analyses. Groups were coded into 1) having experienced a loss only when participant was a child, 2) having experienced a loss only when participant was an adult, or 3) experiencing losses when participant was both a child and an adult. A chi-square test of association was conducted in SPSS 22.0 to determine how the groups differed on type of death and relationship to deceased. Post-hoc testing with adjusted residuals transformed into chi-square and p-values was used to determine how the groups differed

(Beasley & Schumaker, 1995). Calculated p-values were compared to Bonferroni-corrected p-values to determine significance. A multivariate analysis of variance (MANOVA) and Tukey's HSD post-hoc tests were run to determine how these groups differed on time since death, cumulative trauma, and cumulative loss. After determining group differences on each of these circumstantial aspects, a multivariate analysis of covariance (MANCOVA) was tested on resilience and grief when controlling for time since death, relationship to deceased, type of death, cumulative trauma, and cumulative loss. Group differences evident via the MANCOVAs indicated which type of loss is associated with enhanced resilience and grief.

In order to evaluate the interplay between resilience, grief and group status, a moderation model was conducted in the SPSS PROCESS macro (Preacher & Hayes, 2014) (see Figure 1 in Appendix A). PROCESS was used to examine the main effect of resilience predicting grief, as well as the interaction effect between loss group and resilience predicting grief, each controlling for time since death, relationship to deceased, type of death, cumulative trauma, and cumulative loss. PROCESS is a computational procedure for SPSS that implements moderation analyses using an ordinary least squares regression framework (Hayes, 2012). The PROCESS macro for simple moderation is beneficial compared to other techniques (e.g., Johnson-Neyman and pick-a-point), as it mean centers all predictor variables when estimating a moderated path and includes the estimation of bias-corrected bootstrap confidence intervals to test for significance (Hayes, 2012).

Results

Data were examined for skewness, kurtosis, and outliers to determine whether the primary variables met the assumptions of normality. Univariate and multivariate outliers were removed by analyzing out-of-range standardized z-scores and Mahalanobis Distances scores for

each variable. Bi-variate correlations between the independent and dependent variables are presented in Table 2 in Appendix A. A preliminary descriptive analysis was conducted. Means and standard deviations among study variables were computed separately for the entire sample and each of the groups (see Table 3 in Appendix A).

Group Differences on Circumstances of the Loss

Preliminary analyses for the inclusion of control variables in future analyses were run to determine whether differences by group were present for type of death (i.e., anticipated or unanticipated) and relationship to deceased (i.e., immediate family, extended family, or friend/acquaintance), a chi-square test of association was conducted with post-hoc analyses using Bonferroni adjusted alpha levels of .005 per post hoc test. The relation between loss group and type of death was not significant, χ^2 (2, N = 441) = 2.04, p = .36. However, the relation between loss group and relationship to deceased was significant, χ^2 (4, N = 441) = 13.27, p = .01. The both losses group experienced more friend/acquaintance deaths (30.3%; χ^2 (1, N = 441) = 11.56, p < .001) than the childhood loss (14.4%; χ^2 (1, N = 441) = .36, p = .55) and emerging adulthood loss (17.7%; χ^2 (1, N = 441) = .04, p = .84) groups.

A MANOVA with Tukey's HSD post-hoc testing and a Bonferroni-corrected p-value of .017, was run to determine differences based on loss group for time since death, cumulative trauma, and cumulative loss. A statistically significant difference was found in time since death, cumulative trauma, and cumulative loss based on loss group, F(6, 858) = 58.37, p < .001; Wilk's Λ = 0.504, partial η^2 = .29. Tests of Between-Subjects Effects revealed that the loss group has a statistically significant effect on both time since death (F(2, 431) = 101.94; p < .001; partial η^2 = .32), cumulative trauma (F(2, 431) = 4.36; p = .013; partial η^2 = .02), and cumulative loss (F(2, 431) = 74.60; p < .001; partial η^2 = .26). Tukey's HSD post-hoc test further showed, not

surprisingly, that mean scores for time since loss were statistically significantly different between childhood loss group (M = 5.51 years) and emerging adulthood loss group (M = 1.14 years; $p < .001$), and childhood loss group and both losses group (M = 1.28 years; $p < .001$), but not between emerging adulthood loss group and both losses group ($p = .942$). Childhood loss group's mean years since loss was significantly higher than emerging adulthood loss and both losses groups. Mean cumulative trauma scores were statistically significantly different between the loss during childhood and both losses groups, with the both losses group experiencing significantly more cumulative trauma (M = 4.10 events) than the childhood loss group (M = 2.64 events; $p = .009$). No significant differences were found between the childhood loss group and emerging adulthood loss group (M = 3.02 events; $p = .760$), or the emerging adulthood loss group and both losses group ($p = .207$). Mean cumulative loss scores were statistically significantly different between the loss during childhood and both losses groups, with the both losses group experiencing significantly more cumulative loss (M = 2.62 losses) than the emerging adulthood loss group (M = 0.14 losses; $p < .001$). The childhood loss group also experienced more cumulative loss (M = 2.59 losses) than the emerging adulthood loss group ($p < .001$). No differences on cumulative loss were found between the childhood loss and both losses groups ($p = .988$).

Group Differences on Grief and Resilience

In order to test the hypothesis that resilience and grief would vary depending on whether the participant experienced a childhood loss, an adulthood loss, or a combination of losses across these developmental periods, a MANOVA with Tukey's HSD post-hoc testing and a Bonferroni-corrected p-value of .025 was tested. A statistically significant difference was found in grief symptoms and resilience based on loss group, $F(4, 874) = 6.84$, $p < .001$, Wilk's $\Lambda = 0.94$, partial

η^2 = .03. Tests of Between-Subjects Effects revealed loss group has a statistically significant effect on grief symptoms (F(2, 438) = 13.52; p < .001; partial η^2 = .058), but not resilience (F(2, 438) = .027; p = .974; partial η^2 = .00). Tukey's HSD post-hoc test found that mean scores for grief symptoms were statistically significantly different between the both losses group (M = 22.80) and childhood loss group (M = 18.90; p < .001), and trending for the both losses group and emerging adulthood loss group (M = 20.06; p = .052), but not significant between the emerging adulthood loss group and childhood loss group (p = .12).

In order to determine whether time since death, relationship to deceased, cumulative trauma and/or cumulative loss, had an effect on the prior findings, a MANCOVA was tested. Type of death was not included as a covariate since no group differences were found in preliminary testing. Results remained similar to the MANOVA. A statistically significant difference was found on grief and resilience by loss group, while controlling for time since death, relationship to deceased, cumulative trauma and cumulative loss (F (4, 852) = 2.65, p = .03; Wilk's Λ = 0.976, partial η^2 = .012). Tests of Between-Subjects Effects revealed loss group has a statistically significant effect on grief symptoms (F (2, 427) = 5.25; p = .006; partial η^2 = .024), but not resilience (F (2, 427) = .001; p = .999; partial η^2 = .00). Analysis of the means found that scores for grief symptoms were significantly different between the both losses group (M = 22.80) and childhood loss group (M = 18.90), and for the both losses group and emerging adulthood loss group (M = 20.06), but not between the emerging adulthood loss group and childhood loss group.

Main Effect of Resilience Predicting Grief.

The hypothesized inverse association between resilience and grief was tested based on the first component of the PROCESS model moderation analysis. Investigating whether grief

was predicted by resilience, while controlling for time since loss, relationship to deceased, cumulative trauma and cumulative loss, the overall model was significant (R^2 = .17, F(7,426) = 12.21, p < .001). Resilience was a significant predictor of grief symptoms (b = -.06, t(437) = -2.73, p = .007), such that participants with greater resilience experienced less grief. Loss group was also a significant predictor of grief symptoms (b = 1.56, t(437) = 2.76, p = .006), such that the emerging adulthood loss group and the both losses group experienced more grief than the childhood loss group.

Interaction between Resilience and Loss Group Predicting Grief.

To investigate whether this inverse association between resilience and grief varied based on loss group, the second step in the PROCESS model moderation analysis with an interaction effect between resilience and loss group was examined. Regression analyses did not find a significant interaction effect (resilience by loss group interaction; b = -.0139, t(437) = -.479; p = .63). Specifically, loss group did not moderate the relationship between resilience and grief. Therefore, the strong inverse relationship between resilience and grief held, no matter participants' loss group status.

Summary of Results

Although analyses of the circumstantial aspects of death were conducted for preliminary purposes, differences between circumstances of the loss proved fruitful in showing that those participants experiencing both a childhood loss and an adulthood loss have endured significantly more traumas than the childhood loss group and more friend/acquaintance deaths than the childhood loss group and emerging adulthood loss group. In addition, the present findings support many of the stated aims and hypotheses. More specifically, group differences on grief symptoms were found based on whether emerging adults reported experiencing a childhood loss,

an adulthood loss, or a combination of losses across these developmental periods. Surprisingly, these group differences were not found for resilience. Exploratory analyses indicated that, regardless of cumulative trauma, cumulative loss, and circumstances of the loss, those who experienced an adulthood loss and a loss in both adulthood and childhood, show more grief symptomatology. Additionally, concordant with our hypothesis, a direct inverse effect was found between resilience and grief in this sample. However, contrary to our hypothesis, this direct effect did not change based on loss group status.

Discussion

The impact of death on an individual's life has received substantial research attention, but there remain many gaps to address in thanatology research. The current study aimed to provide a more comprehensive evaluation of the grieving process for emerging adults and understand what may help lessen the development of maladaptive grief symptoms following a loss. To offer a more nuanced understanding of the grief process, this study controlled for extrinsic, loss-specific variables, such as time since the loss, type of loss, relationship to the deceased, cumulative traumas, and cumulative losses the mourner has experienced. These covariates were employed to consider whether trait resilience uniquely accounts for decreased maladaptive grief, a relationship that has been identified in multiple studies (e.g., Boerner & Jopp, 2010; Bonanno et al., 2002; Greff & Human, 2004; Hurd, 2004; Mancini & Bonanno, 2010). Moreover, there is limited research on how a childhood loss affects adulthood maladaptive grief. From a risk and resilience standpoint, it is important to know whether experiencing an earlier loss helps or harms one's ability to manage a death in emerging adulthood. The lifespan approach taken throughout this study offers insight into how the concept of death may change over time, and couples it with the idea that possible coping mechanisms are in place earlier on that can help an individual

manage a loss better than in emerging adulthood, or possibly take these mechanisms with them into emerging adulthood. Additionally, the field of bereavement is rapidly growing, with the diagnosis of prolonged grief disorder based on specific maladaptive grief symptomatology criteria finally being recognized. The current study adds to this developing literature within the context of resilience, rather than psychopathology. Therefore, the investigation of how trait-based resilience contributes to the reduction of maladaptive grief can help researchers and clinicians understand how to foster positive functioning in individuals who are displaying PGD symptomatology.

The control variables within this study proved very important in not only confirming the relationship between trait resilience and maladaptive grief, but also how these variables behave differently based on loss experiences throughout one's life. In terms of time since death, prior research has found that losses that are traumatic in nature, or losses that happen suddenly, tend to correlate highly with more grief symptoms (Coleman & Neimeyer, 2006; Kristensen et al., 2012). Since no studies have looked at how this might be different based on when you suffer a loss in your life, the current study included these analyses with the hopes of understanding whether certain groups are experiencing more of these sudden, highly distressing, losses. While no group differences were found, with more specificity (e.g., homicide, suicide, sudden illness, prolonged illness, natural death, etc.) differences between the groups could have been evident. Moreover, had the study included more developmental periods past emerging adulthood, immediate familial deaths and friend deaths may have been more common since these deaths tend to happen later in life. With regard to the relationship to the deceased, an interesting finding emerged that those who experienced both a loss in childhood and adulthood had significantly more friend/acquaintance deaths than the other two loss groups. This likely is associated with the

finding showing differences by group based on cumulative trauma, a variable that is a novel addition to the death literature. The fact that the both losses group also had more cumulative trauma may mean that these individuals are in riskier environments where they are more likely to experience adversity and the passing away of their peers. In addition to cumulative trauma differences being found between the groups, cumulative losses were also found to differ, with childhood loss and both losses groups experiencing significantly more cumulative loss than the emerging adulthood group. This finding provides further evidence that the both losses group may be in an environment that makes them vulnerable to increased adversity and loss.

The theory that the both losses group may be in a riskier environment may also contribute to the explanation for why this group is experiencing significantly more grief symptomatology than the childhood loss group and nearly significantly more grief than the adulthood loss group. As shown in previous studies, experiencing a childhood loss can subject individuals to a range of negative outcomes during this time period and into adulthood. This includes more psychopathology (Harris et al., 1990; Hutton & Bradley, 1994; Mahon & Page, 1995; McCown & Davies, 1995; Nobris & Hellstrom, 2005; Reinherz et al., 1999) and unsupportive environments (Grenklo et al., 2013; Wener-Lin & Biank, 2013; Wolchik et al., 2008), as well as additional life stressors (Sandler et al., 2008). The cumulative nature of these two losses, plus any additional negative stressors that occurred due to this early loss, could prevent the attainment of positive coping skills that may contribute to less maladaptive grief when experiencing a later loss. Another possibility centers on attachment theory (Bowlby, 1969/1982, 1988). Research suggests that childhood attachment styles can be highly influenced by traumatic life events (Feeney, 1999). It may be that individuals in the both losses group, due to their cumulative

trauma and losses, have developed an insecure attachment style that makes the grieving process more prolonged and distressing when an attachment figure is lost later in life.

Other than a developmental explanation for the differences between groups, a contextual one should be considered; although time since loss was controlled for within the groups, between the groups, timing since the loss was still inherently present based on how the groups were divided. Since prior research has shown grief dissipates over time (Ott et al., 2007), the fact that the both losses and adulthood loss groups are experiencing more grief is not surprising. In addition, the childhood loss group was more likely to experience their loss within their family environment rather than alone at college. It is possible that the social support that was gained by these participants allowed their grief to be better managed over time. From a Dual Process Model perspective (Stroebe & Schut, 1999), it may be that these emerging adults' childhood losses were acknowledged and supported, allowing them the ability to overcome dwelling on the loss and focus on developing resilient skills such as orienting their life to the world without their loved one.

Although finding no group differences on trait resilience was in opposition to the study hypothesis, when looking at the mean scores for trait resilience, the current sample is highly resilient. This is not uncommon based on research that has found that emerging adults tend to exhibit a high amount of trait resilience likely due to their outlook on the future and taking on new perspectives (Masten et al., 2006). In addition, this was a college student sample. Multiple studies have shown that experiencing an early loss can have negative effects on future milestone attainment (Brent et al., 2012). College-students may be a unique sample that has demonstrated the necessary trait resilience to overcome the negative influences of a loss.

Even though no group differences were found on trait resilience, based on the moderation results, trait resilience seems to be a contributing factor to how much grief symptomatology emerging adults are displaying. More importantly, the lack of an interaction effect suggests that this is true no matter the developmental time period in which the loss occurred. This speaks to the universal impact that trait resilience has on grief in emerging adults. It can be argued that emerging adults displaying resiliency may be less distressed by their losses, and the negative effects of maladaptive grief are less likely to emerge, which was also suggested by Boerner and Jopp (2010). Moreover, even though over half of these emerging adults were experiencing a loss within the last year, within the stressful college environment, and away from their home, trait resilience still bolstered their ability to have less grief symptomatology just as much as those who experienced a loss in childhood. The direct relationship found between trait resilience and grief is consistent with previous research in the field of bereavement. A negative association between trait resilience and grief symptoms has been found in multiple populations including parentally bereaved children (Wolchik et al., 2008), bereaved spouses (Bonanno et al., 2002; Ong et al., 2010), and bereaved older adults (Bonanno et al., 2005). To add to this literature, the current study found that this relationship holds even after controlling for circumstances around the loss, cumulative trauma, and cumulative loss, something that has been missing from previous research. Including these variables helps add credence to the associations within our model, and should be considered in grief research since these variables have been shown to have an impact on how people grieve (Coleman & Neimeyer, 2006; Kristensen et al., 2012; Lobb et al., 2010; Ott et al., 2007; Sandler et al., 2008). In addition, the relationship between trait resilience and maladaptive grief has now been shown with emerging adults who have suffered different types of loss over the span of their life. This developmental perspective illustrates how prior losses are

not only affecting symptomatology, but also how early losses may actually be harming one's ability to have less grief symptomatology when deaths occur later in life. This lifespan approach has yet to be taken in grief research, but based on the current results, it may be an area for further investigation.

Limitations

Although this study had a number of strengths, there are also limitations that should be considered when interpreting the results. First, the retrospective design produces the possibility of bias and inaccurate reports of childhood events. Although no studies have looked at the reliability of past loss occurrences, unreliable reports of childhood victimization experiences studied in adulthood have been found (Fergusson, Horwood, & Woodward, 2000). However, other studies have found evidence that reports of childhood victimization are, in fact, reliable (Dong et al., 2004). Therefore, it is important to keep the retrospective nature of the study in mind when considering how well participants report on past loss and cumulative trauma.

Second, the cross-sectional design of this study does not allow for the investigation of how trait resilience affects grief over time. Since this study offers a snapshot of trait resilience and maladaptive grief at a single moment, what transpires before and after the snapshot is taken is not accounted for in the analyses. Therefore, we cannot determine if the childhood loss group and adulthood loss groups always had high levels of trait resilience, whether this resilience was gained from the loss, or whether it was gained after another adversity leading them to be able to experience less grief as an emerging adult. Third, only self-report data was included in this study, which may also elicit inaccurate reporting. Furthermore, we did not account for other important markers of functioning (e.g., mental health) which could impact participants' perception of their maladaptive grief symptomatology.

Moreover, the sample for this study poses some limits to generalizability, as the majority of respondents were female college students. Additionally, this study consisted entirely of college students who are likely a unique population of emerging adults with some level of resilience already in place. Thus, there may be differences in how emerging adults who are not attending college exhibit resilience and grief that were not captured in the present study.

Lastly, this study did not investigate racial/ethnic differences between the groups. Prior research has shown that African American bereaved individuals display higher rates of maladaptive grief than Whites (Goldsmith, Morrison, Vanderwerker, & Prigerson, 2007) and bereaved African American emerging adults have been found to experienced more losses in the past two years, and these losses are more likely to be traumatic in nature than bereaved White emerging adults' losses (Laurie & Neimeyer, 2008). Therefore, differences between the groups based on race may be present that could impact the rates of maladaptive grief.

Future Directions

Future studies should include more comprehensive, prospective longitudinal designs that gather data from multiple informants. Although rare, prospective longitudinal studies are important for thanatology research as these designs would allow for an understanding of the causality of maladaptive grief symptoms and increased trait resilience. Additionally, gathering data longitudinally at multiple time points from childhood to adulthood will help determine how grief is impactful in the long term and the influence of additional losses on grief and resilience. Comprehensive studies that include other relevant factors, such as measures of mental health, would also shed light on the experiences impacting individuals' perceptions of resilience and grief following death, which could be incorporated into interventions and treatment programs designed to enhance resilience and prevent maladaptive grief patterns. Furthermore, additional

measures that relate to resilience should be included, such as stress responses, health status, psychopathology, and social support. Measures of resilience should also tap into types of resilience other than trait resilience to research what behaviors, thoughts, and actions have been learned or developed after adversity. This will help researchers understand the vast processes at play that contribute to heightened resilience following a hardship.

Future studies should also incorporate more diverse samples of participants, including college and non-college students. Although emerging adulthood has been associated with certain endeavors, such as the navigation of increased autonomy and attainment of new worldviews, these actions are likely not tied to attending college. In fact, these experiences are likely very different for individuals in college and those not attending college. Some college students may find themselves geographically distant from their families and friends, which could be a challenging event that those not attending college have never faced. On the other hand, non-college students may face other difficult struggles such as being financially responsible as they enter the workforce sooner than college attendees do. Therefore, it is important to understand how the unique experiences of emerging adults who have gone to college differ from those who have not enrolled in higher education.

Clinical Implications

The results from this study shed light on important areas for clinical intervention. Specifically, the both developmental periods losses group may be a prime target for intervention given that they experienced the most grief symptomatology. Early loss has the potential to result in negative life events that may make it difficult to cope with a loss later in life. Therefore, early intervention is key in helping children understand the loss and heal from it to prevent later negative effects. For emerging adult college students specifically, given that social support is a

powerful protective agent, interventions for individuals who have lost a loved one during college should focus on enhancing both family and friend support networks. College campuses should also make sure to provide counseling to these individuals in an affordable and convenient medium. Finally, since less resilience plays a role in maladaptive grief symptomatology, the current study provides support for positive functioning in these individuals that should be strengthened through clinical interventions. At the individual level, this may include building self-esteem and self-efficacy to bolster trait resilience; at the family level, including parent training and family management to help families support one another; and at the community level, fostering connectedness and building friendships with those individuals who are mourning a loss.

Conclusion

The present study aimed to investigate the association between trait resilience and grief throughout the lifespan. Specifically, the main goal was to discover if this association differed based on whether emerging adults experienced a loss during childhood, emerging adulthood, or during both developmental periods, while controlling for circumstances of the loss. cumulative trauma, and cumulative loss. Regardless of loss group, the inverse association between trait resilience and grief symptoms held, such that emerging adults with more trait resilience exhibited less grief symptomatology, even after controlling for time since death, relationship to the deceased, cumulative trauma, and cumulative loss. While the loss groups did not impact the relationship between trait resilience and grief, they did differ in meaningful ways, including on the relationship to the deceased, cumulative trauma, cumulative loss, and grief symptomatology. This study highlights the importance of investigating past and present losses to understand the

effect of cumulative losses over the lifespan and its impact on maladaptive grief symptomatology.

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Appendix A: Tables and Figures

Table 1

Demographics of Current Study Sample and Loss Groups

	Total (N = 441)	**Childhood Loss (n = 263)**	**Adulthood Loss (n = 79)**	**Childhood and Adulthood Losses (n = 99)**
Age				
Current mean age (SD)	19.61 (1.67)	19.10 (1.36)	20.33 (1.87)	20.40 (1.74)
Gender				
Female	77.1%	79.1%	69.6%	77.8%
Male	22.9%	20.9%	30.4%	22.2%
Race				
White	56.7%	57.8%	59.5%	51.5%
Black	33.3%	31.9%	27.8%	41.4%
Asian	1.6%	1.9%	1.3%	2.0%
Hispanic/Latino	4.1%	3.4%	8.9%	1.0%
Multiracial	4.3%	4.9%	2.5%	4.0%

Table 2

Correlations for Study Variables

	1	2	3	4	5	6	7
1. Resilience	-						
2. Grief Symptoms	-.131**	-					
3. Loss Group	.007	.240***	-				
4. Time Since Loss	-.006	-.205***	-.523***	-			
5. Cumulative Trauma	-.036	.218***	.137**	-.021	-		
6. Cumulative Loss	-.002	.045	-.097**	.149**	.000		
7. Type of Loss	-.005	.152**	.066	-.075	.052	.040	-
8. Relationship to Deceased	.047	-.170***	.159**	-.175***	.020	.96*	.096*

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

Table 3
Means and Standard Deviations of Variables by Loss Group

	Total (N = 441)	**Childhood Loss (n = 263)**	**Adulthood Loss (n = 79)**	**Childhood and Adulthood Losses (n = 99)**
Type of Loss				
Sudden	52.4%	44.9%	50.6%	52.5%
Anticipated	47.6%	55.1%	49.4%	47.5%
Relationship to Deceased				
Immediate Familial	10.7%	12.5%	8.9%	7.1%
Extended Familial	70.7%	73.0%	73.4%	62.6%
Friend/Acquaintance	18.6%	14.4%	17.7%	30.3%
Time Since Loss				
Mean years (SD)	3.77 (3.69)	5.51 (3.66)	1.14 (1.22)	1.28 (2.03)
Cumulative Traumas				
Mean number of events (SD)	3.04 (4.19)	2.64 (3.64)	3.02 (5.03)	4.10 (4.68)
Cumulative Losses				
Mean number of losses (SD)	2.59 (1.65)	0.14 (0.66)	2.62 (1.95)	2.17 (1.86)
Grief Symptoms				
Mean (SD)	19.50 (7.97)	18.09 (7.26)	20.06 (8.37)	22.80 (8.50)
Resilience Scores				
Mean (SD)	94.64 (17.31)	94.59 (17.46)	94.40 (17.45)	94.40 (17.46)

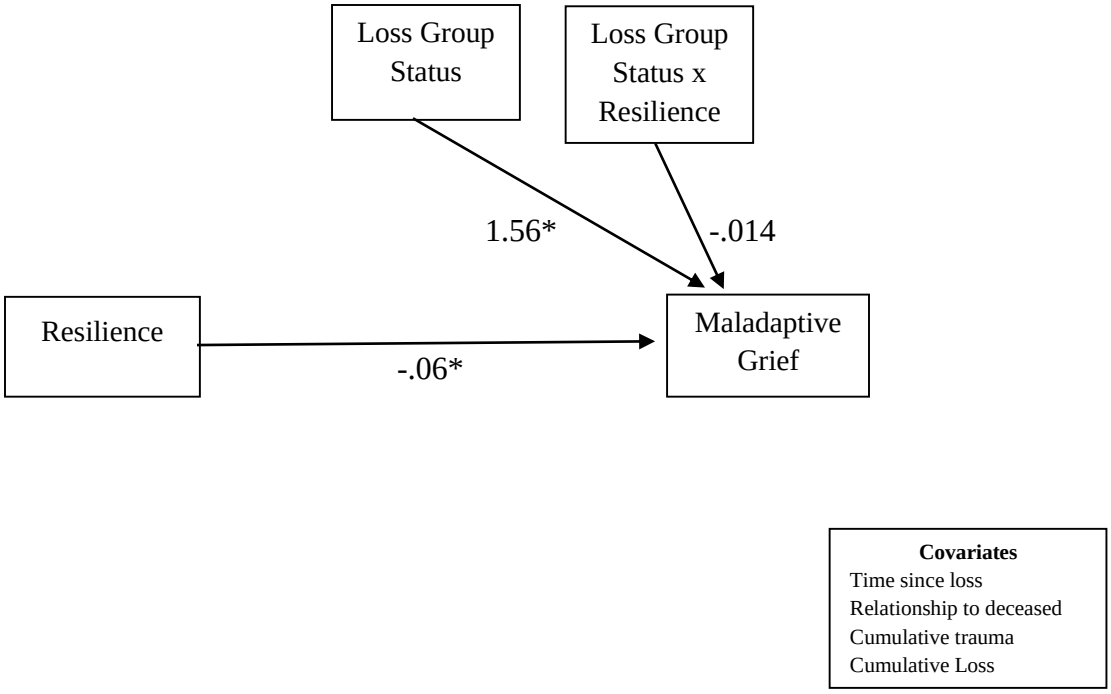

Figure 1. Moderation path diagram of trait resilience and maladaptive grief by loss group status.

Note. Unstandardized beta estimates reported. * $p < .01$. ** $p < .001$

Appendix B: Study Measures

Childhood Traumatic Events Scale

(Pennebaker & Susman, 1988)

For the following questions, answer each item that is relevant. Be as honest as you can. Each question refers to any event that you may have experienced prior to the age of 17.

1. Prior to the age of 17, did you experience a death of a very close friend or family member?_____
If yes, how old were you?_____
If yes, how traumatic was this? (using a 7-point scale, where 1 = not at all traumatic, 4 = somewhat traumatic, 7 = extremely traumatic)_____
If yes, how much did you confide in others about this traumatic experience at the time? (1 = not at all, 7 = a great deal)_____

2. Prior to the age of 17, was there a major upheaval between your parents (such as divorce, separation)?_____
If yes, how old were you?_____
If yes, how traumatic was this? (where 7 = extremely traumatic)_____
If yes, how much did you confide in others? (7 = a great deal)_____

3. Prior to the age of 17, did you have a traumatic sexual experience (raped, molested, etc.)?_____
If yes, how old were you?_____
If yes, how traumatic was this? (7 = extremely traumatic)_____
If yes, how much did you confide in others? (7 = a great deal)_____

4. Prior to the age of 17, were you the victim of violence (child abuse, mugged or assaulted -- other than sexual)?_____
If yes, how old were you?_____
If yes, how traumatic was this? (7 = extremely traumatic)_____
If yes, how much did you confide in others? (7 = a great deal)_____

5. Prior to the age of 17, were you extremely ill or injured?_____
If yes, how old were you?_____
If yes, how traumatic was this? (7 = extremely traumatic)_____
If yes, how much did you confide in others? (7 = a great deal)_____

6. Prior to the age of 17, did you experience any other major upheaval that you think may have shaped your life or personality significantly?_____
If yes, how old were you?_____
If yes, what was the event?_____
If yes, how traumatic was this? (7 = extremely traumatic)_____
If yes, how much did you confide in others? (7 = a great deal)_____

Recent Traumatic Events Scale

(Pennebaker & Susman, 1988)

For the following questions, again answer each item that is relevant and again be as honest as you can. Each question refers to any event that you may have experienced within the last 3 years.

1. When you were 18 or older, did you experience a death of a very close friend or family member?__

If yes, how traumatic was this? (1 = not at all traumatic, 7 = extremely traumatic)_____

If yes, how much did you confide in others about the experience at the time? (1 = not at all, 7 = a great deal)_____

2. When you were 18 or older, was there a major upheaval between you and your spouse (such as divorce, separation)?_____

If yes, how traumatic was this?_____

If yes, how much did you confide in others?_____

3. When you were 18 or older, did you have a traumatic sexual experience (raped, molested, etc.)?_____

If yes, how traumatic was this?_____

If yes, how much did you confide in others?_____

4. When you were 18 or older, were you the victim of violence (other than sexual)?_____

If yes, how traumatic was this?_____

If yes, how much did you confide in others?_____

5. When you were 18 or older, were you extremely ill or injured?_____

If yes, how traumatic was this?_____

If yes, how much did you confide in others?_____

6. When you were 18 or older, has there been a major change in the kind of work you do (e.g., a new job, promotion, demotion, lateral transfer)?_____

If yes, how traumatic was this?_____

If yes, how much did you confide in others?_____

7. When you were 18 or older, did you experience any other major upheaval that you think may have shaped your life or personality significantly?_____

If yes, what was the event?_____

If yes, how traumatic was this?_____

If yes, how much did you confide in others?_____

Connor-Davidson Resilience Scale (CD-RISC)

(Connor & Davidson, 2003)

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

	not true at all (1)	**rarely true (2)**	**sometimes true (3)**	**often true (4)**	**true nearly all the time (5)**
1. I am able to adapt when changes occur.	❍	❍	❍	❍	❍
2. I have at least one close and secure relationship that helps me when I am stressed.	❍	❍	❍	❍	❍
3. When there are no clear solutions to my problems, sometimes fate or God can help.	❍	❍	❍	❍	❍
4. I can deal with whatever comes my way.	❍	❍	❍	❍	❍
5. Past successes give me confidence in dealing with new challenges and difficulties.	❍	❍	❍	❍	❍
6. I try to see the humorous side of things when I am faced with problems.	❍	❍	❍	❍	❍
7. Having to cope with stress can make me stronger.	❍	❍	❍	❍	❍
8. I tend to bounce back after illness, injury, or other hardships.	❍	❍	❍	❍	❍
9. Good or bad, I believe that most things happen for a reason.	❍	❍	❍	❍	❍
10. I give my best effort no matter what the outcome may be.	❍	❍	❍	❍	❍
11. I believe I can achieve my goals, even if there are obstacles.	❍	❍	❍	❍	❍

12. Even when things look hopeless, I don't give up.	❍	❍	❍	❍	❍
13. During times of stress/crisis, I know where to turn for help.	❍	❍	❍	❍	❍
14. Under pressure, I stay focused and think clearly.	❍	❍	❍	❍	❍
15. I prefer to take the lead in solving problems rather than letting others make all the decisions.	❍	❍	❍	❍	❍
16. I am not easily discouraged by failure.	❍	❍	❍	❍	❍
17. I think of myself as a strong person when dealing with life's challenges and difficulties.	❍	❍	❍	❍	❍
18. I can make unpopular or difficult decisions that affect other people, if it is necessary.	❍	❍	❍	❍	❍
19. I am able to handle unpleasant or painful feelings like sadness, fear, and anger.	❍	❍	❍	❍	❍
20. In dealing with life's problems, sometimes you have to act on a hunch without knowing why.	❍	❍	❍	❍	❍
21. I have a strong sense of purpose in life.	❍	❍	❍	❍	❍
22. I feel in control of my life.	❍	❍	❍	❍	❍
23. I like challenges.	❍	❍	❍	❍	❍
24. I work to attain my goals no matter what roadblocks I encounter along the way.	❍	❍	❍	❍	❍
25. I take pride in my achievements.	❍	❍	❍	❍	❍

PG-13

(Prigerson et al., 2009)

PGD is a newly defined syndrome that is a specific reaction to the loss of someone loved very much. There are a particular set of PGD symptoms – feelings, thoughts, actions – that must be elevated at 6 months post-loss and that must be associated with significant functional impairment in order for a person to meet criteria for PGD.

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

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

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

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

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

3. For questions 1 or 2 above, have you experienced either of these symptoms at least daily and after 6 months have elapsed since the loss?

_____ No
_____ Yes

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

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

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

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

PART II INSTRUCTIONS: FOR EACH ITEM, PLEASE INDICATE HOW YOU CURRENTLY FEEL. CIRCLE THE NUMBER TO THE RIGHT TO INDICATE YOUR ANSWER.	**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)?	1	2	3	4	5
7. Have you had trouble accepting the loss?	1	2	3	4	5
8. Has it been hard for you to trust others since your loss?	1	2	3	4	5
9. Do you feel bitter over your loss?	1	2	3	4	5
10. Do you feel that moving on (e.g., making new friends, pursuing new interests) would be difficult for you now?	1	2	3	4	5
11. Do you feel emotionally numb since your loss?	1	2	3	4	5
12. Do you feel that life is unfulfilling, empty, or meaningless since your loss?	1	2	3	4	5

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

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

_____ No
_____ Yes