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To the Graduate Council:

I am submitting herewith a dissertation written by Mary Alice Varga entitled "A Study of Graduate Student Grief and Prolonged Grief Disorder." I have examined the final electronic copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Educational Psychology.

Tricia McClam, Major Professor

We have read this dissertation and recommend its acceptance:

Gary Skolits, Robert A. Rider, Norma T. Mertz

Accepted for the Council:

Carolyn R. Hodges

Vice Provost and Dean of the Graduate School

(Original signatures are on file with official student records.)

A Study of Graduate Student Grief and Prolonged Grief Disorder

A Doctoral Dissertation
Presented for the
Doctor of Philosophy Degree
The University of Tennessee, Knoxville

Mary Alice Varga
May 2013

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DEDICATION

This dissertation is dedicated to my amazing husband, my wonderful parents, my fabulous faculty advisor, and my beautiful angel in heaven.

Matt Varga, words cannot describe how much I appreciate your love and support as a husband, colleague, and friend. You encouraged me from the very beginning to pursue this Ph.D. journey and helped me the whole way. I would not have made it without you. You always believed in me and that is what kept me going. You are the most amazing man I know and your love and hard work inspires me to be a better wife, friend, and scholar. I love you with all my heart and look forward to our long future together in academia and in life.

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ABSTRACT

The purpose of this study was to determine the incidence of grief among graduate students, the effects of their grief, types of support sought, and risk of prolonged grief disorder. A total of 1, 575 graduate students enrolled at a large public Southeastern university completed an online survey about their grief experiences. Students experiencing a significant loss also completed the Prolonged Grief Disorder Questionnaire. Findings revealed that approximately 25% of graduate students experienced the loss of a significant person in their lives within the past 24 months. Graduate students reported various grief effects, with emotional effects being the most significant. These effects were experienced within six months post-loss and subsided thereafter. Graduate students also indicated they sought support primarily from family and friends. Only a small percentage (0.5%) of graduate students met the criteria for prolonged grief disorder; however, each student also reported being diagnosed with another mental health illness. Limitations of the study are addressed and recommendations for future research are provided.

Keywords: bereavement, grief, graduate students, support, prolonged grief disorder

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CHAPTER I

Introduction and Purpose

When the topic of college grief arises, it is common that public events such as the shooting at Virginia Tech first come to mind (Flynn & Heitzmann, 2008). The private instances of grief that also pervade college campuses are less commonly considered. This type of grief among undergraduate students is referred to as the “silent epidemic” on campuses (Neimeyer, Laurie, Mehta, Hardison, and Currier, 2008, p. 28). This is troubling since studies (Balk, 1997; Balk, Walker, & Baker, 2010; Bernat, Ronfeldt, Calhoun, & Arias, 1998; LaGrand, 1981, 1985; Smyth, Hockemeyer, Heron, Wonderlich, & Pennebaker, 2008; Walker, Hathcoat, & Noppe, 2012) indicate that 30-40% of undergraduate students on any given campus are in the first 24 months of bereavement. Another important student population, graduate students, is not included in student grief research. In fact, the research on college student grief is limited to undergraduate students with a focus on the effects grief has on students and support services utilized by grieving students.

For the most part, bereaved or grieving individuals are resilient and learn how to effectively cope with loss (Bonanno, 2004). Unfortunately, college campuses are not environments conducive to grieving. Grieving undergraduate students are often geographically distant from their regular support systems, not receiving support from their peers, struggling to meet academic demands, and surrounded by alcohol and drug temptations (Janowiak, Mei-Tai, & Drapkin, 1995; Servaty-Seib & Taub, 2010). Since grief can manifest itself in individuals in various ways, it can be difficult to identify grieving undergraduate students. Grief affects students holistically in various dimensions including physically, cognitively, behaviorally,

interpersonally, emotionally, and spiritually (Balk 2001; Balk, 2011; Balk, Tyson-Rawson, & Colletti-Wetzel, 1993; Balk & Vesta, 1998; Beam, Servaty-Seib, & Mathews, 2004; Bonanno & Kaltman, 2001; LaGrand, 1981, 1985; Neimeyer et al., 2008; Servaty-Seib & Hamilton, 2006; Walker et al., 2012). A severe condition known as prolonged grief disorder can also develop (Balk et al., 2010; Prigerson et al., 2009). These effects can have everlasting impacts on undergraduate students and their collegiate success. An area of research that remains unknown is how grief affects graduate students and whether it is similar to the experiences of undergraduate students.

Grieving undergraduate students are most likely to have experienced the death of a family member due to natural or expected causes; however, sudden and unexpected deaths of family members and friends are also reported (Balk, 1997; Balk & Vesta, 1998; Balk et al., 2010; Bath, 2009; Bernat et al., 1998; Currier, Holland, & Neimeyer, 2006; LaGrand, 1981, 1985; Smyth et al., 2008; Walker et al., 2012). Relation to the deceased and cause of death are important variables when assessing grief in undergraduate students since sudden, traumatic deaths of immediate family members are linked to severe conditions, such as prolonged grief disorder, making coping with death difficult (Balk et al., 2010). Prolonged grief disorder, a mental disorder that develops as a result of the inability to cope with the loss of a loved one, is diagnosed six months post-loss and includes a unique algorithm of symptoms specific to bereaved individuals (Prigerson et al., 2009). These symptoms cause debilitating effects on grieving individuals that interferes with normal functioning in life. Continued research on prolonged grief disorder in college student populations is important because the disorder can have devastating effects such as insomnia (Hardison, Neimeyer, & Lichstein, 2005), elevated

rates of suicide ideation (Prigerson et al., 1999), health impairments (Prigerson et al., 1997), and reduced quality of life (Prigerson et al., 1995). One research study (Balk et al., 2010) has shown that prolonged grief disorder in undergraduate students is rare; however, additional research (Boelen, 2011 & Schaal, Dusingizemungu, Jacob, Neuner, & Elbert, 2012) indicates the prevalence of the condition increases as the age of the bereaved individual increases, thus posing the question whether the rate of the disorder increases in graduate students, who are typically older in age than undergraduate students.

Although college campuses are often equipped with counseling centers as a resource for grieving students, they may often have waitlists to see students (Janowiak et al., 1995). Furthermore, grieving undergraduate students report they are more willing to talk about their grief with peers than counselors (Balk, 2008; Servaty-Seib & Taub, 2010). Unfortunately, non-bereaved peers often feel sad, helpless, and uncomfortable in the presence of a grieving friend (Vickio, Cavanaugh, & Attig, 1990). Research has not been conducted on the types of support graduate students seek when experiencing grief. This is important to investigate since research (McCarthy, Bruno, & Sherman, 2010) indicates that graduate students generally do not seek support when needed. One study (Hyun, Quinn, Madon, & Lustig, 2006) surveyed the mental health needs of graduate students at one university and found that of the 3,121 responses, almost half of graduate students (44.7%) reported having an emotional or stress-related issue over the previous year and even more (57.7%) reported having a colleague with emotional or stress-related issues. Only half of graduate students (50.2%) considered seeking support for issues relating to academic problems, career issues, financial concerns, and relationship problems. Grief was not mentioned as an issue graduate students were facing.

For graduate students experiencing grief, support they seek is an important area to investigate. Graduate students not seeking support when needed can experience strains to their mental wellness. Research into the mental wellness of graduate students has produced alarming results. The Big Ten Student Suicide Study (Silverman, Meyer, Sloane, Raffel, & Pratt, 1997) showed that graduate students were among the top at-risk for suicide, especially students age 25 and older, and did not always seek support. Students in this age range are also at a higher risk for experiencing grieving complications such as prolonged grief disorder (Boelen, 2011 & Schaal et al., 2012), thus making an investigation into grief and prolonged grief disorder among graduate students warranted. Such an investigation could potentially uncover grief-related obstacles graduate students are facing and help institutions put supportive measures in place to assist them.

While research provides insight on undergraduate student grief, very little is known about grief among graduate students. How grief affects graduate students and whether these effects are different than those experienced by undergraduate students, a very demographically different population, is unknown. Finally, insight into the types of grief supports graduate students may seek is also unknown. An investigation into graduate student grief can generate information on the prevalence of grief among this student population, whether grief affects them similarly to or different than undergraduate students, including their level of risk for prolonged grief disorder, and the types of grief support they utilize. These findings will provide foundational information on grief among graduate students, a student population often excluded from previous research.

Statement of the Problem

Research shows that a large portion of undergraduate students experience grief during their collegiate career and that grief affects them holistically and sometimes detrimentally. When

undergraduate students need grief support, they often seek out friends and peers. However, very little is known about the prevalence of grief among graduate students, how grief affects graduate students, and what types of support they seek. Furthermore, as the rate of mental illness rises in adults (U.S. Department of Health and Human Services, 2008), it is important to explore the prevalence of prolonged grief disorder among graduate students. Currently, we are without basis for providing grief support to graduate students since there is scant information on the prevalence of grief, the effects of grief, or the types of grief support graduate students seek.

Purpose of the Study

The purpose of this study was to determine the incidence of grief among graduate students, the effects of their grief, the types of grief support they seek, and assess their risk of prolonged grief disorder.

Research Questions

The research questions guiding this study follow:

1. What is the incidence of grief among graduate students?
2. Are graduate students affected by their grief, and if so, how?
3. Do grieving graduating students seek support?
4. What is the risk for graduate students to develop prolonged grief disorder?

Significance of the Study

This study provides insight about the incidence of grief among graduate students. Similar to research on undergraduate students, it also provides insight on how grief affects graduate students, including the risk of prolonged grief disorder, and which types of grief support they seek. Surveying the entire graduate student body across all disciplines on their experiences with

grief offers a comprehensive understanding of experiences among a diverse student body. This provides university administrators with information to help address potential needs and enhance both student and institutional success.

Conceptual Framework

The theoretical framework guiding this study is the Holistic Impact of Bereavement developed by Balk (2011). This framework was developed to illustrate the multidimensional effects of grief on undergraduate college students. Through several years of research, Balk found that grief affects students physically, cognitively, behaviorally, interpersonally, emotionally, and spiritually and can manifest in various ways. Although they do not refer to the Holistic Impact of Bereavement specifically in their research, numerous other research studies (Balk, 2001; Balk et al., 1993; Balk & Vesta, 1998; Beam et al., 2004; Bonanno & Kaltman, 2001; LaGrand, 1981, 1985; Neimeyer et al., 2008; Servaty-Seib & Hamilton, 2006; Servaty-Seib & Taub, 2010; Walker et al., 2012) have similar findings.

The Holistic Impact of Bereavement suggests that undergraduate students are affected by grief and bereavement in various ways that affect their lives and their academic experience as outlined by the six dimensions – physical, cognitive, behavioral, interpersonal, emotional, and spiritual (Balk, 2011). Individuals may experience any of the six dimensions individually or intertwined with one another. This is consistent with Balk and Vesta (1998) and LaGrand (1981) who found that “grief is multidimensional, not generalizable” (p. 241). Furthermore, grief symptoms that persist can develop into complicated grief, now known as prolonged grief disorder (Balk et al., 2010; Currier et al., 2006; Neimeyer, Baldwin, & Gillies, 2006; Prigerson et al., 2009; Schnider, Elhai, & Gray, 2007). Currently, there is no research focusing on grieving

graduate students and how they are affected by bereavement. Therefore, it is unknown whether graduate students experience grief similarly or differently than undergraduate students. Using the Holistic Impact of Bereavement model as a guide, we begin to explore these questions.

The Holistic Impact of Bereavement influenced this study by providing the foundation for the study and establishing the need for conducting the study. It also helped frame the research questions. Grief and bereavement may affect graduate students in various dimensions and aspects of their lives, which may even develop into prolonged grief disorder. Determining how grief affects graduate students and what types of grief support they seek provides insight on the grief experiences unique to this student population.

Definitions

Bereavement

Bereavement is the term used to identify the overall experience of losing a loved one (Stroebe, Hansson, Schut, & Stroebe, 2008).

Grief

Grief is “a process of having to let go, of adapting to an environment without the object of loss” (LaGrand, 1985, p. 17).

Prolonged Grief Disorder

Prolonged grief disorder, also known as complicated grief, traumatic grief, or complicated grief disorder, is a mental disorder diagnosed after six months post-loss that develops as a result of the inability to cope with the loss of a loved one (Prigerson et al., 2009). The main symptom is yearning for the deceased, along with at least five of the following nine symptoms: a) avoidance of reminders of the deceased; b) trouble accepting the death of the deceased; c) perception that

life is empty or meaningless without the deceased; d) bitterness or anger related to the loss; e) emotional numbness; f) feeling stunned, dazed, or shocked as a result of the loss; g) feeling part of oneself had died with the deceased; h) difficulty trusting others; and i) difficulty moving on with life (Prigerson et al., 2009).

Organization of the Study

The study is organized into five chapters. Chapter 1 introduced the study and included background for the study, the statement of the problem, purpose of the study, research questions, significance of the study, the theoretical framework guiding the study, definitions of terms unique to the study, and this organizational plan. Chapter 2 provides a critical review of the research and literature relevant to the study. Methods and procedures are outlined in Chapter 3 providing detailed information about the research design, research methods, delimitations, and limitations. Chapter 4 details findings of the study and provides discussion relating to the existing research and literature. Conclusions and recommendations for future research are presented in Chapter 5.

CHAPTER II

Review of the Literature

The purpose of this study was to determine the incidence of grief among graduate students, evaluate the effects of grief including assessing their risk of prolonged grief disorder, and determine the types of grief support they seek. Since research on graduate student grief does not exist, a review of the literature on undergraduate student grief is provided. This review provides a foundation to begin research on graduate student grief. Research on undergraduate student grief began in the 1980s and has since been scant. Most of the research focuses specifically on three areas: a) determining the overall prevalence of grief among undergraduate students; b) exploring how grief affects undergraduate students, including complicated grief and prolonged grief disorder; and c) how grieving students cope with loss. This literature review provides a comprehensive overview of research conducted on the prevalence of undergraduate grief, how grief affects undergraduate students, and the support and coping mechanism utilized by grieving undergraduate students. This information provides a basis for research on graduate student grief.

Prevalence of Grief in Undergraduate Students

Grief is “a process of having to let go, of adapting to an environment without the object of loss” (LaGrand, 1985, p. 17). Bereavement is the term used to identify the overall situation of losing a loved one (Stroebe, Hansson, Schut, & Stroebe, 2008). Grief, therefore, is a reaction to bereavement, although these terms are often used interchangeably. For the most part, bereaved or grieving individuals are resilient and learn how to effectively cope with their losses (Bonanno, 2004). However, there is a concern that undergraduate students experiencing grief or

bereavement are more vulnerable than other populations due to the developmental processes they undergo during their college years (Balk, 2011).

Prevalence studies of grief in undergraduate students have provided information on the rate at which undergraduate students have experienced grief. The landmark study on undergraduate loss was conducted by LaGrand (1981). This was the first major study conducted on grief in undergraduate students. Focusing on loss in general terms, not specific to death, LaGrand conducted a two year-long descriptive study with 1,139 students across nine institutions in New York to explore the types of major loss undergraduate students experience. A survey instrument constructed by the author was administered after a pilot survey on 115 students. The survey consisted of five check-off items and two open-ended questions. The open-ended questions were designed to gain specific information about the loss experienced and generate recommendations for other undergraduate students coping with loss. Over 1,900 written responses on the two open-ended questions were collected. Information on the data analysis of the responses was not reported.

Results showed 46 different types of major losses experienced by undergraduate students. Death of a loved one or sudden death (28.8%), end of a love relationship (25.1%), and end of a friendship (11.1%) were the top three most frequent responses. The five most frequent types of loss experienced by both females and males were the same (death of a loved one or sudden death, end of love relationship, end of friendship, separation from loved ones, and loss of a good grade) but ranked in a different order. These results indicated that females experienced more loss due to the end of friendships while males experienced more loss due to separation from loved ones and loss of good grades (LaGrand, 1981).

LaGrand (1985) expanded the landmark study for an additional three years. The same survey was utilized, however, instead of focusing solely on the prevalence of loss, he focused on “grief” and “griefwork.” LaGrand defined grief as “a process of having to let go, of adapting to an environment without the object of loss” (p. 17). He also defined “griefwork” as “the adjusting behaviors through which one passes during the period following loss and to the confrontations involving feelings and unfinished business associated with the loss” (p. 18). He continued using an open definition of loss and stated that the reactions students report when losing something, such as a love relationship, were similar to the reactions they experienced when losing a family member, signifying that loss is not limited to the death of a person.

The new expanded study included 3,252 undergraduate students at 16 colleges and universities in two states. The recent major losses reported by students included the death of a loved one (27.7%), the end of a love relationship (24.5%), and the end of a friendship (10.1%). The most frequent type of loss experienced by females remained the same as indicated in the previous study (LaGrand, 1981); however, the frequency of specific loss experiences reported by males changed. Contrary to earlier findings, these results indicated that females experienced more loss due to separation from loved ones than males. Results also indicated that males experienced loss of good grades more than previously reported (LaGrand, 1985).

LaGrand’s (1985) extended study with a focus on “grief” and “griefwork” was the first large-scale study to examine grief in undergraduate students. Twelve years later, Balk (1997) conducted a multi-method study examining the prevalence of grief among undergraduate students and their coping experiences. Instead of focusing on all aspects of loss like LaGrand (1981, 1985), Balk focused specifically on the death of a loved one. A large group of

undergraduate students ($n = 994$) in an introductory human development course responded to a survey about death and bereavement over five semesters. Eighteen of the survey respondents, who specifically experienced the death of a family member or friend, were interviewed.

Survey results indicated that most students had experienced the death of a family member ($n = 813$, 81.8%) and the death of a friend ($n = 594$, 60%). Twenty-five percent of students had experienced multiple deaths. The average time since the death occurred was 4.4 years. The most common cause of death was illness or “old age” (83%), followed by accidents (8.6%), suicide (2%), and murder (1.2%). Similar to LaGrand’s (1981, 1985) findings, these results illustrate the high prevalence rate of death experienced by undergraduate students (Balk, 1997).

Research on various aspects of undergraduate student grief and loss has been examined. Most of these studies specifically recruited bereaved students; however, a number of studies have included bereaved and non-bereaved students. These studies also provided frequencies on prevalence rates of grief among undergraduate students. One study examined the prevalence of traumatic events and posttraumatic stress disorder symptoms on undergraduate students (Bernat et al., 1998). Participants included 937 students who were predominately female ($n = 634$, 68%) and identified as White (86%). Students completed a survey that included a general demographic questionnaire, the Trauma Assessment for Adults (Resnick, Best, Freedy, Kilpatrick, & Falsetti, 1993), the Peritraumatic Dissociative Experience Questionnaire-Rater Version (Falsetti, Resnick, Kilpatrick, & Freedy, 1994; Kilpatrick, Resnick, & Freedy, 1991; Marmar et al., 1994; Marmar, Weiss, & Metzler, 1997), and the Impact of Events Scale-Revised (Weiss & Marmar, 1997).

Although they were assessing numerous traumatic events, events related to death and loss were incorporated. Results indicated that approximately 39.5% of students reported witnessing a

serious injury or death (22.0%). Students also reported experiencing the murder of a family member or friend (17.5%). Although these categories are not exactly comparable with those used by LaGrand (1981, 1985) and Balk (1997), they continue to illustrate the high prevalence of death experiences exposed to undergraduate students (Bernat et al., 1998).

Similar to Bernat et. al (1998), another more recent two-part study investigated adverse and traumatic events in the lives of undergraduate students (Smyth et al., 2008). The goal of this study was to examine more diverse student samples from various types of institutions and geographic locations than previously utilized (Bernat et al., 1998). Participants in the first part of the study included 914 undergraduate students enrolled in introductory psychology courses over three years. The average age of participants was 18.78 years and genders were evenly represented between females ($n = 492$, 53.83%) and males ($n = 405$, 44.31%). Seventeen students (1.86%) did not indicate their gender. Students responded to a customized survey with questions about their adverse experiences.

Results showed 66.1% ($n = 604$) of participants experienced at least one adverse event in their lifetime. The prevalence was reported relatively evenly between females (54.1%) and males (45.9%), although females reported higher severity of event experiences than males. Consistent with Bernat et al. (1998), these results continued to illustrate that undergraduate students experience adverse or traumatic events at high rates. These results also indicated that grief is experienced by both undergraduate males and females. Furthermore, females may experience more severe death experiences than males (Smyth et al., 2008).

The second part of the study was conducted with 3,640 undergraduate students in a wellness program over four years. The average age of students was 18.49 and evenly represented

females ($n = 1,945$, 53.4%) and males ($n = 1,695$, 46.6%). Students received the same survey that was distributed in part one of the study, reporting on adverse experiences in their lives.

A majority of students (62.7%) experienced a death in their lifetime. Death experience was reported by both females (53.3%) and males (64.1%) occurring between ages 14-16 (28.2%) and age 17 and older (35.1%). Males reported more experiences with death in this sample than in the first part of the study. Females, however, reported higher perceived severity of events than males. Overall, these results confirmed findings from previous studies (Balk, 1997; Bernat et al., 1998; LaGrand 1981, 1985) that death is experienced by both undergraduate males and females. It also specified that females are more likely to experience adverse effects from the loss (Smyth et al., 2008).

When intentions of undergraduate students to support a grieving person were examined, the prevalence of grief was also explored (Bath, 2009). A sample of 160 undergraduate students enrolled in an introductory psychology course participated by taking an electronic survey that included demographic questions, customized questions about experience with death, and measures on behavior using the Theory of Planned Behavior Questionnaire (Ajzen, 1991, 2006). Students were predominately female (68%) and the average age was 21 years.

Results indicated that over half of students (73%) experienced a loss and that almost half of the losses (41%) occurred between the ages 16 and 20. Most students reported losing grandparents (47%) and friends (26%). Although this was not the central focus of her study, Bath (2009) re-affirms the high prevalence of loss experienced by undergraduate students (Balk, 1997; Bernat et al., 1998; LaGrand, 1981, 1985; Smyth et al., 2008).

Another study specifically explored the prevalence and severity of bereavement among undergraduate students (Balk et al., 2010). This study closely examined the grief experiences of students and assessed the severity of prolonged grief disorder, a condition that can develop due to complicated grief when an individual has difficulty coping with a loss (Prigerson & Jacobs, 2001; Prigerson, Vanderweker, & Maciejewski, 2008). A stratified random sample of participants was used to provide more generalizable results than the study previously conducted by Balk (1997) who used convenience sampling techniques.

A total of 118 undergraduate students participated in the study. Gender representation among the sample was relatively even, with 59% female students and 41% male students. Sixty-nine percent of participants identified as White Non-Hispanic followed by African American (12%). Most students ($n = 111$, 94%) identified as Protestants. Although stratified random sampling was used to produce more generalizable results, the large percent of White Christians represented in this sample limits the generalizability (Balk et al., 2010).

Students completed a demographic questionnaire, questions regarding death experiences, and the Prolonged Grief Disorder Questionnaire (Prigerson et al., 2008). The Prolonged Grief Disorder Questionnaire (Prigerson et al., 2008) is an instrument used to measure complicated grief disorder and assess risk for prolonged grief disorder at six months post-loss. The questionnaire consists of 13 items on five subscales including event criterion; separation distress; duration criterion; cognitive, emotional, and behavioral symptoms; and impairment criteria. There is a specific formula used to measure the disorder. All students who experienced the death of a family member or friend completed the Prolonged Grief Questionnaire (Balk et al., 2010).

Multiple samples were extracted from the data to ensure an adequate sample size. Four samples were drawn for data collection throughout the duration of the project ($n_1 = 54$, $n_2 = 27$, $n_3 = 14$, $n_4 = 23$). Chi-square tests indicated no difference among the samples, thus allowing the samples to be analyzed collectively (Balk et al., 2010).

Results indicated that overall, 30% of the students ($n = 42$) were within the first 12 months of bereavement. Additionally, 39% of students ($n = 55$) were within 24 months of bereavement. Students also reported experiencing more than one death (statistic was not provided). The prevalence of prolonged grief disorder was 1.7% ($n = 2$) (Balk et al., 2010).

The results between students within the first 12 months of bereavement were comparable to those within 24 months of bereavement. For example, 50% ($n = 21$) of those within the first 12 months of bereavement reported the death of a friend whereas 24% ($n = 10$) reported the death of a grandparent. Students experiencing bereavement within 24 months included 45% ($n = 25$) the death of friends, whereas 22% ($n = 12$) reported the death of a grandparent. Cause of death reported included illness ($n = 29$), accidents ($n = 8$), murder ($n = 6$), suicide ($n = 4$), “old age” ($n = 2$), drugs/alcohol issues ($n = 2$), and unknown ($n = 4$). Illness, as the main cause of death experienced by undergraduate students, is consistent with causes reported in previous studies (Balk, 1997; Bath 2009). Cause of death is also an important variable for assessing grief in undergraduate students since sudden, traumatic death has been linked to more severe cases of complicated grief and prolonged grief disorder (Balk et al., 2010).

This study reaffirmed the high prevalence rate of grief among undergraduate students as consistent with previous research (Balk 1997; Bath, 2009; Bernat et al., 1998; LaGrand, 1981, 1985; Smyth et al., 2008). It also provided initial insight on the prevalence of prolonged grief

disorder among undergraduate students, which was found to be very low. Although the study sought to provide more generalizable results through stratified random sampling, the results are still limited. The majority of the sample was students who identified as White Christians. A more diverse sample would provide more generalizable results (Balk et al., 2010).

More recently, a study was conducted at a Christian university to explore the prevalence of bereavement among undergraduate students. The study also explored grief effects on educational and mental health outcomes, along with the role of closeness to the deceased. Students were classified as being bereaved if they had experienced the death of a family member or friend with the past 24 months (Walker et al., 2012).

Almost half (45%) of the 442 students who participated experienced the death of a family member or friend within the past 24 months. Most of the respondents reported the cause of death as illness (72%) followed by accidents (18%). The majority of the bereaved participants were female ($n = 195$, 77%) and lived on campus (90%). The average age of students was 19.89 years and the sample was spread evenly among freshmen, sophomores, juniors, and seniors. Once again, this study reaffirmed the high prevalence rate of grief among undergraduate students (Balk 1997; Balk et al., 2010; Bath, 2009; Bernat et al., 1998; LaGrand, 1981, 1985; Smyth et al., 2008) and the relationships and causes of death involved in the grief experiences (Balk, 1997; Balk et al., 2010; Bath 2009; Walker et al., 2012).

Currently, these eight studies (Balk, 1997; Balk et al., 2010; Bath, 2009; Bernat et al., 1998; LaGrand, 1981, 1985; Smyth et al., 2008; Walker et al., 2012) are the only insights we have on the prevalence of grief among the undergraduate student population. This insight is limited due to the lack of student diversity represented in the samples. Furthermore, it does not

include graduate students, another important student population on higher education campuses. The prevalence of graduate student grief is a gap in the literature that needs to be addressed. As for the literature published on undergraduate grief and bereavement, most of it focuses on specific aspects of the student grief experience, such as the effects of grief and coping mechanisms students utilize.

Grief Effects on Undergraduate Students

In addition to gauging the prevalence of grief in undergraduate students, another concern highlighted by researchers was the effects grief has on students. Since grief can manifest itself in individuals in many ways, it can be difficult to identify grieving undergraduate students. Grief affects students physically, cognitively, behaviorally, interpersonally, emotionally, and spirituality (Balk 2001; Balk, 2011; Balk et al., 1993; Balk & Vesta, 1998; Beam et al., 2004; Bonanno & Kaltman, 2001; LaGrand, 1981, 1985; Neimeyer et al., 2008; Servaty-Seib & Hamilton, 2006; Walker et al., 2012).

Physical Effects

When the landmark study on undergraduate student loss was conducted (LeGrand, 1981), feelings and physical reactions accompanying loss were also examined. Depression (75.3%) was the most frequent feeling reported by both females and males followed by emptiness (58.1%) and anger (53.2%). The most frequent feelings reported by both females and males were the same (depression, emptiness, loneliness, anger, and frustration) but ranked in different orders. These results indicated that women are more likely to experience loneliness than men; and that men are more likely to experience anger than women (LaGrand, 1981).

Students also reported physical reactions accompanying their loss. Crying (62.5%) was the most frequently reported physical reaction followed by insomnia (39.4%) and headaches (31.3%). Similar to the feelings reported by participants, physical reactions reported by females and males were very similar (crying, insomnia, headache, exhaustion, digestive disturbances, weaknesses) with slight variation. These results indicated that women are more likely to experience physical symptoms of weakness than men. They also indicated that men are more likely to experience headaches than women. This study was the first to highlight specific effects grief had on undergraduate students. Results showed that the physical symptoms of grief are similar between females and males. What this study lacked was assessing the severity of the symptoms students endured (LaGrand, 1981).

When LaGrand (1985) expanded the 1981 study on undergraduate student loss, including an additional 2,000 students, he continued examining feelings and physical reactions to grief. Feelings reported following the death of a loved one resulted in different frequencies than previously described (LaGrand, 1981). Depression (69.8%) remained the most frequent feeling reported by both females and males but the frequencies of subsequent feelings changed. Depression, which was previously followed by emptiness and anger, was now followed by shock (61.8%) and emptiness (55.1%). These results indicated that depression is the dominate feeling felt by grieving students. They also suggested that feelings of shock are more prevalent than previously reported (LaGrand, 1981, 1985).

The five most frequent feelings reported by both females and males were the same (depression, shock, emptiness, disbelief, and helplessness) but ranked in different orders. These findings indicated that women are more likely to experience feelings of emptiness than men.

They also indicated that men are more likely to experience feelings of disbelief than women (LaGrand, 1985).

The frequency of physical reactions undergraduate students reported following a loss slightly changed. Crying (78.8%) remained the most frequent physical reaction by both females and males, followed by headaches (33.2%) being more frequently reported than insomnia (32.8%) as previously reported (LaGrand, 1981). Overall, results indicated that women experience more headaches and insomnia than previously known; and men experience more weakness than previously known. Results also indicated that men are more likely to experience insomnia and weakness than women; whereas women are more likely to experience headaches, and exhaustion – the opposite of previous findings (LaGrand, 1981, 1985).

These results were similar to those found by Vickio et al. (1990) when they investigated the perceptions of grief among undergraduate students. They distributed an open-ended survey to 123 undergraduate students gathering information about their experiences with grief and assessing their perceptions of grief and how those perceptions compared to established facts. Questions pertaining to grief included the duration of grief, emotional reactions, physical reactions, impact on relationships, methods of coping, ways of helping others who are grieving, and the emotions of helping others who are grieving.

Students were recruited from introductory psychology courses and consisted of 75 females (61%) and 48 males (29%). Only 1% of students reported experiencing a death of a loved one, although the average numbers of deaths students experienced was seven deaths. Approximately 93.7% of students reported having interacted with a grieving individual. Responses to all of the open-ended questions were coded by the principal investigator. A second

researcher coded twenty randomly selected surveys (16.3%). Interrater agreement was .87. Results indicated that more than half of students (56.9%) reported noticeable emotional reactions to grief. Emotional reactions included sadness or depression (80.5%), anger (52.8%), shock (48.0%), disbelief (32.5%), and denial (24.4%). Sadness, depression, and anger were emotions also perceived to continue throughout the grieving process (Vickio et al., 1990).

Physical reactions included weight loss, crying, and loss of energy (25-50%). Other features included trouble sleeping, headaches, poor appearance, and aggression. These results are also similar to LaGrand's (1981, 1985) findings. Findings of the impact of grief on interpersonal relationships showed that approximately 19% of students perceived grief as increasing closeness of relationships. Decreasing closeness or straining relationships was perceived by 23% of students (Vickio et al., 1990).

This study was especially significant because it provided insight on how non-bereaved students perceived the grieving process. Overall, students believed grief had significant emotional, physical, and interpersonal effects on individuals. These perceptions were consistent with research on grief effects undergraduate students experience (Balk, 1997; Balk & Vesta, 1997; Balk et al., 2010; LaGrand, 1981, 1985; Smyth et al., 2008) and illustrate an awareness students have of the bereavement process (Vickio et al., 1990).

Emotional, Behavioral, & Cognitive Effects

When Balk (1997) surveyed 994 undergraduate students to assess the prevalence and coping mechanisms related to grief, he also interviewed 18 students specifically about their bereavement experiences. Emotions following loss was a theme identified. Emotions reported by students included sadness, loneliness, comfort, fear, and anger. Chi-square analysis was

conducted specifically on anger. Results indicated that students within the first 12 months of bereavement reported more feelings of anger than students beyond 12 months of bereavement.

A four-year longitudinal case study of one female bereaved college student following the death of her father also showed how grief can affect undergraduate students (Balk & Vesta, 1998). The data collected by this student participant included a journal, results from Impact of Events scale (Horowitz, Wilner, & Alvarez, 1979), and the Grant Foundation Bereavement Inventory (Balk, 1995). The Impact of Events scale (Horowitz et al., 1979) is a 15-item survey that measures psychological intrusions and psychological avoidance. Intrusions refer to the thoughts of death that pervade the mind when trying to focus on other things. Avoidance refers to tactics used to avoid thinking about something. The participant took the survey 14 times over the four years. The Grant Foundation Bereavement Inventory (Balk, 1995) is a structured interview that collects quantitative data on attachment, reunion fantasies, disbelief, identification, and disloyalty in bereavement.

Results of the Impact of Events scale (Horowitz et al., 1979) showed that the feelings of intrusion and avoidance for the student following the death of her father fluctuated throughout the four years of the study. The scores reached their lowest point in the middle of the study and again at the end of the study. When her intrusion scores were compared to scores of a separate study with bereaved undergraduate students, this student scored two standard deviations lower than the mean of other students. Her avoidance scores measured two standard deviations higher. These comparisons show that this student experienced lower instances of intrusion and significantly more instances of avoidance than her bereaved peers (Balk & Vesta, 1998).

Results from the Grant Foundation Bereavement Inventory (Balk, 1995) showed how the student scored in the dimensions of attachment, reunion, disbelief, identification, and disloyalty. The student was ranked as having “some attachment” with the fantasies of a reunion with her father declining steadily over the course of the study. Her identification scores remained stable indicating she incorporated her father’s identity, thoughts, or actions into her life “sometimes.” Results also showed disbelief in her father’s death remained constant over the duration of the study, while her disloyalty towards her father’s memory increased at the end of the study, which suggest signs of regret (Balk & Vesta, 1998).

The 21 journal entries made by the student were analyzed and three themes emerged. These themes include a) her ongoing relationship with her father, b) coping with her father’s death and with subsequent events attributed by her bereavement, and c) life lessons. The participant’s ongoing relationship with her father was prevalent in each journal entry. She began each entry with “Dear Dad” or “Dad” and wrote each entry specifically to him. The student also wrote about the second theme, coping with her father’s death and other events as a result of her bereavement. This student was struggling with coping and unaware of the effects grief was having on her. She wrote about her mood swings and stress. She turned to eating disorders, bingeing and purging, as coping mechanisms. Finally, her father’s death caused her to reflect on life lessons, something she referred to often in her journal (Balk & Vesta, 1998).

Results from this case study illustrate how individualized the grief experience can be for students. When compared to a quantitative study of her bereaved peers, this one bereaved student scored vastly different on factors such as intrusion and avoidance. A detailed account of how grief affected her development was also portrayed along with the coping mechanisms she used,

which ranged from healthy mechanisms of journaling to unhealthy mechanisms of eating disorders – a more extreme reaction to grief than previously reported in research (Balk, 1997; Balk & Vesta, 1998; LaGrand 1981, 1985).

Eating-related cognitions and behaviors of bereaved female undergraduate students was the focus of study conducted by Beam, Servaty-Seib, and Mathews (2004). They predicted that college-aged women who experienced the death of a parent or parental divorce would exhibit higher levels of eating disorders than non-bereaved female students. The sample consisted of 330 female students from science and social science departments. The average age of students was 18.81 years and the majority of the participants ($n = 44$) identified as White (Beam et al., 2004).

A total of 165 students participated in the study and 16 reported the death of a parent, 42 reported parental divorce, 5 reported separated parents, and 102 reported intact homes. Sixteen random samples were taken from the parental divorce and no loss samples to adjust for each group size. Students who reported parental separation were excluded. The cause of death for parents included natural causes, accidents, and suicide, with no specific statistics reported. The average time since death was 6.98 years (Beam et al., 2004).

Each participant took a survey that consisted of the Mizes Anorectic Cognitions Scale (MAC; Mizes & Klesges, 1989; Mizes, 1991) and the Bulimia Test-Revised (BULIT-R; Thelen, Farmer, Wonderlich, & Smith, 1991). The MAC is a validated instrument (.75 to .89) composed of 33 questions designed to measure cognitions associated with anorexia and bulimia nervosa. Participants responded to statements about eating and weight, on a five-point likert scale ranging from “strongly disagree” to “strongly agree”. Scores range between 33 and 165, with higher scores representing more disordered eating behaviors. Students also completed the BULIT-R

(Thelen et al., 1991). The BULIT-R is a validated instrument designed to measure symptoms and behaviors related to bulimia nervosa. The instrument is comprised of 36 multiple-choice items and is highly correlated with the diagnosis of bulimia nervosa (Beam et al., 2004).

Multivariate analysis of variance (MANOVA) was conducted to assess the eating disturbances between the bereaved, divorced, and non-loss groups of students. Univariate main effects with the MAC variable and Tukey post hoc analyses were also conducted. Results indicated significant differences in disturbed eating patterns among bereaved and non-bereaved students with regard to anorectic cognitions but not bulimia nervosa. Tukey post hoc analysis indicated that female undergraduate students who experienced a parental death reported significantly higher MAC scores than undergraduate females who experienced parental divorce. Furthermore, undergraduate females who experienced parental divorce did not score higher on the MAC than females in the non-loss group. Overall, these results indicated females undergraduate students who experienced parental loss may be at a high risk for anorectic-related cognitions and behaviors. Similar to Balk & Vesta (1998), this study provided additional insight on the severity of symptoms students can experience related to death and loss. Knowing more about these symptoms and effects can help universities initiate proactive measures to support grieving students (Beam et al., 2004).

In an effort to predict grief symptoms in undergraduate students, Mathews and Servaty-Seib (2007) studied hardiness. Hardiness, the ability to deal with stressful life events without illness or extreme challenge, was previously linked to decreased grief symptoms in adult populations. The purpose of this study was to determine if hardiness could predict grief symptoms in bereaved undergraduate students. It was expected that hardiness would be

negatively associated with grief symptoms. The relationship between hardiness and personal growth was also examined.

A survey packet was distributed to 630 undergraduate students enrolled in an introductory communications course. The survey consisted of a demographic questionnaire, a questionnaire about loss experience, the Hogan Grief Reaction Checklist (HGRC; Hogan, Greenfield, & Schmidt, 2001), the Psychological Hardiness Scale (PHS; Younkin & Betz, 1996), and items from the Model of Grief Prediction (Bugen, 1977). The demographic questionnaire included questions on age, gender, school of study, and number of past death losses. Similar to other grief-related surveys, questions about the loss experience were also asked, including their relationship to the deceased, age of the deceased at time of death, attendance at funeral, and whether the death was “shocking, horrific, violent, or disfiguring” (Mathews & Servaty-Seib, 2007, p. 190). The HGRC (Hogan et al., 2001) is a validated measure (Cronbach’s alpha = .90) used to assess the effects of grief. The measure contains 61 questions with likert responses ranging from “does not describe me at all” to “describes me very well”. The PHS (Younkin & Betz, 1996) is a validated instrument (Cronbach’s alpha = .92) that measures the psychological hardiness of an individual. Hardiness is measured in terms of the ability to handle stress and handle traumatic life events. The instrument has 40 items with a five-point likert scale ranging from “strongly disagree” to “strongly agree”. The closeness to the deceased and preventability of the death was measured using a set of items derived from the Model of Grief Prediction (Bugen, 1977). Cronbach’s alpha conducted for closeness measured .70 and for preventability measured .85 (Mathews & Servaty-Seib, 2007).

Eighty-eight undergraduate students participated and returned their packets (14% response rate). The average age of participants was 19.5 years and consisted mostly of freshmen students ($n = 71$, 80.7%). Females comprised 53.4% ($n = 47$) of the sample. No other demographic information was reported. The majority of deaths experienced included grandparents (26.1%) and friends ($n = 23$, 26.1%). The most common causes of death reported were cancer ($n = 21$, 23.9%) and car accidents ($n = 14$). These death experiences are consistent with experiences previously reported by undergraduate students who most frequently reported the loss of grandparents and friends to illnesses and accidents (Balk, 1997; Balk et al., 2010; Mathews & Servaty-Seib, 2007).

Results from two hierarchical regression analyses showed that hardiness was inversely or negatively associated with grief symptoms. Closeness to the deceased was also significantly correlated. Correlation analyses also indicated that all except one demographic variable were not significantly related to grief symptoms. The variable, perceiving the death as “shocking, horrific, violent, or disfiguring” was significantly correlated with age of the deceased at the time of the death and perceived preventability of the death, or how avoidable the death was perceived to be. Overall, these results indicated a relationship between hardiness and grief symptoms in undergraduate students, with closeness to the deceased as a particularly significant factor (Mathews & Servaty-Seib, 2007).

Closeness to the deceased has also been investigated with grieving college students in terms of academic and mental health outcomes (Walker et al., 2012). An electronic survey consisting of a demographic questionnaire, the Bereaved College Student Experience Survey (BCSES; Walker et al., 2012), and the Survivor Needs Assessment Survey (SNAS; McMenemy,

Jordan, & Mitchell, 2008) was sent to all undergraduate students enrolled at a small, Christian university by the university registrar. All students completed the demographic questionnaire and those who reported experiencing a loss within the past 24 months were given the other instruments (Walker et al., 2012).

The BCSES (Walker et al., 2012) was designed by the authors specifically for this study and contains three sections: a) academic experiences, b) peer/social experiences, and c) resources for support. Items in the academic experiences section were listed with categorical (yes/no) responses and provided participants with the option to provide open-ended responses. Principal component analysis (PCA) was conducted on the items in the peer/social experiences and resources for support sections to correlate the variables (Walker et al., 2012).

The SNAS (McMenamy et al., 2008) is an instrument used to assess the needs of a bereaved individual after experiencing a loss to suicide. The 16 items in the instrument address psychological, behavioral, and social problems following the loss. Responses are on a five-point likert scale ranging from “little to no difficulty” to “very great difficulty”. Participants rated each item twice and responses pertaining specifically to the year following the loss were used for analysis (Walker et al., 2012).

Similar to findings by LaGrand (1981, 1985), bereavement experiences between females and males were similar. There was no significant difference on gender when reporting for closeness to the deceased, mental health, institutional support, external remote support, therapeutic support, personal support, negative social change, or peer social support. However, females did report significant changes in motivation after experiencing a loss. Hierarchical regressions were conducted to further examine the interaction of gender and closeness to the

deceased on mental health outcomes. Results indicated that females who are high in closeness to the deceased are predicted to have greater negative mental health outcomes than males (Walker et al., 2012).

Contingency tables also indicated that closeness to the deceased was related to all academic experiences, including talking to professors about the death, requesting extensions, study habits, test performances, classroom participation, motivation, and concentration. Results showed changes in motivation and concentration were significantly impacted. Students who were close to the deceased are five times more likely to experience changes in motivation and four times more likely to experience changes in concentration. These results indicated that the closer students were with the deceased, the more academic struggles they encountered due to changes in motivation and concentration (Walker et al., 2012).

Insomnia, another effect grief can have on bereaved colleges as reported by LaGrand (1981, 1985) was the focus of a study conducted by Hardison et al. (2005). The purpose of this study was to examine the frequency of insomnia in bereaved undergraduate students. The study also explored the relationship between insomnia and complicated grief symptoms.

A total of 815 undergraduate students from the University of Memphis comprised the sample. Participants were recruited from undergraduate psychology courses over five successive semesters. The final sample consisted of 508 bereaved participants and 307 non-bereaved participants. Bereaved students were defined as those who experienced the death of a family member or friend within the past 24 months. Females (76%) were the majority of the bereaved sample and the reported ethnicities were predominately 58% White and 37% African American. The mean age was 20.57 years (Hardison et al., 2005).

The survey distributed to students included a demographic questionnaire, questions regarding loss, the Inventory of Complicated Grief (ICG; Prigerson & Jacobs, 2001), and a 14-item questionnaire on sleep behaviors retrieved from the *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR)*; American Psychiatric Association, 2002). The ICG is a 34-item scale used to assess the severity of grief symptoms related to continuous thoughts of, and yearning for the deceased, disbelief, lack of acceptance, anger, loneliness, bitterness, overwhelmed, numbness, anxiousness, and feeling out of control. The sleep behavior questions were used to examine whether participants had difficulty sleeping (Hardison et al., 2005; Prigerson et al., 1995; Prigerson et al., 1999).

The most frequent types of loss experienced included grandparents (36%) and friends (28%). The most common causes of death reported included natural and anticipated deaths (44%). Other causes reported included sudden natural deaths (21%) and accidental deaths (18%). This is consistent with relationships of losses and causes of deaths previously reported by students (Balk, 1997; Balk et al., 2010; Hardison et al., 2005; Mathews & Servaty-Seib, 2007).

Results indicated that insomnia was more frequent among bereaved students (22%) than their non-bereaved counterparts (17%). Fifty-nine percent of bereaved participants reported developing insomnia following their loss. More specifically, students who experienced more traumatic deaths as a result of accidents, suicides, or homicides, reported significantly more cases of insomnia (28%) than students who experienced death as a result of natural and anticipated causes (Hardison et al., 2005).

Results of the ICG (Prigerson & Jacobs, 2001) indicated that bereaved students who experienced sudden death reported significantly higher complicated grief scores than bereaved

students who reported other causes of death. Results also indicated that bereaved students who lost a family member or friend reported significantly higher complicated grief scores than bereaved students who lost other individuals. Furthermore, bereaved students who met the criteria for insomnia reported significantly higher complicated grief scores than bereaved students who did not meet the criteria for insomnia. Additional stepwise regressions were conducted and found that the greater contact with the deceased three months prior to the death, more violence associated with the cause of death, the closer the relationship with the deceased, the younger the age of deceased, the fewer months since the loss, the greater level of closeness, insomnia, and gender (female) of the bereaved were found to be significant predictors of complicated grief symptoms (Hardison et al., 2005).

Overall, this study provides another example of the severity of effects grief can have on undergraduate students. Results showed that insomnia was more prevalent (22%) in bereaved undergraduate students when compared to non-bereaved students (17%). Furthermore, bereaved students experiencing insomnia also developed more complicated grief symptoms (Hardison et al., 2005).

Psychological & Philosophical Effects

In addition to the emotional and physical effects of grief, psychological and philosophical effects of grief among grieving undergraduate students have been explored. Schwartzberg and Janoff-Bulman (1991) conducted an empirical study with undergraduate students examining the effects of bereavement on assumptions and beliefs about the world. Participants consisted of 42 undergraduate students. Fifty percent of the students ($n = 21$) experienced the death of a parent in the past three years. All students completed a questionnaire measuring psychological well-being,

assumptions about themselves and the world, the nature of their relationship with their parents, and the intensity of grief experienced by bereaved students. Several measures were used in the survey. The Symptom Checklist (Derogatis, 1977) was used to measure psychological well-being. Measures used to explore assumptions and beliefs about the world included the World Assumption Scale (Janoff-Bulman, 1989), the I, P, and C Scales for the Locus of Control (Levenson, 1973), and a self-esteem scale (Rosenberg, 1965). The Mother-Father-Peer Scale (Epstein, 1983) was used to assess the relationship with the parents. Finally, the Texas Grief Inventory (Faschingbauer, DeVaul, & Zisook, 1977; Zisook, DeVaul, & Click, 1982) was used to measure grief for students who experienced a parental loss (Schwartzberg & Janoff-Bulman, 1991).

Results indicated that bereaved students believed in a less meaningful world than non-bereaved students. Bereaved students also reported believing that events happen more by chance and lacked control. Furthermore, intensity of grief was significantly correlated with parental overprotectiveness in childhood. These results indicated that students who experience the loss of a parent are likely to experience a change in their assumptive worlds related to the death. Results also suggested the more overprotective parents were during childhood, the more intense grief symptoms a student may might experience (Schwartzberg & Janoff-Bulman, 1991).

Prolonged Grief Disorder

Intense grief symptoms can progress into complicated grief, or prolonged grief disorder. Prolonged grief disorder is a diagnosis identifying individuals having difficulty coping with the loss of a loved one. Individuals with prolonged grief disorder are diagnosed six months post-loss or thereafter and are unable to maintain a normal functioning life without the deceased.

Prolonged grief disorder has also been referred to as complicated grief, traumatic grief, and complicated grief disorder. The name was recently changed to more adequately represent the condition, which was previously confused with other disorders such as posttraumatic stress disorder (Prigerson et al., 2008).

Research on prolonged grief disorder is abundant throughout the literature, including reliability and validity of measures (Boelen et al., 2010; Chen et al., 1999; Neimeyer & Hogan, 2001; Prigerson et al., 1995; Prigerson et al., 1999; Prigerson et al., 2009), concurrent validity with other scales (Boelen et al., 2010; Bonanno et al., 2007; Prigerson et al., 1995), and established incremental validity of symptoms that distinguish them from other disorders such as anxiety, depression, and posttraumatic stress disorder (Bonanno et al., 2007; Dillen, Fontaine, & Verhofstadt-Deneve, 2009; Tolstikova, Fleming, & Chartier, 2005). A diagnostic formula developed by Prigerson et al. (2008) is used to assess prolonged grief disorder. The formula incorporates particular symptoms of prolonged grief disorder, which include feelings, thoughts, and actions associated with significant functional impairment six months post-loss. These symptoms are measured in five categories: a) event criterion; b) separation distress; c) duration criterion; d) cognitive, emotional, and behavioral symptoms; and e) impairment criterion on two different five-point likert scales. Individuals meet the criteria for prolonged grief disorder based on a unique combination of responses to each category. Furthermore, this formula specifically illustrates how bereavement-induced depression, anxiety, and trauma differentiate from the traditional symptoms of depression, anxiety, and trauma.

Prolonged grief disorder research among undergraduate student populations is scant and the prevalence is still unknown. Balk et al. (2010) found that 1.7% of a bereaved college sample

met the criteria for prolonged grief disorder. It is theorized that students may withdraw or fail out of school, thus not providing a complete representation of the disorder among the population. The presence of the condition should continue to be examined in larger, more diverse populations to generate more accurate findings.

Support and Coping Mechanisms for Grieving Students

In LaGrand's (1981) landmark survey study on undergraduate student loss, the coping mechanisms students employed after experiencing loss were examined. The three most frequent coping mechanisms reported included talking about the loss (71.9%), gradually accepting the loss (62.2%), and crying (56.4%). Females and males reported similar frequencies of coping mechanisms in the following order: talking about the loss, gradually accepting the loss, crying, time, and through the support of friends, suggesting that gender does not have an effect on how grieving individuals cope with loss.

LaGrand (1981) concluded that social support, communication, and preparation for loss are key aspects for helping undergraduate students cope with their losses. Students are highly vulnerable after experiencing a loss and need the support of others to help them. Communication between students and the individuals supporting them is also crucial. Through acceptance of emotions by supporting individuals, students can express their emotions and cope with their losses in a healthy way.

When LaGrand (1985) extended the study, he continued surveying the types of support and coping mechanisms used by undergraduate students after experiencing loss. Crying (71.3%) became the most frequent coping mechanism reported, instead of talking about the loss as previously reported (LaGrand, 1981), which was the second most frequently reported coping

mechanism (70.4%). Results also showed that religious beliefs and family support were more prevalent coping mechanisms utilized by grieving undergraduate students than previously reported (LaGrand, 1981, 1985).

The frequency of coping mechanisms reported by females and males changed. The most frequently reported coping mechanism by females was crying, instead of talking as indicated in the previous study (LaGrand, 1981), followed by talking, accepting the death, family support, and time. These results indicated that women are more likely to use crying and family support as coping mechanisms than previously reported. Results also showed that women are less likely to use the support of friends and keeping busy as coping mechanisms than previously described (LaGrand, 1981, 1985).

The frequency of coping mechanisms used by males following a loss varied from the previous research (LaGrand, 1981). Males still reported talking as the most frequently used coping mechanism. Additional coping mechanisms reported included gradually accepting the loss, time, crying, and support of friends, with crying reported less frequently than previously reported. These results indicated that males still utilize talking about their loss as their main coping mechanism. Results also indicated that males use the support of friends and crying as coping mechanisms less than previously indicated (LaGrand, 1981, 1985).

LaGrand's (1985) expanded study provided additional insight on coping mechanisms. The study showed an interesting shift in reactions experienced by students and coping mechanism utilized. This illustrates the importance of continuous research on the ever-changing undergraduate student body.

In addition to research on grieving undergraduate students, perceptions of grief among non-bereaved undergraduate students have also been explored. When Vickio et al. (1990) surveyed undergraduate students on their perceptions of grief, she also investigated means of coping with grief, ways of helping and not helping the bereaved, and emotions associated with helping bereaved individuals. Similar to LaGrand's findings (1981, 1985) most students (31.5%) perceived talking about grief as the most effective coping mechanism. Accepting the death (15.7%) and seeking support from others (12%) were also perceived as most effective along with being with other people (11.1%) and thinking about the death (8.4%). Although it was not listed as an effective coping strategy, 47.5% of students listed denial as a coping mechanism (Vickio et al., 1990).

Students perceived the most helpful way of being with grieving individuals as "just being there" (38.2%). Other helpful ways included talking with the bereaved individual about their grief (45.5%), offering comfort and support (44.7%), listening (23.6%), and helping with chores or problems (22.0%). The least helpful ways of supporting grieving individuals included pretending the death did not occur or discouraging grief (34.9%) and forcing self-disclosure (56.1%). Furthermore, 65.9% of students reported experiencing sadness when helping a bereaved individual, followed by helplessness (31.7%) and discomfort (13.8%). Results from this study show that although non-bereaved students may feel sad, helpless, or uncomfortable when helping their bereaved peers, they do possess a high level of awareness of helpful and unhelpful supporting behaviors (Vickio et al., 1990).

Continuing the research on student responses to grieving others, Thornton, Robertson, and Mlecko (1991) investigated the responses of undergraduate students to someone experiencing

disenfranchised grief, or less socially recognized forms of grief, such as miscarriage, abortion, or death of a homosexual partner. Six scenarios outlining different types of grief experienced by females, including the deaths of a loved one, spouse, child, homosexual lover, a miscarriage, and an elective abortion, were given to students. The scenarios were the exact same with only the relationship of the loss changed. The sample of 96 undergraduate students evaluated the six scenarios and reported their perceptions on the griever's social roles, available support, and severity of the grief using a 23-item response sheet. Questions were on a five-point and seven-point likert scale.

Multivariate analysis of variance (MANOVA) indicated significant differences between the types of losses. Duncan's specific comparison tests were used to further analyze the means. Results indicated that students perceived friends and family as less likely to expect grief reactions in the death of a lesbian partner or an abortion. Results also suggested that students perceived more social support from friends and family with the death of a child than any other scenario. Students also reported they would be less likely to visit or feel sympathy for abortion. Finally, students indicated they would less likely want to be an acquaintance with someone grieving the loss of a lesbian relationship, husband, or child than with a miscarriage death (Thorton et al., 1991).

These results provide insight on how undergraduate students perceived bereavement among different grieving situations. They also highlight how students felt about being acquainted with specific grieving individuals. Furthermore, these findings illustrate how bereaved individuals can become more disenfranchised and lack support when they may need it the most (Thorton et al., 1991).

When Balk (1997) interviewed 18 bereaved undergraduate students following administering a bereavement survey, five themes generated from the interview data on loss experience. Themes included reminiscing about the deceased, avoiding reminders of the deceased, emotions, expectations about grief recovery, and means used to cope. Reminders of the deceased involved talking about the deceased person, remembering things they had done with the deceased, picturing the person in their mind, thinking about how the person died, trying to recall the person's voice, and thinking about the last time they saw the person. Most students ($n = 11$, 60%) reported talking about the person they lost in the past month and remembered things they had done with the deceased ($n = 14$, 80%). More than half of students ($n = 10$, 56%) mentioned picturing the deceased in their minds sometimes to almost all the time. Students also reported trying to recall a person's voice ($n = 7$, 39%), described thinking often or almost all the time about how the person died ($n = 9$), and thinking about the last time they saw the person alive ($n = 10$). This shows the importance of reminiscing about the deceased for coping (Balk, 1997).

Avoidance of reminders was reported by eight students. Students attempting to avoid reminders of the death tended to prevent themselves from thinking about the deceased, avoid talking about the deceased, avoid places that reminded them of the deceased, and avoid engaging in activities that triggered memories of the deceased. This type of coping strategy is used by individuals who are uncomfortable or unsure of how to approach their grief and can have detrimental effects. Individuals often employ this type of coping strategy when they were not prepared for the grieving process. In fact, students reported the grieving process was more difficult than anticipated. They also described their sadness as greater than expected and the time

to recover longer than expected. Students also indicated that family understood the grieving process; however they had more uncomfortable feelings with friends. They felt friends expected them to have a speedy grieving process, not be as sad, and recover more quickly. Interestingly, students reported having the same expectations as their friends prior to experiencing their loss (Balk, 1997).

Finally, students spoke directly about their coping mechanisms. The most helpful coping mechanisms included remembering good things about the deceased, religion, crying, keeping busy, talking, and thinking positive thoughts about the death. The least helpful coping mechanisms included not thinking about the deceased and professional help. Grieving alone and keeping belongings of the deceased were indicated as both helpful and distressing. Overall, students felt that helpful coping mechanisms included those that incorporated the deceased, such as talking or reminiscing, and getting support from others (Balk, 1997).

Continuing the research on coping, Balk et al. (1998) investigated the coping mechanisms and bereavement trajectory of 141 undergraduate students using the Thematic Apperception Test (TAT; Murray, 1943). Students were divided into three groups and included those who participated in support groups for bereaved undergraduate students ($n = 46$), a bereavement control group ($n = 34$), and a non-bereaved group ($n = 61$). Most students were female ($n = 114$, 81%) and identified as Protestants or Catholics (86%). The average age of students was 23.2 years and the class membership was evenly spread among freshmen, sophomores, juniors, and seniors.

Each participant wrote stories at three different time points on selected cards from the TAT. TAT cards are used to provide insight on how an individual perceives herself or himself,

others, and the world based on their responses to images. The three TAT cards used in this study included images of a) a young boy huddled on a floor against a couch with a gun beside him, b) a young woman's head against a man's shoulder, and c) a man standing among gravestones. These three cards were chosen to their specific link to grief and bereavement and 2,115 stories were written and coded (Balk et al., 1998; Murray, 1943).

A coding scheme was developed by the principal investigator to analyze stories written by students in response to each TAT card. Coding schemes focused on themes of affiliation, death, grief, and coping. The stories were coded independently by six of the authors and two undergraduate students. Interrater reliability remained above 82% and averaged 85.7%. Statistical analyses, including descriptive and inferential statistics, were also conducted and revealed frequency counts and presence of themes over the three time intervals (Balk et al., 1998).

Results from analyzing the stories showed affiliation imagery, or identifying with personal experiences, mentioned in 51.8% of the stories. A repeated measures MANOVA conducted with the three groups (bereaved control group, bereaved support group, and non-bereaved group) indicated there was no difference in the use of affiliation imagery among the groups. Death was mentioned by students in 43% of the stories. Another repeated measures MANOVA showed bereaved students used the theme of death more than non-bereaved students. The theme of grief was mentioned in 37.3%, of student stories. Repeated measures MANOVA showed the theme was evenly prevalent among the three groups. Finally, coping was mentioned in 67% of stories. Repeated measures MANOVA indicated no group differences. More specifically, coping tasks were mentioned more frequently in stories written by non-bereaved

students than either of the bereaved student groups. Overall, these results show that while bereaved students are more likely to identify death in situations, non-bereaved students are more likely to identify coping. This illustrates how previous experiences with grief can impact the perceptions undergraduate students have on specific situations. This also highlights the importance of ensuring bereaved college students are actively thinking about coping strategies when experiencing or recognizing loss (Balk et al., 1998).

The inability for undergraduate students to effectively cope with loss can have detrimental effects. Schnider, Elhai, and Gray (2007) examined the relationship between complicated grief, coping skills, and posttraumatic stress disorder (PTSD) in a sample of 123 undergraduate students who experienced an unexpected death of a family member, partner, or friend. A majority of participants were female ($n = 91, 74\%$) and identified as being White ($n = 117, 95\%$). The average age was 21.18 years. A prescreening electronic survey was administered to students enrolled in various undergraduate courses, mostly psychology courses. A total of 228 students participated and 126 students (55%) reported an unexpected loss and completed another survey. The additional surveys consisted of five instruments: a demographics questionnaire, the Stressful Life Events Screening Questionnaire-Modified (Goodman, Corcoran, Turner, Yuan, & Green, 1998), the Inventory of Complicated Grief-Revised-Short Form (Prigerson & Jacobs, 2001), the Brief COPE (Carver, 1997), and the PTSD Checklist (Weathers, Litz, Herman, Huska, & Keane, 1993).

Findings suggested that complicated grief and PTSD were significantly correlated with problem-focused and avoidant coping styles. Problem-focused coping styles include engaging in behaviors in order to overcome feelings of distress, in this case, the death of a significant person

in the student's life. Avoidant coping styles use denial and self-distraction to avoid the cause of stress. More effective coping strategies involving students actively confronting their loss, such as meaning-making, has resulted in significantly lower negative grief effects, as shown by Currier et al. (2006) in their study on the effects of sense-making on complicated grief (Schnider et al., 2007).

Currier et al. (2006) used a sample of 1,056 bereaved undergraduate students in undergraduate psychology courses to examine the effects of sense-making as a coping mechanism. Each participant reported losing a loved one within the past 24 months. A majority of the participants (75%) were female students. The majority of students identified as White (56%) or African American (38.4%). The average age of participants was 20.9 years. Students completed a survey that included a general questionnaire, a questionnaire regarding details of the loss they experienced, the Inventory of Complicated Grief (Prigerson & Jacobs, 2001; Prigerson et al., 1995), and a question pertaining to sense-making.

The majority of losses students experienced were family members ($n = 628$, 59.4%), and good friends ($n = 221$, 20.9%). Students often reported the cause of death as natural or expected causes (72%) such as cancer or heart failure. Approximately 28% of students reported losses that included more traumatic causes such as homicide or suicide. This is consistent with previous studies (Balk, 1997; Balk et al., 2010; Mathews & Servaty-Seib, 2007) that showed undergraduate students predominately experienced the loss of family members or friends due to illness (Currier et al., 2006).

Results indicated that students experiencing violent deaths were less likely to engage in sense-making of the death than students experiencing deaths due to natural causes. Results also

showed that even when students experienced more traumatic instances of loss, sense-making decreased the incidence of complicated grief symptoms. This emphasized the importance of healthy, active coping strategies, such as sense-making, to deter harmful complicated grief symptoms and experiences (Currier et al., 2006).

Sense-making, also referred to as meaning-making, and its relationship to complicated grief was explored in another study by Neimeyer et al. (2006). Similar to Currier et al. (2006), the purpose of this study was to examine the meaning construction and its relationship to continuing bonds and complicated grief. Undergraduate students ($n = 506$) were recruited from introductory psychology courses over a three-year period. Females (76.5%) were predominately represented and the average age of participants was 21 years. Students identified as Caucasian (57.9%), African American (36.9%), and other ethnicities (5%). All students reported experiencing the death of a loved one within the past 24 months.

Students completed a demographic questionnaire, questions regarding their loss experience, the Inventory of Complicated Grief (Prigerson & Jacobs, 2001; Prigerson et al., 1995), the Continuing Bonds Scale (Field, Gal-Oz, & Bonanno, 2003), and specific questions developed by the authors to assess meaning reconstruction. Students most frequently reported losing family members (57.2%) and friends (27.7%). This is consistent with previous research (Balk, 1997; Balk et al., 2010; Mathews & Servaty-Seib, 2007) on the types of relationships undergraduate students reported when bereaved (Neimeyer et al., 2006).

Results indicated that students who were able to find benefit in the loss and experience positive identity change were associated with lower levels of complicated grief. However, other factors, such as ethnicity, also impacted the grief process. African American undergraduate

students experienced more separation distress and greater traumatic distress than Caucasians. These results enhanced findings from Currier et al. (2006) expressing the importance of students to make sense or meaning of the loss they experienced. This type of active coping helps students avoid more complicated grief symptoms (Neimeyer et al., 2006).

Coping is an individualized process and Balk & Vesta (1998) illustrated how quantitatively-designed research studies on student bereavement cannot capture the essence of a student's experience. In an effort to capture these experiences, a phenomenological study of undergraduate and postgraduate students' grieving experiences was conducted with six bereaved college students (Seah & Wilson, 2011). Participants were recruited via posted flyers on campus or referrals made by the counseling team on campus. The average age of students was 32 years and consisted of five females and one male. Four students were European, one was African, and one was Chinese. The types of deaths reported were husbands ($n = 2$), friend ($n = 1$), mother ($n = 1$), father ($n = 1$), and cousin with two brothers ($n = 1$) and the average time since experiencing the loss was two years. The cause of death reported by all participants was illness or suicide.

In-depth interviews were conducted with each participant to learn about their "lived experience" of their loss. Open-ended questions were used at the beginning of the interview to initiate conversation, followed by probing questions. Interviews lasted anywhere between 29 and 66 minutes. Using Van Manen's (1990) six research activities for analyzing and interpreting the experience, six categories consisting of ten coping strategies were outlined. Categories included thinking, doing, resting, feeling, relating, and learning. Strategies included making sense or meaning of the loss, discovering benefits of the loss, adopting positive attitudes, establishing

realistic expectations, engaging in activities, getting adequate rest, expressing feelings, seeking help and support, believing in God, and developing skills and knowledge (Seah & Wilson, 2011).

These findings illustrated how unique and individualized the coping experience is for grieving students. Findings also emphasized how students use a variety of coping mechanisms. Further research on the individualized experiences provides additional insight on effective coping strategies employed by students. These insights are helpful for grieving students and others in roles of supporting grieving students (Seah & Wilson, 2011).

Helping grieving individuals was the focus of Bath's (2009) study. The purpose of the study was to examine the intent of undergraduate students to help another grieving individual. The 160 students completed a survey that measured behavioral beliefs, normative beliefs, behavioral control beliefs, past behavior, and intent to support a grieving person. The survey consisted of a demographic questionnaire and the Theory for Planned Behavior Questionnaire (Ajzen, 1991, 2006). Four items relating to intentions to support grieving individuals were also included (Bath, 2009).

The 73% of students who reported experiencing a loss also reported the most beneficial types of interaction they encountered when coping with their loss. Talking with family and friends about their coping (23%) and talking with family and friends (20%) was reported as most beneficial. Alternatively, talking with family and friends about things except for the death (13%) was also beneficial (Bath, 2007).

Bivariate correlations showed students who experienced a loss were more likely to give support to a grieving person. More specifically, females who had experienced a loss were more likely to give support to a grieving person. However, when Theory for Planned Behavior

variables (Ajzen, 1991, 2006) were included using a hierarchical multiple regression, gender and past experience with grief were not significant predictors of intent to give support. Overall, these results indicated that students with loss experience, particularly female students, have greater intentions of supporting grieving individuals than students without loss experience. These findings could be important to campuses and programs that utilize peer-based support programs that focus on grief and loss (Bath, 2007).

Since most of the research on undergraduate student grief (Balk, 1997; Balk & Vesta, 1998; Balk et al., 2010; Bath, 2009; Bernat et al., 1998; Currier et al., 2006; Neimeyer et al., 2006; Schnider et al., 2007; Schwartzberg & Janoff-Bulman, 1991; Vickio et al., 1990; Walker et al., 2012) has been conducted with White female participants, Oltjenbruns (1998) conducted a study comparing grief experiences between White American undergraduate students and Mexican American undergraduate students and to explore the interaction between ethnicity and gender. A total of 100 students participated, 61 White American students and 39 Mexican American students. Each student had experienced the death of a family member or close friend within the past 24 months.

Students were mailed survey packets. The survey packet consisted of a demographic questionnaire, an Acculturation Scale (Cuellar, Harris, & Jasso, 1980) and questions regarding the loss they experienced. The Grief Experience Inventory (Sanders, Mauger, & Strong, 1985), a validated measure used to assess how grief manifests in individuals, was also included (Oltjenbruns, 1998).

Results indicated a significant difference for the main effect of ethnicity on two scales in the Grief Experience Inventory (Sanders et al., 1985), which were loss of control and

somatization. The loss of control scale measures an individual's tendency to externalize grief. Somatization measures an individual's level of physiological reactions attributed to the loss experience. Mexican American students scored significantly higher on these scales than White American students. These results are consistent with Hispanic rituals that embrace and encourage direct displays of grief reactions (Oltjenbruns, 1998). Furthermore, findings also suggested that while there is not an interaction effect between gender and ethnicity, gender was significant on three of the nine scales. These three scales included loss of control, rumination, and depersonalization. This information suggested that Mexican American female college students may experience more difficulty controlling their emotions following a loss (loss of control), more time thinking about the deceased (rumination), and more shock, numbness, and confusion (depersonalization).

These findings also illustrated how differently undergraduate students of non-White cultures cope with death and loss. Findings also highlighted the importance for additional research to be conducted on diverse populations of bereaved students in addition to White and Mexicans. Additional research can provide a more comprehensive understanding of the variety of coping mechanisms used by students from various cultures (Oltjenbruns, 1998).

Summary

Even though research on undergraduate student grief began in the early 1980s, it is a topic scarcely investigated. The main areas that have been explored include a limited number of studies on the overall prevalence of undergraduate student grief, the effects grief has on students, and the coping mechanisms they utilize. It is suggested that an average of 30-40% of undergraduate students are grieving on a given college campus (Balk, 1997; Balk et al., 2010;

Bath, 2009; Bernat et al., 1998; LaGrand, 1981, 1985; Smyth et al., 2008; Walker et al., 2012). Most of these incidents include the loss of grandparents and friends, often by expected causes and accidents, respectively.

The effects of grief are vast and manifest themselves in undergraduate students in many ways. Many of the effects outlined in the research encompass dimensions that are physical, emotional, cognitive, interpersonal, behavioral, and philosophical. More detrimental effects, such as complicated grief and prolonged grief disorder, also exist. Research generating these findings and outlining these effects are limited. Further research can provide additional insights on the effects grief has on undergraduate students, particularly those that come from non-White and non-traditional family backgrounds. The more diverse student populations that can be explored, the more potentially diverse effects can be uncovered and the better understanding college and universities can have in responding to these students.

Research also shows grieving undergraduate students employ a number of coping mechanisms to cope with their loss. The most common mechanism is talking with family and friends. Once again, these findings were generated using samples of college students that were predominately White and female. Additional research using a more diverse sample would provide insight on the coping mechanisms used by students from various cultures.

Although these studies provide preliminary information on the prevalence of grief, the effects, and coping mechanisms utilized among undergraduate students, the studies generating these findings are limited. The sample sizes were small; demographics were homogenous, usually consisting of White females; and recruitment of participants was often generated via convenience sampling. There is a significant gap in the literature that excludes non-White

students and graduate students. Further research utilizing more diverse student populations would provide a better representation of the diverse student bodies in higher education settings and provide appropriate information on the effects of grief and various coping mechanisms.

A research study surveying the entire graduate student body on college campuses and crossing all disciplines on their experiences with grief would provide insight into prevalence of grieving graduate students, which would fill that gap in the literature. Since graduate students are traditionally older than undergraduate students, the probability of them experiencing a loss increases. Similar to the research on undergraduate grief, it would also be beneficial to gain an understanding of how grief affects graduate students and whether they seek support. Graduate students often have more responsibilities than undergraduate students, including familial, parental, and more strenuous academic obligations, which may cause grief to manifest itself in unique ways. Furthermore, as the rate of mental illness rises in adults (U.S. Department of Health and Human Services, 2008), it would be important to explore the prevalence of prolonged grief disorder in graduate students. Findings could also provide insight on how campuses can support this unique student population.

CHAPTER III

Methods and Procedures

The purpose of this study was to measure the incidence of grief among graduate students, the effects of their grief, the types of grief support they seek, and to assess their risk of prolonged grief disorder.

The research questions guiding this study follow:

1. What is the incidence of grief among graduate students?
2. Are graduate students affected by their grief, and if so, how?
3. Do grieving graduating students seek support?
4. What is the risk for graduate students to develop prolonged grief disorder?

This chapter outlines the methods and procedures used to conduct the study. Information pertaining to the study design, site and population, instruments, procedures, delimitations, limitations, and trustworthiness are also included.

Research Design

This study utilized an online cross-sectional survey research design to measure the incidence of grief among graduate students, the effects of their grief, the types of support they seek, and assess their risk of prolonged grief disorder. Survey research designs increase the ability to reach more participants, allowing for higher response rates, and providing more generalizable results than research designs with more restrictive participant involvement. In addition, online surveys also provide an opportunity for individuals to participate in a private and anonymous manner increasing confidentiality and protecting their identity (Babbie, 1973; Colton & Covert, 2007; Creswell, 2003).

Site and Population

The site for this study is a large, public land-grant university located in the Southeast United States. The university has a student population of approximately 27,400 students including 6,200 graduate-level or professional students. The majority (92%) of students are between ages 22-35, with most students in age ranges 21-29 (64.4%) and 30-39 (22.5%). The gender profile of graduate students is 52% female and 48% male; and race comprises of 75% White, 11% Asian, 6% African American, 2% Hispanic, 1% American Indian, and 5% unreported. International students constitute 13% of the graduate student population with the majority of students from China (42%), India (13%), and Korea (7%). Graduate students are enrolled in over 175 degree programs ranging from doctoral and masters level to professional and specialists degrees.

Instrumentation

The online survey for this study consisted of a four-part information questionnaire and the Prolonged Grief Disorder Questionnaire (see Appendix A). This questionnaire gathered data from participants on their experience with grief throughout their life, the effects their grief has had on them specifically during their graduate education, and the types of grief support they sought. The first part of the survey solicited information on age, gender, race/ethnicity, school enrollment status, marital status, parental status, and religious affiliations. The second part contained questions pertaining to loss, which was defined as the death of a person or pet. Participants were asked if they experienced a loss and then asked specific questions about the loss including the date, cause, relationship, and closeness. If they experienced multiple losses, they were prompted to answer questions pertaining to the loss considered the most difficult.

The third part of the of questionnaire consisted of the six dimensions of holistic grieving as outlined in the Holistic Impact of Bereavement (Balk, 2011). The Holistic Impact of Bereavement suggests that students are affected by grief in a variety of capacities, including physical, cognitive, behavioral, interpersonal, emotional, and spiritual. Participants selected all dimensions their grief affected during their time as a graduate student, even if the death was experienced prior to graduate school enrollment. Participants also had the opportunity to share additional effects not outlined in the six dimensions. The final part of the questionnaire consisted of a checklist of grief support services. Participants selected all services utilized for grief support and had the option to enter services utilized that were not listed. The Prolonged Grief Questionnaire (PG-13) gathered data from participants assessing their risk of prolonged grief disorder (Prigerson et al., 2009).

The Prolonged Grief Questionnaire (PG-13)

The PG-13 is used to assess risk of prolonged grief disorder. Item response theory and combinatoric analysis (computer analysis) conducted on the PG-13 determined the algorithm for the diagnosis of prolonged grief disorder (Prigerson et al., 2009). The formula incorporates particular symptoms of prolonged grief disorder, which include feelings, thoughts, and actions associated with significant functional impairment six months post-loss. These symptoms are measured in five categories: a) event criterion; b) separation distress; c) duration criterion; d) cognitive, emotional, and behavioral symptoms; and e) impairment criterion on two different five-point likert scales as shown in Table 1. Individuals meet the criteria for prolonged grief disorder based on a unique combination of responses to each category.

Table 1
Criteria for Diagnosing Prolonged Grief Disorder

Category	Diagnosis Criterion
Event Criterion	The respondent must have experienced bereavement.
Separation Distress	The respondent must experience longing or yearning for the person lost AND intense feelings of emotional pain, sorrow, or pangs of grief related to the deceased at least on a daily basis.
Duration Criterion	The separation distress symptoms must be experienced daily and after six months post-loss.
Cognitive, Emotional, and Behavioral Symptoms	The respondent must experience five out of nine symptoms on a scale of “once a day” or “quite a bit.”
Impairment Criterion	The respondent must answer “Yes” to the question that relates to significant reduction in social, occupational, or other areas of functioning.

Note: Retrieved from Prigerson et al., 2009.

Formerly known as the Inventory of Complicated Grief, the PG-13 has well-established reliability and validity (Boelen et al., 2010; Chen et al., 1999; Neimeyer & Hogan, 2001; Prigerson et al., 1995; Prigerson et al., 1999b; Prigerson et al., 2009), concurrent validity with other scales (Boelen et al., 2010; Bonanno et al., 2007; Prigerson et al., 1995), and incremental validity (Bonanno et al., 2007; Dillen et al., 2009; Tolstikova et al., 2005). Prigerson et al (1995) reported a Cronbach’s alpha of 0.94 and significant concurrent validity with the Beck Depression Inventory ($r = 0.67, p < 0.001$), the Texas Revised Inventory of Grief ($r = 0.87, p < 0.001$), and the Grief Measurement Scale ($r = 0.70, p < 0.001$). Boelen et al (2010) also found a Cronbach’s alpha of 0.94 and a retest temporal stability of 0.92.

Procedures

Approval for the study was obtained from the Institutional Review Board at the University of Tennessee at Knoxville. Permission to access email addresses was also obtained by the Office of Student Records at the study site. The principal investigator distributed the online survey via a link in an email to all graduate students at the institution (see Appendix B). The email accompanying the survey introduced the principal investigator and the study, including the purpose of the study and the time commitment for their participation. The email also explained an incentive associated with the study. Participants who completed the survey had the option to be entered in a drawing to win one of four \$50 Amazon gift cards. Participants were informed that the information collected for the drawing was collected using a separate program not linked to the survey used for the study to ensure confidentiality. The email also included contact information for the principal investigator. Appendix B contains a copy of the email participants received.

Participants were asked to proceed to the survey using a link provided in the email. Prior to the survey, informed consent outlined their involvement, the risks and benefits associated with the study, and the confidentiality of their responses (see Appendix B). It once again included contact information for the principal investigator, the advisor overseeing the study, and the Institutional Review Board at the University of Tennessee. Participants were notified that proceeding with the survey constituted informed consent.

Survey data was collected using the university-supported mrInterview software program. The university collects data, which is stored on a password protected server accessible only to the principal investigator. Data was retrieved and downloaded onto a secure hard drive that is

password protected. Only the principal investigator has access to the password and the hard drive. In compliance with the University of Tennessee's Institutional Review Board (IRB), the hard drive containing the data will be securely stored for the duration of the study and for at least three years thereafter in a locked file-cabinet in the office of Dr. Tricia McClam, advisor to the study, in Claxton 448 in the Department of Educational Psychology & Counseling.

Data Analysis

The data was downloaded and imported into the SPSS 19 Statistical Package. Prior to running statistical analyses, data was examined for outliers and missing data. The first research question, "What is the incidence of grief among graduate students?," was answered using descriptive statistics including frequencies, means, and percentages. Analyses of variances testing were also conducted to provide specific information about grief experiences. The second research question, "Are graduate students affected by their grief?," was answered using descriptive statistics, including frequencies, means, and percentages. Analyses of variances testing were also conducted to provide specific information about grief effects. The third research question, "Do grieving graduate students seek support?," was answered using frequencies and percentages. The final research question, "What is the risk for graduate students to develop prolonged grief disorder?," was answered using the diagnostic formula outlined by Prigerson et al. (2008). This diagnostic formula was sent to the principal investigator when permission to use the instrument was received. The formula specifies that participants must experience a loss, separation distress, elevated separation distress, cognitive, emotional or behavioral symptoms, and social, occupational, or another type of significant impairment.

Delimitations

The delimitation of this study pertains to the population. The experiences of a graduate student population at one Southeastern university are the only experiences reported. Findings in this study may not describe the experiences of graduate student populations at other universities.

Limitations

There are three major limitations to this study. One is the self-report nature of the survey. Self-report surveys rely on information provided directly by the participant. In some instances, survey questions ask participants about information over the span of their lifetime or that occurred in the past, which may result in unrecalled or misrepresented data. The second limitation is the sensitive topic of the survey may also impose limitations on the study. Participants who become uncomfortable answering questions regarding losses may affect the data by not disclosing accurate or sensitive information. The final limitation is the sample used for the study. The sample of grieving graduate students at the university used for the study may not be representative of all grieving graduate students and may be influenced by factors including race, ethnicity, religious/spiritual beliefs, and exposure to death and grief.

CHAPTER IV

Findings of the Study

The purpose of this study was to measure the incidence of grief among graduate students, how they are affected by their grief, the types of support they seek, and their risk for developing prolonged grief disorder. Graduate students at a large Southeastern university with high research activity completed an online survey about their grief experiences. Students who had experienced grief also completed the Prolonged Grief Disorder Questionnaire (Prigerson et al., 2009).

Descriptive statistics, analyses of variances with post-hoc testing, and the PG-13 diagnostic tool were used to analyze the data and answer the following research questions:

1. What is the incidence of grief among graduate students?
2. Are graduate students affected by their grief, and if so, how?
3. Do grieving graduate students seek support?
4. What is the risk for graduate students to develop prolonged grief disorder?

The findings are presented in this chapter. Demographic descriptions of participants are provided along with the findings of each research questions.

Demographic Data

Participants invited to the study were 6,180 graduate students enrolled at a large Southeastern university with high research activity. A total of 1,575 graduate students completed the study for a 25% response rate. Ages of participants were 20-29 (64.2%, 1021), 30-39 (23.4%, 372), 40-49 (7.7%, 122), 50-59 (3.7%, 59), and 60-69 (0.8%, 12). The most responses were from participants 23 years of age (11%, 175), 25 years of age (9.9%, 158), and 24 years of age (9.4%, 150).

The majority of participants identified as White, not of Hispanic origin (83.3%, 1326), followed by Asian (5.1%, 82), African American (4.7%, 74), Hispanic (2.6%, 42), Asian American (1.1%, 18), American Indian or Native American (0.4%, 7), and other (1.8%, 29). Fifteen participants (0.9%) preferred not to answer. These demographics are comparable to the overall graduate student population at the university where the study took place. The majority of participants also identified as Christian (61.6%, 966) and 434 participants (27.3%) indicated they did not have a religious preference. The gender variable was compromised during data collection and was not able to be reported.

More than half (53.8%, 857) of participants indicated they were single, followed by being married (36.3%, 577), divorced (4.7%, 76), or other (3.9%, 62). The majority of participants also reported being non-parents (75.9%, 1210) and having two people in their household (39.3%, 625) or living alone (27.2%, 433). The most frequent annual income reported was less than \$30,000 (47.9%, 762) followed by \$50,000-\$99,000 (19.9%, 316) and \$30,000-\$49,999 (18.2%, 290).

Participants were enrolled in masters programs (50.6%, 805), doctoral programs (37.5%, 597), professional degree programs (8.6%, 136), or other (1.3%, 21) and most were full-time students (77.3%, 1,229). The program affiliation varied with a majority enrolled in social sciences (24.7%, 392), followed by education (15.5%, 246), physical sciences (10.4%, 166), engineering (10.1%, 160), medical/nursing/veterinary (8.8%, 140), business (7.0%, 112), law (4.7%, 75), information technology/information sciences (3.6%, 58), communications (3.4 %, 54), art/music/theatre (3.3%, 53), humanities (2.6%, 42), and other (4.6%, 59).

Another important piece of demographic information is mental health. Participants who experienced a loss were asked if they had been previously diagnosed with depression, eating disorders, insomnia, or post-traumatic stress disorder. The most common mental health diagnosis was depression (20.9%, 333). After depression, insomnia (5.6%, 89) was the next most common mental health diagnosis among participants. However, few participants indicated eating disorders (3.8%, 60) or post-traumatic stress disorder (3.8%, 60) diagnoses.

Findings

The first research question explored the incidence of grief among graduate students. Participants were asked a series of questions regarding loss, specifically due to the death of someone significant in their lives. Specific questions pertained to when the loss occurred, participants' relationship to the deceased, cause of death, and the expectancy of the loss. Most participants (80.3%, 1276) reported experiencing a loss within their lifetime. From these participants, a majority (45%, 715) reported the death occurred more than 36 months ago whereas a smaller number of participants reported the date of death within the past 6 months (9.1%, 144), 12 months (6.4%, 102) and 24 months (25.4%, 157).

The relationships of the deceased included grandparents (31.6%, 502), parents (13.8%, 220), pets (11.0%, 175), friends (8.4%, 133), siblings (2.6%, 42), cousins (2.2%, 35), other (10.3%, 163), and not reported (0.1%, 2). The most common cause of death reported was illness (53%, 842), followed by accident (9.9%, 158), suicide (3.3%, 52), unsure (2.8%, 45), murder (0.9%, 14), and other (10.1%, 161). The participants were asked whether the death was expected or unexpected. The results showed 37.2% (591) of participants indicated the loss was expected whereas 39.4% (626) reported it was unexpected.

Separate analyses were conducted for participants experiencing a loss within the past six, 12, and 24 months. These time frames are significant in grief and loss and have been previously used as markers in bereavement studies (Balk et al., 2010; Prigerson et al., 2009; Walker et al., 2012). Participants experiencing a loss within the past six months reported losing grandparents (28.5%, 41), pets (26.4%, 38), friends (11.8%, 17), parents (9%, 13), cousins (4.2%, 6), siblings (1.4%, 2), and other (17.4%, 25). Causes of death included illness (51.4%, 74), accident (11.1%, 16), suicide (2.1%, 3), murder (0.7%, 1), and other (24.3%, 35). The deaths were also reported as expected losses (44.4%, 64) and unexpected losses (47.9%, 69).

Analyses on participants who experienced a loss within 12 months also showed participants losing grandparents (41.2%, 42), pets (24.5%, 25), parents (8.8%, 9), friends (7.8%, 8), cousins (3.9%, 4), siblings (1%, 1), and other (11.8%, 12). The most frequent cause of death was illness (74.5%, 76) followed by accident (7.8%, 8), suicide (1%, 1), murder (1%, 1), and other (12.7%, 13). Two participants (2%) were unsure as to the cause of death. Expected losses (53.9%, 55) were slightly higher than unexpected (43.1%, 44) among those experiencing loss.

Finally, participants experiencing loss within the past 24 months reported losing grandparents (33.8%, 53), pets (17.8%, 28), friends (15.3%, 24), parents (12.1%, 19), cousins (5.1%, 8), siblings (1.9%, 3), and other (13.4%, 21). Similar to the other groups, the main cause of death included illness (65%, 102), followed by accident (12.1%, 19), suicide (4.5%, 7), murder (0.6%, 1), and other (14.6%, 23). Losses were also reported as expected (46.5%, 73) and unexpected (48.4%, 76).

Grief Effects

The second research question sought to provide insight on the effects of grief on graduate students during their program of study. Participants were asked to report how their grief affected their emotions, physical well-being, cognitive functions, behaviors, world assumptions, and interpersonal relationships. Responses were given on a five-point likert-type scale ranging from “Not affected at all” to “Significantly affected.”

Participants experiencing a loss within 6 months were affected in all areas. Significant emotional effects were reported ($M = 3.76$, $SD = 1.20$), along with moderate and significant cognitive effects ($M = 2.92$, $SD = 1.39$). Moderate physical effects ($M = 2.62$, $SD = 1.42$), behavioral effects ($M = 2.77$, $SD = 1.36$), changes in world assumptions ($M = 2.01$, $SD = 1.24$), and interpersonal effects ($M = 2.43$, $SD = 1.34$) were also reported. All results are outlined in Table 2.

Table 2
Means of Grief Effects at Six Months Post-Loss

Dimension	<i>n</i>	Mean	SD	Skewness	Kurtosis
Emotional	140	3.76	1.20	-0.53	-0.92
Physical	140	2.62	1.42	0.30	-1.29
Cognitive	138	2.92	1.39	0.03	-1.30
Behavioral	139	2.77	1.36	0.25	-1.18
World Assumptions	140	2.01	1.24	0.99	-0.23
Interpersonal	139	2.43	1.34	0.50	-1.01

Note. 1= Not affected at all, 2 = Slightly affected, 3 = Affected, 4 = Moderately affected, 5 = Significantly affected

Participants experiencing a loss within the past 12 months were also affected by their grief in various ways. Participants reported being most affected emotionally ($M = 3.51$, $SD = 1.28$) by their grief. Cognitive ($M = 2.85$, $SD = 1.44$), behavioral ($M = 2.55$, $SD = 1.31$), physical ($M = 2.53$, $SD = 1.45$), affects were also experienced. Effects on interpersonal relationships ($M =$

2.23, $SD = 1.25$) and changes in world assumptions ($M = 2.14$, $SD = 1.30$) were the least reported. All results are reported in Table 3.

Table 3
Means of Grief Effects at 12 Months Post-Loss

Dimension	<i>n</i>	Mean	SD	Skewness	Kurtosis
Emotional	100	3.51	1.28	-0.50	-0.89
Physical	100	2.53	1.45	0.46	-1.20
Cognitive	100	2.85	1.44	0.12	-1.36
Behavioral	100	2.55	1.31	0.39	-1.01
World Assumptions	100	1.30	1.30	0.71	-0.75
Interpersonal	100	1.25	1.25	0.65	-0.76

Note. 1= Not affected at all, 2 = Slightly affected, 3 = Affected, 4 = Moderately affected, 5 = Significantly affected

Participants experiencing a loss within the past 24 months reported similar grief affects as participants in six and 12 months post-loss. Emotional effects ($M = 3.25$, $SD = 1.37$) were the most frequent reported effects, along with behavioral ($M = 2.49$, $SD = 1.43$), cognitive ($M = 2.37$, $SD = 1.38$), and physical effects ($M = 2.18$, $SD = 1.34$). Interpersonal effects ($M = 2.10$, $SD = 1.26$) and changes in world assumptions ($M = 2.03$, $SD = 1.27$) were least effected. All results are outlined in Table 4.

Table 4
Means of Grief Effects at 24 Months Post-Loss

Dimension	<i>n</i>	Mean	SD	Skewness	Kurtosis
Emotional	154	3.25	1.37	-0.10	-1.29
Physical	152	2.18	1.34	0.82	-0.62
Cognitive	152	2.37	1.38	0.68	-0.81
Behavioral	154	2.49	1.43	0.58	-1.01
World Assumptions	153	2.03	1.27	1.08	0.00
Interpersonal	153	2.10	1.26	0.95	-0.19

Note. 1= Not affected at all, 2 = Slightly affected, 3 = Affected, 4 = Moderately affected, 5 = Significantly affected

Time of Loss and Grief Effects

Between groups analysis of variance (ANOVA) was performed to examine the grief effects of students who reported loss at 0-6 months, 7-12 months, 13-24 months, 25-36 months, and more than 36 months. ANOVAs were conducted for each dimension: emotional effects, physical effects, cognitive effects, behavior, world assumptions, and interpersonal effects. Additional post-hoc analyses (Tukey's HSD) were performed to reveal specifics about timing of loss and effects.

Emotional effects. An ANOVA showed a significant interaction for emotional effects and time of loss ($F(1, 1228) = 32.46, p < .001$, partial eta squared = 1.00, observed power = 1.00). Tukey's HSD revealed that students reporting loss within six months ($M = 3.76, SD = 1.20$) reported significantly more emotional grief effects than students reporting loss within 13-24 months ($M = 3.25, SD = 1.37$), 25-26 months ($M = 3.00, SD = 1.54$), and more than 36 months ($M = 2.51, SD = 1.48$), but not more than those reporting loss at 7-12 months ($M = 3.51, SD = 1.28$).

Physical effects. Another significant interaction was found for physical effects and time of loss ($F(1, 1218) = 23.93, p < .001$, partial eta squared = .07, observed power = 1.00).

Consistent with emotional effects, Tukey's HSD also showed that students experiencing loss within six months ($M = 2.62$, $SD = 1.42$) reported significantly more physical effects of grief than students experiencing loss at with 13-24 months ($M = 2.18$, $SD = 1.34$), 25-36 months ($M = 2.06$, $SD = 1.32$) and more than 36 months ($M = 1.70$, $SD = 1.44$), but not more than those at 7-12 months ($M = 2.53$, $SD = 1.45$).

Cognitive effects. Cognitive effects and time of loss showed a significant relationship ($F(1, 1215) = 27.18$, $p < .001$, partial eta squared = .08, observed power = 1.00). Tukey's HSD revealed that students experiencing loss at 0-6 months ($M = 2.92$, $SD = 1.39$) had significantly more cognitive effects than students experiencing loss at 13-24 months ($M = 2.37$, $SD = 1.44$), 25-36 months ($M = 2.28$, $SD = 1.37$), and more than 36 months ($M = 1.89$, $SD = 1.24$), but not more than students reporting loss at 7-12 months ($M = 2.85$, $SD = 1.44$).

Behavior effects. A significant interaction was also found for grief behavioral effects and time of loss ($F(1, 1227) = 18.27$, $p < .001$, partial eta squared = .06, observed power = 1.00). Tukey's HSD further indicated that students reporting loss at 0-6 months ($M = 2.77$, $SD = 1.36$) reported significantly more behavioral effects than students reporting loss at 25-36 months ($M = 2.25$, $SD = 1.43$), and more than 36 months ($M = 1.91$, $SD = 1.26$), but not more than students reporting loss at 7-12 months ($M = 2.55$, $SD = 1.31$) or 13-24 months ($M = 2.49$, $SD = 1.43$).

Interpersonal effects. An ANOVA for grief behavioral effects and time of loss indicated another significant reaction ($F(1, 1225) = 3.22$, $p < .001$, partial eta squared = .01, observed power = 1.00). Tukey's HSD revealed that students reporting loss at 0-6 months ($M = 2.43$, $SD = 0.83$) reported significantly more behavioral effects than students reporting loss at 25-36 months ($M = 2.05$, $SD = 1.29$), and more than 36 months ($M = 2.02$, $SD = 1.28$), but not more than

students reporting loss at 7-12 months ($M = 2.23$, $SD = 1.25$) or 13-24 months ($M = 2.10$, $SD = 1.26$).

World assumptions. There was no significant interaction between time of loss and world assumptions.

Grief Support

The third research question examined the types of support grieving graduate students sought. When analyzing data reported by participants experiencing a loss within the past six months, the majority of participants reported using family members (92.8%, 128) as support for their grief. Friends (85.6%, 119) were the next most common source followed by religious/spiritual communities (26.7%, 36), and professors (20.5%, 27). Results for types of supports utilized by participants are displayed in Table 5.

Table 5.
Support Sought By Graduate Students Experiencing Grief within Past Six Months

Support	<i>Used</i>		<i>Did not Use</i>	
	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>
Family members	128	92.8	10	7.2
Friends	119	85.6	20	14.4
Professor	27	20.5	105	79.5
Academic Advisor	14	10.9	115	89.1
Professional counselor	5	3.9	115	89.1
Student counseling center	8	6.1	124	93.9
Religious/Spiritual Community	36	26.7	99	73.3

Note. 1= Not affected at all, 2 = Slightly affected, 3 = Affected, 4 = Moderately affected, 5 = Significantly affected

The support systems sought by graduate students experiencing a loss within the past 12 months are similar to graduate students experiencing grief within the past six months. Family members (92%, 92) were the most common form of support; followed by friends (86.9%, 86) and then religious/spiritual communities (36.2%, 34). In this instance, spiritual communities

(36.2%, 34) were reported slightly higher for graduate students experiencing a loss within the past 12 months. Detailed responses for grief supports are displayed in Table 6.

Table 6.
Support Sought By Graduate Students Experiencing Grief within Past 12 Months

Support	<i>Used</i>		<i>Did not Use</i>	
	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>
Family members	92	92	8	8
Friends	86	86.9	13	13.1
Professor	10	10.9	82	89.1
Academic Advisor	7	7.6	85	92.4
Professional counselor	7	7.6	86	92.5
Student counseling center	10	11	81	89
Religious/Spiritual Community	34	36.2	60	63.8

Note. 1 = Not affected at all, 2 = Slightly affected, 3 = Affected, 4 = Moderately affected, 5 = Significantly affected

Again, graduate students reporting a loss within the past 24 months presents a similar pattern to graduate students reporting a loss within the past six and 12 months. However, family (88.3%, 136) is slightly less pronounced than graduate students experiencing loss in the past 12 or six months. Friends (86.3%, 132) and the religious spiritual communities (39.1%, 59) remained consistent modes of support for graduate students experiencing loss despite being within the past 24, 12, or six months. Results for supports utilized by participants are displayed in Table 7.

Table 7.
Support Sought By Graduate Students Experiencing Grief within Past 24 Months

Support	Used		Did not Use	
	<i>n</i>	%	<i>n</i>	%
Family members	136	88.3	18	11.7
Friends	132	86.3	21	13.7
Professor	15	10.3	131	89.7
Academic Advisor	11	7.5	136	92.5
Professional counselor	20	13.7	126	86.3
Student counseling center	4	2.7	142	97.3
Religious/Spiritual Community	59	39.1	92	60.9

Note. 1= Not affected at all, 2 = Slightly affected, 3 = Affected, 4 = Moderately affected, 5 = Significantly affected

Time of Loss and Grief Supports

Between groups analysis of variances (ANOVA) were conducted to examine how time of loss at 0-6 months, 7-12 months, 13-24 months, 25-36 months, and more than 36 months interacted with the types of grief supports students utilized. ANOVAs were conducted for each type of support: family, friends, professors, academic advisors, professional counselors, campus counseling center, and religious communities. Significant interactions were only found for time of loss and professors, academic advisors, and professional counselors. Additional post-hoc analyses (Tukey's HSD) were performed to reveal specifics about timing of loss and supports sought.

Professors. An ANOVA performed for time of loss and use of professors as grief support showed a significant interaction ($F(1, 1134) = 6.07, p < .001$, partial eta squared = .02, observed power = .99). Tukey's HSD revealed that students reporting loss at 0-6 months ($M = 2.80, SD = .41$) were more likely to use professors as grief supports than students experiencing loss more than 36 months ago ($M = 2.93, SD = .25$).

Academic advisors. A significant interaction between time of loss and academic advisors for support was also found ($F(1, 1124) = 3.91, p < .01$, partial eta squared = 0.1, observed power = .90). Tukey's HSD showed that students reporting loss at 0-6 months ($M = 2.89, SD = .31$) reported using academic advisors significantly more than students reporting loss at more than 36 months ago ($M = 2.97, SD = .18$).

Professional counselors. Professional counseling and time of loss also showed a significant reaction ($F(1, 1128) = 3.16, p < .05$, partial eta squared = 0.11, observed power = .82). Tukey's HSD revealed that students reporting loss at 0-6 months ($M = 2.96, SD = .19$) reported using professional counselors as support significantly more than students reporting loss at more than 36 months ago ($M = 2.86, SD = .35$).

Prolonged Grief Disorder

The Prolonged Grief Disorder Questionnaire (PG-13; Prigerson et al., 2009) was completed by participants who experienced a loss within the last six, 12, or 24 months to determine their risk of prolonged grief disorder. The PG-13 asks a series of questions pertaining to feelings, thoughts, and actions experienced at least six months post-loss to determine risk of the disorder. The diagnostic formula to determine risk was sent to the principal investigator by Dr. Prigerson. The formula is not being disclosed since permission was only granted to use the formula, not to disclose it; however, it specifies that participants must have experienced a) a loss; b) separation distress; c) elevated separation distress; d) cognitive, emotional or behavioral symptoms; and e) social, occupational, or other types of significant impairment.

Of those who experienced a loss more than six months ago, six participants (0.5%) met the criteria for risk of prolonged grief disorder. All six participants (100%) identified as White,

non-Hispanics. Half of participants (50%) reported being between the ages 20-29, two participants (33.3%) were ages 30-39, and one participant (16.7%) was between the ages 50-59. Two participants (33.3%) classified as Christian, two others (33.3%) reported no religious preference, and two (33.3%) reported other religious preferences. Five participants (83.3%) were not parents and one (16.7%) was a parent. Most participants (66.7%, 4) reported being full-time students or part-time students (33.3%, 2). Half (50%, 3) were enrolled in master's degree programs and half (50%, 3) were enrolled in doctoral programs. Program areas of participants varied including art/music/theatre (16.7%, 1), communications (16.7%, 1), education (16.7%, 1), information technology/information sciences (16.7%, 1), physical sciences (16.7%, 1), and social sciences (16.7%, 1).

Since prolonged grief disorder has been often linked with other mental health concerns, analyses were conducted to examine if the participants at risk reported other mental health diagnoses. Half of participants (50%, 3) also reported being diagnosed with depression. Two participants (33.3%) reported being diagnosed with eating disorders. One participant reported being diagnosed with insomnia (16.7%) and another participant (16.7%) reported being diagnosed with PTSD.

Specific information about the losses was examined for the six participants at risk of developing prolonged grief disorder. Half of the participants (50%, 3) experienced their loss more than 36 months ago; two participants (33.3%) experienced their loss between 13-24 months ago; and one participant (16.7%) experienced their loss within 7-12 months ago. Relationships of the deceased varied and included a parent (16.7%, 1), grandparent (16.7%, 1), sibling (16.7%, 1), pet, (16.7%, 1), and other (33.3%, 2). Illness (33.3%, 2) was the most common cause of death

reported, followed by accident (16.7%, 1), and other (50%, 3). More than half of participants (66.7%, 4) reported the loss as unexpected.

The effects participants experienced as a result of their grief showed that all six participants (100%) reported being “significantly affected” emotionally, physically, cognitively, and behaviorally by their grief during their graduate program. World assumptions views were also significantly affected (50%, 3), moderately affected (16.7%, 1), and slightly affected (33.3%, 2). Participants reported their interpersonal relationships as being significantly affected (66.7%, 4) and moderately affected (33.3%, 2). These results are consistent with the cognitive, emotional, behavioral, and social criteria involved in the PG-13 diagnostic tool that assesses prolonged grief disorder risk.

When indicating types of support sought when experiencing their loss, most graduate students who met the criteria for prolonged grief disorder (83.3%, 5) listed using friends. Half used family (50%, 3), while fewer (33.3%, 2) sought support from professors, academic advisors, professional counselors, and the campus counseling center. Interestingly, none of these graduate students reported using religious or spiritual communities for support.

Key Findings

- Approximately 25% of graduate students experienced the loss of a significant person or pet within the past 24 months.
- Graduate students reported various grief effects, with emotional effects being the most significant. These effects were experienced within six months post-loss and subside thereafter.

- Grieving graduate students primarily sought support from family and friends. Those within six months of post-loss are were likely to seek support from professors and academic advisors.
- Only a small number (0.5%) of graduate students met the criteria for prolonged grief disorder. Each of these students also reported having other mental health diagnoses, including depression, eating disorders, insomnia, and PTSD. Half of these students experienced their loss more than 36 months ago, well beyond the six month post-loss criteria for prolonged grief disorder. Although they used a variety of supports, none of these students reported using religious or spiritual communities.

CHAPTER V

Summary, Discussion, and Conclusions

Grief among undergraduate students provides insights on how students cope with loss. Undergraduate students experience various effects resulting from their grief and employ a variety of supports to help cope. While this information is important, it does not speak to the experiences of graduate students.

The purpose of this study was to determine the incidence of grief among graduate students, the effects of their grief, the types of grief supports they seek, and assess their risk of developing prolonged grief disorder. Graduate students ($n = 1,575$) enrolled at a large Southeastern university completed a survey about their grief experiences. Students who experienced loss also completed questions about the effects of grief, types of support utilized, and the Prolonged Grief Disorder Questionnaire (Prigerson et al., 2009). The data were analyzed using descriptive statistics, frequencies, and analyses of variances to answer the research questions guiding the study:

1. What is the incidence of grief among graduate students?
2. Are graduate students affected by their grief, and if so, how?
3. Do grieving graduate students seek support?
4. What is the risk for graduate students to develop prolonged grief disorder?

This chapter will provide a summary of the findings, discussion and implications of the findings, conclusions, and recommendations for future research.

Summary of Findings

1. Of the 1,575 responses, 80.3% of graduate students reported experiencing a loss within their lifetime; 25.4% reported experiencing a loss within the past 24 months; 6.4% reported experiencing a loss within the past 12 months; and 9.1% reported experiencing a loss within the past six months.
2. The majority of losses at all levels (six months, 12 months, 24 months, and lifetime) were grandparents, caused by illness, and were both expected and unexpected.
3. Graduate students most frequently reported emotional effects related to their loss experience. The least affected dimensions were interpersonal effects and world assumptions.
4. Graduate students used family members, friends, and religious/spiritual communities as support systems when grieving.
5. Only a small portion (0.5%) of participants who experienced loss met the criteria for risk of prolonged grief disorder.
6. All of the participants meeting the risk for prolonged grief disorder also reported being previously diagnosed with another mental health issue.

Discussion

Findings of this study on graduate student grief are similar to those of undergraduate student grief. Approximately 25.4% of graduate students reported experiencing a loss within the past 24 months. This finding is slightly lower than the average of 30-40% of the undergraduate student population (Balk, 1997; Balk et al., 2010; Bernat et al, 1998; LaGrand, 1981, 1985; Smyth et al., 2008; Walker et al., 2012). Types of losses reported by graduate students were also similar to those reported by undergraduate students. Both student populations are most likely to

have experienced the death of a family member (most frequently a grandparent) due to natural or expected causes (Balk, 1997; Balk & Vesta, 1998; Balk et al., 2010; Bath, 2009; Bernat et al., 1998; Currier et al., 2006; LaGrand, 1981, 1985; Smyth et al., 2008; Walker et al., 2012). These findings are not surprising since the majority of graduate students participating in this study were between the ages 20-29 (64.2%), similar in age to undergraduate students.

Another similarity found between graduate and undergraduate students was the effects of grief they experienced. Similar to undergraduate students, graduate students reported effects in each of the six dimensions outlined in the Holistic Impact of Bereavement (Balk, 2011) including emotional, physical, cognitive, behavioral, interpersonal, and world assumptions. When examined more closely, it appears that students reporting a loss within the past six months experience more effects, particularly emotional, physical, cognitive, behavioral, and interpersonal effects. This coincides with previous research (Bonanno, 2004) claiming that individuals often experience intense grief symptoms that subside over time. However, individuals who do not cope and continue to experience intense grief symptoms six months post-loss can possibly experience prolonged grief disorder.

Research on prolonged grief disorder indicates that a small percentage of undergraduate students (1.7%) meet the criteria for the diagnosis (Balk, 2010). The prevalence of prolonged grief disorder risk in the graduate student population is even lower (0.5%). However, similar to concerns with grieving undergraduate students, the low prevalence may be due to graduate students withdrawing or failing out of school. The age of participants in this study may provide another explanation. Most graduate students who participated in the study were similar in age with undergraduate students and since prolonged grief disorder is more prevalent in older adults

(Johnsen, Dyregrov, & Dryegrov, 2012), providing another rationale for the low incidence. What is striking about these findings is that half of the participants ($n = 3$) meeting the criteria for prolonged grief disorder experienced their loss more than three years ago; and two more experienced their loss more than a year ago ($n = 2$). This suggests that there may be graduate students experiencing prolonged grief disorder for a significant amount of time.

Closer examination of the graduate students meeting the criteria for prolonged grief disorder, found prominent similarities to undergraduate students with complicated grief. As previously mentioned, this is not unexpected since the majority of graduate students participating in the study were close in age to undergraduate students. Each of the graduate students who met the criteria for the disorder also reported being diagnosed with depression, eating disorders, insomnia, or post-traumatic stress disorder. This is consistent with previous research displaying correlations between grief and mental health concerns, such as complicated grief and PTSD (Schnider et al., 2007), eating disorders (Beam et al., 2004), depression (LaGrand, 1981, 1985), and insomnia (Hardison et al., 2005; LaGrand, 1981, 1985; Vickio et al., 1990).

Supports utilized by graduate students also emulate those utilized by undergraduate students. Similar to undergraduate students (Bath, 2009), graduate students primarily seek support from family members and friends. Furthermore, graduate students in this study also utilized a religious/spiritual community for support which is understandable given the strong religious/spiritual activity of the geographic location where the study took place. Another similarity was the lack of support sought from on-campus counseling centers. Like undergraduate students (Janowiak et al., 1995), graduate students did not often seek assistance from university counseling centers or other professional counseling centers. It was very

surprising, however, that overall graduate students did not report getting more support from professors or academic advisors. Additional analyses, however, showed that graduate students in their first six months of grieving are more likely to seek support from their professors, academic advisors, and professional counselors. Graduate programs are typically smaller than undergraduate programs allowing for the establishment of a more in-depth relationship between student and faculty. Often the relationship between student and advisor/major professor is more intimate. Since most grief affects experienced by graduate students occurs within the first six months of loss, it makes sense that graduate students might reach out to their professors or academic advisors for support. Graduate students who may not seek out these supports may turn to professional counselors to help them cope with their loss.

In addition to the quantitative data provided by participants, graduate students also reached out via comments in the survey and emails willing and eager to provide more information about the losses they experienced. Students sent messages of praise and thanks for conducting research on such an important and crucial topic. One student shared, “Thank you for this nice study. I think the problems related to the grad students' are mostly (or at least mine) related to working with an advisor who really does not know much about different cultures and religions.” Another student commented, “Wonderful topic to study. I hope your research goes well.” Another student simply wrote, “Thank you for this important research.” Many also expressed losses other than death that affected them during their graduate program in powerful ways. One student shared, “My stressor was more to divorce and my ex having custody of my 2 girls, 9 and 5 years old.” Another student wrote, “My greatest loss came from my fiancée leaving me and not from a death. This was a more significant loss than any death in my family so far and

affected my studies to the point of me having to take time away from my education.” This outreach by participants suggests there is a great need and desire to further examine loss among this population and within various cultures of graduate students.

Implications

Although the findings of this study are limited to the institution studied, they are suggestive of the grief experiences graduate students at other institutions may have. Many participants in this study were young in age, thus prompting similar findings to studies conducted with undergraduate students. Although older graduate students were not equally represented, results still provide an initial insight on the grief experiences of graduate students.

These findings also have implications for higher education. Similar to the undergraduate population, it is important that higher education administrators be cognizant of the life experiences that affect graduate students. Since graduate students are not likely to seek support for their mental health concerns (Hyun et al., 2006), campuses should strive to provide support when needed. Peer-support groups have shown success with grieving undergraduate students (Fajgenbaum, Chesson, & Lanzi, 2012; LaGrand, 1985; Vickio & Clark, 1998) and may also be beneficial for grieving graduate students.

Furthermore, since graduate students in their first six months of grieving reported seeking support from professors and academic advisors, it may be helpful to provide faculty with information on how to advise grieving students. It is important to inform faculty that six months post-loss is when students display the most prominent grief effects. This is particularly important for students with previous mental health diagnoses who may be at a higher risk for prolonged grief disorder.

In addition to providing coping support, institutions can also provide logistical support. One recommendation is to review and implement academic policies specifically for grieving students. Although medical leaves of absence are commonplace at most institutions, grief does not always qualify as a medical or mental diagnosis. As a result, institutions have begun incorporating grief provisions in their student handbooks allowing for students to take time to grieve and cope with loss (H. Servaty-Seib, personal communication, August 8, 2011).

Allowing graduate students time to cope with a loss is important. Grief that is avoided can trigger complicated grief reactions (Schnider et al., 2007). As this study shows, graduate students experiencing grief within the first six months of a loss are at the highest risk for also experiencing various grief effects. They do not tend to manifest into more severe situations such as prolonged grief disorder. However graduate students who have previously been diagnosed with mental health issues such as depression, post-traumatic stress disorder, insomnia, or eating disorders may be at a higher risk for developing prolonged grief disorders.

Conclusion

This study on graduate student grief provides initial insights on how loss affects these students. Overall, findings are strikingly similar to those of undergraduate students. Graduate students are experiencing losses similar to undergraduate students, feeling comparable effects, and utilizing similar supports. Most graduate students experience grief symptoms in the first six months of loss and a low number meet the criteria for prolonged grief disorder. Graduate students with previous mental health diagnoses may be at a higher risk for developing prolonged grief disorder.

Recommendations for Further Research

The following are recommendations for further research based on the findings of this study. The study should be replicated with graduate students at other institutions across various parts of the United States to see how results compare among varying institutions. The study should be also replicated to include both undergraduate and graduate students for group comparisons. It would also be insightful to examine specific demographic factors such as gender, religion, ethnicity, and program of study and how those variables correlate with grief experiences. Older grieving graduate students who are at a higher risk for developing prolonged grief disorder should also be studied. The study should be expanded to include other types of losses graduate students experience not limited to death of a person or pet. A mixed methods study focused on faculty, advisors, and other university administrators would provide insight on their experiences with grieving graduate students. Finally, a qualitative study should be conducted with grieving graduate students to gain a deeper understanding of their experiences.

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APPENDIX

APPENDIX A

Thank you in advance for completing this survey. Your participation will aid in understanding the grieving experiences of graduate students. Please review the informed consent information below. Proceeding to the survey implies your consent.

This survey will take approximately 10-15 minutes to complete. The survey is anonymous. Demographic information will be requested – but no identifying information. Your participation is voluntary and you may end the survey at any time. There are minimal risks involved with this study; however if you experience discomfort as a result of the questions asked in this survey, you may contact the UT Counseling Center at (865) 974-2196 for assistance.

If you have any questions about the survey, please contact the principal investigator, Mary Alice Varga, via email at maryalice@utk.edu or by phone at (865) 974-8145. You may also contact the advisor of this study, Dr. Tricia McClam at mcclam@utk.edu or (865) 974-3845 or Brenda Lawson, the Compliance Officer at the University of Tennessee, at blawson@utk.edu or (865) 974-3466.

At the conclusion of the survey, you will have an opportunity to complete a separate form to enter into a drawing for four \$50 Amazon Gift Cards. The incentive information is **not** connected to this study; thus, protecting your identity. If you are a winner in the drawing, you will be notified via email on December 1, 2012.

Please answer the following demographic questions about yourself:

1. Gender

- Female
- Male
- No answer

2. Age

Please indicate your age: _____

3. Race/Ethnicity

- African American or Black
- American Indian or Alaska Native
- Asian
- Asian American
- Hispanic
- White, not of Hispanic origin
- Other (please specify): _____
- No answer

4. Religious Preference:

- Buddhism
- Confucianism
- Hinduism
- Islam
- Judaism
- Mormon
- Christian
- Taoism
- None
- Other (please specify): _____
- No answer

5. Marital status:

- Married
- Single
- Divorced
- Widowed
- No answer

6. Parental Status:

- Parent
- Non-parent

7. Household

Please list the number of people living in your household (including yourself): ____

8. Average annual income:

- Less than \$30,000
- \$30,000 – \$49,999
- \$50,000 - \$99,999
- \$100,000 - \$149,999
- \$150,000 - \$199,999
- \$200,000 - \$249,999
- \$250,000 or more
- Don't know
- No answer

9. Current student status:

- Full-time student
- Part-time student
- No answer

10. Degree in progress

- Masters degree
- Specialist degree
- Doctoral degree
- Professional degree
- Other (please specify): _____
- No answer

11. Please select the area that best describes your academic program:

- Art
- Business
- Communications
- Education
- Engineering
- Information Technology
- Law
- Medical/Nursing/Veterinary
- Physical Sciences
- Social Sciences
- Other (please specify): _____
- No answer

12. Have you been diagnosed with any of the following:

- Depression
- Eating disorder
- Insomnia
- Post-traumatic stress disorder
- No answer

13. Have you experienced the loss of a significant person in your life due to death?

(If the answer to Question 13 is no, then participant is directed to the end of the survey.)

- Yes
- No

14. Have you experienced multiple losses due to death? If so, how many?

- Yes 1-3
- Yes 4-6
- Yes 7-9
- Yes 10 or more
- No
- No answer

Please answer the remaining questions pertaining to one loss you consider the most difficult to experience.

15. How long ago did the loss occur?

- 0-6 months ago
- 7-12 months ago
- 13-24 months ago
- 25-36 months ago
- More than 36 months ago
- No answer

16. What was the relationship of the person you lost?

- Parent
- Grandparent
- Friend
- Sibling
- Cousin
- Pet
- Other (please specify): _____
- No answer

17. What was the cause of death?

- Illness
- Accident
- Murder
- Suicide
- Unsure
- Other (please specify): _____
- No answer

18. Was the loss expected or unexpected?

- Expected (forthcoming, death was anticipated)
 Unexpected (sudden, death was not anticipated)

19. Please indicate how this loss affected you during your graduate program, even if the loss occurred prior to your graduate program enrollment.

	Not at all affect 1	2	Moderately affected 3	4	Significantly affected 5	No answer
Emotionally (Feelings of sadness, anger, guilt, regret, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Physically (Fatigued, illness, headaches, insomnia, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cognitively (Difficulty concentrating, studying, paying attention in class, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Behaviorally (Crying, smoking, drinking, sexual promiscuity, irrational outbursts, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
World Assumptions (Changes in thoughts regarding religion or spirituality, searches for life meaning, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Interpersonally (Relationship changes with others, feelings of isolation, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

20. If there were any other specific affects you experienced, please describe them below.

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

- Not at all
- At least once
- At least once a week
- At least once a day
- Several times a day

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

- Not at all
- At least once
- At least once a week
- At least once a day
- Several times a day

22. 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

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

- Not at all
- At least once
- At least once a week
- At least once a day
- Several times a day

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

- Not at all
- At least once
- At least once a week
- At least once a day
- Several times a day

25. For each item below, please indicate how you currently feel.

	Not at all	Slightly	Somewhat	Quite a bit	Overwhelmingly
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)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Have you had trouble accepting the loss?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Has it been hard for you to trust others since your loss?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Do you feel bitter over your loss?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Do you feel that moving on (e.g., making new friends, pursuing new interests) would be difficult for you now?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Do you feel emotionally numb since your loss?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Do you feel that life is unfulfilling, empty, or meaningless since your loss?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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

- Yes
- No

27. Please select all forms of support your utilized when your experienced the loss.

	Did not use this support	Used this support	No Answer
Family members	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Friends	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Professor	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Academic Advisor	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Professional counselor (off campus)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Student counselor center staff	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Religious/Spiritual Community	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other (please specify): _____

28. Please provide any additional comments:

Thank you for completing this survey. If you would like to participate in the drawing for one of four \$50 Amazon Gift Cards, please go to this link: LINK.

APPENDIX B

Dear Graduate Student,

My name is Mary Alice Varga and I am a Ph.D. candidate in Educational Psychology and Research in the Department of Educational Psychology and Counseling in the College of Education, Health, and Human Sciences. I am conducting a study on grief experienced by graduate students for my dissertation and ask for your participation.

Participation entails completing a brief survey (10 minutes) on your experiences with grief. The survey asks demographic questions and sensitive information about experiences with loss; however, the survey will not ask for identifiable information. Participation is voluntary and you have the option to end your participation at any time.

At the conclusion of the survey, you will have the opportunity to participate in a drawing for one of four \$50 Amazon Gift Cards. The information solicited for the drawing is not linked to the survey to protect your identity. Gift Card winners will be contacted via email by November 15, 2012.

If you would like to participate in this study, please [CLICK HERE](#). This will direct you to the survey. Submission of the survey implies your consent. If you have questions about the survey at any time, please feel free to contact me at maryalice@utk.edu.

Thank you in advance for your participation. Your help is greatly appreciated!

Sincerely,

Mary Alice Varga

The University of Tennessee

Department of Educational Psychology & Counseling

APPENDIX C

IRB Approval

VITA

Mary Alice Varga was born and raised in Richmond, Virginia and is the youngest daughter of Norton and Betty Snead. She has four older siblings, one brother, and three sisters.

Her formal education began at Saint Benedict Catholic School in Richmond, Virginia, and continued at Saint Gertrude High School. She attended Shenandoah University, where she received her Bachelor of Science degree in Biology in 2005. She worked at Shenandoah University as the Housing Coordinator and as a Residence Director in the Office of Residence Life. She then completed her Masters degree in Education from Western Carolina University in 2008 where she worked in graduate and intern positions for offices of housing, advising, student support services, and academic tutoring. She also served as an adjunct faculty member at Southwestern Community College.

Upon graduating from Western Carolina University, she worked in the Office of Undergraduate Admissions at The University of Tennessee. In 2009, she was accepted into and began the Educational Psychology and Research doctoral program. She also worked as a graduate research assistant for the Department of Educational Psychology and Counseling for three years before accepting a tenure-track faculty position at the University of West Georgia.

Mary Alice expects to receive her Ph.D. from The University of Tennessee in May, 2013. She is currently an Assistant Professor of Educational Research in the College of Education at the University of West Georgia. Her husband, Dr. Matt Varga, received his Ph.D. in Higher Education Administration from The University of Tennessee in May 2012 and is an Assistant Professor of College Student Affairs in the College of Education at the University of West Georgia.