

**FAMILY GRIEF COMMUNICATION, SELF-CONSTRUAL,
AND THE FUNCTIONING OF GRIEVING COLLEGE STUDENTS**

by

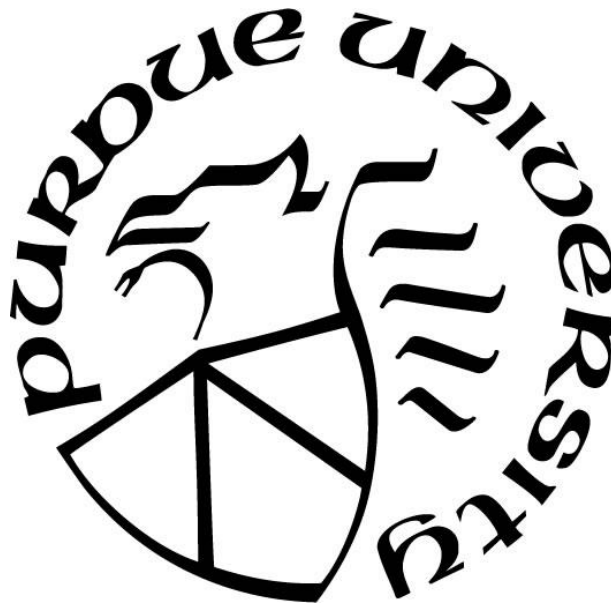
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ABSTRACT

Grieving the deaths of immediate and extended family members as well as friends is a common experience among traditional-age college students. The overarching purpose of this study was to provide a more nuanced understanding of how various family grief communication factors (i.e., frequency, quality, willingness to communicate—personal/perceived family, reasons for grief communication avoidance—self-protection/relationship-protection) and self-construal might be related to the post-loss functioning of grieving traditional-age college students. Using hierarchical multiple regressions, I analyzed survey data from 369 grieving college students who were between ages 18 and 24 and had experienced the death of at least one individual they considered as family member within the last two years. First, the current findings indicated that the more frequent grieving students communicated about their grief with their family, the stronger their grief reactions. Second, the more students reported family grief communication of high quality, the weaker their grief reactions and the higher their post-loss family satisfaction. Third, there were no relationships between grieving college students' personal willingness or their perceived family willingness to communicate about grief and their own grief reactions. Fourth, grieving students' post-loss family satisfaction levels were similar regardless of how personally willing they were to communicate their grief, but increased as they perceived their family members as more willing to communicate about their grief. Fifth, the more grieving students avoided family grief communication for self-protection reasons, the stronger their grief reactions and the lower their post-loss family satisfaction. Sixth, college students reported similar

levels of grief reactions and post-loss family satisfaction regardless of how much they reported avoiding grief communication to protect their family relationships. Seventh, quality, personal and family willingness to communication, and reasons for grief communication avoidance did not moderate the relationship between the frequency of family grief communication and grieving students' post-loss functioning. Eighth, grieving students reported similar levels of grief reactions and post-loss family satisfaction regardless of how much they identified with interdependent self-construal, independent self-construal, or a combination of both. Finally, the relationships between grieving students' reasons for grief communication avoidance (i.e., self-protection, relationship protection) and their post-loss functioning (i.e., grief reactions, post-loss family satisfaction) remained similar regardless of how much they identified with independent or interdependent self-construal. The results of this study may be used to inform clinical interventions and outreach efforts for grieving traditional-age college students and their family members.

CHAPTER ONE: INTRODUCTION

Overview of Problem

College Student and Grief

Grieving the deaths of immediate and extended family members as well as friends is a common experience among college students. Balk (2008) estimated that approximately 22% to 30% of undergraduate college students have experienced the deaths of family members or friends in the past 12 months, and 25% to 48% have lost loved ones in the past two years. Using racially stratified survey data from the National Longitudinal Survey of Freshmen collected between 1999 and 2004, Cox, Dean, and Kowalski (2015) found that approximately 60% of the 3,098 college students surveyed reported experiencing the death of at least one friend or family member between their sophomore and senior years. Pérez-Rojas et al. (2017) found that grief and loss issues were the 15th most common clinician-rated presenting concern and represented an area of concern seen in 11% of 53,194 clients. Given the prevalence of death losses among college students, it is essential to understand the impacts of grief on college student functioning, as well as the factors that could facilitate adaptive functioning among grieving college students.

The Reconceptualized Model of Multiple Dimensions of Identity (RMMDI; Abes, Jones, & McEwen, 2007; Jones & Abes, 2013) offers a lens through which counseling psychologists can understand how college students experience grief and how grief affects college students' functioning and identity development. As college students develop their identities, socially constructed identities might move in and out of the core sense of self, depending on contextual influences and the changing meaning individuals make of these identities (Jones & Abes, 2013). The contextual influences may come from their experiences with significant life events (e.g., grieving the death of someone close), their family of origin, and larger sociocultural contexts. In

addition, the complexity of their meaning-making filters may affect how they interpret and incorporate contextual influences into their perceptions of social and core identities.

Experiencing the death of someone close can be a contextual influence that affects the core and the socially constructed identities of college students. The death loss may challenge college students' unexamined worldviews and assumptions, prompting them to "relearn and reauthor their understanding of how the world works, their personal identity, and their life narrative" (Servaty-Seib & Taub, 2010, p. 958). Depending on their meaning-making filters and the interpersonal and cultural contexts within which they live, college students may reevaluate their worldviews and sense of self, create meanings of the death loss, and incorporate new meaning structures into their identities.

Resulting from this identity development and meaning-making process, bereaved college students may experience positive and negative identity changes in both of their intrapersonal and interpersonal/relational selves. The identity changes within the intrapersonal dimension of self following a death loss may take the form of shifts in roles and abilities perceptions, daily activities and priorities, outlook on the future, and spiritual or philosophic views of the world (Gillies & Neimeyer, 2006). The identity changes within the interpersonal/relational dimension of self following a death loss may take the form of shifts in beliefs about and needs associated with closeness in social relationships, actions in social communities, and careful engagement in social relationships (Gillies & Neimeyer, 2006; Schultz, 2007; Shalka, 2016).

College students cope with grief and bereavement via various strategies. Among these grief coping strategies, social support has been consistently cited as a crucial adaptive coping strategy (Cohen & Samp, 2018; Mason Grissom, 2017; Yilmaz, 2014). Bereaved college students often report difficulty seeking and receiving social support from their non-bereaved

peers due to lack of emotional maturity, limited perspective-taking ability to understand and support grieving peers, and the differences in worldview and life priority due to the life experience of bereavement (McEwen , Higgins, & Pipes, 1982; Parikh & Servaty-Seib, 2013).

Family support, particularly in the form of family communication, becomes especially important in the post-loss functioning of bereaved college students when they face difficulties in seeking support from their peers. Family support has been connected to bereaved students social functioning and institutional attachment (Cousins, Servaty-Seib, & Lockman, 2017), posttraumatic growth (Wolchik, Coxe, Tein, Sandler, & Ayers, 2008), and identity development (Cait, 2005; Schultz, 2000). Although support is an important coping resource for bereaved college students, few studies have examined grief-specific family communication within the bereaved college student population, despite scholarly indications that family communication is a major component connected with the post-loss functioning of bereaved families and adults.

Grief and Family Communication

Even within the bereaved family and adult populations, empirical findings on the adaptiveness of family grief communication are mixed. On one hand, openly communicating about grief among family members may be a source of support for grieving individuals, resulting in lower grief reactions, higher relationship satisfaction, and increased meaning-making and reorganization of roles within families (Bosticco & Thompson, 2005; Kamm & Vandenberg, 2001; Traylor, Hayslip, Kaminski, & York, 2003). On the other hand, open family grief communication but may also be a stressor that promotes greater strain (Hooghe, Neimeyer, & Rober, 2011; Mohamed Hussin, Mohammad, Azman, Guàrdia-Olmos, & Aho, 2018), as family members are not always on the same page regarding how much they seek or engage in grief communication and may value connection through silence (Basinger, Wehrman, & Mcaninch,

2016; Hooghe et al., 2011; McBride & Toller, 2011). These studies suggest that family communication in the wake of bereavement serves complex and sometimes conflicting functions as grieving individuals cope with death losses within their family systems. Past findings offer evidence and arguments for a more complex examination of the meanings and potential adaptiveness in the silence surrounding family grief communication.

Research regarding family grief communication needs to be built upon a solid communication theoretical foundation. Communication theories, including Baxter and Montgomery's (1996) Relational Dialectics Theory (RDT) and Petronio's (2002) Communication Privacy Theory (CPM), provide a foundation from which to examine the complexity in family grief communication.

RDT posits that communication in relationships is marked with tensions between two contradictory forces (i.e., dialectical tension): unity (i.e., centripetal) and differences (i.e., centrifugal). When two individuals communicate, they experience contradictory needs for self-disclosure (i.e., expression) and privacy protection (i.e., nonexpression), as well as contradictory needs for connection with (i.e., integration) and autonomy from (i.e., separation) each other (Baxter, 2004). RDT also postulates that these contradictory needs are in constant flux (Baxter, 2004). Hence, grieving individuals may simultaneously experience a need to share their grief and connect with other family members, and a need to maintain the privacy of their grief and remain autonomous from other family members. Such continuous flux of contradictory needs may also explain why grieving individuals may choose to communicate at one time and remain silent about their grief at another time. As such, I argue that dialectical tension between openness and avoidance—conceptualized in the current study as willingness to communicate—is an important communication factor in family grief communication.

Similar to RDT, at the core of CPM is the assumption that individuals experience simultaneous needs to be connected and to remain separated from their family members. Individuals may manage their privacy by choosing whether, how, and to what extent they disclose private information in family relationships. CPM posits that individuals claim ownership over their private information (i.e., privacy ownership), create implicit or explicit privacy rules regarding the sharing and restricting of private information (i.e., privacy control), and experience boundary turbulence when the privacy rules are violated (Petronio, 2002b). Following from CPM, grief can be conceptualized as private information; individuals could have different privacy rules and have different motivations or reasons for maintaining the rules that govern this private information. As such, I argue that the reasons for communication avoidance, such as for self-protection or relationship protection, are another important communication factor in family grief communication.

College Student, Family Grief Communication, and Self-Construal

In addition to communication factors, self-construal may also help in explaining the complex and sometimes conflicting functions of family grief communication. The Self-Construal Theory (Markus & Kitayama, 1991) is valuable in that it explores the connections between larger societal culture and development of the sense of self. Most relevant to the present study, the theory also has implications on how individuals experience grief, approach communication, and avoid communication. By exploring how individuals with different self-construal profiles perceives and engage in family grief communication, this study could contribute to the family grief communication literature among bereaved college students by clarifying how different types of self-construal may be related different ways of communicating about grief.

Self-construal refers to “how individuals define and make meaning of the self” (p. 143) in relation to others (Markus & Kitayama, 1991). Individuals with high interdependent self-construal are more likely to define themselves as a part of their social groups and come from collectivistic cultures; their sense of self tends to be more flexible and variable according to the social contexts they are in. On the other hand, individuals with high independent self-construal are more likely to define their inner selves as autonomous and independent and come from individualistic cultures; their sense of self tends to be more bounded and invariable regardless of the social contexts (Markus & Kitayama, 1991).

Albeit limited, empirical studies suggest that self-construal may be related to how individuals experience and communicate about grief. Those who endorse higher interdependent self-construal may experience more grief reactions and stronger identity disruption when bereaved because their sense of identity is more defined by social relationships (Papa & Lancaster, 2016). They may also express grief more as social responsibilities to their respective families, such as through supporting and not burdening living family members, to maintain harmony and satisfaction in family relationship (Ho & Tsui, 2002). Finally, given their motivation to maintain group harmony and tendency to be group-oriented in social interactions (Cross, Hardin, & Gercek-Swing, 2011), those who endorse higher interdependent self-construal may be more motivated to avoid family grief communication to protect their family relationship especially if communicating about grief could threaten the family harmony.

Importance of Study

This study could contribute to a more nuanced understanding of family grief communication. First, this study examined and explored the relationships among family grief communication factors (i.e., frequency, quality, personal and perceived family willingness to

communicate about grief, interaction between personal and perceived family willingness to communicate about grief, communication avoidance for self-protection or relationship protection reasons) and post-loss functioning (i.e., grief reactions, family satisfaction) previously found in qualitative studies. Second, this study explored how self-construal may be connected to grief and family satisfaction. Incorporation of self-construal may be a beginning step to toward a more culturally sensitive understanding of family grief communication research (Rosenblatt, 2013). Third, the findings from this study may offer guidance to those on college campuses who seek to support grieving students, including counseling center clinicians, residential life personnel, and staff members in offices of family relations and dean of students.

Key Terms

Throughout this study, I use terms that are defined differently in the literature and may be unfamiliar to some readers. For clarity, I define each term below:

- The term *traditional-age college students* refers to undergraduate students between ages 18 and 24 (Wyatt, 2011).
- The term *grieving college students* refers to traditional-age college students who are experiencing grief reactions due to death loss(es).
- The term *bereavement* refers to “the state of having lost someone to death” (Zisook & Shear, 2009, p. 67).
- The terms *grief* and *grief reactions* refer to the “emotional, cognitive, functional and behavioral responses to the death” (Zisook & Shear, 2009, p. 67)
- For this study, I have created the term *grieving college students’ post-loss functioning* and *grieving college students’ functioning* to refer to college students’ grief reactions and satisfaction towards their family relationships after the death loss.

- The term *family* refers to “a social group of two or more persons, characterized by ongoing interdependence with long term commitments that stem from blood, law or affection” (Braithwaite and Baxter, 2006, p. 3). In this study, I use the term family broadly to include individuals who are traditionally considered as immediate (e.g., father, mother, sibling) and extended (e.g., grandparent, aunt, uncle, cousin), as well as individuals who are emotionally or lawfully connected but may not be biologically related.
- The term *family communication* refers to “the way verbal and non-verbal information is exchanged among family members” (Epstein, Bishop, Ryan, Miller, & Keitner, 1993, p.3).

Statement of Purpose

The overarching purpose of this study was to provide a more nuanced understanding of family grief communication among bereaved college students by attending to different communication factors and self-construal. First, I examined whether family grief communication factors (i.e., frequency, quality) were associated with grieving college students’ functioning (i.e., grief reactions, family satisfaction). Second, I examined whether additional communication factors (i.e., personal or perceived family willingness to communicate, interaction between personal and perceived family willingness to communicate, grief communication avoidance for self-protection and relationship protection reasons) were associated with grieving college students’ functioning (i.e., grief reactions, family satisfaction). Third, I explored whether quality of family grief communication and additional communication factors (i.e., personal or perceived family willingness to communicate, interaction between personal and perceived family willingness to communicate, grief communication avoidance for self-protection and relationship

protection reasons) moderated the relationship between frequency of family grief communication and grieving college students' functioning (i.e., grief reactions, family satisfaction). Fourth, I explored the potential relationships among interdependent self-construal, independent self-construal, and the interaction between interdependent and independent self-construal and grieving college students' functioning (i.e., grief reactions and family satisfaction). Fifth, I explored whether self-construal (i.e., interdependent, independent) moderated the relationship between grief communication avoidance for self-protection and relationship protection reasons and grieving college students' functioning (i.e., grief reactions and family satisfaction).

Relevance to Counseling Psychologists

The present study on grieving college student and family grief communication is consistent with the professional identity of counseling psychologists. First, the overarching purpose of this study honors counseling psychologists' commitment to diversity, multiculturalism, and social justice (Mintz & Bieschke, 2009). Second, the topic of grief and the focus on college student population align with counseling psychology's unifying themes (e.g., focus on intact personality, brief intervention, person-in-environment; Gelso & Fretz, 2014). Third, the focus on grieving college students and their coping via family communication with a significant life event (i.e., grieving death of someone close) connects with the preventive and educative-developmental roles of counseling psychologists.

First, the overarching purpose of this study reflects counseling psychologists' commitment to diversity, multiculturalism, and social justice. Counseling psychologists attend to cultural diversity, advocate for intentional efforts to develop cross-cultural competencies, and create culturally sensitive practices in research, practice, teaching, training, and assessment (Forrest & Campbell, 2012; Sue, 2001). My goal to provide a more nuanced understanding of

family grief communication among grieving college students reflects this commitment. By intentionally focusing on how self-construal may be associated with college students' family grief communication, grief reactions, and family satisfaction, this study could offer counseling psychologist information on how they could tailor their intervention to fit grieving students based on their self-construal.

Second, the focus on the topic of grief within the college student population aligns with counseling psychology's unifying themes (e.g., focus on intact personality, brief intervention, person-in-environment; Gelso & Fretz, 2014). Bereavement is a normative developmental experience common among college students (Servaty-Seib & Taub, 2010). Focusing on bereaved students aligns with counseling psychologists' emphasis on engaging with individuals with intact personalities who are struggling with life challenges. Similarly, most bereaved individuals are not seriously disturbed or in need of long-term care (Stroebe, Hansson, Schut, & Stroebe, 2008), thus fitting with counseling psychologists' focus on brief intervention that aims to help individuals gain awareness of their strengths and empower them to use their strengths to cope with developmental struggles. Finally, there is a clear emphasis on person-in-environment interaction in this study, in that I a) conceptualize bereavement as a contextual factor that affects student identity development, and b) seek to understanding how contextual factors (i.e., family communication factors) affect college students' grief coping.

Third, the focus on grieving college students and their coping with a significant life event (i.e., grieving death of someone close) via family communication connects with the preventive and educative-developmental roles of counseling psychologists. With regard to the preventative role, grieving during college can be an isolating experience (Parikh & Servaty-Seib, 2013; Servaty-Seib & Fajgenbaum, 2015) and may interfere with college students identity development

as well as their intrapersonal and interpersonal functioning (Cait, 2005; Cousins et al., 2017; Cupit, Servaty-Seib, Parikh, Walker, & Martin, 2016; Schultz, 2000). Findings from this study could be used to inform college students on ways to appropriately tap into family support and strengths to prevent grief-related negative functioning (e.g., complicated grief, social isolation, reduced academic performance). With regard to the educative-developmental role, findings from this study could be used to develop empirically-supported psychoeducational workshops and outreach materials for grieving college students, their family members, and other personnel working with grieving students on college campuses.

CHAPTER TWO: REVIEW OF THE LITERATURE

The overarching purpose of this study is to provide a more nuanced understanding of family grief communication among bereaved college students by attending to different communication factors and self-construal. In this chapter, I review the theory and empirical research that are relevant to this goal and inform the development of this study.

I begin by briefly reviewing the Reconceptualized Model of Multiple Dimensions of Identity (RMMDI; Jones & Abes, 2013) as a lens through which to understand how college students experience, adjust to, and cope with their grief. I then describe the impacts of grief on college students' identity development. Next, I describe the factors affecting college students' post-loss functioning and the strategies they seem to generally employ to cope with grief.

I then review the research on family grief communication, specifically the conflicting findings in current literature on the benefits and drawbacks of engaging in and avoiding family grief communication. Next, I describe communication theories (i.e., Relational Dialectics Theory, Communication Privacy Management Theory) that offer insights into the conflicting findings on family grief communication. Based on the propositions of these communication theories, I provide rationale for proposing my use of two communication indicators (i.e., frequency and quality of family communication) and four moderating variables in understanding family grief communication (i.e., personal willingness to communicate about grief, perceived family willingness to communicate about grief, grief communication avoidance for self-protection, grief communication avoidance for relationship protection).

Finally, I describe the Self-Construal Theory (Markus & Kitayama, 1991) and propose using self-construal in understanding how college students experience grief and engage in family communication. I conclude this chapter with my research questions and hypotheses.

College Students and Grief

Traditional-age college students between ages 18 and 24 are centrally focused on issues of identity and their planned futures. During this period of development, college students develop their career goals, negotiate and redefine their roles within their family of origin, and build lifelong relationships with romantic partners and friends. Abes, Jones, and McEwen's (2007) RMDDI offer a lens through which counseling psychologists can understand how college student experience and cope with their grief based on their development. RMMDI addresses college students' development across the intrapersonal, interpersonal, and cognitive domains, and emphasizes the interrelatedness among multiple identities.

Reconceptualized Model of Multiple Dimensions of Identity (RMMDI)

Abes et al. (2007) and Jones and Abes, 2013 describe the identity development of college students as a fluid and dynamic process. As college students develop their overall identities, socially constructed identities might move in and out of the core sense of self, depending on contextual influences and the changing meaning individuals make of these identities (Jones & Abes, 2013). As such, college students' identity development involves four interactive components: a core sense of self, multiple dimensions of social identities, contextual influences, and meaning-making filters (see Figure 1; Abes et al., 2007).

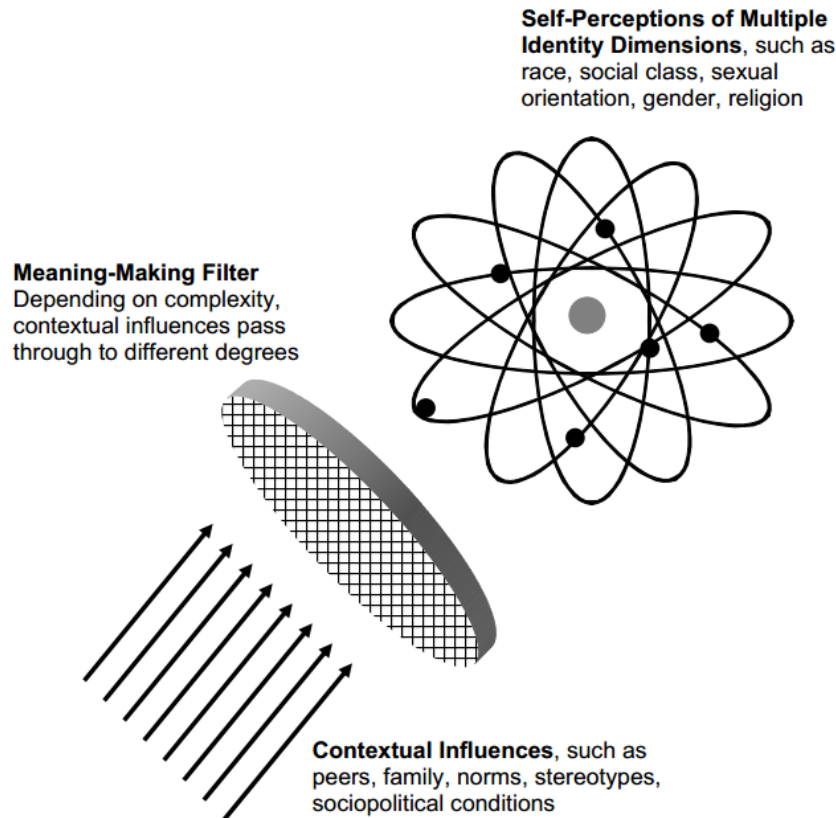


Figure 1. Reconceptualized Model of Multiple Dimensions of Identity (RMMDI; Abes et al., 2007)

The core sense of self refers to traits and behaviors that individuals find self-descriptive (Jones & McEwen, 2000). This core sense of self—sometimes labelled as the “personal identity” or the “inner identity” (p. 408)—is often linked to one or more social identities, but is more meaningful, more complex, and less susceptible to outside influence than social identities. For instance, a group of racially and religiously diverse undergraduate woman students studied by Jones and McEwen's (2000) described their core sense of self using terms such as “intelligent, kind, a good friend, compassionate, [and] independent” (p. 409), and resisted using external identities or labels (e.g., African American or racial minority for a Black female from Uganda) because they found these terms simplistic, inaccurate, and less relevant.

Surrounding this core sense of self are social identities, which have multiple intersecting dimensions. The multiple intersecting dimensions are roles or social categories that people claim as representative, and can include dimensions such as gender, race, sexual orientation, social class, culture, and religion (Abes et al., 2007; Jones & Abes, 2013; Jones & McEwen, 2000). These social identities cannot be understood in isolation and are highly related to each other. For instance, when discussing their identities as a woman, college students inevitably include other dimensions of their social identities, such as being a Jewish woman or a Black woman (Jones & McEwen, 2000). These social identity dimensions may be incorporated into and have varying salience to the core sense of self depending on two factors: contextual influence and meaning-making filter.

The contexts in which these identities are experienced can affect how college students perceive their identities and how salient each identity dimension is to them. These contextual influences include family background, sociocultural conditions (e.g., experiences with systems of privilege and differences, such as racism or sexism), sociopolitical environment, current experiences in college (e.g., critical incidents or classes, feedback from peers and significant others), career decisions and life planning, and peer influence (Abes et al., 2007; Jones & McEwen, 2000). For instance, students with underprivileged identities consider these underprivileged social identity dimensions as more salient than their privileged identities. Those who have encountered others with different identity dimensions also tend to consider different dimensions as more salient; for instance, a woman of European descent described an increased interest in her ethnicity and the Latin culture after volunteering in Mexico (Jones & McEwen, 2000).

In addition to contextual influences, college students' meaning-making filters are another element that affects their identity perception and salience. Meaning-making filters represent college students' cognitive capacities and can vary in complexity; as college students' cognitive abilities develop, their meaning-making capacities increase, and their meaning-making filters become more complex, deeper, and less permeable to contextual influences. As such, college students with more complex meaning-making filters or capacities are better able to filter contextual influences via their own meaning-making process. They are also more capable of determining how these contexts influence their identity and integrating any one identity dimension with other co-existing identity dimensions. Because of this integration, college students with more complex meaning-making filters are better able to develop congruent core and social identities that match with their ideal sense of self.

College students can progress along different levels of meaning-making capability (i.e., formulaic, transitional, and foundational) as they develop their core and social identities. Formulaic meaning-making is most dominant among traditional-age college students. Students at this level of meaning-making capacity make meaning through "concrete relationships to which one's interests are subordinated" (Abes et al., 2007, p. 4). Those with formulaic meaning-making ability are infrequently aware of the interconnectedness among multiple dimensions of their identity and define their identities just as external contexts define these identities without making meaning of their own. For instance, Abes et al. (2007) described a female lesbian college student who saw no connection between her identity as a lesbian and her social class, despite her wanting to achieve a higher social class than other lesbians she saw in the bars. Although always defining her identity in opposition to stereotypes, which was a contextual influence, this student

was adamant that none of these social identities and stereotypes influenced who she was as a person.

Transitional meaning-making is in between formulaic meaning-making and foundational meaning-making capacities. Students at the transitional meaning-making capacity often experience “unresolved conflicts between their developing internal voices and external influences” (Abes et al., 2007, p. 5). Those with transitional meaning-making ability tend to still define their identities via contextual influences (e.g., stereotype, social norms, family expectations), but are starting to realize the limitation of defining their identities by stereotypes. As such, they begin to experience identity conflicts and frustrations from the incongruence between external, contextual expectations, and evolving internal beliefs. For instance, another lesbian woman student in Abes et al.'s (2007) study described the conflicting roles of religion in her identity; she indicated religion as important to her core sense of self, while simultaneously questioned practicing religion in her life due to her family’s use of religion to disprove her lesbian identity.

Finally, at a higher level of meaning-making, foundational meaning-making, college students have the “ability to construct knowledge in a contextual world, ... to construct an internal identity that’s separate from external influences, and ... to engage in relationships without losing one’s internal identity” (Abes et al., 2007, p. 5). Those with foundational meaning-making ability resist stereotypes, and typically present their identity in a consistent way regardless of the external environment. With an internally generated identity, multiple identity dimensions co-exist peacefully. Students at this level reinterpret the contextual influence and ascribe their own internal meaning onto the context. For instance, another lesbian woman in Abes et al.'s (2007) study described multiple social identities as important and close to her core

sense of self. She displayed acute awareness of the role of discrimination, a contextual influence, in the saliency of her various social identities. Having ascribed her own meanings to her religious and sexual identities, she perceived no conflicts between these two social identities and resisted stereotypes regarding her sexual identity that typically might be associated with her religious beliefs.

In sum, as college students develop their identities, socially constructed identities might move in and out of the core sense of self, depending on contextual influences and the changing meaning individuals make of these identities (Jones & Abes, 2013). The contextual influences may come from their experiences with significant life events (e.g., planning for their careers, grieving the death of someone close), their family of origin, and larger sociocultural contexts. In addition, the complexity of their meaning-making filters may affect how they interpret and incorporate contextual influences into their perceptions of social and core identities.

Impacts of Grief on College Students' Identity Development

Traditional-age college students are at a critical junction in developing their identities. Yet, experiencing the death of someone often challenges their unexamined worldviews and assumptions, prompting college students to “relearn and reauthor their understanding of how the world works, their personal identity, and their life narrative” (Servaty-Seib & Taub, 2010, p. 958). Neimeyer and Anderson (2002) described this process as meaning reconstruction.

This meaning reconstruction process involves three key elements, including sense making, benefit finding, and identity change (Gillies & Neimeyer, 2006). When sense making, bereaved individuals “review, reevaluate, and rebuild pre-loss meaning structures” (p. 54) related to daily priorities, self-perceptions, view of the future, view of the world, interpersonal relationships, and faith and spirituality as they search for the meaning of the loss (Gillies &

Neimeyer, 2006). When benefit finding, bereaved individuals attempt to find a silver lining, benefits, or growth associated with the death loss. New meaning structures emerge as bereaved individuals make sense of and find benefit from the loss. If the new meaning structures are helpful in reducing distress, bereaved individuals may then incorporate the new meanings into their worldview and identity, thereby contributing to identity change (Gillies & Neimeyer, 2006). In essence, the meaning reconstruction process involves bereaved individuals engaging in an active process of finding or creating meaning in life and in the death. This meaning-making process is highly dependent on the interpersonal and cultural contexts that the bereaved individuals are in (Servaty-Seib & Taub, 2010). In addition, the meanings reconstructed may not be limited to cognitive, expressible meanings, but can often be implicit and inexpressible.

The identity changes that grieving students experience may center around two dimensions of self: the intrapersonal self and the interpersonal/relational self. The identity change on the intrapersonal dimension of self following a death loss may be in form of roles and abilities perceptions, daily activities and priorities, outlook on the future, and spiritual or philosophic views of the world (Gillies & Neimeyer, 2006). Schultz (2007) found that college students whose mothers died reported distinct selves before and after the death of their mothers. Their identity shifted from one of being a daughter who was taken care of to one of being an independent person who needed to take care of oneself, father, and siblings. Latent in this identity change were the discontinuity in their sense of self and the sentiment of feeling forced into adulthood and to become mature (Schultz, 2007; Servaty-Seib & Fajgenbaum, 2015). In the narratives of 10 college students who had experienced trauma, including trauma from the deaths of family and friend, Shalka (2016) found themes of self-questioning about physical and psychological ability post-loss; these college students also reported perceiving a changing inner

relationship with their emotional responses and physical bodies, such as reinterpreting strong emotional responses as resilience and being more self-compassionate towards the limits of their bodies (Shalka, 2016). In addition to positive changes, some college students also reported negative intrapersonal identity shifts. For instance, non-traditional college students from an urban commuter university reported negative identity changes (e.g., blaming self, seeing the death loss as become part of internal identity) after experiencing death of a family member, particularly when this family member died at a younger age (Norris-Bell, 2012).

The identity change on the interpersonal/relational dimension of self following a death loss may be in the form of changing beliefs about and needs associated with closeness in social relationships, actions in social communities, and careful engagement in social relationships (Gillies & Neimeyer, 2006; Schultz, 2007; Shalka, 2016). Bereaved college women in Schultz's (2007) study described shame in self and reported feeling inadequate, uncomfortable, and disconnected from peers because their peers could not understand or support their grieving experiences. Bereaved college students in Servaty-Seib and Fajgenbaum's (2015) study also described in their narratives that the forced maturity following a significant death loss further separated them from non-bereaved peers. Similarly, the bereaved college students in Shalka's (2016) study also reported changes in the relational self, such that they experienced simultaneous needs to get closer to others and to push them away, a sense of loneliness within existing the social relationships, and a sense of kinship with those with similar experiences. They also described experiences of having to constantly negotiate whether to disclose their experiences, navigate the vulnerability related to the disclosure, and decide whether they should conceal parts of their identity in social interactions (Shalka, 2016).

In sum, experiencing the death of someone close can be a contextual influence that affects the core and the socially constructed identities of college students. Depending on their meaning-making filters and the interpersonal and cultural contexts within which they live, college students may reevaluate their worldviews and sense of self, create meanings of the death loss, and incorporate new meaning structures into their identities. Resulting from this process, college students may experience positive and negative identity changes in both of their intrapersonal and interpersonal/relational selves. The differences in identity changes may be related to the characteristics of individuals (e.g., the grieving students, the people who died), of the relationship factors (e.g., relationships with living family members), or of the larger environmental factors (e.g., cultural expectations of grieving individuals).

Factors Affecting College Students' Post-Loss Functioning

College students adjust to and cope with grief uniquely based upon several factors. These factors may include demographic characteristics of the grievers, causes of death, time since death, perceived closeness to the person who died, and family relationships with living family members. Due to the uniqueness in grief expression and coping, the empirical findings on how these factors affect college students' post-loss functioning are often mixed.

Race. Empirical findings related to how race relates to college students' post-loss functioning are mixed. McNally (2014) compared the current and past grief intensity between White/European and Black college students and found that White/European college students displayed higher intensity of current grief than college students of color; the past grief intensity did not differ between White/European and Black students. On the reverse, Cousins et al. (2017) surveyed college students at a predominantly White/European large Midwestern university and found that underrepresented racial minority students (e.g., Asian Americans, Biracial or

Multiracial students, international students from Asian countries) displayed poorer college student functioning across four domains, including academic, social, emotional functioning and institutional attachment than their White/European majority peers.

Gender. Empirical findings on grief and gender differences are more consistent, such that college women seem to endorse poorer post-loss functioning than college men. For instance, Rings (2009) found that women college students endorsed greater prolonged grief symptoms than men. Cousins et al. (2017) supported this finding and found that college students who identified as women exhibited poorer emotional functioning than peers who identified as men. Similarly, women in Cupit et al.'s (2016) study reported they had poorer test performance, were less able to concentrate and participate in class, needed longer time to complete assignments, and visited home more frequently than men.

Religion and spirituality. Empirical findings related to how religion and spirituality affects college students' post-loss functioning are mixed. Some researchers found that college students perceived religious or spiritual coping as helpful, and that religious or spiritual college students coped better than non-religious or non-spiritual students. In a college student sample comprising of various religious beliefs (e.g., Protestant, Catholic, Jewish, Agnostic), Balk (1997) found that these students perceived religious practices helpful as they cope with their grief. Similarly, urban college students who identified as agnostics were more likely to sense-make by attributing the loss to the causes of death (e.g., died because of illness, lifestyle, genetics) than to religious or spiritual meanings (e.g., a lesson or a punishment from God, everything happens for a reason; Norris-Bell, 2012). These students who identified as agnostics also reported higher levels of bereavement-related depression than students who identified as religious, spiritual, or atheist. Other researchers found that religious coping may not be helpful for grieving students.

For example, Collison, Gramling, and Lord (2016) found that Christian-affiliated bereaved students engaged more frequently in negative religious coping (e.g., discontent towards God, pleading for direct intercessions from God) and became more likely to “make sense of the situation without relying on God” (p. 108) than non-religiously affiliated bereaved students.

Cause of death. Empirical findings related to how cause of death affects college students’ post-loss functioning are mixed. Some researchers argue that those bereaved by unanticipated or violent deaths exhibit poorer functioning than those bereaved by anticipated, natural deaths. For instance, Rings (2009) found that traditional and non-traditional college students bereaved by suicide, homicide, accident, or war endorsed greater prolonged grief symptoms than their counterparts bereaved by natural causes and medical conditions. Other researchers suggest bereavement by anticipated or natural deaths may be associated with equal, if not greater functioning difficulties. For instance, Manoogian, Vandenbroeke, Ringerling, Toray, and Cooley (2018) analyzed the open-ended responses of bereaved college students and found that all participants expressed equally painful grief experiences regardless of whether their grandparents died from expected, chronic conditions or from unexpected deaths. Yet another group of researchers argued that sense making is a stronger predictor of functioning issues among bereaved students than the objective causes of death. More specifically, Currier, Holland, and Neimeyer (2006) found that although college student bereaved by violent deaths (e.g., suicide, homicide, accident) reported higher complicated grief symptoms than peers bereaved by natural deaths (e.g., cancer, heart failure), this positive relationship was fully mediated by sense making.

Time since death. Empirical evidence on how time since death relates to grief intensity is also mixed. On the one hand, researchers suggested that time since death does not affect grief

experiences. For instance, Cousins et al. (2017) found that time since death was not significantly correlated with the academic, social, and personal or emotional functioning nor with institutional attachment among college students who experienced a death loss in the past two years. Cupit et al. (2016) also found that time since death was not associated with bereaved college students' academic experiences or their mental health difficulties. In a sample combining traditional and non-traditional college students, time since death was also not associated with the intensity of prolonged grief symptoms (Rings, 2009). On the other hand, Schwartz, Howell, and Jamison (2018) found that college students who experienced only a current death loss (i.e., less than 2 years) and students who experienced current as well as past death losses (i.e., more than 2 years) endorsed more prolonged grief symptoms than students who experienced only past death losses.

Perceived closeness to the deceased. Perceived closeness to the deceased has consistently been negatively associated with the post-loss functioning of bereaved college students. Pollard, Varga, Wheat, Mcclam, and Balentyne (in press) found that graduate students with closer relationships with the person who died endorsed more impact of loss across all dimensions, including emotional, physical, cognitive, behavioral, world assumptions and interpersonal functioning. Walker et al. (2011) collected data from a Christian university and found that although college students who were close to the deceased endorsed more mental health problems and increased negative changes than their peers with lower closeness, they did not use resources (e.g., counseling, campus ministry) more than did their less-close peers. Cupit et al. (2016) further supported Walker et al. (2011) with data from students enrolled in a secular and a public university. Cupit et al. (2016) found that bereaved college students close to the deceased reported greater academic and mental health difficulties and greater discomfort interacting with their professors than their less-close peers. These students also indicated greater

changes to their college experiences and priorities (e.g., increased meaning in college, more inclined to spend time with peers than on partying) than their less-close peers. It also appears that the effect of perceived closeness on college student post-loss functioning outweighs the effects of gender, age, time since the death loss, and kinship category (Bottomley, Smigelsky, Floyd, & Neimeyer, 2017).

Relationships with living family members. Another factor that affects bereaved college students' post-loss functioning are their relationships with living family members. Carmon, Western, Miller, Pearson, and Fowler (2010) surveyed university students and found that participants who considered their immediate family as conversation-oriented (i.e., a communication climate that encourage open communication) prior to the death of a family member experienced higher levels of personal growth after the death loss than their peers who considered their immediate family to be conformity-oriented (i.e., a communication climate that emphasizes homogenous attitudes, values, and beliefs among family members to maintain relationship harmony). On the other hand, Kissane et al. (2006) found that students who reported hostile family communication (e.g., highly conflictual, poor cohesion, poor expressiveness) at the time of the death exhibited high depression and poor social functioning 13 months after death, even when the communication process was facilitated by therapists in a family-focused grief therapy setting.

Grief Coping Strategies

College students cope with grief and bereavement via various strategies. Among these grief coping strategies, social support has been consistently cited as a crucial adaptive coping strategy. Yilmaz (2014) found that bereaved Turkish college students who engaged in problem-focused coping, religious coping, and coping through social support reported higher

posttraumatic growth; avoidant coping was not associated with posttraumatic growth. Social support was the strongest predictor among the three coping strategies positively associated with posttraumatic growth, which Yilmaz (2014) attributed to the communal rituals in Turkish culture (e.g., visiting the home of the deceased and bringing food to the family members of the deceased). Mason Grissom (2017) interviewed eight African American college students who lost their close friends by sudden violent deaths (e.g., gun violence, suicide, murder), and found themes of emotional, behavioral, spiritual, and social coping. Similar to Yilmaz (2014), Mason Grissom (2017) again found that social support (e.g., offering a listening ear, offering encouraging messages, and distracting them from their grief) was the most important coping strategy; the support was most helpful when it came from individuals they had relationships with prior to the death or those who knew the deceased friend well. Cohen and Samp (2018) interviewed bereaved adolescents and college students and found through their narratives that participants were more likely to disclose their grief and less inclined to use internally focused coping strategies, such as emotion- or problem-focused coping, when they felt supported by friends and family members. Together, these studies suggest that social support from peer and family is an important grief-focused coping strategy that may affect grieving students' post-loss functioning.

Although social support is an important source of support, bereaved college students often report difficulty seeking and receiving such support from their non-bereaved peers. Bereaved students interviewed by Seah and Wilson's (2011) reported feeling lonely as they grieved in the college environment. This sense of loneliness, feeling different, feeling minimized when discussing their grief experiences with peers were consistently found in studies involving bereaved college students (Balk, 1997; Schultz, 2000; Servaty-Seib & Fajgenbaum, 2015;

Silverman, 1987). Such challenges seeking support on campus may be connected to the lack of emotional maturity, limited perspective-taking ability to understand and support grieving peers, and the differences in worldview and life priority due to the life experience death losses (McEwen, Higgins, & Pipes, 1982; Parikh & Servaty-Seib, 2013). Unfortunately, changes in peer support and relationships characterized by decreased involvement in campus activities and increased isolation from peers were positively associated with mental health difficulties among bereaved college students (Cupit et al., 2016).

Family support becomes especially important in the post-loss functioning of bereaved college students when they face difficulties in seeking support from their peers. Cousins et al. (2017) surveyed bereaved and non-bereaved college students and found that bereaved students with low family support displayed poorer social functioning and lower institutional attachment (i.e., general thoughts about and commitment towards college) than their bereaved peers with more family support. Wolchik et al. (2008) conducted a six-year longitudinal study with parentally bereaved youth and found that only support from the non-bereaved parents, but not support from other adults or siblings, significantly predicted youth's posttraumatic growth. Newton (2012) found that some parentally bereaved young adults reported receiving satisfying support from extended family members, whereas many reported receiving low support and experiencing conflicts with siblings. Factors such as grief differences, ages of the siblings, the developmental phase of each sibling, the dynamics of the family, proximity to one another, and the relationship prior to the death contributed to sibling conflicts (Newton, 2012).

College Students and Family Grief Communication

Although social support, particularly family support, is an important coping resource for bereaved college students, few studies have examined family grief communication within the

bereaved college student population. Due to the dearth of research focusing on family grief communication among bereaved college students, I first review the adaptive and maladaptive functions of open family grief communication in the general bereaved adult population. I then explain the conflicting findings using two communication theories that have been frequently used in family communication studies with college students: RDT and CPM. I also review other significant family communication factors that have been studied within general adult population who has been bereaved or has experienced significant life events, and within college student population that are not specific to the grief context.

Family Grief Communication among Bereaved Adults

Extant research has found family communication as a major factor related to the grief reactions and family satisfaction of bereaved adults. For instance, Traylor et al. (2003) conducted a six-month, longitudinal, and quantitative study with bereaved adults and found that their grief reactions six months after a death loss were negatively associated with family cohesion, family affect, and open family communication. In addition, Traylor et al. (2003) found that bereaved adults' understanding of their family structure and processing of difficulty experiences, two months after the death, predicted lower grief symptoms at six months post-loss. In a review of family grief communication literature from 1970 to 2004, Bosticco and Thompson (2005) found meaning-making and family role reorganization are higher among bereaved families that communicate and engage in storytelling. Kamm and Vandenberg (2001) studied couples whose child died and found that open emotional communication was positively related marital satisfaction and negatively related to grief reactions. Together, these studies suggest that open family grief communication is adaptive and facilitates healthier post-loss family relationships.

Although family grief communication seems significant, recent studies have cautioned against one-sided promotion of open communication, as family members may not agree on how much they engage in or desire for grief communication. Some bereaved parents (i.e., experienced death of a child) avoided communicating about grief to shield themselves from potential hurtful messages that invalidate grief coping and to avoid reminding their family members the pain of bereavement (McBride & Toller, 2011b). Toller and Braithwaite (2009) found that some family members preferred to experience their grief privately and not express their grief in their family. Hooghe, Neimeyer, and Rober (2011) conducted a case study with Flemish parents whose child died and found that the couple expressed ambivalence towards verbalizing their grief and valued connection through silence. Basinger et al. (2016) interviewed college students and found that these bereaved young adults perceived their grief as a private experience, created privacy rules to protect their grief, and experienced emotional and relationship turbulence when their grief privacy rules were violated. Together, these findings suggest the need for a more complex examination of the meanings and potential adaptiveness in the silence surrounding family grief communication.

Overview of Communication Theories

Family communication in the wake of bereavement serves complex and sometimes conflicting functions as grieving individuals cope with the death within their family system. Communicating about grief among family members may be a source of support for grieving individuals, but may also be a stressor that promotes greater strain (Hooghe et al., 2011; Mohamed Hussin et al., 2018). Research regarding family grief communication needs to be built upon a solid communication theoretical foundation to capture the complexity in family grief communication. Communication theories, including Baxter and Montgomery's (1996) RDT and

Petronio's (2002) CPM, provide a foundation from which to examine the complexity in family grief communication.

Relational Dialectics Theory (RDT). RDT was developed in connection with the theory of dialogism developed by the Russian philosopher, Mikhail Bakhtin (1981). RDT adopts Bakhtin's (1981) the belief that a dialogue involves two contradictory processes of differentiation and fusion. A dialogue requires two individuals to maintain the uniqueness of their individual perspectives (i.e., differentiation), and simultaneously requires the two individuals to understand each other's perspectives and merge their perspectives (i.e., fusion). If there is only differentiation but not fusion, or vice versa, there is no dialogue but rather a monologue (Baxter & Montgomery, 1996b).

Using this foundation, Baxter and Montgomery (1996) proposed that communication in relationships is marked with tensions between two contradictory forces (i.e., dialectical tension): unity (i.e., centripetal) and differences (i.e., centrifugal). When two individuals communicate, they experience contradictory needs for self-disclosure (i.e., expression) and privacy protection (i.e., nonexpression), as well as contradictory needs for connection with (i.e., integration) and autonomy from (i.e., separation) each other (Baxter, 2004).

RDT also posits that these contradictory needs are in a constant flux and are not resolvable (Baxter, 2004). At the core of RDT is the belief that "meaning-making is a process that emerges from the struggle of different, often competing, discourses" (Baxter & Braithwaite, 2010, p. 65). As such, understanding the flux of contradictory needs, along with the specific contexts and meanings of such communication, should provide a more comprehensive understanding of communication in relationships.

RDT has been applied across many marital and family studies since its conception in the 1990s, including renewal of marital vows (Baxter & Braithwaite, 1995), perceptions of stepfamily relationships (Baxter, Braithwaite, Bryant, & Wagner, 2004), and family communication (Baxter & Braithwaite, 2010). Specifically, a few qualitative studies have examined family grief communication using the RDT lens with adult participants. For instance, based on interviews with bereaved parents, McBride and Toller (2011) found that these parents refrained from communicating about grief to shield themselves from hurtful or threatening messages and other family members from pain associated with the bereavement; at the same time, they also chose specific family members who they considered as “safe spaces” to disclose their grief. Toller and Braithwaite (2009) found that bereaved parents experienced simultaneous needs to grieve together and apart; they also reported simultaneous needs to be open and closed while communicating about the death of their children to share the pain and “provide space” (p. 268) for each other. Although not directly indicated by the authors of these studies, I observed a similar theme focused on how these grieving participants reported simultaneous needs for openness and avoidance when communicating about their grief.

Communication Privacy Management Theory (CPM). Another communication theory that could also help explain the conflicting findings regarding the adaptive and maladaptive functions of open family grief communication is CPM. Similar to RDT, at the core of CPM is the assumption that individuals experience simultaneous needs to be connected and to remain separated from their family members. Individuals may manage their privacy by choosing whether, how, and to what extent they disclose private information in family relationships. Private information is defined as information that could contribute to feelings of vulnerability when disclosed (Petronio, 2002b), such as sexuality (Schrimshaw, Downing, Cohn, & Siegel,

2014), infertility (Bute & Vik, 2010), parental deployment (Owlett, Richards, Wilson, DeFreese, & Roberts, 2015), and grief (Basinger et al., 2016; Cohen & Samp, 2018). CPM consists of three elements: privacy ownership, privacy rules, and boundary turbulence.

First, CPM posits that individuals claim ownership over their private information (i.e., privacy ownership), just as they own any other tangible possessions, such as money, phones, and office equipment. Individuals can decide whether to share this information with others or restrict information to prevent others from knowing. When individuals share this private information with family members, family members then become the co-owners of the private information. In the context of grief, Basinger et al. (2016) interviewed bereaved college students and found that not only did they conceptualize grief as private information they owned, they also made decisions about whether to protect or to share their grief with their family members. Because grief can be considered private information that each grieving individual owns (Basinger et al., 2016), the willingness of grieving individuals and their family members to share this private information and communicate with each other about their grief may affect how much grieving individuals communicate about their grief and how beneficial such communication is.

Second, CPM posits that individuals control others' access to private information by creating implicit or explicit privacy rules regarding the sharing and restricting of private information (i.e., privacy control). The privacy rules are guided by core criteria and catalyst criteria. Core criteria are “stable gauges used to make choices about privacy rules” (Petronio, 2013, p. 10), such as family culture prior to the bereavement. Catalyst criteria are events that may trigger privacy rule changes, such as the death of a family member (Toller & McBride, 2013), changes in social support (Cohen & Samp, 2018), and an end-of-life conversation (Keeley & Generous, 2015). The privacy rule changes triggered by catalyst criteria depend on

individuals' motivation and cost-benefit analysis (Petronio, 2013). In the context of grief, Toller and McBride (2013) interviewed parents about their decision to discuss a recent death loss in the family with their children. Many parents established new privacy rules to selectively discuss the death with their children, which were different from their family of origin's privacy rules to conceal the death. For example, some parents established the privacy rules of openly discussing death with their children to normalize "death as a part of life" and to "model grief" (p. 11) while leaving out details that might not be age-appropriate for their children (Toller & McBride, 2013).

Privacy rules are established based on various factors, including gender, assessment for the risk and benefit ratio, motivation, context, and culture (Petronio, 2010). Motivationally, because the grief of each individual is not only owned by the self, but also co-owned by others including family members, family members may each establish different personal privacy rules and uphold different degrees of willingness to share their grief. They may also withhold their grief by avoiding grief-related communication due to factors such as personal discomfort, perceived family discomfort, relationship protection, or self-preservation (Basinger et al., 2016; Toller & Braithwaite, 2009; Toller & McBride, 2013). Contextually, societal stigma, such as shame, guilt, and perceived preventability attached to suicidal death, may also affect bereaved family members' willingness to communicate about their grief and the family grief communication privacy rules they establish (Maple, Edwards, Plummer, & Minichiello, 2010a). Culturally, individuals from the Caucasian American culture tend to hold more permeable privacy boundaries because this culture at large values open communication in interpersonal relationships (Derlega, Metts, Petronio, & Margulis, 1993). College students from societies upholding Confucianism values (e.g. Taiwan, China, Hong Kong, Japan, and Korea) tend to

value and emphasize relational hierarchy, such as respect for older generations; thus, privacy boundaries among generations are likely firmer (Zhang, Lin, Nonaka, & Beom, 2005).

Finally, CPM also posits that individuals experience boundary turbulence when they or the co-owners of private information violate the agreed upon privacy rules (Petronio, 2002b). Such boundary turbulence may be an intentional violation of privacy rules by sharing the private information with others against the agreed-upon rules. It may also be mistakes from accidentally sharing information against the agreed-upon rules. Boundary turbulence may also be caused by fuzzy boundaries because individuals or the co-owners were unclear about what could and could not be shared. In the context of grief, bereaved college students reported boundary turbulence when family grief communication went against their expectations, such as when they felt compelled to communicate when they wanted to avoid discussing their grief (Basinger et al., 2016). These students also reported boundary turbulence when their family members talked too much or too little about the deceased individual, described the negative characteristics of or unhappy memories associated with the deceased individual instead of the positive ones, and talked about the deceased individual in inappropriate settings (e.g., in the public; Basinger et al., 2016). Such turbulence occurred repeatedly over time and contributed to uncomfortable family exchanges and sometimes more distant family relationship (Basinger et al., 2016).

Factors Affecting Family Grief Communication

I propose four communication factors that have empirical significance and theoretical relevance for family grief communication and to the grieving college student population. Drawing on empirical studies on family communication, I argue that frequency of family communication and perceived quality of family communication are important communication factors in family grief communication.

Drawing from RDT, I argue that the dialectical tension between openness and avoidance—conceptualized as willingness to communicate in this study—is another significant family grief communication factor, as grieving individuals experience simultaneous needs for openness and avoidance in family grief communication. Drawing from CPM, I argue that the reasons for communication avoidance are an important family grief communication factor, as grief may be conceptualized as private information; individuals may have different privacy rules and motivations or reasons for maintaining the rules that govern this private information.

These family communication factors have been frequently studied within the general adult population with bereavement or other significant life event experiences, as well as within the general college student population without a bereavement focus. As such, for each of the communication factors, I review empirical evidence from the family communication research within the general adult population, followed by evidence within the general college student population. I then use empirical evidence from college student grief literature to argue for the need to examine and explore how these family communication factors may be important among grieving college students and their post-loss functioning.

Frequency of family communication. Frequency of family communication, particularly grief-specific family communication, is important for the grieving college students for multiple reasons. Bereaved college students describe benefit from talking about their grieving experiences with and receiving support from other grieving peers and family members (Balk, 1997; Servaty-Seib & Fajgenbaum, 2015). Nonetheless, these bereaved students often could not discuss their grief experiences with friends and family members, as they were unsure whether non-grieving peers understood their experiences (Parikh & Servaty-Seib, 2013), were concerned about receiving unhelpful messages or sensing discomfort from their peers (Balk, 1997; Schultz, 2007),

and were worried about negatively affecting their family members (Cait, 2005; Jakoby, 2014; Schultz, 2007). Although college students indicated finding grief-specific communication helpful, an overwhelming number of grieving students reported having limited opportunities to communicate about their grief and expressed feeling isolated in their grief experiences, particularly in college environments (Balk, 1997; Schultz, 2007; Seah & Wilson, 2011; Servaty-Seib & Fajgenbaum, 2015; Shalka, 2016). As such, frequency of family grief communication may be an important factor for the post-loss functioning of grieving college students.

In family communication studies, frequency of family communication is related to a variety of intrapersonal and interpersonal functioning variables, including coping, emotional functioning, and engagement in risky behaviors. Nonetheless, the associations are often mixed and dependent on the participant demographics and the context of the communication.

Among adults who have experienced significant life events, frequency of family communication is often linked to adaptive functioning. For instance, Hawkins (2016) interviewed nondeployed spouses and found that frequent communication with deployed spouses was the most important factor that contributed to nondeployed spouses' ability to cope and ability to maintain a positive attitude. Similarly, Houston, Pfefferbaum, Sherman, Melson, and Brand (2013) found that frequency of communication with deployed spouses during deployment was positively associated with emotional functioning and negatively associated with stress reactions and negative temper among non-deployed spouses. Walston (2009) interviewed mother-daughter dyads following mother's cancer diagnosis and found that both mothers and daughters reported more frequent communication after the initial diagnosis and during cancer treatment, particularly about the mother's health and treatment. Although both mothers and daughters indicated a wish to focus more on the daughters, the dyads still welcomed the frequent

communication focusing on the mother and perceived such communication as support in this joint battle against cancer (Walston, 2009).

Among college students in a non-bereavement context, it is unclear how the frequency of family communication across different difficult topics relates to college students' functioning. On the one hand, some researchers found that frequency of family communication was not associated with any student functioning variables. For instance, LaBrie et al. (2016) conducted an intervention study and found that the frequency of parent-initiated communication about alcohol use was not related to college students' weekly alcohol consumption amount nor to their number of heavy episodic drinks. On the other hand, some researchers found that frequency of family communication was related to negative attitudes and functioning among college students in a non-bereavement context, such as negative attitudes towards protected sex and positive attitudes towards drinking. For instance, college students who describe more frequent discussions about condom use and abstinence with their mothers endorsed lower confidence in the protective abilities of condoms and more conservative sexual attitudes (Lefkowitz & Espinosa-Hernandez, 2007). Napper, Hummer, Lac, and LaBrie (2014) found a positive association between college students' positive attitudes toward drinking and parent-initiated communication about alcohol. Similarly, students who endorsed more frequent family discussions about the negative aspects of drinking consumed more alcohol and experienced more negative consequences from drinking.

In sum, these findings suggest that frequency of communication is an important but insufficient measure to understand grieving college students' post-loss functioning. It is imperative to include other communication indicators, such as communication quality, to ensure

a more comprehensive examination of how family communication is related to college students' post-loss functioning.

Quality of family communication. Quality of family communication has been consistently and positively associated with adaptive functioning among adults who have experienced significant life events, grieving adults, and college students. With regard to grieving adults, Hooghe, Rosenblatt, and Rober (2018) found that bereaved couples whose child died communicated nonverbally about their grief by being emotionally attuned to each other and by observing each other; such emotional and relational attunement characterized communication sensitivity and respect, and served the functions of protecting themselves and their partners. Albuquerque, Pereira, and Narciso (2016) reviewed literature on parental bereavement and couple's relationship from 2000 to 2014 and reported that high quality communication, indicated by openness, supportiveness, availability, understanding, and non-judgmental presence, was related to more positive couple relationships. With regard to adults who have experienced significant life events, Koenig Kellas and Trees (2006) found that sense-making of difficult family experiences were more pronounced when the communication among student-family triads was characterized by verbal and nonverbal attentiveness, warmth, perspective-taking, and dynamic or smooth turn-taking. Houston et al. (2013) found that non-deployed spouses endorsed lower stress and better emotional responses before and during deployment when they indicated having better communication with deployed spouses about general issues and deployment-related topics. Together, these studies suggest that communication qualities, such as sensitivity to others' needs, openness, understanding, nonjudgmental presence, verbal and nonverbal attentiveness, warmth, perspective-taking, and smooth turn-taking, are associated with various

functioning variables of adults who are bereaved or are experiencing significant life events, including grief symptoms and relational satisfaction.

Among college students in a non-bereavement context, quality of family communication is a consistent and significant contributor to college students' functioning. For instance, Serido, Shim, Mishra, and Tang (2010) found that quality of parental financial communication was negatively associated with college students' financial stress and general psychological distress, and positively associated with their subjective well-being; these associations were mediated by future-oriented financial coping behaviors, such as budgeting and saving. These findings suggest that as college students transition into young adulthood, high quality family communication about finances provides them with the opportunity to practice their financial coping behaviors, thereby contributing to their financial and general well-being (Serido et al., 2010). In addition, college students who endorsed higher quality sex communication with their mothers, indicated more openness and comfort, less concern about condoms interfering with sexual pleasure, and fewer barriers to condom use (Lefkowitz & Espinosa-Hernandez, 2007). Given positive attitudes toward condom use are associated with increased safe sex practice, students who have higher quality family communication about sex may be less at risk for sexually transmitted diseases. Emmers-Sommer (2004) also found that quality of communication between romantic partners was positively associated with romantic relationship intimacy and satisfaction among college students. Finally, Segrin, Wosidlo, Givertz, Bauer, and Murphy (2012) surveyed parent-college student dyads and found that quality of communication (i.e., more open, less problematic) was positively associated with family satisfaction among college students. Although the empirical findings above are not grief-specific, they suggest that college students' perceptions of the

quality of family communication may be related to their beliefs toward and engagement in adaptive behaviors, and thus their general functioning.

Willingness to communicate. Although openness is often a construct used in family communication and grief research, I choose to focus on willingness to communicate as a specific measure family communication openness based on Kirkman, Rosenthal, and Feldman's (2005) recommendation. Kirkman et al. qualitatively studied parent-adolescent communication about sexuality and found that “openness” in communication carried complex meanings for the parents and the adolescents, particularly regarding difficult topics. More specifically, although the families indicated that “openness is the basis of all good family communication” (p. 63), many stated that openness involved parents being willing and adolescents sensing parents’ willingness to answer questions about sexuality (Kirkman et al., 2006). Openness in family communication also involved maintaining an open-minded attitude towards the topic discussed (e.g., seeing sex before marriage as appropriate) and balancing privacy and openness. Given the complexity in the meaning of “openness,” Kirkman et al. (2005) cautioned future researchers against the unexamined use of open family communication, and recommended future researchers to specify and investigate clearly defined components of open family communication. As such, I will use willingness to communicate as a more specific a measure of family communication openness.

Willingness to communicate has not been used in family communication research within the grief context, but has received considerable attention in family communication research pertaining to organ donation, particularly among college students. For instance, Feeley (2007) conducted a literature review on organ donation issues among college students and reported that students’ willingness to talk about organ donation with their families often leads to more frequent discussion about organ donations with their family members. Such communication

willingness may be enhanced via interventions, such as providing students with questions and information brochures they can use to spark family communication about organ donation (Feeley, 2007). In addition, frequency of family communication about organ donation and willingness to communicate is also related to the communication culture within a family (Feeley, 2007). Park, Yun, Smith, and Morrison (2010) found that college students who perceived their family as highly conformity-oriented were less willing to communicate about organ donation with their families than their peers who perceived their family to be less conformity-oriented, even if they held positive attitudes towards organ donation.

Reasons for communication avoidance. Among grieving adults and adults who have experienced challenging life events, communication avoidance has been negatively associated with family relationship satisfaction, and the different reasons for such avoidance have moderated this negative relationship. In a sample of adult breast cancer survivors, Donovan-Kicken and Caughlin (2010) found that higher personal avoidance and perceived partner avoidance in discussing cancer were associated with lower relationship satisfaction; perceived partner avoidance had a stronger effect than personal avoidance. Of the reasons for avoiding cancer discussion, self-protection consistently strengthened the negative association between personal and perceived partner avoidance and relationship satisfaction. Donovan-Kicken and Caughlin (2010) found that adult breast cancer survivors reported lower relationship satisfaction when they avoided talking about cancer, especially when their reasons were to protect themselves from being judged and minimized by their partners. In connection with the current study, it may be possible that grieving individuals could avoid communicating about their grief to prevent explicit disclosure of grief differences, to protect themselves and to preserve their interpersonal relationships.

Among college students within a non-bereavement context, communication avoidance is a common strategy used in college students' interactions with family members (Guerrero & Afifi, 1995). Topics related to sex, deep conversations, and relationships with biological parents within stepfamilies are cited as most frequently avoided topics among college students (Golish & Caughlin, 2002a; Heisler, 2005). For instance, high school seniors and college students were more likely to avoid discussing negative life experiences (e.g., failures, events that were emotionally traumatic or unpleasant to discuss) with parents than with siblings (Guerrero & Afifi, 1995). In addition, avoidance due to relationship protection was cited as a reason for topic avoidance more with parents than with siblings, whereas avoidance due to self-protection was significantly associated with avoidance regardless of the relationship types (e.g., sibling to sibling, parent to child) in a family unit (Guerrero & Afifi, 1995).

Although college students often engage in communication avoidance, such communication avoidance has been negatively associated with relationship satisfaction; this negative association is moderated by the reasons for such communication avoidance. Using a college student sample, Caughlin and Afifi (2004) found a negative association between topic avoidance and relationship satisfaction in parent-child dyads and dating heterosexual couples. The reasons for topic avoidance moderated this negative association, such that avoidance to protect relationships weakened, whereas avoidance due to lack of closeness amplified the negative association between topic avoidance and satisfaction in both relationship types. Similarly, when college students reported feeling less close to their romantic partners, they perceived more reasons to avoid discussing different topics, particularly if the reasons were

related to protecting themselves and believing that their partners would be unresponsive (Dillow, Dunleavy, & Weber, 2009).

In sum, communication avoidance has been negatively associated with relationship satisfaction across adult and college student populations in nongrief-specific contexts. A similar pattern of communication avoidance may exist when college students experience death loss-related grief, contributing to lower satisfaction across different relationships, including family relationship satisfaction. Nonetheless, it is important to assess the specific reasons individuals have for avoiding communication, as avoidance for self-protection reasons and for relationship protection reasons may be associated with relationship satisfaction to different extents.

Grief, Family Communication, and Self-Construal

In addition to communication factors, self-construal may also help in explaining the complex and sometimes conflicting functions of family grief communication. The Self-Construal Theory (Markus & Kitayama, 1991) is valuable in that it explores the connections between larger societal culture and development of the sense of self. Most relevant to the present study, the theory also has implications on how individuals experience grief and approach or avoid communication. By exploring how individuals with different self-construal profiles perceive and engage in family grief communication, this study could contribute to the family grief communication literature among bereaved college students by clarifying how different types of self-construal may be related to different ways of communicating about grief.

Below, I first describe the Self-Construal Theory (SCT; Markus & Kitayama, 1991). I then review the empirical evidence that indicates how self-construal is relevant to grief, as well as to cognitive, affective, motivational, and communicative processes.

Self-Construal Theory

Self-construal refers to “how individuals define and make meaning of the self” (p. 143) in terms of how much their sense of self is connected with or separated with others (Markus & Kitayama, 1991). Markus and Kitayama (1991) have identified two types of self-construal: interdependent and independent. Individuals with high interdependent self-construal are more likely to define themselves as a part of the social groups they belong to and come from collectivistic cultures (Markus & Kitayama, 1991). As such, their sense of self tends to be more flexible and variable according to the social contexts they are in. On the other hand, individuals with high independent self-construal are more likely to define their inner selves as autonomous and independent and come from individualistic cultures (Markus & Kitayama, 1991). Because of the beliefs in the uniqueness of each person’s internal attributes, their sense of self tends to be more bounded and invariable regardless of the social contexts (Markus & Kitayama, 1991).

SCT was originally proposed as a way to explain cross-cultural differences in behaviors among individuals from collectivistic and individualistic cultures. Nonetheless, recent self-construal research has expanded the theory and found that interdependent and independent self-construal are not mutually exclusive and can co-exist (e.g., Cross, Hardin, & Gercek-Swing, 2011; Gudykunst & Lee, 2003). Although interdependent self-construal is more prominent in collectivistic countries independent self-construal is more common in individualistic countries (Markus & Kitayama, 1991), both types of self-construal can be represented in the subcultures of a mainstream culture. That is, individuals who live in in a predominant individualistic country but belong to a collectivist subculture may endorse higher interdependent self-construal than independent self-construal, and vice versa.

Empirical evidence supports Markus and Kitayama's (1991) preposition that interdependent and independent self-construal are not mutually exclusive. For instance,

Gudykunst et al. (1996) found that Australian college students endorsed higher interdependent self-construal and lower independent self-construal than Japanese college students, despite that dominant Australian culture is individualistic and dominant Japanese culture is collectivistic. Santamaría, de la Mata, Hansen, and Ruiz (2010) compared the self-descriptions of college students from Denmark, Spain, and Mexico using the shortened Twenty Statement Test (Kuhn & McPartland, 1954). They found that Danish college students described themselves less frequently with private attributes unrelated to other people (e.g., “I am an honest person”). Instead, Danish college students described themselves more frequently with interdependent attributes (e.g., “I am someone who likes to help people”), despite the idea that Denmark was hypothesized as the most individualistic culture among Denmark, Spain, and Mexico. Together, these findings suggest that interdependent-independent self-construal may not correspond to collectivism-individualism, and both types of self-construal can be represented in the subcultures of a mainstream culture.

In addition, empirical evidence also suggest that interdependent and independent self-construal represent two distinct, orthogonal dimensions. For instance, Singelis (1994) conducted confirmatory analyses based on data from students at the University of Hawaii and found a two-factor structure of the Self-Construal Scale, supporting Markus and Kitayama's (1991) preposition of a two-dimensional model of self-construal. Kam, Zhou, Zhang, and Ho (2012) also conducted a confirmatory analysis based on data from college students in China and found that interdependent self-construal was slightly and negatively correlated with independent self-construal, suggesting that the two self-construal types were related but different dimensions of self-construal. Together, these findings suggest interdependent and independent self-construal are not bipolar opposites; instead, these two self-construal types are two distinct dimensions, as

individuals can endorse high levels of both self-construal types, as well low levels of both self-construal types.

Furthermore, self-construal researchers have recently argued for a multidimensional perspective on self-construal, and advocated for considerations of other mediating variables, such as personal values, socialization, and national socioeconomic development (Gudykunst et al., 1996; Harb & Smith, 2008; Matsumoto, 1999; Vignoles et al., 2016). Based on two large multinational surveys conducted on both high school and college students (study one) and adults (study two), Vignoles et al. (2016) proposed, tested, and validated a seven-dimensional model of interdependent and independent self-construal. These dimensions are bipolar and represent different domains of personal and social functioning, one of which includes communicating with others (i.e., harmony as interdependent way of being and self-expression as independent way of being). After conducting a cross-cultural region comparison, Vignoles et al. (2016) concluded that groups from different cultural regions emphasized different ways of being interdependent and independent, varying based on nation-level cultural factors (i.e., individualism-collectivism, national socioeconomic development, and religious heritage).

Self-Construal and Grief

Very few researchers have explored the relationship between self-construal and grief. Tsui (Ho & Tsui, 2002) analyzed interviews with 10 bereaved Hong Kong individuals to develop a pool of grief reaction items. She compared this list to other grief reaction inventories developed based on U.S. samples (e.g., Texas Revised Inventory of Grief; Faschingbauer, Devaul, & Zisook, 1977, Inventory of Complicated Grief; Prigerson et al., 1995) and found a unique set of grief reaction items focusing on social roles and relationships that was highly connected with the

nature of interdependent self-construal (e.g., “I would continue to uphold my responsibilities.”; “I would worry that others would be affected by my grief.”).

In addition, Papa and Lancaster (2016) surveyed adults who had experienced death and non-death losses in the past year, and coded participants’ responses to the Twenty Statement Tests (Kuhn & McPartland, 1954)—20 open-ended statements starting with “I am ...”—as representing independent or interdependent self-construal. They found that bereaved participants who described themselves with more independent self-statements (e.g., “I am myself.”; p. 52) exhibited fewer prolonged grief symptoms and lower identity disruption when compared to participants with more interdependent self-statements (e.g., “I am a woman.”; p. 52).

Kim and Hicks (2015) conducted a longitudinal study with a nationally representative group of bereaved parents in the 48 contiguous states of the United States. They found that only interdependent self-construal moderated the negative relationship between losing a child and purpose in life 10 years after the initial data collection. More specifically, experiencing the death of a child significantly lowered bereaved parents’ purpose in life only among parents who endorsed high levels of interdependent self-construal, but not among parents with low levels of interdependent self-construal. Independent self-construal, on the other hand, did not moderate the negative relationship between losing a child and purpose in life.

Albeit limited, these three studies suggest that self-construal may be related to how individuals experience grief and family relationship. More specifically, those who endorse higher interdependent self-construal may experience more grief symptoms and stronger identity disruption when bereaved because their sense of identity is more defined by social relationships. This association might be accentuated among college students especially given they are at a critical period of identity development (Jones & Abes, 2013). In addition, those high on

interdependent self-construal may also express grief more as social responsibilities in their respective families, such as through supporting and not burdening living family members, to maintain harmony and satisfaction in family relationship.

Self-Construal and Cognitive, Affective, Motivational, and Communicative Processes

Cognition. Individuals with differing self-construal may differ in cognitive processes, such as sensitivity to contexts, variability of sense of self, and nonsocial cognitive activities (Cross et al., 2011; Markus & Kitayama, 1991). For instance, compared to students who were primed with independent self-construal (i.e., read text that used “I” and “my” as pronouns), Haberstroh, Oyserman, Schwarz, Kühnen, and Ji (2002) found that German college students who were primed with interdependent self-construal (i.e., read text that used “we” and “our” as pronouns) were more sensitive to contextual information presented to them and hence less likely to provide others with redundant information when communicating. Konrath, Bushman, and Grove (2009) conducted survey and experimental studies and found that college students who endorsed high independence and low interdependence were more likely to perceive “the self, social world, and physical environment as composed of many disconnected elements” (p. 1198) as opposed to students who endorsed low independence and high interdependence.

Affection. Variations in self-construal are also related to different affective processes, such as emotional expression, sensitivity, and distress. Markus and Kitayama (1991) predicted that different conditions can elicit the same emotion depending on self-construal and individuals with different self-construal can experience different emotions to varying degrees. This claim was empirically supported by Neumann, Steinhäuser, and Roeder (2009), who found that German college students exhibited higher pride when exposed to the achievement of others after being primed to think about similarities with other people (i.e., interdependent orientation), and

higher pride when exposed to the achievement of self after being primed to reflect on their differences from other people (i.e., independent orientation). Su, Lee, and Oishi (2013) found that White/European American college students who suppressed socially disengaging emotions (e.g., anger, pride) exhibited higher depressive symptoms when they endorsed high levels of independent self-construal. In addition, Liu and Goto (2007) found an interaction effect between interdependent and independent self-construal on mental distress, such that Asian American adolescents with a strong interdependent but a weak independent orientation endorsed higher mental distress than those with a strong independent but a weak interdependent orientation.

Motivation. Motivation also varies with different self-construal orientations. Markus and Kitayama (1991) predicted that individuals with high interdependent self-construal would be more likely to be motivated by social motives and exert control by changing themselves to fit the environment, but less likely to regard themselves positively to prevent standing out. Individuals with high independent self-construal, on the other hand, would be more likely to be motivated by personal motives, exert control by changing the environment to fit personal needs, and more likely to regard themselves positively for self-enhancement (Cross et al., 2011; Markus & Kitayama, 1991).

Empirically, Lalwani and Shavitt (2009) supported this prediction, as they conducted 12 experiments and found that college students with interdependent self-construal were more motivated and ready to present themselves as socially sensitive and appropriate, and less motivated and ready to present themselves as skillful and capable than college students with independent self-construal. Due to these beliefs, individuals with strong interdependent self-construal are more likely to use cooperative strategies in interpersonal relationship, whereas individuals with strong independent self-construal are more likely to use confrontation or

domination in interpersonal relationship (Cross et al., 2011). Through findings from both survey and experimental studies, van Horen, Pöhlmann, Koeppen, and Hannover (2008) found that college students who endorsed independence orientation or were primed with independent self-knowledge (i.e., asked to circle pronouns “I” and “my” before completing the survey) perceived their personal goals as more important than social goals. The reverse was also true, such that college students who endorsed or were primed with interdependence rated social goals to be more important and relevant than personal goals (van Horen et al., 2008).

Communication. Self-construal has been associated with different interpersonal behaviors, including communication styles. Gudykunst et al. (1996) surveyed college students from Australia, United States, Japan, and South Korea, and found that regardless of their nationalities, college students who endorsed higher interdependent self-construal were more sensitive to others’ needs and feelings in interpersonal communication; they were also more likely to communicate via indirect and ambiguous messages and to endorse more negative attitudes toward conversational silence. On the other hand, college students who endorsed higher independent self-construal were more dramatic but precise in verbal and nonverbal expression; they were also more open to disclosing personal information and to expressing emotions and less likely to use indirect messages in communication (Gudykunst et al., 1996b). Hara and Kim (2004) further supported Gudykunst et al. (1996) as they found that college students with high interdependent self-construal were more likely than students with high independent self-construal to interpret indirect meanings in other’s messages and express themselves indirectly.

Self-construal has also been associated with argumentativeness and communication apprehension. Merz (2009) surveyed college students at a metropolitan university in the United States and found that students who viewed themselves as independent, as opposed to

interdependent, were more likely to perceive that they had control over a communication episode, and in turn they were more likely to be argumentative and less apprehensive when communicating. Contrary to their hypothesis, whereas students who viewed themselves as interdependent perceived that external factors (i.e., fate or powerful others) had control over the communication episode, they also perceived some level of internal control over the communication episode; in turn, they also experienced some levels of communication apprehension (Merz, 2009). After conducting a follow-up focus group discussion, Merz (2009) concluded that students with predominant interdependent self-construal grew up in families that emphasized collectivistic values but were also acculturated to larger societal cultures that emphasized individualistic cultures, thereby explaining their simultaneous endorsement of internal and external control.

Summary. As interdependent and independent self-construal represents two distinct, orthogonal dimensions, individuals may endorse high levels of both self-construal types, or low levels of both self-construal types. In addition, individuals' cognitive, affective, motivational, and communicative processes may also differ based on their self-construal profiles. Individuals high on interdependent self-construal may be more sensitive to contextual information, prefer socially engaging emotions (e.g., appreciation, sadness, guilt), more motivated to maintain group harmony, and more likely to be group-oriented in social interactions. As such, those high on interdependent self-construal may be more motivated to avoid family grief communication to protect their family relationship especially if communicating about grief may threaten their family harmony. On the other hand, individuals high on independent self-construal may be less sensitive to contextual information, prefer socially disengaging emotions (e.g., pride, anger), more motivated to enhance personal benefits or reduce personal harms, and more willing to

confront others. As such, those high on independent self-construal may be more motivated to avoid family grief communication to protect themselves, especially if communicating about grief with their family may bring about uncomfortable or hurtful feelings.

Summary, Research Questions, and Hypotheses

The overarching purpose of this study was to provide a more nuanced understanding of family grief communication among bereaved college students by attending to different communication factors and self-construal. More specifically, the current research had five goals, which corresponded to the five research questions below.

- RQ1: Are frequency and quality of family grief communication associated with grieving college students' functioning (i.e., grief reactions, family satisfaction)?

H1a: Frequency of family grief communication will be negatively associated with grief reactions

H1b: Frequency of family grief communication will be positively associated with family satisfaction

H1c: Quality of family grief communication will be negatively associated with grief reactions

H1d: Quality of family grief communication will be positively associated with family satisfaction

- RQ2: Are the willingness to communicate about grief (i.e., personal, perceived family, and interaction between personal and family) and reasons for grief communication avoidance (i.e., self-protection, relationship protection) associated with grieving college students' functioning (i.e., grief reactions, family satisfaction)?

H2a: Personal willingness to communicate about grief will be negatively associated with grief reactions

H2b: Personal willingness to communicate about grief will be positively associated with family satisfaction

- H2c: Perceived family willingness to communicate about grief will be negatively associated with grief reactions
- H2d: Perceived family willingness to communicate about grief will be positively associated with family satisfaction
- H2e: The interaction between personal willingness and perceived family willingness will be associated with family satisfaction, such that high personal willingness/low perceived family willingness, as well as low personal willingness/high perceived family willingness, will be positively associated with grief reactions.
- H2f: The interaction between personal willingness and perceived family willingness will be associated with family satisfaction, such that high personal willingness/low perceived family willingness, as well as low personal willingness/high perceived family willingness, will be negatively associated with family satisfaction.
- H2g: Grief communication avoidance for self-protection reason will be positively associated with grief reactions
- H2h: Grief communication avoidance for self-protection reason will be negatively associated with family satisfaction
- H2i: Grief communication avoidance for relationship protection will be negatively associated with grief reactions
- H2j: Grief communication avoidance for relationship protection will be positively associated with family satisfaction
- RQ3 (exploratory): Does (a) the quality of family grief communication, (b) willingness to communicate about grief (i.e., personal, perceived family), and (c) reasons for grief communication avoidance (i.e., self-protection, relationship protection) moderate the relationship between the frequency of family grief communication and grieving college students' functioning (i.e., grief reactions, family satisfaction)?
 - RQ4 (exploratory): Are interdependent self-construal, independent self-construal, and the interaction between interdependent and independent self-construal associated with grieving college students' functioning (i.e., grief reactions, family satisfaction)?
 - RQ5 (exploratory): Do interdependent self-construal and independent self-construal moderate the relationship between reasons for grief communication avoidance (i.e., self-

protection, relationship protection) and grieving college students' functioning (i.e., grief reactions, family satisfaction)?

My first and second research questions are descriptive/predictive; I developed the research questions and hypotheses corresponding to the first two goals based on past empirical findings. My third, fourth, and fifth research questions are exploratory; I have, therefore, not offered hypothesis to correspond with these three goals, as the existing theoretical and empirical literature do not offer direction regarding the expected findings.

CHAPTER 3: METHOD

In this chapter, I describe the methodology of the present study. I first provide an overview of the participant characteristics and the measures selected. Then, I review the recruitment and data collection procedure.

Participants

Demographic Characteristics

Participants were 369 college students who had experienced the deaths of one or more individuals whom they considered to be family within the past two years. Of the sample, 67% ($n = 246$) were women and 33% ($n = 123$) were men; none identified as transgender woman, transgender man, genderqueer, or other self-identified gender. College student participants were between the ages of 18 and 24 years ($M = 20.15$, $SD = 1.68$). The sample consisted of 71% ($n = 262$) White/European Americans, 14% ($n = 51$) Asians or Asian Americans, 6% ($n = 24$) Hispanic/Latinx, 5% ($n = 21$) biracial or multiracial, 1% ($n = 3$) Black or African Americans, 1% ($n = 3$) Middle Eastern or Middle Eastern Americans, 1% ($n = 3$) self-specified (e.g., Indian, South Asian, prefer not to answer), and 1% ($n = 2$) Native Hawaiians or other Pacific Islanders. About 7% ($n = 26$) were international students from nations such as Bangladesh, India, Malaysia, and South Korea. Regarding sexual orientation, 76% ($n = 283$) identified as heterosexual, 8% ($n = 32$) as bisexual, 6% ($n = 22$) as asexual, 2% ($n = 6$) as questioning, 1% ($n = 4$) as pansexual, 1% ($n = 3$) as lesbian, 1% ($n = 2$) as gay, 1% ($n = 2$) as queer, 2% ($n = 5$) were of self-specified sexual orientations (e.g., fluid, demisexual), 1% ($n = 4$) preferred not to answer, and 1% ($n = 2$) left the sexual orientation question empty.

Among the college student participants, 33% ($n = 121$) were first-years, 21% ($n = 78$) were sophomores, 17% ($n = 64$) were juniors, 19% ($n = 71$) were seniors, and 10% ($n = 35$) were graduate students. Of the sample, 41% ($n = 153$) identified as Christians, 18% ($n = 68$) as Catholics, 12% ($n = 44$) as non-religious/non-spiritual, 11% ($n = 41$) as agnostic, 9% ($n = 32$) as atheist, 3% ($n = 10$) as Hindu, 2% ($n = 7$) as Muslims, 1% ($n = 1$) as Buddhists, and 3% ($n = 11$) as self-specified (e.g., Jewish, naturalistic spiritual, Greek Orthodox). When prompted to indicate how important religion or spirituality were to these participants, 22% ($n = 81$) indicated very important, 21% ($n = 76$) important, 23% ($n = 85$) neutral, 16% ($n = 59$) unimportant, and 18% ($n = 68$) very unimportant. For their self-perceived social class, participants rated themselves between 0 and 100 ($M = 65.68$, $SD = 17.57$), with 0 being the lowest or worst-off and 100 being the highest or most well-off. About 90% ($n = 331$) reported not having any long-lasting or chronic conditions, and 10% ($n = 28$) indicated having such conditions (e.g., Attention Deficit Disorder, Panic Disorder, Major Depression, thyroid issues, hearing loss).

Participants in this study significantly differed from the Purdue University student enrollment in Spring 2019 with regards to gender $\chi^2 (1, N = 369) = 79.00, p < .001$, race, $\chi^2 (7, N = 369) = 30.31, p < .001$, residency status $\chi^2 (1, N = 369) = 39.94, p < .001$, and year in school $\chi^2 (4, N = 369) = 221.76, p < .001$. Specifically, men, Black or African American, international, and non-first-year students (i.e., sophomore to graduate or professional) were underrepresented in this study (see Table 1.).

Table 1. Comparison of Sample to Population

Variable	Sample	Population
Gender		
Men	33%	56%
Women	67%	44%
Race		
White	71%	73%
Asian or Asian American	14%	10%
Hispanic or Latinx	6%	6%
Biracial or Multiracial	5%	4%
Black or African American	1%	4%
Self-Specified	2%	3%
American Indian	0%	1%
Native Hawaiians or other Pacific Islanders	1%	1%
Residency		
Domestic	93%	80%
International	7%	20%
Year in School		
First-Year	33%	10%
Sophomore	21%	17%
Junior	17%	18%
Senior	19%	29%
Graduate or Professional	10%	25%

Note. Comparison of the current sample ($N = 369$) to Spring 2019 Purdue University student enrollment ($N = 40,884$). Data for the current sample was collected in Spring 2019. Data for the Spring 2019 Purdue University student enrollment was retrieved from <https://www.purdue.edu/datadigest/>. Race percentages of the Purdue University student enrollment was adjusted to include only domestic students.

Death-Related Characteristics

Participants reported experiencing between one to six death losses in the past two years ($M = 1.58$, $SD = .85$), with 60% ($n = 222$) experiencing one death loss and 40% ($n = 147$) experiencing two or more death losses. Students who experienced two or more death losses were

directed to respond to the following death-related characteristics based on the closest person who died. The closest person who died in the past two years were grandparents or grandparent figures (58%; $n = 213$), aunts or uncles (15%; $n = 54$), parents or parent figures (9%; $n = 34$), cousins (6%; $n = 24$), siblings or stepsiblings (2%; $n = 9$), close friends (2%; $n = 7$), in-laws (1%; $n = 5$), family friends (1%; $n = 5$), nieces and nephews (1%; $n = 4$), children or stepchildren (1%; $n = 1$), and self-specified individuals (4%; $n = 13$; e.g., great uncle, great grandparents, godmother). When prompted to self-classify their relationship with the person closest to them who had died, 57% ($n = 209$) identified them as an immediate family member and 43% ($n = 160$) identified them as an extended family member. The majority (84%; $n = 310$) of participants indicated not living with their loved one when they died.

The mean time since death of the closest person was 11.14 months ($SD = 7.03$). Causes of death included old age (30%; $n = 111$), prolonged illness (24%; $n = 91$; e.g., cancer), other illnesses (14%; $n = 52$; e.g., Alzheimer's disease, Parkinson's disease, heart failure), sudden illness (13%; $n = 47$; e.g., stroke, heart attack), accident (8%; $n = 28$; e.g., automobile), suicide (5%; $n = 20$), drug overdose (3%; $n = 11$), murder or homicide (1%; $n = 2$), self-specified (2%; $n = 7$; e.g., childbirth, surgery complications, unknown death cause, infection). With regard to emotional closeness to the person who died, participants rated their closeness an average of 5.01 ($SD = 1.25$), with 1 = *very emotionally distant* and 7 = *very emotionally close*.

Measures

Demographic and Death-Related Questionnaire

This questionnaire consisted of items focusing on participant demographics and death-related characteristics (see Appendix A). Participant demographics I included were: age, gender, racial/ethnic identity, sexual orientation, international student status, academic status, religious

affiliation, perceived importance of religion and spirituality, perceived social class, and presence of long-lasting or chronic conditions. In addition, I also collected death-related characteristics, including number of deaths experienced in the past two years, relationship to the person who died, self-classified relationship to the person who died (i.e., immediate, extended, others), living status prior to the death, time since death, and the cause of death.

Scale of Emotional Closeness (SEC)

The SEC (Servaty-Seib & Pistole, 2007; see Appendix B) measures the extent to which individuals perceive emotional closeness with the person who died. This scale consists of seven items on a single factor and each item is rated on a 7-point scale (1 = *Very strongly disagree* to 7 = *Very strongly agree*). Sample items include “I felt I could share my most intimate feelings with this person” and “I kept my distance emotionally from this person.” Two items are reverse scored. Higher scores indicate stronger emotional closeness with the person who died.

With regard to psychometrics, Servaty-Seib and Pistole (2007) reported a Cronbach’s alpha of .87 and mean inter-item correlation of .47 in their original validation study of the SEC with adolescents. McNally (2014) reported Cronbach’s alphas of .94 with a bereaved college student sample. The Cronbach’s alpha of SEC scores using the current sample was $\alpha = .90$. In terms of validity, scores on the SEC have been positively associated with past and current grief reactions (Servaty-Seib & Pistole, 2007), perceived social support from friends (McNally, 2014), and college students’ academic and social adjustment (Cousins et al., 2017).

Core Bereavement Items (CBI)

The CBI (Burnett, Middleton, Raphael, & Martinek, 1997; see Appendix C) measures normative grief experiences, including the dimensions of (a) images and thoughts, (b) acute

separation, and (c) grief. This measure assesses my dependent variable of grief reactions. This scale consists of 17 items and each item is rated on a 4-point scale (0 = *Never* to 3 = *A lot of the time*). Sample items include “Do you experience images of the events surrounding X’s death?” “Do you find yourself missing X?” and “Do reminders of X such as photos, situations, music, places etc. cause you to feel loneliness?” Higher scores on CBI indicate more intensive normative grief reactions.

With regard to psychometrics, Burnett et al. (1997) reported a Cronbach’s alpha of .90 in their original validation study of the CBI. In addition, Holland, Nam, and Neimeyer (2013) evaluated the psychometric properties of CBI and found a two-factor model with good internal consistencies: Thoughts ($\alpha = .87$), Emotional Response ($\alpha = .93$), and Overall ($\alpha = .95$). The Cronbach’s alpha of CBI scores using the current samples was $\alpha = .96$. In terms of validity, scores on the CBI have been negatively associated with sense-making and benefit finding (Keesee, Currier, & Neimeyer, 2008), and positively associated with complicated grief (Keesee et al., 2008) and attachment avoidance (Jerga, Wilkinson, & O’Kearney, 2007). Burnett et al. (1997) also established discriminant validity of CBI, such that CBI scores of participants who experienced unexpected losses were higher than those who experienced expected losses.

Family Satisfaction Scale (FSS)

The FSS (Olson, 2008; see Appendix D) assesses the degree to which family members feel happy and fulfilled with each other. This measure assesses my dependent variable of post-loss family satisfaction. The FSS consists of 10 items and each item is rated on a 5-point scale (1 = *very dissatisfied* to 5 = *very satisfied*). The scale begins with the instruction “Using the rating scale below, how satisfied are you with the following?” For the purpose of this study and after consulting with the grief and loss team, I modified the instruction to “Using the rating scale

below, how satisfied are you with the following in your family since the death loss?" I sought feedback from an external expert panel on whether the instruction modification was appropriate (see Appendix J). Two members of the expert panel expressed concerns regarding the construct of family satisfaction, as this construct assessed two different variables (i.e., happiness and fulfillment) and contained an element (i.e., quality of family communication) that was assessed as a separate construct in this study. Another expert suggested that I instruct participants to focus on a specific death loss. After incorporating the panel's feedback, the final instruction was "Using the rating scale below, how satisfied are you with the following in your family since the death of *the family member with whom you were the closest?*" Sample items include "the degree of closeness between family members," "your family's ability to be flexible," and "the amount of time you spend together as a family." Higher scores indicate greater levels of post-loss family satisfaction.

Regarding psychometrics, Olson (2008) reported a Cronbach's alpha of .92 and a test-retest reliability of .85 for FSS. The Cronbach's alpha of FSS scores using the current sample was $\alpha = .96$. In terms of validity, scores on the FSS have been positively associated with family communication (Craddock, 2001; Givertz & Segrin, 2014; Olson, 2008) and quality of life (Olson, 2008), and negatively associated with stress (Lightsey & Sweeney, 2008).

Family Grief Communication Frequency (FGCF)

FGCF is modelled after Emmers-Sommer's (2004) Communication Quantity measure, which assesses the frequency and length of interactions using four mediums of communication (i.e., face-to-face, phone, email, letter). The original measure consists of eight items and is open-ended, such that participants can input the numerical figures to indicate frequency and length of family communication for each medium per week. Emmers-Sommer (2004) later dropped the

email and letter options due to low endorsement rates. Total communication frequency is computed by summing the total number of communication frequency across mediums. Total communication length is computed by summing the minutes of each communication episode across mediums and then dividing the total minutes by 60 minutes so that the communication length is presented in hours. A composite FGCF score is computed by multiplying the total communication frequency and total communication length. Higher scores on the scale indicate more frequent and longer family communication.

For the purpose of this study, I used two of Emmers-Sommer's (2004) mediums (i.e., face-to-face and phone-voice calling) and added four other mediums suggested by Toma and Choi (2016; i.e., texting, instant messaging, video chatting, self-identified; see Appendix E). Texting is defined as “SMS sent through smartphone applications such as IMessage, Whatsapp, and Blackberry message”; instant messaging (IM) is defined as “online conversations using applications such as G-Chat, Facebook chat and text-only Skype chat”; and video chatting is defined as communication using Facetime, Skype, etc. (Toma & Choi, 2016, p. 4).

After consulting with the grief and loss research team and considering that college students are likely geographically away from their family members, I modified the instruction of communication frequency from “Approximately how many days a week do you use this medium to communicate with your family?” to “Approximately how many days a week do you use this medium to communicate about your grief experiences with your family?” I also modified the instruction of communication length from “On the days that you use this medium, how much time do you spend using this medium to communicate with your partner, in minutes?” to “On the days that you use this medium, how much time do you spend using this medium to communicate about your grief experiences with your family, in minutes?” I sought feedback from an external

expert panel on whether the item and instruction modifications were appropriate (see Appendix J). The panel indicated the modifications were appropriate; hence, I made no further modification.

With regard to psychometrics, no reliability information was reported due to the numerical nature of the measure. I attempted to contact the author but was unable to retrieve the reliability information of this measure due to non-response (T. Emmers-Sommer, personal communication, June 6, 2018). In terms of validity, communication frequency was positively associated with college students' intimacy and relationship satisfaction in romantic relationships (Emmers-Sommer, 2004; Kirkpatrick, 2007), and negatively associated with spousal stress reactions in deployed military families (Houston et al., 2013).

Family Grief Communication Quality (FGCQ)

The FGCQ is adapted from the Communication Quality subscale of the Iowa Communication Record (ICR; Duck, Rutt, Hoy, & Strekc, 1991) and measures perceived quality of family communication about grief experiences. This scale consists of 10 items and each item is rated on a 9-point scale with anchors of opposite adjectives on each end. The original scale begins with the instruction "Describe the quality of communication." After consultation with the grief and loss team, I modified the instruction to "Describe the quality of communication when you and your family communicate about your grief experiences" (see Appendix F). In addition, I sought feedback from an external expert panel on whether the instruction modification was appropriate (see Appendix J). Most experts indicated the modification was appropriate, and one expert suggested that I include the word stem "My family is..." at the end of the instruction. Hence, after incorporating the panel's feedback, the final instruction read "Describe the quality of communication when you and your family communicate about your grief experiences. *My*

family communication about our grief experience is:" Sample items include "strained (1) vs. relaxed (9)," "great deal of misunderstanding (1) vs. great deal of understanding (9)," and "poor listening (1) vs. attentive (9)." Higher scores on FGCQ indicate more positive family grief communication quality.

With regard to psychometrics of the original ICR Communication Quality subscale, Duck et al. (1991) reported Cronbach's alphas of .88 for the overall college students sample ($n = 1,585$), .84 for men ($n = 828$), and .90 for women ($n = 757$). The Cronbach's alpha for FGCQ scores using the current sample was $\alpha = .89$. In terms of validity, the original Communication Quality subscale of the ICR has been related to gender with women reporting higher communication quality than men (Duck et al., 1991; Ramirez & Broneck, 2009), and relationship types (Ramirez & Broneck, 2009b), such that communication quality was higher with best friends than with romantic partners and acquaintances. The original Communication Quality subscale was also positively associated with intimacy and relational satisfaction (Emmers-Sommer, 2004a).

Willingness to Communicate about Grief - Personal or Family (WCG-P/F)

Willingness to Engage in Family Discussion about Organ Donation (Park et al., 2010) measures the degree to which an individual is willing to communicate with their family members about organ donation. This measure consists of three items and each item is rated on a 5-point scale (1 = *strongly disagree* to 5 = *strongly agree*). Sample items include "I am willing to talk to my family about my decision to become an organ donor" and "I would feel comfortable talking to my family about becoming an organ donor." Higher scores on the scale indicate greater willingness to communicate about organ donation.

For the purpose of this study and after consultation with the grief and loss research team, I changed the phrase “become(ing) an organ donor” to “my grief experiences” (see Appendix G). For instance, I changed the item “I am willing to talk to my family about my decision to become an organ donor” to “I am willing to talk with my family about my grief experiences.” These items were named WCG-Personal. I also created three parallel items to tap into participants’ perceptions of their family members’ willingness to communicate; these items were named WCG-Family. An example of a newly created item is “My family is willing to talk with me about their grief experiences.” I also added an instruction that read “The following statements are about you and your family. Please indicate how much you agree with the following statements.”

I sought feedback from an external expert panel regarding the appropriateness of the item and instruction modification (see Appendix J). Most experts indicated the item and instruction modifications, including the parallel items for family (i.e., WCF-Family), were appropriate. An expert expressed concern regarding the word “talk” in the items and stated that communication could be nonverbal and indirect. To address this expert’s feedback, I changed the words “talk to” to “communicate with” in all items. For example, I changed the item “I know how to talk to my family about my grief experiences” to “I know how to communicate with my family about my grief experiences.” For the instruction, the same expert asked that I clarify whether I want the participants to respond based on general grief communication or grief communication in relation to the closest person who died. Hence, the final instruction after incorporating her feedback was “The following statements are about you and your family's communication about grief in general. Please indicate how much you agree with the following statements.”

With regard to psychometrics, Park et al. (2010) reported a Cronbach's alpha of .91 on the original scale using confirmatory factor analysis and data from 461 undergraduate students enrolled at a large Midwestern university. The Cronbach's alphas using the current sample were $\alpha = .89$ for WCG-Personal and $\alpha = .92$ for WCG-Family. Willingness to engage in family discussion about organ donation was positively associated with actual engagement in family discussion about organ donation (Park et al., 2010), knowledge about organ donation (Morgan & Miller, 2002), and positive attitudes about organ donation (Morgan & Miller, 2002).

Reasons for Grief Communication Avoidance (RGA)

The Reasons for Topic Avoidance scale (RTA; Caughlin & Afifi, 2004c; Guerrero & Afifi, 1995) measures the reasons behind individuals' desire and behaviors aimed at avoiding intimate self-disclosure. RTA consists of 12 items grouped into 4 subscales, including Relationship Protection (3 items, e.g., "It might ruin our relationship"), Self-Protection (4 items, e.g., "It would leave me too vulnerable"), Partner Unresponsiveness (4 items, e.g., "This person would view the issue as trivial"), and Social Inappropriateness (1 item, i.e., "It would be socially inappropriate to discuss this topic"). Each item is rated on a 7-point scale (1 = *strongly disagree* to 7 = *strongly agree*). Higher scores on each subscale indicate greater avoidance for each reason.

In the current study, I used only the Relationship Protection and the Self-Protection subscales because these two reasons align with interdependent and independent self-construal (see Appendix H). For purposes of the present study and after consulting with the grief and loss research team, I modified the instructions from "Please rate whether you agree or disagree with the following reasons for topic avoidance" to "We would like to know the reasons why you choose to avoid discussing grief with your family. For this next scale, keep your family in mind

and think about why you avoid discussing grief. I avoid discussing grief with my family because...”

I sought feedback from an external expert panel regarding the appropriateness of the instruction modification (see Appendix J). An expert expressed concern that the instruction might potentially lead the participants to think only of avoidance; she asked that I add a question to assess how much grieving students avoid family grief communication and include a preface that not all individuals avoid grief communication. To address her feedback, I adapted a question from the Topic Avoidance Scale (TAS; Guerrero & Afifi, 1995), which was “To what extent do you avoid discussing your grief experiences with your family?” The question was rated on a 7-point scale (1 = *always avoid* to 7 = *never avoid*) and was presented before the RGA items. After incorporating her feedback, the final instruction read “*Some people do not avoid communication about grief with their family, whereas others may avoid such communication.* To what extent do you avoid discussing your grief experiences with your family?” After participants responded to this question, I presented them with the instruction “We would like to know the reasons why you choose to avoid discussing grief with your family. For this next scale, keep your family in mind and think about why you avoid discussing grief. I avoid discussing grief with my family because...”, followed by the RGA items. In addition, another expert also provided additional feedback and expressed concern on a double-barreled item. To incorporate her feedback, I changed the item from “My family might *evaluate or judge* my behavior” to “My family might *judge* my behavior.”

With regard to psychometrics, Guerrero and Afifi (1995) reported Cronbach’s alphas of .82 for Relationship Protection and .84 for Self-Protection subscales in a sample of 169 high school and college students sample. The Cronbach’s alphas for Relationship Protection and Self-

Protection subscale scores using the current sample were $\alpha = .89$ and $\alpha = .76$, respectively. In terms of validity, RTA has been found to moderate the relationship between topic avoidance (e.g., relationship issues, negative life experiences) and relational satisfaction (Caughlin & Afifi, 2004c). In addition, RTA has been found to be similar across family relationship types (e.g., siblings and parent-child dyads reported similar reasons for topic avoidance; Golish & Caughlin, 2002), but different between genders (e.g., young adults cited partner unresponsiveness as a more important reason for men than women; Guerrero & Afifi, 1995).

Self-Construal Scale-Short (SCS)

The SCS-Short (Gudykunst & Lee, 2003; see Appendix I) consists of two subscales and assesses the extent to which individuals see themselves as connected or embedded in the groups they belong to (i.e., interdependent self-construal), or as unique and separate from others (i.e., independent self-construal); these two subscales represent the two distinct, orthogonal dimensions of self-construal. This measure consists of 12 items grouped into two subscales, including Interdependent (six items; e.g., “I will sacrifice my self-interest for the benefit of my group”) and Independent (six items; e.g., “My personal identity is important to me”). Each item is rated on a 7-point Likert scale (1 = *strongly disagree* to 7 = *strongly agree*). Higher scores indicate greater identification with interdependent or independent self-construal.

With regard to psychometrics, Gudykunst et al. (1996) reported Cronbach’s alphas of .80 for the Interdependent self-construal subscale and .82 for the Independent self-construal subscale. Kim and Kim (2014) used only the Interdependent subscale in a study with 180 college students in South Korea and reported a Cronbach’s alpha of .83. Cronbach’s alphas for scores using the current sample were $\alpha = .78$ for the Interdependent and $\alpha = .73$ for the Independent subscales. In terms of validity, scores on the Interdependent subscale were positively associated

with sensitivity and concerns for others' feelings in communication (Gudykunst et al., 1996b), as well as more attribution to situation or contextual influences (Singelis, 1994). On the other hand, scores on Independent subscale were negatively associated with the use of indirect messages (Emmers-Sommer, 2004a) and positively associated with emphasis on maintaining one's opinion over the majority opinion (Park, 2001).

Procedure

I first obtained expedited approval from the Institutional Review Board (IRB) of Purdue University and began participant recruitment upon obtaining approval from the IRB. I recruited participants by requesting the Office of the Registrar at Purdue University to send out the recruitment email (see Appendix K). to 20,000 students via the Direct Student Email request and a reminder email a week later (see Appendix L).

The study inclusion criteria included: aged 18 and 24 and having experienced the death of one or more family members or individuals they consider to be family members (i.e., may not be blood relation) in the past two years. My decision to include participants who lost individuals who they considered to be family members but who might not be biologically related to them was based on two rationale and was intended to enhance cultural inclusivity of family communication. First, based on my own cultural background, I considered my god-family with whom I am not biologically related to be immediate family members. Second, I found that many grieving college students include those who have traditionally been considered as extended family members (e.g., grandparents), or close family friends as their immediate family members (Liew & Servaty-Seib, 2018).

Once participants received the recruitment email, they clicked on the online survey link to access the survey. They were first presented with an online information sheet (see Appendix

M). If they chose to participate in the study, they were asked to provide consent by clicking “I wish to participate in this study” button at the end of the information sheet. If they chose not to participate, they could either close the link or indicate “I do not wish to participate in this study” to be directed to the end of the survey. Participants who chose to continue proceeded to complete the survey. The mean time participants took to complete the survey was 30.95 minutes ($SD = 125.02$ minutes). At the end of the survey, they had the option to enter a random drawing for one of four \$20 Amazon.com gift cards. Those who chose to enter the random drawing provided their names and email addresses.

To ensure confidentiality, (a) names and email addresses of participants who entered the random gift card drawing were stored in a separate database; (b) no identifying information, including IP addresses, was collected in the survey; (c) only my research advisor and I had access to the data to protect confidentiality; and (d) data collected were stored on password-protected computers.

CHAPTER 4: RESULTS

In this chapter, I present the results of this study. First, I describe the data screening procedures and preliminary analyses I undertook. Then, I detail the results of the primary analyses I used to address my research questions and to test the hypotheses.

Data Screening and Preliminary Analyses

First, I screened participants based on consent, inclusion criteria, missing responses, and self-reported data validity. Of the 20,000 students who received the study invitation, 801 participants (4%) clicked into the online survey. Of these 801 participants, I first excluded 16 (2%) participants who did not provide consent and 42 (5%) participants who exited the survey after providing consent. I then excluded a total of 177 (22%) participants who did not meet the inclusion criteria, including 113 participants who did not experience any deaths in the past two years, 14 participants who were bereaved more than two years ago, and 50 participants who reported deaths of friends or other individuals they did not consider to be family members. I also excluded 141 (18%) participants who missed one or more measures and 38 (5%) participants who responded “no” to the question “in your honest opinion, should we use the data you have provided in this survey?”

Second, I conducted analyses on whether the remaining missing responses for each primary measure were missing at random. Based on visual inspection, I identified 44 missing data points (i.e., 2 missing data points from post-loss family satisfaction, 1 from grief reactions, 35 from family grief communication frequency, 2 from family grief communication quality, 3 from perceived family willingness to communicate about grief, 1 from independent self-construal). There were 35 missing data points from family grief communication frequency

because participants responded to the first half of this measure (i.e., used each medium at least one day per week to communicate about grief with their family), but left the second half of this measure empty (i.e., did not indicated how many minutes they spent using this medium to communicate with their family). The Little's MCAR test was insignificant ($p = .98$), suggesting that the missing data points were missing at random. I then imputed the missing data points using linear trend at point in SPSS, including the missing data points from family grief communication frequency.

Third, I checked for univariate and multivariate outliers using boxplot, Z-scores, and Mahalanobis Distance respectively. For univariate outliers, I first visually examined the boxplots of all the continuous primary variables; I deemed values more than three interquartile ranges and marked with asterisk (*) on the boxplots as extreme univariate outliers. The only variable with extreme outliers was the frequency of family communication. Per the recommendation of Aguinis, Gottfredson, and Joo (2013), I further examined these extreme outliers visually and quantitatively using Z-scores. I identified and excluded responses from nine participants, including one who input an impossible value (i.e., 1001 hours per week when there was only 168 hours per week), one who indicated in the open response box that he/she/they did not understand the question, and seven whose Z-scores on frequency of communication were greater than ± 3.29 . For the multivariate outliers, I used Mahalanobis Distance and identified and excluded responses from nine participants who emerged as extreme multivariate outliers. As a result, after data screening, the final sample size of this study constituted 369 participants. The final sample represented 2% of the 20,000 students who received the recruitment email and 46% of 801 students who clicked into the survey.

Fourth, I examined the data for normality, linearity, homoscedasticity, and multicollinearity to ensure that the data met the assumptions of multiple regressions, the primary statistical analysis used in this study. With regard to normality, the data of a variable were considered skewed if the skewness statistics of the variable divided by standard error of the statistics was more than ± 2.58 (Cohen, Cohen, West, & Aiken, 2003). Based on Cohen et al.'s (2003) recommendation, I identified five negatively skewed variables, including emotional closeness to the deceased (skewness = $-.58$, SE = $.12$), post-loss family satisfaction (skewness = $-.34$, SE = $.12$), perceived family willingness to communicate (skewness = $-.33$, SE = $.12$), interdependent self-construal (skewness = $-.47$, SE = $.12$), and independent self-construal (skewness = $-.53$, SE = $.12$). I also identified two positively skewed variables, including grief reactions (skewness = $.61$, SE = $.12$) and frequency of family grief communication (skewness = 1.31 , SE = $.12$). After reflecting the five negatively skewed variables and conducting square root transformation on all the seven skewed variables, distributions of the five reflected and negatively skewed variables reached normality, whereas the two positively skewed variables remained highly skewed. I then used logarithm transformation on the two positively skewed variables (i.e., grief reaction, frequency of family grief communication), after which their distributions achieved normality. After comparing the correlation matrices of the original and the transformed variables, I did not find any significant alterations in strength, significance, and direction to the relationships. Thus, I used the original variables for all subsequent analyses (Davino, Furno, & Vistocco, 2014; Osborne, 2002).

With regards to linearity, I created scatterplots with each dependent variable (i.e., grief reactions, post-loss family satisfaction) plotted against each independent variable. Visual examination of the scatterplots suggested that grief reactions and post-loss family satisfaction

were approximately and linearly associated with all independent variables. With regard to homoscedasticity, I created and examined the two scatterplots, one each for grief reactions and post-loss family satisfaction, with standardized residual values plotted against standardized predicted values. Because I observed no clear patterns in the scatterplots, I determined that the data likely did not violate the assumption of homoscedasticity. Finally, with regard to multicollinearity, I considered bivariate correlations greater than .80 (Pallant, 2013) among independent variables and variance inflation factor (VIF) of 10 or greater (Cohen et al., 2003) as exhibiting multicollinearity. Because the correlations amongst all independent variables were below .80 and that the VIF did not exceed 3, the data likely did not violate the assumption of multicollinearity.

Fifth, I computed the descriptive statistics and internal consistency for all primary variables (see

Table 2). The scores on all of the primary variables exhibited good internal consistency, as indicated by Cronbach alphas of above .70 (Tabachnick & Fidell, 2013). Specifically, alphas were as follows: closeness to the deceased ($\alpha = .90$), grief reactions ($\alpha = .96$), post-loss family satisfaction ($\alpha = .93$), family grief communication quality ($\alpha = .89$), personal willingness to communicate about grief ($\alpha = .89$), perceived family willingness to communicate about grief ($\alpha = .92$), family grief communication avoidance for self-protection ($\alpha = .76$), family grief communication avoidance for relationship protection ($\alpha = .89$), interdependent self-construal ($\alpha = .78$), and independent self-construal ($\alpha = .73$).

Sixth, I tested for the associations among my dependent variables (i.e., grief reactions, post-loss family satisfaction), demographic variables, and death-related variables (see

Table 3). I performed bivariate correlations between my primary dependent variables and the continuous demographic (i.e., age, subjective social class, perceived importance of religion) and the death-related variables (i.e., number of deaths experienced in the past two years, months since the most significant death, closeness with the deceased). For the continuous demographic and death-related variables, I only controlled for variables significantly correlated with my dependent variables (i.e., $p \leq .01$) and had a medium or greater effect size (i.e., $r \geq .30$; Cohen, 1988).

In addition, I used MANOVAs to determine possible group differences in my dependent variables based on the categorical demographic (i.e., gender, sexuality, race, international student status, year in school, religion, disability status) and death-related variables (i.e., relationship to the deceased, living status with the deceased prior to his/her/their death, cause of death). For the categorical demographic and death related variables, I only controlled only for variables that showed significant group differences in my dependent variables (i.e., $p \leq .01$) and had a medium or greater effect size (i.e., partial eta squared, $\eta_p^2 \geq .13$; Pierce, Block, & Aguinis, 2004).

Based on the correlations and MANOVAs results (see Appendix N), grief reactions were significantly associated only with emotional closeness with the deceased at a medium or greater effect size. Post-loss family satisfaction was not significantly associated with any of the continuous demographic and death-related variables at a medium or greater effect size. In addition, grief reactions and post-loss family satisfaction did not vary based on any of the categorical demographic and death-related variables. As such, I controlled only for emotional closeness with the deceased by adding it into step one of the hierarchical multiple regression for grief reactions.

Table 2. Description of Demographic, Death-Related, and Primary Continuous Variables

Variable	Measure used	Mean	SD	Minimum	Maximum	Cronbach's Alpha
1. Age ^a	-	20.15	1.68	18.00	24.00	-
2. Subjective Social Class ^a	-	65.68	17.57	10.00	100.00	-
3. Perceived Importance of Religion ^a	-	4.44	2.08	1.00	7.00	-
4. Number of Deaths in the Past Two Years ^a	-	1.58	.85	1.00	6.00	-
5. Months Since the Most Significant Death ^a	-	11.14	7.03	0.00	24.00	-
6. Emotional Closeness to the Deceased ^a	Scale of Emotional Closeness	5.01	1.25	1.00	7.00	.90
7. Grief Reactions ^b	Core Bereavement Items	2.12	.73	1.00	4.00	.96
8. Post-Loss Family Satisfaction ^b	Family Satisfaction Scale	3.51	.87	1.00	5.00	.93
9. Frequency of Family Grief Communication (Hours per Week) ^c	Communication Quantity	2.03	2.94	0.00	15.50	-
10. Quality of Family Grief Communication ^c	Iowa Communication Record – Communication Quality Subscale	5.79	1.49	1.40	9.00	.89
11. Willingness to Communicate about Grief – Personal ^c	Willingness to Communicate about Grief	4.34	1.68	1.00	7.00	.89
12. Willingness to Communicate about Grief – Perceived Family ^c	Willingness to Communicate about Grief	4.66	1.52	1.00	7.00	.92
13. Reasons for Grief Communication Avoidance – Self-Protection ^c	Adapted Reasons for Topic Avoidance Scale	3.41	1.38	1.00	7.00	.76
14. Reasons for Grief Communication Avoidance – Relationship-Protection ^c	Adapted Reasons for Topic Avoidance Scale	3.90	1.85	1.00	7.00	.89
15. Interdependent Self-Construal ^c	Self-Construal Scale	5.36	.86	2.17	7.00	.78
16. Independent Self-Construal ^c	Self-Construal Scale	5.80	.79	3.33	7.00	.73

Note. ^a Demographic and death-related variables. ^b Dependent variables. ^c Independent variables.

Table 3. Bivariate Correlations Between the Demographic and Death-Related Continuous Variables and Primary Variables

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Age	--	.00	.07	-.10	.11*	.01	-.01	.05	.01	-.03	.07	-.05	-.12*	-.09	-.07	-.03
2. Subjective Social Class		--	.04	-.01	.03	.00	-.07	.20***	.00	.13**	.15**	.12*	-.12*	-.11*	-.01	-.01
3. Perceived Importance of Religion			--	.11*	-.07	.13**	.11*	.11*	.05	.17***	.19***	.14**	-.10	-.02	.07	-.08
4. Number of Deaths in the Past Two Years				--	-.04	.15**	.14**	.06	.09	.00	.02	.14**	.03	-.01	-.01	-.04
5. Months Since the Most Significant Death					--	-.04	-.19***	-.04	-.09	-.07	-.11*	-.05	.05	.00	-.11*	.06
6. Emotional Closeness to the Deceased						--	.56***	.11*	.08	.15**	.13**	.15**	-.12*	-.06	.14**	.06
7. Grief Reactions							--	-.09	.23***	-.12*	-.07	-.08	.17**	.15**	.07	.04
8. Post-Loss Family Satisfaction								--	.10*	.66***	.54***	.57***	-.44***	-.17**	.29***	.09
9. Frequency (Hours/Week)									--	.14**	.20***	.12*	.01	.08	.09	.00
10. Quality										--	.71***	.69***	-.52***	-.24***	.33***	.06
11. Personal Willingness											--	.64***	-.55***	-.30***	.33***	.01
12. Perceived Family Willingness												--	-.43***	-.26***	.26***	.12*
13. Self-Protection													--	.45***	-.12*	-.03
14. Relationship-Protection														--	.06	.01
15. Interdependent Self-Construct															--	.24**
16. Independent Self-Construct																--

Note. $n = 369$. * $p < .05$, ** $p < .01$, *** $p < .001$.

Main Analyses

My first research question focused on whether frequency and quality of family grief communication were associated with grieving college students' post-loss functioning (i.e., grief reactions, family satisfaction). My second research question focused on whether willingness to communicate about grief (i.e., personal, perceived family, and interaction between personal and family) and reasons for grief communication avoidance (i.e., self-protection, relationship protection) were associated with grieving college students' post-loss functioning (i.e., grief reactions, family satisfaction). My third research question was exploratory, focusing on whether (a) quality of family grief communication, (b) willingness to communicate about grief (i.e., personal, perceived family), and (c) reasons for grief communication avoidance (i.e., self-protection, relationship protection) would moderate the relationship between the frequency of family grief communication and grieving college students' post-loss functioning (i.e., grief reactions, family satisfaction).

My fourth research question was also exploratory, focusing on whether interdependent self-construal, independent self-construal, and the interaction between interdependent and independent self-construal were associated with grieving college students' post-loss functioning (i.e., grief reactions, family satisfaction). Finally, my fifth research question was exploratory and focused on whether interdependent self-construal and independent self-construal would moderate the relationship between reasons for grief communication avoidance (i.e., self-protection, relationship protection) and grieving college students' post-loss functioning (i.e., grief reactions, family satisfaction).

In summary, I conducted two multiple hierarchical regressions that corresponded to my two dependent variables (i.e., grief reactions, post-loss family satisfaction). For the regression on grief reactions, I used the first step to control for emotional closeness to the deceased (i.e., the

death-related variable significantly associated with grief reactions), the second step to address RQ1, RQ2, and RQ4, and the third step to address RQ3 and RQ5. For the regression on post-loss family satisfaction, I used the first step to address RQ1, RQ2, and RQ4, and the second step to address RQ3 and RQ5.

I calculated the observed power for each regression analysis based on a power analysis (Soper, 2016) with .05 alpha level and a sample size of $n = 369$, along with 18 predictors for grief reactions and 17 predictors for post-loss family satisfaction. For this study, the power for the regression analyses to explain significant variation in grief reactions (i.e., 1.00) and post-loss family satisfaction (i.e., 1.00) was high. Below, I describe the results for grief reactions followed by the results for post-loss family satisfaction, and then summarize the results based on my research questions and hypotheses.

Grief Reactions, Family Grief Communication, and Self-Construct

At step 1, grief reactions was regressed onto emotional closeness to the deceased. At step 2, I added the primary variables into the regression model, including frequency of family grief communication (H1a), quality of family grief communication (H1c), personal willingness to communicate about grief (H2a), family willingness to communicate about grief (H2c), grief communication avoidance for self-protection (H2g), grief communication avoidance for relationship protection (H2i), interdependent self-construct (RQ4), and independent self-construct (RQ4). At step 3, I included nine interaction terms into the regression model, including personal willingness X family willingness (H2e), frequency X all other family grief communication variables (RQ3; i.e., frequency X quality, frequency X personal willingness, frequency X family willingness, frequency X self-protection, frequency X relationship-protection), interdependent self-construct X independent self-construct (RQ4), and self-construct

X reasons for grief communication avoidance (RQ5: i.e., interdependent self-construal X relationship-protection, independent self-construal X self-protection). I centered all variables before I computed the interaction terms and before I included them in the regression model.

Overall, the regression model for grief reactions was significant, such that after step 3 with all IVs and interaction terms in the equation, $R^2 = .45$, $F(18, 350) = 15.62$, $p < .001$ (see Table 4). At step 1, the analysis yielded a significant regression model accounting for 32% of variance in grief reactions, $R^2 = .32$, $F(1, 367) = 170.59$, $p < .001$. Emotional closeness to the deceased ($\beta = .56$, $p < .001$) emerged as a significant positive predictor of grief reactions.

At step 2, the regression model, $R^2 = .43$, $F(9, 359) = 30.45$, $p < .001$ and R^2 change, $\Delta R^2 = .11$, $F(8, 359) = 9.15$, $p < .001$, were both significant. Emotional closeness to the deceased ($\beta = .59$, $p < .001$) remained a significant predictor of grief reactions. In addition, family grief communication frequency (H1a; $\beta = .20$, $p < .001$) and grief communication avoidance for self-protection (H2g; $\beta = .12$, $p = .02$) emerged as significant positive predictors of grief reactions, whereas family grief communication quality (H1c; $\beta = -.18$, $p = .01$) emerged as a significant negative predictor of grief reactions. These variables accounted for an additional 11% variance in grief reactions beyond emotional closeness with the deceased. Nonetheless, personal willingness to communicate about grief (H2a), family willingness to communicate about grief (H2c), grief communication avoidance for relationship protection (H2i), interdependent self-construal (RQ4), and independent self-construal (RQ4) did not explain additional variance in grief reactions. In summary, only H1c and H2g were supported; H1a was not supported despite the significant association between family grief communication frequency and grief reactions because the direction of the association differed from the hypothesized direction.

At step 3, although the regression model, $R^2 = .45$, $F(18, 350) = 15.862$, $p < .001$ remained significant, the R^2 change was not significant, $\Delta R^2 = .01$, $F(9, 350) = .88$, $p = .55$. The insignificant R^2 change indicated that none of the interaction terms, including personal willingness X family willingness (H2e), frequency X quality (RQ3), frequency X personal willingness (RQ3), frequency X family willingness (RQ3), frequency X self-protection (RQ3), frequency X relationship-protection (RQ3), interdependent self-construal X independent self-construal (RQ4), interdependent self-construal X relationship-protection (RQ5), independent self-construal X self-protection (RQ5), explained additional variance in grief reactions.

Post-Loss Family Satisfaction, Grief Communication, and Self-Construal

At step 1, post-loss family satisfaction was regressed onto frequency of family grief communication (H1b), quality of family grief communication (H1d), personal willingness to communicate about grief (H2b), family willingness to communicate about grief (H2d), grief communication avoidance for self-protection (H2h), grief communication avoidance for relationship protection (H2j), interdependent self-construal (RQ4), and independent self-construal (RQ4). At step 2, I included nine interaction terms into the regression model, including personal willingness X family willingness (H2f), frequency X all other family grief communication variables (RQ3; i.e., frequency X quality, frequency X personal willingness, frequency X family willingness, frequency X self-protection, frequency X relationship-protection), interdependent self-construal X independent self-construal (RQ4), and self-construal X reasons for grief communication avoidance (RQ5: i.e., interdependent self-construal X relationship-protection, independent self-construal X self-protection). I centered all variables before I computed the interaction terms and before I included them in the regression model.

Overall, the regression model for post-loss family satisfaction was significant, such that after step 2 with all IVs and interaction terms in the equation, $R^2 = .49$, $F(17, 351) = 20.07$, $p < .001$ (see Table 4). At step 1, the analysis yielded a significant regression model accounting for 47.8% of variance in post-loss family satisfaction, $R^2 = .48$, $F(8, 360) = 41.18$, $p < .001$. Family grief communication quality (H1d; $\beta = .42$, $p < .001$) and family willingness to communicate about grief (H2d; $\beta = .19$, $p = .001$) emerged as significant positive predictors of post-loss family satisfaction, whereas grief communication avoidance for self-protection reasons (H2h; $\beta = -.14$, $p = .01$) emerged as a significant negative predictor of post-loss family satisfaction. Nonetheless, family grief communication frequency (H1b), personal willingness to communicate about grief (H2b), grief communication avoidance for relationship protection (H2j), interdependent self-construal (RQ4), and independent self-construal (RQ4) did not explain additional variance in post-loss family satisfaction.

At step 2, although the regression model, $R^2 = .49$, $F(17, 351) = 20.07$, $p < .001$ remained significant, the R^2 change was not significant, $\Delta R^2 = .02$, $F(9, 351) = 1.16$, $p = .32$. The insignificant R^2 change indicated that none of the interaction terms, including personal willingness X family willingness (H2f), frequency X quality (RQ3), frequency X personal willingness (RQ3), frequency X family willingness (RQ3), frequency X self-protection (RQ3), frequency X relationship-protection (RQ3), interdependent self-construal X independent self-construal (RQ4), interdependent self-construal X relationship-protection (RQ5), and independent self-construal X self-protection (RQ5), explained additional variance in post-loss family satisfaction.

Table 4. Predictors of Grief Reactions and Post-Loss Family Satisfaction

	Grief Reactions						Post-Loss Family Satisfaction					
	R ²	ΔR ²	B	SE	β	sr ²	R ²	ΔR ²	B	SE	β	sr ²
Step 1	.32***	.32***					-	-				
Emotional Closeness to the Deceased			.33	.03	.56***	.32			-	-	-	-
Step 2	.43***	.12***					.48***	.48***				
Family Grief Communication Frequency (H1a, H1b)			.06	.01	.20***	.04			.00	.01	.00	.00
Family Grief Communication Quality (H1c, H1d)			-.09	.03	-.18**	.01			.24	.04	.42***	.07
Willingness to Communicate about Grief – Personal (H2a, H2b)			.02	.03	.05	.00			.02	.03	.04	.00
Willingness to Communicate about Grief – Family (H2c, H2d)			-.02	.03	-.04	.00			.11	.03	.19**	.02
Reasons for Grief Communication Avoidance – Self-Protection (H2g, H2h)			.06	.03	.12*	.01			-.09	.03	-.14**	.01
Reasons for Grief Communication Avoidance – Relationship Protection (H2i, H2j)			.03	.02	.07	.00			.02	.02	.05	.00
Interdependent Self-Construal (RQ4 – exp)			.03	.04	.03	.00			.07	.05	.07	.00
Independent Self-Construal (RQ4 – exp)			.01	.04	.01	.00			.03	.04	.02	.00
Step 3	.45***	.02					.49***	.01				
Personal Willingness X Family Willingness (H2e, H2f)			.00	.01	.00	.00			-.01	.01	-.03	.00
Frequency X Quality (RQ3 – exp)			-.01	.01	-.05	.00			-.01	.01	-.03	.00
Frequency X Personal Willingness (RQ3 – exp)			.00	.01	.01	.00			-.02	.01	-.08	.00
Frequency X Family Willingness (RQ3 – exp)			.00	.01	.00	.00			.01	.01	.06	.00
Frequency X Self-Protection (RQ3 – exp)			-.02	.01	-.08	.00			.00	.02	-.02	.00
Frequency X Relationship-Protection (RQ3 – exp)			.00	.01	.03	.00			.02	.01	.09	.01
Interdependence X Independence (RQ4 – exp)			.034	.04	.04	.00			-.04	.04	-.04	.00
Relationship-Protection X Interdependence (RQ5 – exp)			.04	.02	.08	.01			.02	.02	.03	.00
Self-Protection X Independence (RQ5 – exp)			.01	.03	.02	.00			-.01	.03	-.02	.00

Note. Emotional closeness with the deceased was not included in the analysis of post-loss family satisfaction due to insignificant correlation in the preliminary analysis.

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

Summary of Results

The hypotheses associated with RQ1 were partially supported. RQ1 focused on whether frequency and quality of family grief communication were associated with grieving college students' post-loss functioning (i.e., grief reactions, family satisfaction). Contrary to H1a, frequency of family grief communication was *positively* associated with grief reactions. Frequency of family grief communication was not associated with post-loss family satisfaction, therefore H1b was not supported. Quality of family grief communication was negatively associated with grief reactions and positively associated with post-loss family satisfaction, supporting both H1c and H1d (see

Table 5).

The hypotheses associated RQ2 were also partially supported. RQ2 focused on whether willingness to communicate about grief (i.e., personal, perceived family, and interaction between personal and family) and reasons for grief communication avoidance (i.e., self-protection, relationship protection) were associated with grieving college students' post-loss functioning (i.e., grief reactions, family satisfaction). Personal willingness to communicate about grief was not associated with grief reactions or post-loss family satisfaction, therefore neither H2a nor H2b were supported. Family willingness to communicate about grief was not associated with grief reactions, but was positively associated with post-loss family satisfaction, therefore H2c was not supported but H2d was supported. The interaction between personal willingness and family willingness was not associated with grief reactions or post-loss family satisfaction, therefore neither H2e nor H2f were supported. Grief communication avoidance for self-protection reasons was positively associated with grief reactions and negatively associated with post-loss family satisfaction, thereby supporting both H2g and H2h. Finally, grief communication avoidance for

relationship protection reasons was not associated with grief reactions or post-loss family satisfaction, therefore H2i and H2j were not supported (see

Table 5).

The answer to RQ3 was no. Exploratory in nature, RQ3 focused on whether (a) quality of family grief communication, (b) willingness to communicate about grief (i.e., personal, perceived family), and (c) reasons for grief communication avoidance (i.e., self-protection, relationship protection) moderated the relationship between the frequency of family grief communication and grieving college students' post-loss functioning (i.e., grief reactions, family satisfaction). None of the aforesaid family grief communication variables moderated the relationship between frequency of family grief communication and grieving college students' grief reactions and post-loss family satisfactions.

The answer to RQ4 was no. Also exploratory in nature, RQ4 focused on whether interdependent self-construal, independent self-construal, and the interaction between interdependent and independent self-construal were associated with grieving college students' post-loss functioning (i.e., grief reactions, family satisfaction). None of the aforesaid self-construal variables were significantly associated with grieving college students' grief reactions or post-loss family satisfactions.

The answer to RQ5 was no. Exploratory in nature, RQ5 focused on whether interdependent self-construal and independent self-construal moderated the relationship between reasons for grief communication avoidance (i.e., self-protection, relationship protection) and grieving college students' post-loss functioning (i.e., grief reactions, family satisfaction). Interdependent self-construal did not moderate the relationships between grief communication avoidance for relationship protection and grief reactions/post-loss family satisfaction. Similarly,

independent self-construal also did not moderate the relationship between grief communication avoidance for self-protection and grief reactions/post-loss family satisfaction.

Finally, although not connected to my research questions or hypotheses, emotional closeness to the deceased emerged as the only death-related variable significantly associated with college students' grief reactions.

Table 5. Summary of Hypotheses Testing

Hypothesis #	Hypothesis	Outcome
H1a	Frequency of family grief communication will be negatively associated with grief reactions.	Not supported
H1b	Frequency of family grief communication will be positively associated with post-loss family satisfaction.	Not Supported
H1c	Quality of family grief communication will be negatively associated with grief reactions.	Supported
H1d	Quality of family grief communication will be positively associated with post-loss family satisfaction.	Supported
H2a	Personal willingness to communicate about grief will be negatively associated with grief reactions.	Not supported
H2b	Personal willingness to communicate about grief will be positively associated with post-loss family satisfaction.	Not supported
H2c	Perceived family willingness to communicate about grief will be negatively associated with grief reactions.	Not supported
H2d	Perceived family willingness to communicate about grief will be positively associated with post-loss family satisfaction.	Supported
H2e	The interaction between personal willingness and perceived family willingness will be associated with grief reactions, such that high personal willingness/low perceived family willingness, as well as low personal willingness/high perceived family willingness, will be positively associated with grief reactions.	Not supported

Table 5 continued

Hypothesis #	Hypothesis	Outcome
H2f	The interaction between personal willingness and perceived family willingness will be associated with family satisfaction, such that high personal willingness/low perceived family willingness, as well as low personal willingness/high perceived family willingness, will be negatively associated with post-loss family satisfaction.	Not supported
H2g	Grief communication avoidance for self-protection reason will be positively associated with grief reactions.	Supported
H2h	Grief communication avoidance for self-protection reason will be negatively associated with post-loss family satisfaction.	Supported
H2i	Grief communication avoidance for relationship protection will be negatively associated with grief reactions.	Not supported
H2j	Grief communication avoidance for relationship protection will be positively associated with post-loss family satisfaction.	Not supported

CHAPTER 5: DISCUSSION

The overarching purpose of this study was to provide a more nuanced understanding of family grief communication among bereaved college students by attending to different communication factors and self-construal. I proposed family communication factors that have empirical significance (i.e., frequency, quality) and theoretical relevance (i.e., willingness to communicate, reasons for communication avoidance) for family grief communication and to the grieving college student population. In addition, I drew from cross-cultural psychology and posited that self-construal, or the extent to which individuals' sense of self is connected with or separated from others, might be related to how grieving college students experienced grief, post-loss family satisfaction, and family grief communication.

My first research question focused on whether frequency and quality of family grief communication were associated with grieving college students' functioning (i.e., grief reactions, post-loss family satisfaction). My second research question focused on whether willingness to communicate about grief (i.e., personal, perceived family, and interaction between personal and family) and reasons for grief communication avoidance (i.e., self-protection, relationship protection) were associated with grieving college students' post-loss family satisfaction. My third research question was exploratory, focusing on whether (a) quality of family grief communication, (b) willingness to communicate about grief (i.e., personal, perceived family), and (c) reasons for grief communication avoidance (i.e., self-protection, relationship protection) moderated the relationship between the frequency of family grief communication and grieving college students' functioning (i.e., grief reactions, post-loss family satisfaction).

My fourth research question was also exploratory, focusing on whether interdependent self-construal, independent self-construal, and the interaction between interdependent and

independent self-construal were associated with grieving college students' functioning (i.e., grief reactions, post-loss family satisfaction). Finally, my fifth research question was exploratory and focused on whether interdependent self-construal and independent self-construal moderated the relationship between reasons for grief communication avoidance (i.e., self-protection, relationship protection) and grieving college students' functioning (i.e., grief reactions, post-loss family satisfaction).

To address the overarching goal and these research questions, I analyzed survey data from 369 grieving college students. Students reported their demographic information, death-related information, emotional closeness to the deceased, grief reactions, post-loss family satisfaction, frequency of family grief communication, quality of family grief communication, willingness to communicate about grief (i.e., personal and perceived family), reasons for grief communication avoidance (i.e., self-protection, relationship protection), self-construal (i.e., interdependent, independent). I conducted two hierarchical multiple regressions that corresponded to grief reactions and post-loss family satisfaction, respectively. Two of the four hypotheses associated with RQ1 (i.e., H1c, H1d) were supported. Three of the ten hypotheses associated with RQ2 (i.e., H2d, H2g, H2h) were supported. The answers to all exploratory research questions, including RQ3, RQ4, and RQ5, were no.

Below, I review and provide possible explanations of the findings associated with my hypotheses and research questions. Next, I review and provide tentative explanations for findings not connected to my hypotheses and research questions. I then offer clinical implications of these findings, followed by study limitations and future research directions. I conclude by summarizing the key findings and implications.

Primary Study Findings

Below, I summarize findings from the hypotheses testing as organized by my research questions. I also offer tentative explanations for each supported and not supported hypothesis based on existing empirical evidence, theoretical evidence, and my understanding.

Frequency and Quality of Family Grief Communication and Grieving Students' Functioning

Frequency of family grief communication. For RQ1, I hypothesized that the frequency of family grief communication would be negatively associated with grief reactions (H1a) and positively associated with post-loss family satisfaction (H1b). H1a and H1b were not supported; instead of the proposed *negative* association, frequency of family grief communication was *positively* associated with grief reactions and unrelated to post-loss family satisfaction.

The current findings indicated that the more time grieving students spent per week communicating about their grief with their family (i.e., more frequent family grief communication), the more they thought about the person who died and experienced feelings of sadness, loneliness, etc (i.e., stronger grief reactions). The frequency of family grief communication addressed only the time spent communicating, but not the tone of the communication (e.g., positive/negative, desirable/undesirable) or the initiator of the communication (i.e., student-initiated or family-initiated). As such, it is possible that frequent communication about grief after the death may have made the absence of the person who died more salient, heightened grieving student's sense of loss, and hence prompted stronger grief reactions, especially if grieving students felt compelled to engage in such communication because their family members initiated most of the communication. It may also be possible that

students who experienced stronger grief reactions reached out more and hence communicated more frequently with their family members about their grief.

In contrast, how frequently grieving students communicated about grief with their family members was *not* related to how satisfied they felt with their family after the death loss. It may be possible that the amount of time spent communicating about grief may not be related to how satisfied grieving students feel regarding their family's closeness, ability to handle stress, etc after the most significant death (i.e., post-loss family satisfaction). Instead of the frequency or amount of time spent communicating about grief, the nature of the communication (e.g., positive/negative, desirable/undesirable) may be a more powerful predictor of post-loss family satisfaction. Past qualitative research on family grief communication has indicated that communicating about grief among family members may be a source of support for some grieving individuals and families, but may also be a stressor that promotes greater strain for others due to differing communication expectations, motivations, privacy rules (Hooghe et al., 2011; Manoogian et al., 2018; Mohamed Hussin et al., 2018).

Quality of family grief communication. I also hypothesized that the quality of family grief communication would be negatively associated with grief reactions (H1c) and positively associated with post-loss family satisfaction (H1d); both of these hypotheses were supported. As assessed by the communication quality measure I used, high quality family grief communication was marked by relaxed, personal, attentive, informal, smooth, and open communication episodes with high levels of understanding and low levels of communication breakdowns (Duck et al., 1991).

The more students reported family grief communication of high quality, the weaker their grief reactions (e.g., thinking of and longing for the deceased individual, feeling lonely or sad

when reminded of the deceased individual). This finding is consistent with the protective functions of high-quality family communication found in previous studies on grieving adults (Albuquerque et al., 2016; Giannini, 2011) and non-grieving college students (Segrin et al., 2012). It is possible that high quality family grief communication allows for an understanding and supportive outlet in which grieving college students can express and process their grief, thereby allowing them to make sense of the death, identify new meanings to the loss, and hence experience less intense grief (Gillies & Neimeyer, 2006). It is also possible that students who experienced less intense grief were less affected by the death loss, communicated with family about their grief with greater ease, and hence rated the grief communication as higher quality.

In addition, the more students reported family grief communication of high quality, the higher their post-loss family satisfaction (i.e., the degree to which family members feel happy and fulfilled with each other since the death of the family member they were closest with). It is possible that grieving students who experience their family grief communication as more open, attentive, smooth, and free of communication breakdowns (i.e., higher quality) may have also experienced stronger care for and from their family members. They may hence be more confident in their family's ability to cope with stress and hence report higher levels of post-loss family satisfaction. It is also possible that grieving students who reported engaging in high-quality family grief communication came from well-functioning families, viewed their family via a more positive lens, and hence felt more satisfied towards their family relationships. Past research has indicated that individuals from high functioning families often reported high levels of family satisfaction (Mansfield, Keitner, & Dealy, 2015), as family functioning and family satisfaction both tap into similar elements, such as the family's ability to cope with stress, resolve conflicts, and share positive experiences.

Willingness to Communicate, Reasons for Grief Communication Avoidance, and Grieving Students' Functioning

Personal and perceived family willingness to communicate about grief. For RQ2, I hypothesized that personal willingness to communicate about grief (H2a) and perceived family willingness to communicate about grief (H2c) would be negatively associated with grief reactions; neither of these hypotheses were supported. In this study, personal willingness assessed how comfortable, capable, and willing grieving students were to communicate about their personal grief with their family members (e.g., “I am willing to communicate with my family about my grief experiences”). In contrast, perceived family willingness focused on grieving students' perception of how comfortable, capable, and willing their family members were to communicate about their grief (e.g., “My family members are willing to communicate with me about their grief experiences”).

The current findings indicated that there were no relationships between grieving college students' personal willingness nor their perceived family willingness to communicate about grief and their own grief reactions. Grieving students' personal and perceived family willingness to communicate about grief may *not* matter with regard to how much they personally miss the deceased individual or how strong they personally respond to the loss (i.e., grief reactions). Instead, their personal and perceived family willingness to communicate about grief may matter more for their family members' grief, which was not assessed in this study. It is important to note that more than 70% of participants in this study experienced grandparent and aunt/uncle deaths. Past research has indicated that that grieving students whose grandparents died often reported worrying about the well-being of their parents, becoming more attuned to the needs of other surviving family members, and relating to surviving family members more maturely (Manoogian et al., 2018). Grieving students, such as those in the present study, may be focused

more on responding to and supporting their family members' grief than they are focused on their own grief.

In addition, I also hypothesized that personal willingness to communicate about grief (H2b) and perceived family willingness to communicate about grief (H2d) would be positively associated with post-loss family satisfaction; only H2d was supported. The current findings indicated that grieving students' post-loss satisfaction toward their family relationships (e.g., ability to resolve conflicts and cope with stress) remained the same regardless of how personally willing they were to communicate their grief, but increased as they perceived their family members as more willing to communicate about their grief. There may be at least two possible explanations for these findings.

First, again because more than 70% of grieving students in this study experienced grandparent and/or aunt and uncle deaths, perceived family willingness to communicate about grief may be a more powerful indicator for grieving students' post-loss family satisfaction than their personal willingness to communicate because of their concerns for their family members, especially for their parents (Manoogian et al., 2018). Hence, grieving students may have prioritized their family members' willingness over their personal willingness to communicate about grief because of their concerns for their family members, particularly their parents. When grieving students perceived their family members to be more willing to communicate about the family members' grief, they may be more inclined to engage in grief-focused family communication, thus potentially allowing for more family meaning-making opportunities. Past research has indicated that increased family meaning-making after a death loss is associated with more role reorganization in the family system (Bosticco & Thompson, 2005; Koenig Kellas &

Trees, 2006) and greater family cohesion (Walsh, 2002; Walsh & McGoldrick, 2013)—concepts closely associated with family satisfaction.

Second, because of grieving students' ongoing development in terms of cognitive and meaning-making ability, perceived family willingness to communicate about grief may be a more powerful contextual influence on grieving students' post-loss family satisfaction than their personal willingness. According to the Reconceptualized Model of Multiple Dimensions of Identity (RMMDI), most traditional-age college students define their identities based on external and contextual influences, such as family expectations and social norms. Their cognitive abilities and meaning making filters may be less complex; thus, they may be less equipped to filter out these contextual influences via their own meaning-making process (Abes et al., 2007). These elements are closely connected to college students' interpersonal communication competence (Rubin, Martin, Bruning, & Powers, 1993) and cognitive development (Koesten, Schrod, & Ford, 2009; Martin & Anderson, 1998) as suggested by past research. Hence, while grieving students develop more complex cognitive capacity and mature meaning-making ability, their post-loss satisfaction towards family relationships may be more affected by a contextual influence (i.e., their family's willingness to communicate about grief) than their meaning-making ability or inner wishes (i.e., their personal willingness to communicate about grief).

Interaction between personal and perceived family willingness to communicate about grief. I hypothesized that the interaction between personal willingness and perceived family willingness would be associated with grief reactions and post-loss family satisfaction. More specifically, high personal willingness/low perceived family willingness, as well as low personal willingness/high perceived family willingness, would be positively associated with grief reactions (H2e) and negatively associated with post-loss family satisfaction (H2f). The

hypothesized interaction effects were based on CPM's proposition of boundary turbulence, such that grieving students may experience boundary turbulence in the forms of higher grief and lower post-loss family satisfaction when there is a mismatch between their personal willingness and their family's willingness to communicate about grief (Basinger et al., 2016; Petronio, 2002). H2e and H2f were not supported.

The current findings indicated that grieving students reported similar levels of grief reactions and post-loss family satisfaction regardless of whether there was a mismatch between their personal willingness and their family's willingness to communicate about grief. It may be possible that the mismatch between grieving students' personal willingness and perceived family willingness simply may be less important than their perceived family willingness to communicate about grief due to the explanations referenced above: (a) grieving students' individual grief may be less affected than their family members' grief, (b) perceived family willingness may be prioritized over personal willingness because most participants experienced grandparent and aunt/uncle deaths, and (c) perceived family willingness as a contextual influence may have more power than grieving students' personal willingness due to their development phase. It may also be possible that the mismatch between grieving students' personal willingness and perceived family willingness contributes to boundary turbulence not in the form of stronger grief or lower post-loss family satisfaction, but in the form of academic adjustment and concentration difficulties (Cupit et al., 2016; Servaty-Seib & Hamilton, 2006) and general uncomfortable feelings in familial interactions (e.g., vulnerable, awkward; Basinger et al., 2016).

Reasons for grief communication avoidance. I also hypothesized that grief communication avoidance for self-protection reasons would be positively associated with grief

reactions (H2g) and negatively associated with post-loss family satisfaction (H2h); both H2g and H2h were supported.

The current findings indicated that the more grieving students avoided family grief communication for self-protection reasons (i.e., to avoid getting hurt, to avoid judgment from family), the stronger their grief reactions. It is possible that grieving college students may feel lonelier and less supported in their grief when their reasons to avoid grief communication were to protect themselves from being hurt, judged, or minimized. The lack of support from surviving family members may prompt grieving students to miss the deceased individual even more and thus experience stronger grief. On the other hand, it may also be possible that students who experienced stronger grief were more motivated to avoid grief communication to protect themselves from additional hurt or family judgments because they may be feeling especially vulnerable from the loss. Past studies have also supported the protective functions of grief communication, such as helping grieving individuals co-regulate emotions (Hooghe et al., 2018), shielding them from uncomfortable social interactions or minimizing responses (Basinger et al., 2016; Goodrum, 2008), and protecting them from experiencing vulnerable feelings and beliefs (e.g., being a burden; Jakoby, 2014).

The current findings also indicated that the more grieving students avoided family grief communication for self-protection reasons (e.g., to avoid getting hurt, to avoid judgment from family), the lower their post-loss family satisfaction. This finding parallels the negative association found between communication avoidance for self-protection reasons and relationship satisfaction among non-grieving adults and college students in past research (e.g., Caughlin & Afifi, 2004; Donovan-Kicken & Caughlin, 2010). It is possible that grieving students who endorsed high levels of family grief communication avoidance for self-protection reasons are

concerned about their family's ability to respond to them with empathy and care, and to remain positive and flexible with them during stressful times. These concerns may manifest as or translate into less satisfying family relationship after the death of the family member they were closest with. On the other hand, it is also possible that grieving students' family relationships may be dissatisfying and unsafe, thus potentially leading them to avoid family grief communication and protect themselves from being hurt, judged, or minimized by their family members. Communication avoidance for self-protection reasons may hence be a proactive coping strategy grieving students use to maintain a sense of control and reduce conflict with surviving family members in a dissatisfying and potentially unsafe family (Roloff & Ifert, 2000).

Finally, I hypothesized that grief communication avoidance for relationship protection reasons would be negatively associated with grief reactions (H2i) and positively associated with post-loss family satisfaction (H2j); H2i and H2j were not supported.

The current finding indicated that college students reported similar levels of grief reactions regardless of how much they reported avoiding grief communication to protect their family relationships. Grieving students' intentions to not hurt their family and protect their existing family relationship by avoiding grief communication may not matter to their personal levels of grief simply because the grief reactions assessed in this study were grieving students' individual responses to the death loss, not the family's grief and response to the death loss.

Similarly, the current findings also indicated that college students reported similar levels of post-loss family satisfaction regardless of how much they reported avoiding grief communication to protect their family relationships. A canceling effect may explain why grief communication avoidance was not related to post-loss family satisfaction. On one hand, grieving students who were *satisfied* with their family relationship after the death of the family member

they were closest with may not feel the need to protect their family by avoiding grief communication because they were confident in their family's ability to cope with stress, resolve conflicts, etc. On the other hand, grieving students who were *dissatisfied* with their family relationship after the death of the family member they were closest with may also not perceive the need to protect their existing family relationship by avoiding grief communication because their family relationship was already dissatisfying to begin with.

Communication Quality, Willingness to Communicate, and Reasons for Grief Communication Avoidance as Moderators of the Relationship between Frequency of Family Grief Communication and Grieving Students' Functioning

For RQ3, I explored whether (a) quality of family grief communication, (b) willingness to communicate about grief (i.e., personal, perceived family), and (c) reasons for grief communication avoidance (i.e., self-protection, relationship protection) would moderate the relationship between the frequency of family grief communication and grieving college students' post-loss functioning (i.e., grief reactions, post-loss family satisfaction). I did not include any hypotheses due to insufficient literature to support the direction of the potential moderating effects. The current findings did not support the possibility of the aforesaid family grief communication variables moderating the relationship between the frequency of family grief communication and grieving students' post-loss functioning.

Specifically, the current findings indicated that the relationships between grieving students' frequency of family grief communication and their post-loss functioning remained similar regardless of how good or poor they perceived the grief communication quality to be. It may be possible that frequent communication about grief with family members prompted such strong grief reactions that even higher quality grief communication was not able to buffer its

impacts. Again, I did not assess who initiated the frequency of grief communication; the family-initiated nature of frequent grief communication could also be a confounding factor.

The current findings also indicated that the relationships between grieving students' frequency of family grief communication and their post-loss functioning remained similar regardless of how personally willing and how much they perceived their family to be willing to communicate about grief. In the preliminary analyses, both personal and perceived family willingness to communicate were weakly correlated with the frequency of family grief communication. Perhaps personal and perceived family willingness to communicate about grief represent intentions to communicate and may not translate proportionally into actual time spent on grief communication because of (a) the challenges posed by the geographical distance between grieving students and their family members ([Fajgenbaum et al., 2012](#)), and (b) the death and grief avoidant cultural norms in both the family- and dominant U.S. society- levels (Cohen & Samp, 2018; Harris, 2010; Walter, 2010). Hence, the weak association between personal and perceived family willingness to communicate about grief and frequency of family grief communication may explain why both forms of willingness to communicate about grief did moderate the relationship between frequency of family grief communication and grieving students' post-loss functioning.

Finally, the current findings indicated that the relationships between grieving students' frequency of family grief communication and their post-loss functioning remained similar regardless of how much they endorsed avoiding grief communication for self-protection and relationship protection reasons. In fact, in the preliminary analyses, neither grief communication for self-protection nor relationship protection reasons were correlated with the frequency of family grief communication. Perhaps personally endorsing more or fewer reasons to avoid

communicating grief, whether to protect oneself from getting hurt or to prevent hurting one's family, simply does not translate into communicating more or less frequently about grief because the frequent family grief communication could be family-initiated. If indeed the frequent family grief communication was family-initiated, grieving students may not have had a choice or may not have perceived a choice to avoid communicating.

Self-Construal, Reasons for Grief Communication Avoidance, and Grieving Students' Functioning

For RQ4, I explored whether interdependent self-construal, independent self-construal, and the interaction between interdependent and independent self-construal were associated with grieving college students' post-loss functioning (i.e., grief reactions, post-loss family satisfaction). The answer to RQ4 was no. The current findings indicated that college students reported similar levels of grief reactions and post-loss family satisfaction regardless of how much they defined their inner selves as a part of the social contexts they were in (interdependence), as autonomous and unique beings (independence), or as a combination of their social contexts and autonomy (interaction between interdependence and independence to represent the orthogonal nature of both self-construal types).

For RQ5, I explored whether interdependent and independent self-construal moderated the relationship between reasons for grief communication avoidance (i.e., self-protection, relationship protection) and grieving college students' post-loss functioning (i.e., grief reactions, post-loss family satisfaction). The answer to RQ5 was also no. The current findings indicated that the relationships between grieving students' reasons for grief communication avoidance (i.e., self-protection, relationship protection) and their post-loss functioning (i.e., grief reactions, post-

loss family satisfaction) remained similar regardless of how much they defined their inner selves as a part of social groups or as autonomous beings.

There may be at least four reasons to explain the lack of associations (RQ4) and moderating effects of self-construal (RQ5). First, it may simply be that self-construal processes, or the ways grieving traditional-age college students define themselves, do not relate to their grief reactions and post-loss family satisfaction. The items included in the Self-Construal Scale (Gudykunst & Lee, 2003) I used had a primary theme of agency and decision-making. For instance, interdependent self-construal items assessed whether individuals include the in-group in their sense of self (i.e., “I respect the decisions made by my group”), whereas independent self-construal items assessed whether individuals respect and make decisions for their unique sense of self (i.e., “I should decide my future on my own”). Yet, inherent in both grief reactions and post-loss family satisfaction is the lack of agency and control, as grief is the involuntary reactive response to loss (Meagher & Balk, 2013) and family satisfaction addresses an individual’s satisfaction toward the existing family system (Olson, 2004). Thus, it may be possible that self-construal was not associated with grief reactions and post-loss family satisfaction simply because there is very little room for agency as students grieve and experience their family relationships.

Second, grieving students’ identity development may also explain the lack of associations between self-construal and grieving students’ post-loss functioning, along with the lack of moderating effects of self-construal. As grieving traditional-age college students move through their college years, they are still in the process of developing a coherent sense of self; they are also learning how to filter out contextual influences via their own meaning making process (Abes et al., 2007). When the coherent sense of self is an evolving and moving target, grieving students

may not be able to consistently and confidently identify how important their personal identity is (i.e., independence) or how much they will sacrifice their self-interest for the benefit of a group they belong to (i.e., interdependence). Given this developmental fluctuation, self-construal may not be a stable variable that can consistently be manifested in connection to students' grief, post-loss family satisfaction, and reasons for avoiding family grief communication. Hence, the lack of association between self-construal and grieving students' post-loss functioning, along with the lack of moderating effects of self-construal, may simply reflect a developmental issue.

Third, the frame of reference in interdependent self-construal may also explain the lack of associations between self-construal and grieving students' post-loss functioning, along with the lack of moderating effects of self-construal. In this study, interdependent self-construal focuses on group membership at large and does not define the *specific* reference groups with which individuals define themselves (Gudykunst & Lee, 2003; Markus & Kitayama, 1991; Singelis, 1994), and mirrors the definition of collective-interdependent self-construal by Cross et al. (2000). Cross et al. (2000) further identified and validated another type of interdependent self-construal: relational-interdependent self-construal, which focuses on how individuals define their inner selves in to relation to *close* relationships, such as family relationship and friendship (e.g., "My close relationships are an important reflection of who I am"; Cross, Hardin, & Gercek-Swing, 2011). Developmentally, traditional-age college students are likely to be more aware of their identities as defined by close social relationships (e.g., family, friend group) than their identities as defined by larger social identities and group memberships (e.g., social class, race and ethnicity). Hence, for grieving students in this study, *relational-interdependent* self-construal—not *collective-interdependent* self-construal—may be associated with their post-loss

functioning and could potentially moderate the relationship between reasons for grief communication avoidance and post-loss functioning.

Additional Findings: Beyond Hypotheses and Exploratory Research Questions

Emotional closeness with the deceased emerged as a strong positive predictor of grief reactions and was not related to post-loss family satisfaction. This finding is not surprising and paralleled prior research on closeness with the deceased and grief, such that individuals who shared a close emotional relationship with the person who died were more likely to experience more intense grief (Eckerd, Barnett, & Jett-Dias, 2016; Hardison et al., 2005; Rings, 2009; Servaty-Seib & Pistole, 2007). On the other hand, emotional closeness with the deceased was not related to post-loss family satisfaction. The death of an individual changes the family system and often prompts role reorganization (Walsh & McGoldrick, 2013). Thus, it is likely that family-level factors, such as communication, provision and receipt of support, and family problem-solving ability, play a stronger role in the post-loss family satisfaction than individual level factors (i.e., emotional closeness with the deceased).

Clinical Implications

Findings from this study provide possible directions for evidence-based interventions to assist and support grieving traditional-age college students. Below, I offer treatment considerations and possibilities first for working with grieving students, and second for working with the family members of grieving students.

Grieving Traditional-Age College Students

Individual therapy. When conducting initial assessments and individual therapy with grieving traditional-age college students, counseling center clinicians could consider assessing for how emotionally close the students were to the deceased individual and what roles the deceased individual played in the students' lives. It is important to assess beyond the official or formal relationship to the deceased individual, as grieving students in this study did report individuals traditionally considered as extended family members (e.g., grandparents) as immediate family members with whom they shared close relationships. Assessing for the closeness with and the role played by the deceased individual could help counseling center clinicians understand how strong college students' grief might be and how much college students might be affected by the death loss.

In addition to understanding their closeness to the deceased individual, clinicians could also explore other family-level factors, including how frequently grieving traditional-age college students communicate about their grief with family and how they perceive the quality of such communication. Asking questions such as "How often and for how long do you and your family members spend talking about your grief experiences?" could help clinicians get a sense of students' grief intensity. Although not assessed in the present study, asking grieving students about who initiates such conversations may also be helpful. More importantly, clinicians could also explore how grieving students would describe the quality of such grief communication, along with what effects they believe such communication has on their grief experiences and family relationships. Especially for students who report family grief communication of low quality (e.g., poor listening, superficial, difficult, guarded, full of misunderstanding and communication breakdown), clinicians may assist them in (a) identifying the potential reasons for the poor quality communication to facilitate perspective-taking ability, (b) practicing

communicating about their grief experiences via role plays, and (c) exploring ways to productively disengage from such communication should the family grief communication episodes become harmful or hurtful for the students.

Counseling center clinicians working with grieving traditional-age college students may also benefit from assessing how grieving students perceive their family's willingness to communicate about grief. Clinicians could consider asking grieving students questions, such as "How willing, comfortable, or capable do you think your family members are to communicate about their grief with you?" These questions could offer clinicians insights into grieving students' experiences in their family system, as findings from this study indicated that students who perceived their family as willing to communicate about grief were more likely to feel satisfied about their family's ability to cope with stress, stay flexible, resolve conflicts, etc (i.e., post-loss family satisfaction).

In addition, counseling center clinicians may also benefit from exploring grieving traditional-age college students' reasons for avoiding grief-focused family communication. Findings in this study indicated that grieving traditional-age students who avoided grief-focused family communication to protect themselves were more likely to experience strong grief and to feel less satisfied about their family relationships. Hence, clinicians may watch for any endorsement of self-protective reasons for avoiding grief communication such as, "I might get hurt," "My family might look down on me or judge my behavior," "I would feel uncomfortable," and "It brings up a hurtful past event." For grieving students who endorse these self-protective reasons, counseling center clinicians could validate their fear of judgment from family members and assist them in identifying specific family members with whom they feel connected or safe. Clinicians may also capitalize on the therapeutic relationship to gently encourage grieving

students to experience and challenge their discomfort to communicate about grief via corrective emotional experiences.

Group therapy. Counseling center clinicians who are developing or facilitating groups for grieving traditional-age college students may consider dedicating a few sessions to the topics of emotional closeness to the deceased individual and/or family grief communication. A session may focus on helping grieving students understand the connection between emotional closeness with the deceased and their grief reactions. Again, findings from this study indicated the closer the students were to the deceased person, the stronger their grief. Clinicians could engage grieving students in an experiential exercise of mapping their emotional closeness to the deceased individual and the centrality of this individual to their identity relative to other family members. When processing their experiences in this exercise, clinicians could provide psychoeducation on the role of emotional closeness—rather than the official relationships to the deceased individuals—in terms of grief intensity. Although not addressed in this study, such psychoeducation could validate students' grief experiences and may protect against minimization of their loss by themselves or their family members.

Another group session could focus on exploring family grief communication factors, particularly on the helpful or unhelpful communication qualities, perceptions of family willingness to communicate, and the reasons for avoiding such communication. First, clinicians could engage grieving students in a discussion about the qualities they find helpful and unhelpful in grief-focused family communication. In this process, clinicians could assist grieving students in articulating the specific behaviors that demonstrate the desirable or undesirable family grief communication qualities. Second, clinicians could ask grieving students to rate their family members' willingness to communicate about grief and discuss the effects of this rating on their

family relationships. Clinicians could then discuss with grieving students how much their perceptions may match with their family members' actual willingness to communicate. Third, clinicians could also ask grieving students to rate how much they avoid grief-focused family communication and to discuss their reasons for such avoidance; such discussion could be validating for grieving students to know that they are not alone in fearing judgments from family members, especially when there is a theme of self-protection in these avoidance reasons.

In these discussions, clinicians could also capitalize on group processes, such as pointing out when group members demonstrate desirable communication qualities or when group members appear to avoid communicating about their grief in the group process to protect themselves. Clinicians can then engage group members in conversations about the group process (e.g., how they feel during those moments with desirable grief communication qualities or moments of avoidance) and assist grieving students in practicing the insights and skills learned about grief communication outside of group with their family members.

Outreach and educational programs. In addition to informing individual and group therapy, the present findings could provide guidance for counseling center clinicians in developing outreach and educational programs for grieving students. Outreach and educational programs are especially important given only about 18% of grieving students within the first year of bereavement attend therapy for grief-related issues (Cox et al., 2015) and about 11% of client presenting concerns were focused on grief and loss issues (Pérez-Rojas et al., 2017).

First, the outreach and education programs for grieving traditional-age college students may focus on assisting grieving students explore their grief experiences. For instance, given findings in this study indicated that higher emotional closeness with the deceased individual was associated with stronger grief reactions, educational programs could focus on (a) helping

students validate their grief reactions as relative to emotional closeness to the deceased individual, and (b) dispelling the myth that grieving students' *should* grieve less strongly when they lose a grandparent or an aunt because these individuals are traditionally considered extended family members.

Second, the outreach and educational programs could focus on helping students explore their grief communication needs (e.g., how frequent they hope to communicate about grief, what communication qualities they find helpful, why they might avoid communicating about grief with their family members). For instance, given higher quality family grief communication was related to lower grief and higher post-loss family satisfaction, psychoeducation about what grief communication qualities grieving students find helpful and discussion about whether their family grief communication possesses these qualities may be beneficial. Third, the outreach and educational programs could also assist grieving students develop the interpersonal skills to initiate or engage in grief-focused communication based on their needs. For instance, because higher perceived family willingness to communicate about grief was associated with greater post-loss family satisfaction in this study, outreach programs could assist grieving students to assess their family members' willingness to communicate about grief, derive meaning from their assessments of how much their family members want to communicate, and seek out support from specific trusted family members who might be willing to discuss their grief.

Family Members of Grieving Traditional-Age College Students

Student affairs personnel may consult with the family members of grieving students through their roles in the academic, residential life, student life, and parents and family units. For example, at Purdue University, student affairs personnel may work with family members who contact the Office of the Dean of Students to initiate use of the student bereavement leave policy,

or family members who reach out to the Parent and Family Connections office to inquire about how they could best support their grieving children while their children are on campus. When consulting with parents and other family members of grieving students, these individuals and campus units could provide psychoeducation to family members focusing on various topics related to college student grief and family grief communication.

Student affairs personnel could discuss the importance of understanding how emotionally close the grieving students are to the deceased individual, as emotional closeness with the deceased emerged as a highly significant positive predictor of grief reactions. Although not addressed in this study, student affairs personnel may also caution family members against underestimating grieving students' closeness with the deceased individual and thus unintentionally minimizing students' grief, as such underestimation and minimization have been documented in previous grieving emerging adult literature (e.g., Basinger et al., 2016; Manoogian et al., 2018).

Student affairs personnel could also provide psychoeducation focused on helping family members understand the qualities of grief-focused family communication that grieving students appreciate, as well as the benefits of demonstrating these qualities in grief-focused family communication. For instance, in this study, grief-focused family communication of high quality was marked by attentiveness, in-depthness, relaxed tone, expression of understanding, etc. Grief communication with these qualities was related to lower grief and higher post-loss family satisfaction among grieving students. Such psychoeducation could help family members become more aware of the ways they could capitalize on grief-focused family communication as a form of support to grieving students.

Psychoeducation could also focus on the benefits when family members express willingness to communicate about their own grief. Some benefits grieving students endorsed in this study include satisfaction toward their family's ability to cope with stress and stay flexible, time spend together as a family, and concerns for and closeness between family members (i.e., post-loss family satisfaction). Expressing the willingness to communicate about grief is especially important if the deceased individual was a grandparent or grandparent figure, as grieving students often report worrying about their parents' well-being (Manoogian et al., 2018).

Finally, student affairs personnel could also provide psychoeducation focused on helping grieving family members understand, inquire, honor, and address grieving students' reasons for avoiding grief-focused family communication. Student affairs personnel could offer information related to the potential reasons students avoid grief-focused family communication (e.g., to avoid judgments and hurt from family members), and the associations between these reasons and grieving students' functioning (e.g., the greater the avoidance of grief-focused family communication avoidance for self-protection reasons, the stronger the grief and the lower the post-loss family satisfaction, and vice versa). In addition, student affairs personnel could offer information cards with talking points or questions that family members could use to inquire, honor, and address grieving students' reasons for avoiding grief-specific family communication. For instance, these talking points or questions could be: "I noticed you seem hesitant to discuss your grief experiences. I wonder if you worry that I might look down on you or judge you."

Limitations

Below, I describe the limitations of this study. I organize them based on issues of sampling, measurement, and design.

Sampling

In terms of sampling, participants were limited to college students between the ages of 18 and 24 enrolled at a large Midwestern university. Note that this sample was homogenous, as the participants were 67% women, 71% White or European American, 93% U.S. citizen, and 76% straight. In addition, most participants reported the most significant death they experienced in the past two years was grandparent death (58%) followed by aunt/uncle death (15%). With this homogenous sample, participant's responses to various family grief communication measures were likely biased by the cultural contexts within which they were socialized. For instance, the death aversive and grief avoidant cultural norms in the dominant U.S. society (Cohen & Samp, 2018; Harris, 2010; Walter, 2010) may have heightened participants' endorsement of grief communication avoidance for self-protection reasons.

In addition, with this homogenous sample, participant's responses to self-construal were also likely biased by the cultural contexts within which they were socialized. There was limited variation in how much grieving students in this study endorsed interdependence and independence self-construal based on the standard deviations (see

Table 2). The lack of variability in self-construal may be related to the homogeneity of the White and middle or middle-upper social class sample, whose self-concept, values, and behaviors center on the expression of personal preferences, exploration of personal interests, emergence as unique entities, and influencing of social contexts to fit personal needs (Imamoğlu & Karakitapoglu-Aygun, 2004; Manstead, 2018; Vignoles et al., 2016).

Measurement

First, all the family grief communication measures focused on communication at the family system without reference to specific family members, which likely introduced some measurement errors. For instance, a participant emailed me after completing the survey and indicated that he responded to the frequency and quality of family grief communication, willingness to communicate about grief, and reasons to avoid grief communication measures with the closest surviving family member—his mother—in mind. He also indicated that his responses to the same measures would have been drastically different had he thought about family members with whom he shared a distant or conflictual relationship with, or about his family system in general. Based on this participant's feedback, it is possible that some participants responded to the measures with the general family system in mind, whereas others responded with specific family members in mind. Hence, without clarifying who the participants referenced while they completed the family grief communication measures, there could be additional family-level factors that I did not control for, such as grieving students' emotional closeness to the surviving family members or general family functioning. These confounding family-level factors could have affected the associations between various family grief communication factors and college students' post-loss functioning.

Second, I did not differentiate between family communication about *grief* and family communication about *death* in the family grief communication measures. While the instructions focused on family communication of grief experiences, participants could have interpreted the instructions differently; some might have responded to the items with communication about their *grief* in mind (i.e., personal reactions, such as yearning for the deceased family member), whereas others might have responded with communication about the death in mind (i.e., circumstances surrounding the death, such as moments leading up to the death). The distinctions

between communication about grief and about death could change how grieving students perceived the quality of family grief communication. Communicating about grief could be a more complicated and vulnerable process due to the greater variation in how family members experience and express grief. On the other hand, communicating about the death could be a less vulnerable process as the perceptions of the circumstances surrounding the death could be less subjective to personal interpretations and hence more consistent among family members. Hence, not making clear the distinction between family communication about *grief* and about *death* could have introduced some measurement errors.

Third, I did not operationalize “family communication” in my measures and left it open for participants’ individual interpretations. Participants could have interpreted family communication means through their own cultural lens as verbally talking about grief, nonverbally communicating about their grief via emotional attunement or silence, or communicating via other means. For instance, bereaved Flemish parents in Hooghe et al.’s (2011) and Hooghe et al.’s (2018) studies reported that they found talking about grief unhelpful because words were futile in capturing their grieving experiences; they instead communicated nonverbally by attuning to their partner’s emotions and showed support through physical touch. In the context of this study and for the Family Grief Communication Frequency measure, participants responded with how many days and how many minutes they spent “communicating with their family about their grief experiences.” With the dominant European American culture focusing on direct and verbal communication (Mansson & Myers, 2009; Niedenthal, Rychlowska, & Wood, 2017), such framing of the question might have primed the White majority participants to interpret the remaining family grief communication measures as verbally talking about grief. The challenges associated with nonverbal communication due to

geographical distance between most grieving students and their family members might have further primed the participants for verbal communication. Hence, without operationalizing and clarifying for participants the definition of “family communication,” some participants might have responded to the family grief communication measures with verbal communication in mind, whereas others with nonverbal communication mind. Again, this is likely another measurement variance and cultural bias unaccounted for in the current study.

Third, I did not control for the *extent* to which participants avoided family grief communication in the current analyses. The expert panel I sought feedback from had expressed concern that I assessed only for the reasons for family grief communication avoidance without assessing for the extent to which participants avoided family grief communication (see Appendix J). At the panel’s suggestion and with feedback from the grief and loss research team, I adapted and included an one-item measure from the Topic Avoidance Scale (Guerrero & Afifi, 1995). Rated on a 7-point Likert scale (1 = “never avoid” and 7 = “always avoid”), the item was “Some people do not avoid communication about grief with their family, whereas others may avoid such communication. To what extent do you avoid discussing your grief experiences with your family?” Immediately following this item, participants responded to the Reasons for Grief Communication Avoidance measure. Although I have data on the extent to which participants avoided family grief communication, I did not include this item in the current analyses to honor the existing contract from the proposal meeting. Hence, low scores on the Reasons for Grief Communication Avoidance measure may mean: (a) the reasons in general did not apply to them because they endorsed a low extent of family grief communication avoidance, or (b) the specific reasons did not apply to them even if they endorsed a high extent of family grief communication avoidance.

Design

First, I collected the quantitative data using an online survey, which captured relationships among family grief communication factors, self-construal, grief reactions, and post-loss family satisfaction at a given time. The cross-sectional data did not account for longitudinal changes, such as changes in how participants perceive their family relationships and communication before and after the deaths. As Relational Dialectics Theory (RDT) posits, communication in relationships involves contradictory needs that are constantly changing and in flux (Baxter, 2004). Basinger et al. (2016) found that grieving students' privacy rules related to grief communication, perceptions of the ease in grief communication, and their willingness to discuss grief changed over time. In addition, participants in the current study also reported in an open-ended response box that the frequency of their family grief communication would have been different had the data collection occurred over semester breaks when they were at home. Hence, with the cross-sectional nature of the current study, I could not capture the longitudinal changes in family grief communication, and the shorter-term changes in family grief communication due to grieving students' changing geographical proximity with family members during the semester vs. over the semester break.

Second, I did not assess for whether the frequency of family grief communication reported in current study was initiated by grieving students or by their family members. For instance, had the majority amount of time grieving students reported communicating about grief been initiated by their family members, grieving students may not have had control over how much, when, with whom, and about what aspects of their grief they communicate. Such lack of control likely represents a violation of privacy rules posited by Communication Privacy Management (CPM) theory, and could create boundary turbulence that grieving students reported in (Basinger et al.'s (2016) study (e.g., uncomfortable family interactions, conflicts in

family relationship if happened repeatedly). The functions and effects of family grief communication frequency may differ significantly depending on how much communication was student-initiated versus family-initiated.

Third, I did not assess for the extent to which grieving college students in this study participated in public rituals (e.g., funerals, memorial services, grave visitations) or personal rituals (e.g., listening to a song connected to the deceased individual or grief). Grieving students who are highly involved in the public rituals may have more opportunities to communicate verbally and nonverbally with their family members about their grief or the death; the increased opportunities may affect how frequently grieving students engage in family grief communication, how they perceived the quality of family grief communication, and how close or satisfied they feel towards their family relationship. In addition, grieving students who are highly involved in personal rituals also may have a greater sense of control over their grief and feel more connected to the deceased individual; the increased perceived control and the continuing bonds with the deceased may allow grieving students to experience lower grief. Past research has also found that involvement in public and personal rituals are associated with increased communication and closeness among family members (Fanos, Little, & Edwards, 2009; Manooogian et al. 2018), perceived control (Norton & Gino, 2014), and continuing bonds with the deceased individual (Barnhill, 2011; Norton & Gino, 2014; Suhail, Jamil, Oyebode, & Ajmal, 2011). Hence, without assessing for the extent of ritual participation, I might not have accounted for a potentially confounding variable that could change how grieving students engage in family grief communication, experience grief, and perceive post-loss family satisfaction.

Fourth, I assessed only for grieving college students' perspectives without considering their family members' perspectives despite the fact that most of my study variables were family-

level factors, such as post-loss family satisfaction. Grieving students and their family members may experience and report their post-loss family relationship quite differently based on their differing closeness to the deceased individual, the differing roles they play in their family system, etc. It may be possible that grieving students are dissatisfied towards their post-loss family relationship while their family members find their post-loss family relationship satisfying, or vice versa. Mehta, Cohen, and Chan (2009) urged researchers not to make inferences on family level factors based on the perspectives on a single family member; instead, they encouraged researchers to incorporate a family system approach to understand how a major life event could affect the entire family system and to gather perspectives from multiple family members.

Fifth, the main analyses I used, multiple hierarchical regressions, did not consider the relationships among my independent variables (i.e., various family grief communication factors, self-construal). Instead, the analyses addressed the relationships between these independent variables and my dependent variables (i.e., grief reactions, post-loss family satisfaction) and the one-to-one interaction terms formed by multiplying specific independent variables. Tabachnick and Fidell (2013) argue that “a regression solution is extremely sensitive to the combination of variables included in it” (p. 122), and that the independent variables may appear less important than they actually are if the independent variables included are a few of the many that are important to the dependent variables. In this study, many of my independent family grief communication factors were correlated with one another and with my dependent variables. For instance, both quality of family grief communication and personal willingness to communicate about grief were significantly associated, with medium effect sizes, with perceived family willingness to communicate about grief, grief communication for self-protection and relationship

protection reasons, and interdependent self-construal. Hence, it may be possible that some independent variables (e.g., personal willingness, avoidance for relationship-protection, interdependent self-construal) did not emerged as significantly associated with my dependent variables and appeared less important than they truly were because other more powerful family grief communication factors were included in the regression solution. A hierarchical modeling approach, such as structural equation modelling, that accounts for the relationships among the family grief communication factors and self-construal could contribute to a more meaningful understanding of how grieving college students engage in family grief communication and what functions these communication factors serve.

Future Research Directions

Sampling

Future researchers examining family grief communication, self-construal, and post-loss functioning of grieving college students should take concerted efforts to recruit more diverse samples, and/or to focus on the less understood grieving student populations. For instance, future researches could focus on understanding the unique grieving experiences and grief communication engagement among international students. International students often face added challenges in their bereavement and adjustments, such as geographical distance, time zone differences, varying definitions and structures of family, and navigation of different communication and grieving norms in the United States and their home countries (Servaty-Seib & Taub, 2010). In addition, future researchers could also explore the unique grieving experiences and grief communication engagement among non-traditional college students. Non-traditional college students likely experience and express grief differently due to having more complex and coherent identity, or additional roles in the family (e.g., caretaker of the deceased parent, parents

to young children). Nontraditional college students have reported identity changes different from their traditional-age college peers after experiencing the death of a family members (Goldstein, 2013; Norris-Bell, 2012; Servaty-Seib & Taub, 2010). Exploring and understanding the grieving and grief communication experiences of these understudied populations could be highly valuable for student affairs personnel, especially given the rising numbers of international and non-traditional college students enrolled in universities in the United States (Institute of International Education, 2018; National Center for Education Statistics, 2019).

Measurement

Future researchers could improve the measurement of family grief communication in several ways. First, future researchers should consider explicitly identifying or inviting participants to define the reference group for “family” when operationalizing family grief communication. Doing so would allow researchers to account for differential definitions of and references to family (e.g., “family” as a whole vs. “family” with reference to specific family members) in the measurement of family grief communication.

Second, future researchers could also make clear the distinctions between family communication about *grief* versus family communication about *death* to control for the potential confounding influence on quality of family communication. Future researchers may also explore whether the associations with various family grief communication and college student functioning variables differ based on the content of the family communication (i.e., grief versus death).

Third, future researchers may want to consider a more comprehensive assessment of family grief communication by incorporating both verbal and nonverbal communication assessments (e.g., Non-Verbal Immediacy Scale; Richmond, McCroskey, & Johnson, 2003) and

coding of recorded family communication episodes (e.g., Bartel, 2016). For instance, in addition to measuring the frequency of, willingness to, and reasons to avoid *talking* about grief with family members, future researchers could also assess nonverbal aspects of family grief communication, such as body gestures, facial expression, voice and tone, and turn-taking (Baesler & Burgoon, 1987).

Third, instead of using a one-item measure to assess the general extent of grief communication avoidance, future family grief communication researchers may want to create a measure of grief communication avoidance by integrating different grief communication content areas found in the literature. For instance, future researchers may ask “To what extent do you avoid discussing the following death-related topics with your family?” Participants can then rate their extent of avoidance on different content areas, such as communication about emotions resulting from the loss (Hooghe et al., 2012), the deceased person (Basinger et al., 2016), the circumstances surrounding the death (Maple, Edwards, Plummer, & Minichiello, 2010b), dreams related to the death (Black et al., 2016), etc.

Finally, beyond the family grief communication factors, future researchers exploring the experiences of grieving college students could consider incorporating a more dynamic and fine-tuned measurement of self-construal beyond Markus and Kitayama's (1991) proposed interdependent and independent self-construal. For instance, future researchers could consider using self-construal measures that differentiate between collective-interdependence and relational-interdependence (Cross et al., 2000; Kashima & Hardie, 2000), or self-construal measures that specify interdependence and independence across different domains of personal and social functioning. Such domains include *experiencing of the self* (i.e., a spectrum from

connection to others to self-containment) and *making decisions* (i.e., a spectrum from receptiveness to influence to self-direction; Vignoles et al., 2016, p. 10).

Design

First, future researchers may consider using longitudinal and repeated measures designs to examine how grieving students' engagement in family grief communication, reports of self-construal, experiences with post-loss functioning change over time. For instance, future researchers may consider collecting data from grieving students at different time points, such as in the middle of a semester and again during the semester break over the course of a year or perhaps even four years. The data could be analyzed using a hierarchical modeling approach, such as structural equation modelling, to account for the relationships among different family grief communication factors. For instance, researchers could examine (a) grieving students endorsement of various family grief communication factors change over time; (b) how these family grief communication factors are interrelated; (c) how the changes in these grief communication factors predict grieving students' post-loss functioning at different time-points; and (d) how grieving students' self-construal changes over time as their cognitive and identity development unfold. Understanding how grieving student's engagement in family grief communication changes and what communication factors may predict their long-term functioning could be highly valuable for student affairs personnel supporting grieving students and their families. Exploring how grieving students' self-construal changes over time by considering their identity developmental process and honoring the unique identity shifts grieving students face could also contribute to a more nuanced theoretical development of the Self-Construal Theory.

Second, when measuring frequency of family grief communication, future researchers may consider assessing what proportion of the time spent communicating about grief is initiated by the grieving students or by their family members. Doing so could allow researchers to offer insights regarding grieving students' perceptions of the desirability of and control for the time spent communicating about grief.

Third, future researchers may also explore whether ritual participation may be related to family grief communication among grieving college students. Future researchers may assess for the types of rituals grieving students participate in and the levels of participation. Researchers may also invite grieving students to share their perspectives on how ritual participation may facilitate or hinder their family grief communication. Such exploration may provide a more nuanced understanding of the functions of ritual participation on college student grief and post-loss family satisfaction by considering the verbal and nonverbal communicative functions of ritual participation.

Fourth, future researchers may consider using a dyadic or family system-based approach in assessing how family grief communication and post-loss family satisfaction may be related. Instead of relying only on the perspectives of grieving college students, future researchers may also collect data from other family members, such as a surviving family member with whom grieving students are close with or all individuals the grieving students consider as immediate family members. Future researchers may also explore how these family members perceive the communication and support offered by grieving students; this information may be assist grieving students develop a sense of purpose and help them gain insights into their helpfulness, as grieving students may be at the first point in their life to offer tangible support to their family members. The multi-informant approach, coupled with multilevel modelling analysis approach,

could provide a more holistic and in-depth understanding of how the impacts of family grief communication on post-loss family satisfaction may differ within and between different family systems.

Fifth, future researchers may also consider using mixed-methods design to address the measurement limitations in this study and to situate their findings within grieving students' cultural backgrounds. For instance, using an explanatory sequential design, future researchers could first gather quantitative information about how much grieving students engage in family grief communication and what communication factors may be related to their post-loss functioning. Researchers could then recruit a subset of the participants to gather qualitative information about which family members grieving students consider as they respond to the quantitative portion and what modes of communication they find most helpful or unhelpful (e.g., verbal, nonverbal, combination). In addition, the researchers could also gather qualitative information about what family or larger systemic communication and grieving norms might have influenced grieving students' engagement in family grief communication. The qualitative data could serve as a contextual background to help explain the quantitative data; the findings generated from a mixed-methods design could provide a more nuanced and culturally sensitive understanding of family grief communication among grieving students.

Conclusion

The overarching purpose of this study was to provide a more nuanced understanding of family grief communication among bereaved college students by attending to various communication factors and self-construal. With survey responses from 369 traditional-age college students in the first two years of bereavement, I found that more frequent family grief communication was associated with stronger grief reactions, but was unrelated to post-loss

family satisfaction. Family grief communication of higher quality was associated with both lower grief reactions and higher post-loss family satisfaction. In addition, higher perceived family willingness to communicate about grief was not related to grief reactions, but was associated with higher post-loss family satisfaction. Higher levels of grief communication avoidance for self-protection reasons were associated with both stronger grief reactions and lower post-loss family satisfaction. Finally, interdependent and independent self-construal was not associated with grieving traditional-age college students' grief reactions or post-loss family satisfaction, nor did these variables moderate the relationship between reasons for grief communication avoidance and grieving traditional-age college students' post-loss functioning (i.e., grief reactions, family satisfaction).

The current findings should be interpreted with caution due to the study limitations, which included the homogeneity of current sample, the lack of clarity in how “family” and “family communication” were operationalized and measured, and the cross-sectional nature of the study with an analytic approach that did not account for relationships among various family grief communication factors.

With these caveats and limitations in mind, the findings offer potential guidance for those seeking to support grieving traditionally aged college students and possible directions for future research. In terms of supporting grieving students, counseling center clinicians and student affairs personnel may want to keep in mind that frequent grief-focused family communication may not always be helpful for grieving students. Instead, those seeking to support grieving students may benefit from attending to the quality of grief-focused family communication and the self-protection reasons students may have for avoiding such communication. In terms of research, future researchers could consider exploring the family grief communication

experiences of understudied population (e.g., international students, non-traditionally aged college students) and assess for both verbal and nonverbal aspects of family grief communication. Future researchers may also consider using longitudinal or mixed methods designs to assess for family grief communication changes over time and to situate the findings within grieving students' cultural backgrounds.

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APPENDIX A. DEMOGRAPHICS QUESTIONNAIRE

1. Which university are you affiliated with?
 - a. Purdue University
 - b. Other, please specify: _____
2. Age:
 - a. 17 or below
 - b. 18
 - c. 19
 - d. 20
 - e. 21
 - f. 22
 - g. 23
 - h. 24
 - i. 25
 - j. 26 or above
3. Gender
 - a. Woman
 - b. Man
 - c. Transgender woman
 - d. Transgender man
 - e. Genderqueer
 - f. Do not identify as woman, man, or transgender
 - g. Self-specified: _____
4. Do you consider yourself to be:
 - a. Asexual
 - b. Bisexual
 - c. Fluid
 - d. Gay
 - e. Heterosexual
 - f. Lesbian
 - g. Pansexual
 - h. Queer
 - i. Questioning
 - j. Prefer not to answer
 - k. Self-specified:
5. Which best describes your race?
 - a. Black / African / African American
 - b. Hispanic/Latinx (e.g., Cuban American, Mexican American, Puerto Rican)
 - c. American Indian or Alaskan Native

- d. Native Hawaiian or Other Pacific Islander
 - e. Asian / Asian American
 - f. Middle Eastern / Middle Eastern American
 - g. White / Caucasian / European or European descent (not of Hispanic origin)
 - h. Biracial/Multiracial (Please specify: _____)
 - i. Self-specified: (Please specify: _____)
6. Are you an international student?
- a. Yes (National origin: _____)
 - b. No
7. Year at school:
- a. First-Year
 - b. Sophomore
 - c. Junior
 - d. Senior
 - e. Masters
 - f. Doctoral
8. Which religion do you affiliate with?
- a. Christian
 - b. Muslim
 - c. Catholic
 - d. Buddhist
 - e. Hindu
 - f. Atheist
 - g. Agnostic
 - h. Non-religious
 - i. Self-specified (please specify)
9. How important is your religious or spiritual beliefs in your life?
- a. 1 – Not at all important
 - b. 2
 - c. 3
 - d. 4
 - e. 5 – Extremely important
10. Please use the slide to indicate where you think your family stands at this point relative to other people in your country. To the right of the slider are the people who are the best off – those who have the most money, the most education and the most respected jobs. To the left are the people who are the worst off- who have the least money, least education, and the least expected jobs or no jobs. The further right your family is on this slider, the closer you are to the families at the very top.
- a. A-----B-----C-----D-----E-----F-----G-----H-----I-----J

11. Do you have a long-lasting or chronic condition (physical, visual, auditory, cognitive, mental, emotional, or other) that substantially limit one or more of your major life activities (your ability to see, hear, or speak; to learn, remember, or concentrate)?
- Yes. Please indicate the terms that best describe the condition you experience: ____
 - No.
 - Prefer not to answer

For the following questions, we define family members as both immediate (i.e., parents, siblings, spouse/partner, children) and extended (i.e., grandparents, cousins, in-laws, uncles, aunts) family members.

12. In the past 2 years, how many death loss(es) greatly affected you and your family members?
- 1
 - 2
 - 3
 - 4
 - 5
 - 6 or more

If you experienced multiple death losses in the past 2 years, think of the deceased individual you were closest with. Answer the following questions in relation to this individual.

13. What was/is your relationship to the deceased individual?
- Mother / Mother Figure
 - Father / Father Figure
 - Sibling / Stepsibling
 - Spouse / partner
 - Child / Stepchild
 - Grandmother / Grandmother figure
 - Grandfather / Grandfather figure
 - Uncle
 - Aunt
 - Niece
 - Nephew
 - Cousin
 - In-law
 - Family friend
 - Close friend
 - Self-specified, please specify: _____

14. Did/Do you consider this person a/an:
- Immediate family member
 - Extended family member
 - Friend
 - Self-specified, please specify: _____

15. How long ago, in months, did this individual die?

16. What was the cause of this individual's death? (Dropdown Menu)

- a. Cancer (Specify: _____)
- b. Stroke
- c. Heart Attack
- d. HIV/AIDS
- e. Other Illness (Specify: _____)
- f. Car Accident
- g. Other Accident (Specify: _____)
- h. Suicide
- i. Murder/Homicide
- j. Drug Overdose
- k. Old age
- l. Self-specified (Specify: _____)

17. Did you live with the deceased individual in the period leading up to her/his death?

- a. Yes
- b. No

18. In your honest opinion, should we use the data you have provided in this survey? (I will include this item at the end of the survey)

- a. Yes
- b. No

APPENDIX B. SCALE OF EMOTIONAL CLOSENESS

The level of closeness we feel to others differs from person to person and over time. Please **think about your relationship with the person who died and with whom you were the closest** while answering the following questions. Using the following scale, indicate the number that corresponds to how much you agree with each statement.

Rating Scale:

1	2	3	4	5	6	7
Very			Neither			Very
Strongly						Strongly
Disagree						Agree

1. I felt I could share my most intimate feelings with this person.
2. I kept my distance emotionally from this person.
3. It was very easy to talk with this person.
4. I felt close to this person.
5. It was difficult to talk with this person.
6. This person understood me.
7. This person shared his/her most personal thoughts with me.

APPENDIX C. CORE BEREAVEMENT ITEMS

These questions are about your experience in relation to the recent loss of your family member. If you experience more than one death losses, please **answer the following questions in relation to the family member with who you were the closest.**

Rating Scale:

0	1	2	3
Never	A little bit of the time	Quite a bit of the time	A lot of the time

1. Do you experience images of the events surrounding X's death?
2. Do thoughts of X come into your mind whether you wish it or not?
3. Do thoughts of X make you feel distressed?
4. Do you think about X?
5. Do images of X make you feel distressed?
6. Do you find yourself preoccupied with images or memories of X?
7. Do you find yourself thinking of reunion with X?
8. Do you find yourself missing X?
9. Are you reminded by familiar objects (photos, possessions, rooms etc) of X?
10. Do you find yourself pining for/yearning for X?
11. Do you find yourself looking for X in familiar places?
12. Do you feel distress/pain if for any reason you are confronted with the reality that X is not coming back?
13. Do reminders of X such as photos, situations, music, places etc cause you to feel longing for X?
14. Do reminders of X such as photos, situations, music, places etc cause you to feel loneliness?
15. Do reminders of X such as photos, situations, music, places etc cause you to cry about X?
16. Do reminders of X such as photos, situations, music, places etc cause you to feel sadness?
17. Do reminders of X such as photos, situations, music, places etc cause you to feel loss of enjoyment

APPENDIX D. FAMILY SATISFACTION SCALE

Using the rating scale below, how satisfied are you with the following in your family **since the death of the family member with whom you were the closest?**

Rating Scale:

1	2	3	4	5
Very Dissatisfied				Very Satisfied

1. The degree of closeness between family members.
2. Your family's ability to cope with stress.
3. Your family's ability to be flexible.
4. Your family's ability to share positive experiences.
5. Your family's ability to resolve conflicts.
6. The quality of communication between family members
7. The amount of time you spend together as a family.
8. The way problems are discussed.
9. The fairness of criticism in your family.
10. Family members concern for each other.

Has the degree of your family satisfaction changed since the death loss?

- a. No
- b. Yes – please explain: _____

APPENDIX E. FAMILY GRIEF COMMUNICATION FREQUENCY

Instruction: Approximately how many days a week do you use this medium to communicate about your grief experiences with your family? (Drop-down options: 1 -- 2 -- 3 -- 4 -- 5 -- 6 -- 7)

1. Face-to-face
2. Phone (e.g., voice calls)
3. Texting (e.g., texts sent through smartphone applications, such as iMessage, Whatsapp)
4. Instant messaging (e.g., text-only G-Chat, Facebook chat, Skype chat)
5. Video chatting (e.g., Facetime, Skype, G-Chat video call)
6. Other medium. Please specify:

Instruction: On the days that you use this medium, how much time on average do you spend using this medium to communicate about your grief experiences with your family, in minutes? (open-ended)

1. Face-to-face
2. Phone (e.g., voice calls)
3. Texting (e.g., texts sent through smartphone applications, such as iMessage, Whatsapp)
4. Instant messaging (e.g., text-only G-Chat, Facebook chat, Skype chat)
5. Video chatting (e.g., Facetime, Skype, G-Chat video call)
6. Other medium. Please specify:

APPENDIX F. FAMILY GRIEF COMMUNICATION QUALITY

Instruction: Describe the quality of communication when you and your family communicate about your grief experiences. My family communication about our grief experience is:

1. Strained (1) ----- Relaxed (9)
2. Impersonal (1) ----- Personal (9)
3. Poor Listening (1) ----- Attentive (9)
4. Formal (1) ----- Informal (9)
5. Superficial (1) ----- In-depth (9)
6. Difficult (1) ----- Smooth (9)
7. Guarded (1) ----- Open (9)
8. Great deal of misunderstanding (1) ----- Great deal of understanding (9)
9. Laden with communication breakdowns (1) ----- Free of communication breakdowns (9)

APPENDIX G. WILLINGNESS TO COMMUNICATE ABOUT GRIEF - PERSONAL OR PERCEIVED FAMILY

Instruction: The following statements are about you and your family's communication about grief in general. Please indicate how much you agree with the following statements.

Rating Scale:

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

1. I would be comfortable communicating with my family members about my grief experiences.
2. I know how to communicate with my family about my grief experiences.
3. I am willing to communicate with my family about my grief experiences.
4. My family members would be comfortable communicating with me about their grief experiences.
5. My family members know how to communicate with me about their grief experiences.
6. My family members are willing to communicate with me about their grief experiences.

APPENDIX H. REASONS FOR GRIEF COMMUNICATION AVOIDANCE

Some people do not avoid communication about grief with their family, whereas others may avoid such communication. To what extent do you avoid discussing your grief experiences with your family?

Never Avoid (1) ----- Always Avoid (7)

We would like to know the reasons why you choose to avoid discussing grief with your family. For this next scale, keep your family in mind and think about why you avoid discussing grief.

Strong Disagree (1) ----- Strongly Agree (7)

I avoid discussing grief with my family because:

1. I might get hurt.
2. My family might look down on me.
3. My family might judge my behavior.
4. I would feel uncomfortable.
5. It brings up a past event that was hurtful.
6. I don't want to change the nature of my relationship with my family.
7. I don't want to hurt my family.
8. I want to protect my family.
9. I want to protect my relationship with my family.

APPENDIX I. SELF-CONSTRUAL SCALE

Instruction: You will read some statements with regard to yourself and your general relations with others. Please indicate the extent to which you agree or disagree with the following statements.

Rating Scale:

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

Interdependence (INT)

1. I will sacrifice my self-interest for the benefit of my group.
2. I stick with my group even through difficulties.
3. I respect decisions made by my group.
4. I maintain harmony in the groups of which I am a member.
5. I respect the majority's wishes in groups of which I am a member.
6. It is important to consult close friends and get their ideas before making a decision.

Independence (IND)

7. My personal identity is important to me.
8. I prefer to be self-reliant rather than depend on others.
9. I take responsibility for my own actions.
10. It is important for me to act as an independent person.
11. I should decide my future on my own.
12. I enjoy being unique and different from others.

APPENDIX J. EXPERT PANEL FEEDBACK ON MEASURE ADAPTATION

Of the ten researchers I contacted, two declined providing feedback and three did not respond after two contact attempts. The five researchers who provided feedback were:

- Dr. John Caughlin, Professor in the Department of Communication at the University of Illinois at Urbana-Champaign. He specializes in the connections between interpersonal communication and personal and relational well-being;
- Dr. Mary Alice Varga, Associate Professor in the Department of Leadership, Research, and School Improvement at the University of West Georgia. She specializes in student grief and bereavement, as well as online learning environments and computer-mediated communication;
- Dr. David Balk, Professor in the Department of Health and Nutrition Sciences at the City University of New York – Brooklyn College. He specializes in bereavement among adolescents and college students;
- Dr. Illene Cupit, Professor in the Department of Women and Gender Studies at the University of Wisconsin at Green Bay. She specializes in college student grief, the uses of the Internet in the study of death and dying, and the effects of bereavement camps as a form of grief intervention for bereaved children;
- Dr. Tashel Bordere, Assistant Professor in the Department of Human Development and Family Science at the University of Missouri Columbia. She specializes in bereavement during adolescence and young adulthood among African American children, youth, and families.

In the table below, I detailed the feedback I received from the expert panel on each adapted measure. For measures with adapted instructions, I asked the experts to rate whether the adapted instruction appropriately captured the essence of the original instruction a 5-point scale (1 = *strongly disagree*, 5 = *strongly agree*). For measures with adapted items, I asked the experts to rate whether each added or adapted item appropriately captured the construct of interests a 5-point scale (1 = *strongly disagree*, 5 = *strongly agree*); I presented the mean ratings for each measure. Please note that some experts provided only open-ended feedback, but not numeric ratings.

Measure	Feedback I Asked for	Dr. John Caughlin	Dr. Mary Alice Varga	Dr. David Balk	Dr. Illene Cupit	Dr. Tashel Bordere	Modifications Made to Include Expert Panel Feedback
Family Satisfaction Scale	Do you believe that the modified instruction appropriately captures the essence of the original instruction?	<p>Rating: N/A</p> <p>Open-ended feedback: I think the change in timeline is fine, but I am not a fan of the satisfaction scale because the specifics are really hypotheses about what makes somebody have a satisfying marriage--for example, the idea that communication is important is really a hypothesis not an evaluation of the relationship, per se. This creates some potential confounds too when people evaluate these things in the satisfaction measure and then there are items about them in the other parts of the survey (e.g., they might be reporting on communication in one measure so it is a problem that the satisfaction measure includes</p>	<p>Rating: 3</p> <p>Open-ended feedback: My only concern is about the operationalization of what you are measuring - there are two variables in play: 1) feeling happy; and 2) feeling fulfilled. One can feel one without feeling the other. Do some items measure happiness and one fulfillment?</p>	<p>Rating: N/A</p> <p>Open-ended feedback: N/A</p>	<p>Rating: N/A</p> <p>Open-ended feedback: Modification looks fine. Be sure to also include the description of the measure.</p>	<p>Rating: 5</p> <p>Open-ended feedback: I love your idea of looking at family communication among college students following a death loss!</p> <p>Question: Will participants be asked to focus (e.g., most recent? most significant?) on a particular death loss as they complete the survey?</p>	<p><i>Instruction sent to expert panel:</i> "Using the rating scale below, how satisfied are you with the following in your family since the death loss?"</p> <p><i>Final instruction after expert panel feedback:</i> "Using the rating scale below, how satisfied are you with the following in your family since the death of <u>the family member with whom you were the closest?</u>"</p>

Measure	Feedback I Asked for	Dr. John Caughlin	Dr. Mary Alice Varga	Dr. David Balk	Dr. Illene Cupit	Dr. Tashel Bordere	Modifications Made to Include Expert Panel Feedback
		<p>an item in which they are evaluating communication). There was actually a lot written about this in the 1980s--I could send you some citations if you wanted--two authors were Ted Huston and Norton. I think Ted Huston's measure that used semantic differentials to evaluate the relationship (e.g., miserable-enjoyable) is better than this one because it avoid the problem above. Another good option is the Kansas Marital Satisfaction Scale, which can be found here: https://journals.sagepub.com/doi/pdf/10.2466/pr0.1983.53.2.583 I can send you Ted's measure if you are interested in that one. Anyway, that's my take on this...</p>					

Measure	Feedback I Asked for	Dr. John Caughlin	Dr. Mary Alice Varga	Dr. David Balk	Dr. Illene Cupit	Dr. Tashel Bordere	Modifications Made to Include Expert Panel Feedback
Frequency of Family Grief Communication	1) Do you believe that the modified instruction appropriately captures the essence of the original instruction?	Rating (Instruction): 4	Rating (Instruction): 5	Rating (Instruction): N/A	Rating (Instruction): 5	Rating (Instruction): 5	No changes
	2) Do you think the four additional mediums (underlined below) are appropriate additions?	Rating (Items): 4 Open-ended feedback: N/A	Rating (Items): 5 Open-ended feedback: None - all good	Rating (Items): N/A Open-ended feedback: N/A	Rating (Items): 5 Open-ended feedback: N/A	Rating (Items): 5 Open-ended feedback: N/A	
Quality of Family Grief Communication	Do you believe that the modified instruction appropriately captures the essence of the original instruction?	Rating (Instruction): 4 Open-ended feedback: No comment	Rating (Instruction): 5 Open-ended feedback: Good - no concerns or suggestions	Rating (Instruction): N/A Open-ended feedback: N/A	Rating (Instruction): N/A Open-ended feedback: Looks good. Do you think it would help to add "My family is..."	Rating (Instruction): 4 Open-ended feedback: Just a survey question: Will an item be available to indicate that they do not communicate about their grief experiences?	To address Dr. Cupit's feedback: <i>Instruction sent to expert panel</i> "Describe the quality of communication when you and your family communicate about your grief experiences." <i>Final instruction after expert panel feedback:</i> "Describe the quality of communication when you and your family communicate about your grief experiences. <u>My family communication about our grief experience is:</u> " (items are strained--relaxed, impersonal--personal)

Measure	Feedback I Asked for	Dr. John Caughlin	Dr. Mary Alice Varga	Dr. David Balk	Dr. Illene Cupit	Dr. Tashel Bordere	Modifications Made to Include Expert Panel Feedback
Willingness to communicate about grief	1) Do you believe that the modified items below appropriately capture <i>personal willingness</i> to communicate about grief ?	Rating (Personal Willingness Items): N/A	Rating (Personal Willingness Items): 5.0	Rating (Personal Willingness Items): N/A	Rating (Personal Willingness Items): N/A	Rating (Personal Willingness Items): 4.3	To address Dr. Bordere's feedback on talking vs. communicating, I changed all the items with wording "talk to" to "communicate with". For example, <i>item sent to expert panel reads</i> "I know how to talk to my family about my grief experiences." <i>Final item after expert panel review:</i> "I know how to <u>communicate</u> with my family about my grief experiences."
	2) Do you believe that the parallel items below appropriately captures <i>perceived family willingness</i> to communicate about grief?	Rating (Perceived Family Willingness Items): N/A Open-ended feedback: these seem fine to me. I should note that this is really more a measure of confidence than willingness, but you can deal with that. (I might be willing to talk about something if I had to, even if it makes me uncomfortable.)	Rating (Perceived Family Willingness Items): 5.0 Open-ended feedback: No feedback - all good!	Rating (Perceived Family Willingness Items): N/A Open-ended feedback: N/A	Rating (Perceived Family Willingness Items): N/A Open-ended feedback: Looks good.	Rating (Perceived Family Willingness Items): 4.0 Open-ended feedback: I know that you want me to look at the underlined portions, but I also want to share a thought about further clarifying an item. - I wonder if item two could be made clearer - "I know how to best communicate my grief experiences with family." I am suggesting this item because some families may be more expressive in communication via methods beyond verbal communication or "talking." For example, some	To address Dr. Bordere's feedback about whether I want participants to respond based on general grief communication or grief communication in relation to the closest person who died, I changed instruction to make its focus on general grief communication (instead of communication about grief specific to the closest person who died) clearer. <i>Instruction before expert panel review:</i> "The following statements are about you and your family. Please indicate how much you agree with the following statements. " <i>Final instruction after expert panel review</i> " The following statements are about you and your family's <u>communication about grief in general</u> . Please

Measure	Feedback I Asked for	Dr. John Caughlin	Dr. Mary Alice Varga	Dr. David Balk	Dr. Illene Cupit	Dr. Tashel Bordere	Modifications Made to Include Expert Panel Feedback
						<p>people may communicate their grief to family indirectly via a facebook post in which they share their experiences. Some communication is indirect or non-verbal.</p> <p>-*I really like the addition of the three parallel items! Students are often worried about the well-being of bereaved family members.</p> <p>-Are you wanting participants to respond to these items based on the death that they related to in the first set of questions or to provide a response about the family's communication around loss in general.</p>	<p>indicate how much you agree with the following statements."</p>

Measure	Feedback I Asked for	Dr. John Caughlin	Dr. Mary Alice Varga	Dr. David Balk	Dr. Illene Cupit	Dr. Tashel Bordere	Modifications Made to Include Expert Panel Feedback
Reasons for Grief Communication Avoidance (i.e., Self-Protection and Relationship Protection)	1) Do you believe that the modified instruction appropriately captures the essence of the original instruction?	Rating (Instruction): 4.0	Rating (Instruction): 5.0	Rating (Instruction): N/A	Rating (Instruction): 5	Rating (Instruction): 4	To address Dr. Varga's concerns of a double-barreled item, I changed item :My family might evaluate or judge my behavior" to " <u>My family might judge my behavior</u> "
	2) I modified the wordings from "my partner" to "my family." Do you believe that the modified items below appropriately capture grief communication avoidance for self-protection and for relationship protection reasons?	Rating (Self-Protection Items): N/A	Rating (Self-Protection Items): 4.6	Rating (Self-Protection Items): N/A	Rating (Self-Protection Items): N/A	Rating (Self-Protection Items): 4.6	To address Dr. Cupit's feedback about instruction bias, <i>Instruction before expert panel review:</i> "We would like to know the reasons why you choose to avoid discussing grief with your family. For this next scale, keep your family in mind and think about why you avoid discussing grief. I avoid discussing grief with my family because:" <i>Instruction after expert panel review:</i> " <u>Some people do not avoid communication about grief with their family, whereas others may avoid such communication.</u> We would like to know the reasons why you choose to avoid discussing grief with your family. For this next scale, keep your family in mind and think about why you avoid discussing grief. I avoid discussing grief with my family because:"
		Rating (Relationship Protection Items): N/A	Rating (Relationship Protection Items): 5.0	Rating (Relationship Protection Items): N/A	Rating (Relationship Protection Items): N/A	Rating (Relationship Protection Items): 4.0	
		Open-ended feedback: seems fine	Open-ended feedback: Changes are good - the third item is double-barreled - you can evaluate without judging. Recommend breaking into two questions or remove one. "My partner might evaluate or judge my behavior."	Open-ended feedback: Your measures impress me for the clarity and specificity in the items. You have refined a much more global measure of Family Coherency that I reported in my dissertation, a measure that proved powerful in discriminating adolescents' emotional responses to sibling death.	Open-ended feedback: Overall this looks good. My main concern is that you might be leading your respondents to think only of avoidance. Include some statement to the effect of "some people also do not avoid communication about grief with family" and a question about how much they avoid communicating about grief with family.	Open-ended feedback: N/A	

APPENDIX K. RECRUITMENT EMAIL

FROM: Chye Hong Liew (cliew@purdue.edu)
REPLY TO: Chye Hong Liew (cliew@purdue.edu)
SUBJECT: Survey: College Student Grief, Family Communication, and Cultural Background

Dear Purdue Student,

I am Chye Hong and a doctoral candidate in Counseling Psychology at Purdue University. I invite you to participate in a research study focusing on the grief experiences of college students.

Please know that my hope is to use the information you offer to make a difference in the lives of future grieving students. I have a true sense of how challenging it is to experience an important death loss while in college, and to keep moving ahead with your studies when you have so many other concerns on your mind. Your participation is appreciated and may help to improve future services and support provided to grieving college students and their families. This project is supervised by my advisor, Dr. Heather L. Servaty-Seib and approved by the Purdue University IRB Board (IRB Research Project Number: 1811021349).

Participating in this online anonymous survey study will take 10 to 15 minutes. Participation is voluntary, so you can stop the survey at any time, or skip questions at your discretion. Five participants will be randomly selected to receive a \$20 Amazon.com gift card. The odds of winning are dependent on the number of responses received, but are expected to be 1 in 100 or better. To enter into the drawing of for one of five Amazon gift cards, follow the directions provided at the end of the survey.

To participate, you must be between ages 18 and 24 and have experienced the death of one or more individual(s) you consider to be family member(s) (i.e., may not be blood relation) in the past two years. Please click on this link ([insert link](#)) if you would like to participate.

If you have any questions, please feel free to contact me at cliew@purdue.edu or my advisor Dr. Heather Servaty-Seib at servaty@purdue.edu.

Thank you for your help,

Chye Hong Liew
Counseling Psychology Doctoral Candidate
Department of Educational Studies
Purdue University

APPENDIX L. RECRUITMENT EMAIL – ONE WEEK REMINDER

FROM: Chye Hong Liew (cliew@purdue.edu)

REPLY TO: Chye Hong Liew (cliew@purdue.edu)

SUBJECT: Survey: College Student Grief, Family Communication, and Cultural Background

Dear Purdue Student,

I am Chye Hong and a doctoral candidate in Counseling Psychology at Purdue University. A week ago, I invited you to participate in a research study focusing on the grief experiences of college students. If you responded – thank you! If you didn't, please consider completing the survey.

Please know that my hope is to use the information you offer to make a difference in the lives of future grieving students. I have a true sense of how challenging it is to experience an important death loss while in college, and to keep moving ahead with your studies when you have so many other concerns on your mind. Your participation is appreciated and may help to improve future services and support provided to grieving college students and families. This project is supervised by my advisor, Dr. Heather L. Servaty-Seib and approved by the Purdue University IRB Board (IRB Research Project Number: 1811021349).

Participating in this online anonymous survey study will take 10 to 15 minutes. Participation is voluntary, so you can stop the survey at any time, or skip questions at your discretion. Five participants will be randomly selected to receive a \$20 Amazon.com gift card. The odds of winning are dependent on the number of responses received, but are expected to be 1 in 100 or better. To enter into the drawing of for one of five Amazon gift cards, follow the directions provided at the end of the survey.

To participate, you must between ages 18 and 24 have experienced the death of one or more individual(s) you consider to be your family member(s) (i.e., may not be blood relation) in the past 2 years. Please click on this link (insert link) if you would like to participate.

If you have any questions, please feel free to contact me at cliew@purdue.edu or my advisor Dr. Heather Servaty-Seib at servaty@purdue.edu.

Thank you for your help,

Chye Hong Liew
Counseling Psychology Doctoral Candidate
Department of Educational Studies
Purdue University

APPENDIX M. INFORMED CONSENT

RESEARCH PARTICIPANT CONSENT FORM
College Student Grief, Family Communication, and Culture
(IRB Research Project Number: 1811021349)
Chye Hong Liew, M.S.Ed
Heather L. Servaty-Seib, Ph.D.
Educational Studies, Purdue University

Please Print this Information Sheet for Your Records

What is the purpose of this study?

The purpose of this study is to learn more about grief experiences of college students, including grief-related conversations with your family. To participate in this study, you must be between ages 18 and 24 and have experienced a death loss that affected you and your family in the past 2 years.

What will I do if I choose to be in this study?

This online survey includes questions focused on your background information, grief experiences, family communication related to grief, and cultural background. Your participation is relevant to this study and may help to improve the services provided to grieving college students and their family members. All survey answers will be collected anonymously. Please complete these forms and click the submit button upon completion.

How long will I be in the study?

This online survey will take approximately 10 - 15 minutes to complete.

What are the possible risks or discomforts?

There are no foreseeable risks or adverse effects associated with this study. The risk of participating in this study is considered minimal and no greater than you would encounter in everyday life. Some questions may possibly be connected with some emotional discomfort for you. If you would like emotional support and related assistance, you can contact a counselor near you by calling 765-494-6995 or logging on to www.purdue.edu/caps. You may also receive 24-hour assistance by contacting the Lafayette Crisis Center by contacting 1-765-742-0244, the National Suicide Prevention Lifeline by contacting 1-800-273-TALK. Additionally, there is minimal risk of a breach of confidentiality due to the electronic nature of the survey. However, several safeguards are in place to minimize the risk of a breach in confidentiality, which can be found below in the section entitled, "Will information about me and my participation be kept confidential."

Are there any potential benefits?

There are no obvious personal benefits from participating in this study other than gaining insights into your grief experiences through self-reflection (Kentish-Barnes et al., 2015).

Will I receive payment or other incentive?

By participating in this survey, you will become eligible to participate in a drawing for 1 of 5 Amazon.com gift cards. You will be given the opportunity to submit your email to be entered into the drawing. At the end of this study, four email addresses will be randomly chosen to receive a \$20 gift card. The odds of winning are dependent on the number of responses received, but are expected to be 1 in 100 or better. The persons chosen from this random drawing will receive an email directly from Amazon.com with their gift card information included.

Will information about me and my participation be kept confidential?

Your privacy and confidentiality are important to us. You may choose to complete this survey in a private location such that other persons may not view your answers while you complete this survey. The information you submit electronically will be transmitted and stored securely. The online service we use for this survey has SSL encryption for the survey link and survey pages during transmission of information. We will protect your survey responses in multiple ways. We will collect your survey responses anonymously. You are not asked to provide your name or any identifying material other than demographic information. Your survey answers cannot be traced directly to you or your email address. Student email addresses submitted for the follow-up study invitation and gift card drawing will not be connected to your survey responses and will be stored in a password protected excel file. The file containing your email addresses will be destroyed upon the completion of this study. All data will be kept on a secure computer database and a password protected computer on the West Lafayette campus. Only the co-investigators of this study will be able to access the data. The data from this study will only be used for the purposes described above. The data collected in this survey will be maintained indefinitely, but any reports, publications, or related documents will be reported on an aggregate (not individual) level. The project's research records may be reviewed by departments at Purdue University responsible for regulatory and research oversight.

What are my rights if I take part in this study?

Participation in this study is completely voluntary. If you begin participating in this study, you may choose to stop the survey at any time, or skip questions at your discretion, without penalty. Participation or non-participation will not affect your grades or class standing.

Who can I contact if I have questions about the study?

If you have any questions your participation in this study, you may contact Chye Hong Liew (cliew@purdue.edu) or Dr. Heather Servaty-Seib (765-494-0837; servaty@purdue.edu). If you have any concerns about your rights as a research participant or participation, you may call the Human Research Protection Program at (765) 494-5942, email (irb@purdue.edu) or write to:

Human Research Protection Program - Purdue University
Ernest C. Young Hall, Room 1032
155 S. Grant St.,
West Lafayette, IN 47907-2114

Documentation of Informed Consent

I have had the opportunity to read this consent form and have the research study explained. I have had the opportunity to ask questions about the research study, and my questions have been

answered. I am prepared to participate in the research study described above. I can print a copy of this consent form for my records.

I wish to participate in this study

I do not wish to participate in this study

Please Print this Information Sheet for Your Records

APPENDIX N. PRELIMINARY ANALYSES REVIEW

Below, I review the preliminary analyses I conducted before performing my main analyses. First, I conducted bivariate correlations among grief reactions, post-loss family satisfaction, and the continuous demographic and death-related variables, including age, subjective social class, perceived importance of religiosity/spirituality, number of deaths experienced in the past two years, months since the most significant death, and emotional closeness with the deceased. Second, I conducted a series of Multivariate Analysis of Variance (MANOVAs) to determine whether grief reactions and post-loss family satisfaction varied based on the categorical demographic and death-related variables, including gender, sexuality, race, international student status, year in school, religious/spiritual affiliation, disability status, official relationship to the deceased, self-identified relationship to the deceased, living status prior to the death, and cause of death.

Continuous Demographic and Death-Related Variables

For the continuous demographic and death-related variables, I only controlled for variables significantly correlated with my dependent variables (i.e., $p \leq .01$) and had a medium or greater effect size (i.e., $r \geq .30$; Cohen, 1988).

For grief reactions, age ($r = -.01, p = .79$), subjective social class ($r = -.07, p = .17$), and perceived importance of religiosity/spirituality ($r = .11, p = .04$) were not significantly correlated with grief reactions. On the other hand, number of deaths experienced in the past two years ($r = .14, p = .01$), months since the most significant death ($r = -.19, p < .001$), and emotional closeness with the deceased ($r = .56, p < .001$) were significantly associated with grief reactions. Hence, in the main analysis for grief reactions, I controlled only for emotional closeness with the deceased because it was the only variable correlated with grief reactions at a medium effect size.

For post-loss family satisfaction, age ($r = .05, p = .39$), perceived importance of religiosity/spirituality ($r = .11, p = .04$), number of deaths experienced in the past two years ($r = .06, p = .29$), months since the most significant death ($r = -.04, p < .45$), and emotional closeness with the deceased ($r = .11, p < .04$) were not significantly correlated with post-loss family satisfaction. Although subjective social class ($r = .20, p < .001$) was significantly correlated with post-loss family satisfaction, the correlation did not achieve medium effect size. Hence, in the main analysis for post-loss family satisfaction, I did not control for any continuous demographic or death-related variables.

Categorical Demographic and Death-Related Variables

For the categorical demographic and death-related variables, I only controlled only for variables that exhibited significant group differences in grief reactions and post-loss family satisfaction (i.e., $p \leq .01$) and had a medium or greater effect size (i.e., partial eta squared, $\eta_p^2 \geq .13$; Pierce, Block, & Aguinis, 2004).

With regard to gender, the overall multivariate findings indicated a significant difference in my dependent variables (i.e., grief reactions, post-loss family satisfaction) using Wilk's lambda, $F(4, 608) = 6.11, p < .001, \eta_p^2 = .04$. Nonetheless, because the effect size was small, I did not consider the univariate findings.

With regard to sexuality, the overall multivariate findings did *not* indicate a significant difference in my dependent variables (i.e., grief reactions, post-loss family satisfaction) using Wilk's lambda, $F(20, 608) = 1.25, p = .21, \eta_p^2 = .04$. Hence, I did not consider the univariate findings.

With regard to race (i.e., Black, American Indian/Alaskan Native, Asian, Latinx, Native Hawaiian/Pacific Islander, Middle Eastern, White, Biracial/Multiracial, Self-Specified), the

overall multivariate findings did *not* indicate a significant difference in my dependent variables (i.e., grief reactions, post-loss family satisfaction) using Wilk's lambda, $F(14, 608) = 1.21, p = .44, \eta_p^2 = .02$. Hence, I did not consider the univariate findings.

With regard to international student status, the overall multivariate findings did *not* indicate a significant difference in my dependent variables (i.e., grief reactions, post-loss family satisfaction) using Wilk's lambda, $F(2, 304) = 2.09, p = .13, \eta_p^2 = .01$. Hence, I did not consider the univariate findings.

With regard to year in school, the overall multivariate findings did *not* indicate a significant difference in my dependent variables (i.e., grief reactions, post-loss family satisfaction) using Wilk's lambda, $F(10, 608) = .77, p = .65, \eta_p^2 = .01$. Hence, I did not consider the univariate findings.

With regard to religious/spiritual affiliation, the overall multivariate findings did *not* indicate a significant difference in my dependent variables (i.e., grief reactions, post-loss family satisfaction) using Wilk's lambda, $F(16, 608) = .84, p = .64, \eta_p^2 = .02$. Hence, I did not consider the univariate findings.

With regard to disability status, the overall multivariate findings did *not* indicate a significant difference in my dependent variables (i.e., grief reactions, post-loss family satisfaction) using Wilk's lambda, $F(2, 304) = 1.06, p = .35, \eta_p^2 = .01$. Hence, I did not consider the univariate findings.

With regard to the official relationship with the deceased (e.g., grandparent, aunt/uncle), the overall multivariate findings indicated a significant difference in my dependent variables (i.e., grief reactions, post-loss family satisfaction) using Wilk's lambda, $F(28, 608) = 2.60, p <$

.001, $\eta_p^2 = .11$. Nonetheless, because the effect size was small, I did not consider the univariate findings.

With regard to self-identified relationship with the deceased (i.e., immediate family, extended family), the overall multivariate findings indicated a significant difference in my dependent variables (i.e., grief reactions, post-loss family satisfaction) using Wilk's lambda, $F(2, 304) = 17.39, p < .001, \eta_p^2 = .10$. Nonetheless, because the effect size was small, I did not consider the univariate findings.

With regard to living status with the deceased prior to the death, the overall multivariate findings did *not* indicate a significant difference in my dependent variables (i.e., grief reactions, post-loss family satisfaction) using Wilk's lambda, $F(2, 304) = 2.46, p = .09, \eta_p^2 = .02$. Hence, I did not consider the univariate findings.

With regard to the cause of death, the overall multivariate findings did *not* indicate a significant difference in my dependent variables (i.e., grief reactions, post-loss family satisfaction) using Wilk's lambda, $F(20, 608) = 1.32, p = .16, \eta_p^2 = .04$. Hence, I did not consider the univariate findings.

Summary

Grief reactions were significantly associated only with emotional closeness with the deceased at a medium or greater effect size. Post-loss family satisfaction was not significantly associated with any of the continuous demographic and death-related variables at a medium or greater effect size. In addition, grief reactions and family satisfaction did not vary based on any of the categorical demographic and death-related variables. As such, I controlled only for emotional closeness with the deceased by adding it into step one of the hierarchical multiple regression for grief reactions.

VITA

LIEW, CHYE HONG

Purdue University, Counseling Psychology, Department of Educational Studies
 Beering Hall of Liberal Arts and Education
 Major Advisor: Dr. Heather L. Servaty-Seib

EDUCATION

Ph.D.	2020	Purdue University <i>Counseling Psychology (APA Accredited)</i>
M.S.Ed.	2016	Purdue University <i>Concentration in Counseling Psychology</i>
B.S.	2013	University of Illinois at Urbana-Champaign <i>Major: Psychology, Minor: Sociology</i>
	2010	Taylor's University College <i>American Degree Transfer Program</i>

CLINICAL EXPERIENCE

Psychology Intern, UCSB Counseling and Psychological Services

Fall 2019 –
Summer 2020

Primary Supervisor: Victoria Gonzalez, Ph.D.

Client Population: College students

Presenting Issues: Relationship issues, adjustment and acculturation, identity development issues, interpersonal violence and trauma, and grief and loss

Responsibilities:

- Provide 10 to 12 hours of individual short-term therapy per week, including Mandarin-speaking therapy
- Co-facilitate process group for men trauma survivors, psychoeducation group for students with ADHD, and informal lunch discussion for international students.
- Provide in-person brief assessment/triage to connect students with appropriate mental health and other relevant services
- Supervise one practicum student
- Conduct comprehensive assessment and brief ADHD screening
- Participate in Mandarin Consultation and Case Consultation Teams

Practicum Student, Purdue University Honors College

Spring 2019

Supervisor: Heather L. Servaty-Seib, Ph.D., HSPP

Client Population: First generation college students

Presenting Issues: Interpersonal relationship issues, grief and loss, adjustment and acculturation, trauma, and identity development issues

Responsibilities:

- Provided brief individual therapy
- Received and engaged in individual and group supervision

Practicum Student, Four County Community Mental Health

Fall 2017 –
Spring 2018

Supervisor: James Noll, Ph.D., HSPP

Client Population: Incarcerated population, inpatient care, low-income

Presenting Issues: Severe and persistent mental illness, grief and loss, trauma, substance use and recovery, crisis intervention

Responsibilities:

- Provided short-term, solution-focused individual therapy and facilitated open skill-based groups (i.e., Illness Management Recovery, Dialectical Behavioral Therapy) on the inpatient care unit
- Initiated and facilitated Mindful Self-Compassion groups for incarcerated clients
- Provided individual and milieu therapy to clients transitioning from incarceration back to community in a Work Release program
- Administered and scored the Montreal Cognitive Assessment, a brief screening tool for mild cognitive impairment
- Collaborated with an interdisciplinary team comprising of psychiatrist, case manager, substance use counselor, client service specialist on client care and treatment planning

Career Assessment Counselor, Purdue Counseling and Guidance Center

Summer 2017

Supervisor: Eric D. Deemer, Ph.D.

Client Population: Adolescent high school students

Presenting Issues: Career exploration

Responsibilities:

- Administered, scored, and interpreted career, academic achievement, and personality assessment batteries (i.e., Strong Career Interest Inventory, Skills Confidence Inventory, Woodcock-Johnson IV Test of Achievement, NEO-Personality Inventory-3)
- Conducted semi-structured interviews, completed integrative assessment reports, and provided feedback to clients and their parents.

Practicum Student, Counseling Services, DePauw University

Fall 2016 –
Spring 2017

Supervisors: Julie d'Argent, Ph.D., HSPP and Shengying Zhang, Ph.D., HSPP

Client Population: College students, student athletes

Presenting Issues: Depression, anxiety, relationship issues, grief and loss, adjustment and acculturation, trauma, bipolar disorder, identity development, substance use concerns

Responsibilities:

- Used psychodynamic, IPT, and mindfulness approaches in individual counseling
- Co-led a mixed gender interpersonal process group and a process group for sexual assault survivors
- Provided individual consultation using the Brief Alcohol Screening and Intervention for College Students (BASICS) model
- Engaged in outreach programming including eating disorder screening and animal assisted stress-relief outreach
- Received and engaged in individual, group, and peer supervision
- Received didactic trainings in various topics (e.g., substance use, mindfulness)
- Presented oral and formal case conceptualizations

Practicum Student, Purdue Counseling and Guidance Center, Purdue University

Fall 2015 –
Spring 2016

Supervisors: Eric D. Deemer, Ph.D. and Blake Allan, Ph.D.

Client Population: College students, adult community members

Presenting Issues: Depression, anxiety, relationship issues, grief and loss, adjustment and acculturation, academic difficulties, borderline personality disorder, bipolar disorder

Responsibilities:

- Used cognitive behavioral therapy and interpersonal process therapy in counseling
- Co-led a grief and loss support group for grieving college students
- Administered, scored, and interpreted personality assessment batteries (e.g., MMPI, MCMI, PAI, and NEO-PI-3)
- Received and engaged in individual, group, and peer supervision
- Wrote intake reports, weekly progress notes, and termination reports
- Presented formal case conceptualization

PROFESSIONAL / CAMPUS LEADERSHIP EXPERIENCE

Student Committee, Diversity Seminar, Purdue University

Spring 2017

Supervisor: Ayşe Çiftçi, Ph.D.

- Served as a student liaison between program faculty and students to plan seminar series focusing on professional and diversity awareness development
- Facilitated program climate discussions on inclusivity, social justice, multiculturalism issues

Graduate Assistant, Academic Success Center, Purdue University

Fall 2015 –
Summer 2016

Supervisor: Katie Dufault

- Provided one-on-one consultations to students and assisted students in developing personalized study plans
- Facilitated workshops on student success skills (e.g., time management, study skills)

Counseling Center Paraprofessional, Counseling Center, UIUC

Spring 2012 –
Spring 2013

Supervisor: Theresa Benson, Ph.D.

- Designed and co-facilitated workshops on mental health awareness, resilience, and various workshops on request
- Actively participated in on-campus outreach and strengths development programs through the Counseling Center
- Planned and advocated for suicide prevention programs with the Outreach and Consultation Committee of the Counseling Center
Participated in evaluating Counseling Center's program effectiveness
- Engaged in theatre production targeting social issues on campus, focusing on diversity and suicide
- Completed a semester of training on active listening, helping, and motivational interviewing skills

RESEARCH EXPERIENCE

Research Assistant, Grief and Loss Research Team, Purdue University

Fall 2014 –
Present

Supervisor: Heather L. Servaty-Seib, Ph.D.

- Collaborated with research team members to develop and execute a study exploring the roles of perfectionism and self-compassion on suicidal ideation among honors and non-honors college students
- Analyzed college students' feedback for the Grief Absence Policy for Students (GAPS) at Purdue University using qualitative content analysis
- Researched and compiled a list of universities with student bereavement leave policy
- Engaged in team meetings and provided feedback to members' research projects

Research Team Lead, Cultural Climate of Professional Organization Project

Fall 2017 –
Present

Supervisors: Heather L. Servaty-Seib, Ph.D., Rosie Davis, Ph.D., Nathan Todd, Ph.D.

- Initiate a collaborative research project with doctoral students at University of Memphis and UIUC to evaluate how cultural inclusiveness and organizational climate at the Association for Death Education and Counseling (ADEC) affects membership engagement
- Coordinate with research collaborators and ADEC administrators to collect data and facilitate organizational changes to enhance cultural inclusiveness

Research Assistant, Military Family Research Institute, Purdue University

Fall 2014 –
Summer 2015,
Summer 2017

Supervisor: Dave Topp, Ph.D.

- Developed and executed evaluation programs for the Department of Defense (DoD) family support programs
- Conducted statistical analysis to understand the psychological well-being of Indiana National Guards and their families
- Completed phone-based structured interviews, conducted interviewer fidelity checks, and analyzed qualitative responses to understand military families' experiences throughout the deployment cycle
- Assisted in writing grant proposals to the DoD

Research Assistant, School of Communication and Information, NTU Singapore

Sep 2013 –
Aug 2014

Supervisors: Fernando Paragas, Ph.D. and May Lwin, Ph.D.

- Coordinated and evaluated intervention programs in grade schools to examine effects of exergaming participation on exercise outcomes
- Facilitated focus groups consisting elementary, secondary, and university level students to study how media socialization affects the effectiveness of online and mobile learning
- Conducted statistical analysis and structural equation modeling for multiple studies
- Assisted in writing grant application to the Singapore Ministry of Education Academic Research Fund
- Edited manuscripts for journal submission

Bachelor's Thesis, Psychology Department, UIUC*Supervisor:* Michael Kral, Ph.D.Spring 2012 –
Spring 2013

- Conducted a mixed method study on effects of suicide on survivor's family relationships and communication
- Administered surveys and interviewed 11 suicide survivors
- Transcribed and coded interview responses using NVivo and conducted comparative statistical analysis on survey responses
- Presented findings at campus-wide Undergraduate Research Symposium and to the Psychology Department

TEACHING EXPERIENCE**Instructor**, EDPS 31500: Collaborative Leadership: Interpersonal Skills, Purdue UniversityFall 2016 –
Summer 2018*Supervisor:* Brittany Gundel, Ph.D.

- Taught an experiential undergraduate course focusing on leadership development through group activities, discussions, role plays, and lectures
- Facilitated discussions on how various interpersonal skills (e.g., active listening, diversity and privilege awareness, difficult conversation) are essential to leadership
- Supervised role plays wherein students practiced active listening skills in groups and provided feedback to facilitate students' active listening skills development

Instructor, GS 29001: Academic Success Skills, Purdue UniversityFall 2015 –
Spring 2016*Supervisor:* Katie Dufault

- Taught an undergraduate level course focusing on various academic success skills (e.g., self-regulation, time management, note-taking, stress management, motivation)
- Assisted students in applying learning theories (e.g., Blooms' Taxonomy) into their personalized study plans
- Developed lesson plans and group activities to facilitate student learning

VOLUNTEER EXPERIENCE**Volunteer**, Taiwan Tzu Chi Buddhist FoundationSpring 2012 –
Present

- Volunteer in relief aids distribution to individuals affected by natural disasters and medical outreach events for individuals without health insurance
- Provide mental health support to disaster-affected individuals in aid distributions
- Co-developed lesson plans and co-taught a humanistic culture class for elementary and middle school students focusing on character development (e.g., respect, gratitude, environmentalism)

AWARDS AND HONORS

Bruce Shertzer Graduate Scholarship in Counseling

2019

Association of Death Education and Counseling Student Conference Scholarship

2015 – 2019

Psychology Departmental Distinction (UIUC)

2013

Dean's List (UIUC) - *Fall 2010 to Spring 2011, Spring 2012 to Spring 2013*

2010 – 2013

James E. Spoor Scholarship (UIUC)

2012

GRANTS

Purdue University Bilsland Dissertation Fellowship	Aug 2019 – Jul 2020
Purdue Research Foundation Research Grant for Graduate Research Assistantship	Aug 2018 – Jul 2019
Purdue University College of Education Graduate Student Travel Award	Oct 2017
Purdue Graduate Student Government Travel Grant	Mar 2016 & 2017
Purdue University College of Education Dean's Graduate Student Support Program	Nov 2015

PROFESSIONAL LEADERSHIP AND AFFILIATIONS

Proposal Reviewer, APA Convention (Division 17)	2020
Proposal Reviewer, Counseling Psychology Conference	2020
Student Member, Clinical Faculty Member Search Committee, Purdue Counseling Psychology Program	2019
Participant, Graduate Leadership Institute of Asian American Psychological Association (GLIAAPA)	2019
Chair, Student and New Professional Committee of the Association of Death Education and Counseling (ADEC)	2018- 2019
Student Member, American Psychological Association (APA)	2014 - Present
Student Member, APA Division 17 – Society of Counseling Psychology (SCP)	2014 - Present

PUBLICATIONS

- Servaty-Seib, H. L., Williams, P., & Liew, C. H. (2019). *Interpersonal and Intrapersonal Predictors of Suicidal Thoughts/Actions in First-Year College Students*. Manuscript submitted for publication.
- Liew, C. H., & Servaty-Seib, H. L. (2019). College students' feedback regarding a bereavement leave policy for students. *Journal of Student Affairs Research and Practice*, 57(1), 55-68. doi: 10.1080/19496591.2019.1614940 (peer reviewed)
- Servaty-Seib, H. L., & Liew, C. H. (2019). Advocating for Bereavement Leave Policies for College Students. *Journal of College Student Development*, 60(2), 240-244. doi: 10.1353/csd.2019.0021 (peer reviewed)
- Liew, C. H., & Servaty-Seib, H. L. (2017). College student grief, grief differences, family communication, and family satisfaction. *Death Studies*, 42(4), 228-238. doi: 10.1080/07481187.2017.1334014 (peer reviewed)

PRESENTATIONS

- Liew, C. H. & Servaty-Seib, H. L. (2019, April). *Continuing bonds, meaning, and normative vs. complicated grief*. Poster presented at the 41st annual meeting of the Association for Death Education and Counseling, Atlanta, GA.
- Boeh, B. A., Germany, M. L., Liew, C. H. (2019, April). *Association for Death and Education Counseling Climate Study*. Report presented at the 41st annual meeting of the Association for Death Education and Counseling, Atlanta, GA.
- Liew, C. H. & Servaty-Seib, H. L. (2018, April). *Bereavement leave policy: College students' feedback*. Paper presented at the 40th annual meeting of the Association for Death Education and Counseling, Pittsburgh, PA.
- Boeh, B. A., Germany, M. L., Liew, C. H. (2018, April). *Organizational satisfaction and ADEC membership retention*. Poster presented at the 40th annual meeting of the Association for Death Education and Counseling, Pittsburgh, PA.
- Liew, C. H. & Servaty-Seib, H. L. (2017, April). *College student grief, grief differences, and family communication*. Poster presented at the 39th annual meeting of the Association for Death Education and Counseling, Portland, OR.

- Liew, C. H. (2016, April). *Family grief communication and individual and family well-being*. Poster presented at the 2016 Great Lakes Regional Counseling Psychology Conference, Bloomington, IN.
- Liew, C. H., & Servaty-Seib, H. L. (2016, April). *Experiences of family members affected by MH370 and MH17*. Poster presented at the 38th annual meeting of the Association for Death Education and Counseling, Minneapolis, MN.
- Liew, C. H., & Kral, M. (2014). Family Relationships and Communication Before and After Suicide: A Mixed Method Approach. Proceedings from *2014 Asian Congress of Applied Psychology (ACAP 2014)*. Singapore: Asia Pacific International Academy.

RELEVANT SKILLS

Computer: PnC, Titanium, Avatar, SPSS, NVivo, AMOS, Microsoft Office, WinCati, HP Teleform

Language : Mandarin (Native), English (Proficient), Malay (Proficient)

Training : Spiritual Competency in Mental Health, Green Zone Training, Disaster Mental Health, QPR Gatekeeper Training, Mental Health First Aid