8-2016

Effects of attachment style, coping strategy, social support and spirituality on parental grief among older Chinese parents : structural equation modeling.

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EFFECTS OF ATTACHMENT STYLE, COPING STRATEGY, SOCIAL SUPPORT AND SPIRITUALITY ON PARENTAL GRIEF AMONG OLDER CHINESE PARENTS: STRUCTURAL EQUATION MODELING

by

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A Dissertation

Submitted to the Faculty of the
Raymond A. Kent School of Social Work of the University of Louisville
in Fulfillment of the Requirements
for the degree of

Doctor of Philosophy in Social Work

Kent School of Social Work
University of Louisville
Louisville, Kentucky

August 2016

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A Dissertation Approved on

June 22nd, 2016

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ACKNOWLEDGEMENTS

Although I claim the copyright of this dissertation, truly, the completion of it is not just my work. Without the help, inspiration and mentorship from my mentors, this could not have been done. Without the support of my beloved father, mother and brother, this could not have been done. Further, without the sacrifice of my wife's time and career and the joy that my son brings into my life, this could not have been done.

My special thanks to my chair, Thomas Lawson who led me to enjoy research classes and provided a role model of social work research and teaching. His vision of the future of social work education really provided the inspiration for me to be one of the new generation social workers who can think and act globally.

My special thanks to Barbara Head who gave me more scholarly mentorship, guidance and support than I ever imagined. God has blessed me with such mentorship, and I am truly thankful.

My thanks go to Bibhuti Sar, Anna Faul and Marie-Antoinette Sossou, they are the best professors a doctoral student can ever have. They place students first and contribute far more than what they are required. Students are fortunate to have them serve on their committee.

My gratitude goes to all the study participants who helped make this research possible. I knew many of them for over 2 years, but only by their screen names. Many of them didn't understand research, but they knew about the grief experience and how to survive it. They taught me a lot by contributing to my research.

I want thank Kent School of Social Work. I feel so proud to be one of you. Now I go to my next journey, but L1C4.

Finally, I praise God who has been with me throughout the doctoral learning process.

ABSTRACT

EFFECTS OF ATTACHMENT STYLE, COPING STRATEGY, SOCIAL SUPPORT AND SPIRITUALITY ON PARENTAL GRIEF AMONG OLDER CHINESE PARENTS: STRUCTURAL EQUATION MODELING

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Most modern grief theories and clinical working models are constructed in the context of Western culture, and the effectiveness or explanatory power of those theories and models have not been fully tested in other cultures, especially through a more complex interactive model. The current study focuses on the role of attachment style, coping strategy, social support and spirituality on older bereaved parents' grief. It also explores if differences in age, gender, causes of the child's death, time since the death have a differential effect on parental grief. The purpose of this study was to test the main factors effectively mediating or aggregating the extent of Chinese parents' grief following their only child's death.

The sample of this study consisted of 206 Chinese older parents whose child has died. Since the study includes the development of initial theory and model construction

aided by data collection, structural equation modeling (SEM) is utilized as the analysis method.

Results found statistically significant effects of attachment style, coping strategy, social support on the level of parental grief. Different groups showed different behavioral patterns in response to the death of a child. Specifically, women showed more insecure attachment style, had more daily spiritual experiences and perceived more social support. Older participants perceived less social support. Implications for social work practice, research, theory development, policy change are discussed.

TABLE OF CONTENTS

LIST OF TABLES

Table Page

LIST OF FIGURES

Figure Page

INTRODUCTION TO THE PROBLEM

The death of a loved one is not only a functional disruption to the family which impedes the completion of life cycle tasks (Kissane & Bloch, 1994). The impact of the death of a significant other is profound, it affects an individual physically, emotionally and spiritually (James & Friedman, 1998). The death of a close family member can trigger intense grieving among surviving family members (Engelkemeyer & Marwit, 2008). Research has identified typical psychological grieving symptoms, including anxiety, anger, guilty, longing, disorganization, and loss of pleasure as well as physical grieving symptoms, for example, exhaustion and sleep difficulties (Becvar, 2001).

The grief that follows the death of a significant other is a long process. Research suggests that 30% to 49% of adults could be diagnosed as clinically depressed in the first few months following loss (Futterman, Gallagher, Thompson, Lovett, & Gilewski, 1990) and 18% to 30% of adults can remain depressed after 12 months (Jacobs, Hansen, Berkman, Kasl, & Ostfeld, 1989). Approximately 18% of adults continue to display symptoms of depression after 24 months (Futterman et al., 1990). Bereaved individuals may continue to show grieving symptoms even many years after the death (Klass, Silverman, & Nickman, 2014).

Many are affected by grief. According to the CDC, the number of deaths in 2010 was 2,596,993 in the United States (Murphy, Xu, & Kochanek, 2013). This figure suggests that over five million individuals are newly bereaved (i.e., experience the death of a loved one) per year in the United States, if only two people grieve for each deceased person. China has the largest population in the world and has 9 million deaths per year (National Bureau of Statistics of China, 2013). The huge number of deaths leaves a huge group of grieving individuals, and it is estimated that roughly 20 million are affected by grief in China.

Statement of the Problem

Parental Grief

Among all the losses, death of a child is the most excruciating loss. It is not only a loss of life; the family has also lost their hopes, dreams, expectations, fantasies and wishes for the child (Rando, 1986)This is the reason why parental grief has been recognized as "the most intense and overwhelming of all grief" (Davies et al., 2004, p. 506). The intensity of parental grief has been attributed to the uniqueness of the parent-child relationship (Rando, 1986). Not only is the natural order of children outliving their parents shattered upon the death of a child, parents are also precluded from their instrumental roles of provider, comforter, protector, and advisor (Klass, 2001). Jackson (1977) indicated that the tragic and untimely nature of a child's death is "a basic threat to the function of parenthood - to preserve some dimension of the self, the family, and the social group." Following the death of their child, parents are robbed of the ability to carry

out their functional roles and left with an oppressive sense of failure, a loss of power and ability, and a deep sense of being violated. They must grieve the loss of their old identities, as well as their former assumptions and beliefs about themselves and their capabilities in order to reflect the reality of the death and its specific effect on them (Rando, 1991). Parents must contend with the resulting secondary losses of disillusionment, emptiness, and insecurity that derive from a diminished sense of self.

Parental grief is often accompanied with somatic symptoms including insomnia, muscle soreness, lump in the throat, feeling uneasy in public (Gilllis, Moore, & Martinson, 1997), hypertension and obesity (Tietz, McSherry, & Britt, 1977), and headaches and fatigue (Foster et al., 2011). The higher incidence of somatic complaints experienced by bereaved parents is seen as a direct result of grief instead of the mediation by emotional distress (Gudmundsdottir & Chesla, 2006). Many bereaved parents were found to struggle with the desire to let go of their intense pain and continue on with their lives while remaining faithful to the memory of their child (Marx & Davidson, 2003). For instance, they reported feeling guilty when they do not feel pain and agonize over concerns that they may be forgetting their children. Other emotional responses that bereaved parents experience include: shame, anger, fear (Arnold, Gemma, & Cushman, 2005), and blame (Dyregrov, Nordanger, & Dyregrov, 2003). In addition, feelings of rejection, abandonment, embarrassment, and stigma are frequently voiced by parents bereaved by suicide (Arnold et al., 2005).

Parental grief is more painful, more consuming, and more likely to involve complicated mourning than the death of a spouse (Gorer, 1965). Studies have demonstrated that the death of a child results in a significantly higher intensity of grief than the death of a spouse or a parent and often leads the grief to unresolved state (Maercker & Znoj, 2010). The unnaturalness and unacceptable nature of a child's death results in parental grief that is slow in its progression and is much longer lasting. It has also been shown to be prolonged, for instance, parents grieving for as long as 20 years over the loss of a young child had similar scores on a grief inventory as parents who had lost a child in the past 3 months to 2 years (Neidig & Dalgas-Pelish, 1991). Research found bereaved parents have a higher frequency of unresolved grief than any other bereaved groups (Zisook & Lyons, 1988).

Unresolved grief has been shown to contribute to worse physical and mental health (Lannen, Wolfe, Prigerson, Onelov, & Kreicbergs, 2008). Health risk behaviors, such as tobacco and substance abuse are commonly seen among bereaved parents (Kivimäki, Vahtera, Elovainio, Lillrank, & Kevin, 2002). Bereaved mothers were found to be at the highest risk for suicide, and their suicidal ideation may persist beyond the fifth year after their child's death (Li, Laursen, Precht, Olsen, & Mortensen, 2005). A Danish study compared a group of parents who had lost a child to a large matched comparison group of parents who had not lost a child; the finding indicates the loss of a child "is associated with an overall increased mortality in mothers and a slightly

increased early mortality from unnatural causes in fathers" (Li, Precht, Mortensen, & Olsen, 2003, p. 365).

Another study found that bereaved parents report almost double the rate of depression, compared to the non-bereaved. In the same study, bereaved parents exhibited significantly lower psychological well-being than the non-bereaved, even 18 years following the death of their child (Rogers, Floyd, Seltzer, Greenberg, & Hong, 2008). Multiple studies found posttraumatic stress symptoms to be present in grieving parents after a sudden and traumatic death of their child (Kivimäki et al., 2002; Murphy et al., 1999), and parents who lost a child due to suicide developed more symptoms of Post-Traumatic Stress Disorder PTSD (Dyregrov et al., 2003). The prevalence of PTSD was found to be present for as long as 5 years in bereaved parents (Murphy, Chung, & Johnson, 2002). A study found that parents who lost a child had a higher risk of a psychiatric hospitalization compared to the general population and compared to bereaved parents who have more than one child, the risk of a psychiatric hospitalization was higher for parents who lost their only child (Li et al., 2005).

Furthermore, parental grief has been found to place a great strain on the marital relationship. The majority (70%) of bereaved parents experienced significant marital distress related to the loss of their child (Fish, 1986), and suffering the death of a child has been associated with a higher divorce rate (Rothman, 2002). The dissolution of the marital relationship happens especially when effective and appropriate coping strategies are not shared and maintained by the couple (Laakso & Paunonen-Ilmonen, 2002a).

Research has identified several risk factors related to the intensity of parent's grief. One of them is the birth order of the deceased child; research found parents who lost their only child appear to have a more difficult time(Dyregrov et al., 2003). The other risk factor is age of the child. Keesee, Currier, and Neimeyer (2008) reported that parents losing older children were more likely to demonstrate symptoms of complicated grief. Another study found that there is a positive curvilinear relationship between the age of the child at the time of death and the intensity of the grief until the age of 17, when the grief symptoms began to decrease. The same study also confirmed the number of other children in the family is correlated with grief symptoms, with more children resulting in less grief and depression (Wijngaards-de Meij et al., 2005).

There is a gender difference in grieving, with women being particularly vulnerable to blame and guilt after a child's death because of their protective roles (Walsh & McGoldrick, 2004). Mothers who lost their child have been found to have the greatest increase in mortality due to unnatural reasons during the first 3 years of bereavement (Li et al., 2003).

Literature also suggests that social support outside the immediate family serves as the key element in helping bereaved parents overcome the difficulties of adjustment and coping with the loss of the child (Cacciatore, 2010). However, many bereaved parents struggle with a lack of social support, especially support from usual sources such as family and friends (Marx & Davidson, 2003). Bereaved parents could experience

additional secondary losses, including expected yet unrealized emotional and social supports.

Grief in Later Adulthood

Age plays a relevant role of the process of grieving. Erikson et al. indicated that at 50 years of age or older, the individual is confronted with issues of self-acceptance versus despair, which may be exacerbated by the process of grieving (Erikson, Erikson, & Kivnick, 1986). The elderly are at greater risk because they experience the widest variety of bereavement in terms of type of relationship to the deceased (Shah & Meeks, 2012). Grief increasingly impacts people who are of advanced age. Empirical research found that older adults grieving the death of a child or spouse have higher prevalence of complicated grief (CG) (Kinoshita, Sorocco, Gallagher-Thompson, Maddux, & Winstead, 2008). Research also identified the loss of significant others in late life is an especially important risk factor for suicidal behavior in the elderly (Szanto, Prigerson, Houck, Ehrenpreis, & Reynolds, 1997).

Grief in older adulthood may have negative consequences in the areas of emotional, physical, social, and cognitive functioning (Moss, Moss, & Hansson, 2001). Elderly bereaved individuals showed more problematic reactions to the loss than younger bereaved individuals (Sanders, 1981). In addition, the elderly find it more difficult to reconstruct their social roles and social support networks. Since older adults have established and internalized a history of behaviors, habits and other interactions with the deceased significant other, the necessary adjustments associated with bereavement in

later-life can be the most challenging situation an older person undergoes. Following the death of a child, the individual must give up his or her title of parent and take on the identity of the bereaved parent. Role loss was found to increase the chances of social isolation and loneliness (Stroebe, Zech, Stroebe, & Abakoumkin, 2005).

As parents age, they may already be faced with a number of life transition and loss issues, including losses of mobility and independence. The death of a child holds multiple meanings to them. Compared to younger parents, the death of a child to older parents means the termination of a relationship where significant time, emotion, and energy have been invested. They lost not only their offspring, but their friend (De Vries, Dalla Lana, & Falck, 1994). In addition, older parents may be living with a chronic illness, necessitating their reliance on others for care and assistance. As bereaved parents, they lost the potential caretaker or supporter as they age (Malkinson & Bar-Tur, 2005). Older parents were also found to have a greater chance of developing survivor guilt because their children had predeceased them (Miles & Demi, 1986); and their grief responses may be complicated and magnified by this survivor guilt (Moss, Lesher, & Moss, 1987). A study confirmed this trend by finding that parents bereaved of younger children were significantly less depressed, less guilty, more socially involved, less preoccupied with the deceased, less numb, and less given to somatic complaints than parents bereaved of adult children (Rubin, 1990).

The Purpose of the Study

To gain a better understanding of the complexity of older bereaved parents' grief, multiple variables need to be considered, including personal history, gender, culture, coping styles, personality traits, and support systems (Rubin, Malkinson, & Witztum, 2000). However, the role each variable plays in the whole process of parental grief has not been fully investigated in a quantified way. Further, every culture provides a context that profoundly affects grief (Rosenblatt, 2008). At present, most modern grief theories and clinical working models are constructed in the context of Western culture, and thus, the effectiveness or explanatory power of those theories and models have not been fully tested in other cultures, especially through a more complex interactive model.

The primary goal of this study is to test the main factors influencing parents' grief process as described in William Worden's mourning mediators of mourning model (Worden, 2009). Compared to the population of bereaved parents, those who actively seek help from professions are still in the minority. One study found that only 10% to 30% of adults use bereavement services after a death in the U.S. (Bergman, Haley, & Small, 2010). For a country like China, professional bereavement services are still emerging. There is an urgent need to embrace the Western theories, then to develop a more applicable model considering China's unique social environment. The second goal is to determine the applicability of William Worden's mourning process model or an adaptation of the model.

The Significance of the Study

In the 1970s, China chose to adopt an extreme measure of birth control, known as the family planning or one-child policy, as a means to slow population growth in the most populated country in the world. This policy is not without serious consequences including the risk of losing one's only child, particularly for older parents who are beyond the age of childbearing. This particular group of bereaved parents in the context of the one-child policy are referred as "shiduers" (Zheng & Lawson, 2015).

No official statistics are available about how many parents have lost their only child since the one-child policy was implemented. The estimation is that there are at least 76,000 families who experienced the loss of a child in China (National Health Department of China, 2010), based on the average death rate of people under the age of 30. The number of Chinese bereaved parents is estimated to be over 150,000 per year. Over the 35 years of implementation of the policy, 45 million parents are estimated to have lost their only child. Considering the legal age of marriage for men is 22 and for women 20 years, those who complied with the policy since the policy was first strictly implemented in 1980 would be in their fifties. With the increasing life expectacy in China, the risk of losing a child is increasing for parents, especially for those who are older.

The critical issues faced by parents who lost their only adult child have only emerged recently as those who complied with the policy decades ago are now aging. Because this is a new phenomenon, there has been little research focused on this important and growing group. Older bereaved Chinese parents are still an understudied

population, meaning that very limited knowledge has been built which considers their particular cultural and political experiences. Furthermore, successful treatments or interventions after the loss of a child have not been substantiated (Wijngaards-de Meij et al., 2005). The relatively large population of bereaved older parents, combined with the devastation that the loss of a child brings, necessitates the need for further research on bereaved older parents.

This study seeks to increase social awareness of bereavement within this specific ever growing population of bereaved parents in China. Exploring the influential factors of parental grief may help to lend meaning and understanding to those who are grieving the loss of a child within the age group identified in this study. Ultimately, the current study hopes to increase insight into the nuances of the impact of losing one's only child and promote positive social change for the older bereaved parents.

Furthermore, testing the fit of the model of parental grief with a sample of bereaved parents is important because such testing will link theory and research as well as contribute to social work practice. Testing the model of parental grief can also lay a foundation for addressing the gap between theory and research in the field of thanatology, especially in the field of studying bereaved parents. In addition, testing the model will inform the field in general by identifying risk and protective factors for parental grief. Specifically, this study seeks to contributed by: (1) linking the process of developing empirical model to the theoretical understanding of grief, and (2) potentially informing intervention strategies for the counseling program services.

The issue of older parents who lost an adult child was identified by Rando (1986) 30 years ago, because of the increasing life expectancy in the general population. Thirty year later, the situation has not altered significantly, while the possibility of older adults experiencing the death of a child has increased. In response to the acute need for research on parental grief, the current study seeks to bridge the gap between theory and research by contributing empirical evidence that will directly inform an understanding of the grief of bereaved parents. The present study will also add new knowledge that may better inform the clinical interventions of social worker and other professions.

Summary

In summary, the loss of a child can result in significant impairments in the bereaved older parents' life and an increased need to understand long term psychosocial issues among those affected by the death of a child. With the higher prevalence rates of complicated grief among bereaved parents, it is imperative to explore why and how psychosocial factors impact the bereaved parents' grief related to this significant loss.

Given the fact that pathological grief is a prominent issue for older adults' later life, it is also vitally important to understand their unique psychosocial needs. Knowledge of predictors and influential factors of severe complicated grief in bereaved old parents would assist social workers in developing better assessment options and interventions to meet their needs. Understanding the influences of personal and social factors on levels of grief would help target critical points of intervention at the individual and social level, as

well as improve research-based knowledge related to the impact of healthcare disparities on individuals and populations.

Chapter II provides a review of the literature related to parental grief in response to the loss of a child and the various influential risk and protective factors, which are attachment style, copying style, spirituality and social support. Additionally, relevant theoretical perspectives are reviewed with introduction of a proposed conceptual model which integrates those theories and attempts to address a gap in the literature.

LITERATURE REVIEW

This chapter explores the foundational theoretical literature which informs an understanding of the parents' psychosocial responses to the death of a child. First, the important terms used in this study are defined; second, theories about grief are introduced in which a paradigm shift is presented. Several key models of grief are introduced, including the Dual Process Model (Schut, 1999), the Tasks of Mourning Model (Worden, 2009), the Meaning-reconstruction Model (Neimeyer, 2001), and The Model of Adaptive Grieving Patterns (Doka & Martin, 2010). Finally, a proposed conceptual model is presented that incorporates critical aspects of the theories and models reviewed and that forms the basis for the proposed research. The variables are then discussed as well as the literature that supports their inclusion.

Literature Search Strategy

Literature searches were conducted using the following databases: Academic Search Premier, CINAHL, Dissertations and Theses, Eric, ProQuest Education, ProQuest Psychology, PsycARTICLES, PsycBOOKS, PyschINFO, SAGE and SocIndex, employing key terms including parental bereavement, parental grief, older parents, death of a child. In addition to formal search strategies via academic databases, several studies

were identified through linking from reference lists. Only literature written in English was included in the search. While the primary focus was the literature primarily from the last 15 years, older sources were included as deemed relevant.

Definitions of Key Terms

Grief – The usual reaction to loss is called grief; it is defined as "a primarily emotional reaction to the loss of a loved one through death. It incorporates diverse psychological (cognitive, social-behavioral) and physical (physiological-somatic) manifestation" (Stroebe, Hansson, Stroebe, & Schut, 2001, p. 6).

Prolonged grief disorder – Distinguishable from the symptoms of normal grieving process, a portion of adults continue to grieve for an extended period of time and begin to exhibit symptoms of a state known as prolonged grief disorder (PGD) (Prigerson et al., 2009). Prolonged grief disorder is variously referred to as "complicated grief" (CG) (Boelen, Van Den Hout, & Van Den Bout, 2006; Prigerson et al., 1995), "traumatic grief" (TG) (Boelen & Van Den Bout, 2002). Except for persistent and disruptive yearning, pining, and longing for the deceased, symptoms of PGD also include: "trouble accepting the death; inability to trust others since the death; excessive bitterness related to the death; feeling uneasy about moving on; detachment from formerly close others; feeling life is meaningless without the deceased; feeling that the future holds no prospect for fulfilment without the deceased; feeling agitated since the death."(Zhang, El-Jawahri, & Prigerson, 2006, p. 1192).

Parental grief – According to Rando (1986), parental grief is the intense and enduring grief process comprised of psychological, physical, social, and behavioral responses by parents who have lost a child to death.

Mourning – Corr, Nabe, and Corr (1997) indicated that mourning represents the ways in which people learn to adapt to loss, bereavement, and grief - to blend this experience into the fabric of ongoing lives. Mourning is the pattern of adaptation to loss; it is characterized by socially shaped thoughts, feelings, and actions which individuals engage in to express their grief, either publicly or privately (Gorer, 1965).

Attachment style – Adult attachment refers to an individual's consistent tendency to effectively seek and maintain proximity and connect with at least one specific individual who is able to provide the potential for physical and/or psychological safety and emotional security (Berman & Sperling, 1994). Adult attachment styles are categorized as follows: (1) secure; (2) dismissing; (3) preoccupied, and (4) fearful (Bartholomew & Horowitz, 1991).

Coping style/strategy – General coping strategies refer to psychological and behavioral efforts used to manage the specific external or internal demands that tax a person's resources (Lazarus, 1991). For individuals dealing with the loss of a loved one, coping strategies refer to the behavioral and psychological efforts that are used to manage, master, minimize, or tolerate stressors and demands due to bereavement and grief (Dageid & Duckert, 2008).

Social support – The feeling as though an individual is cared for and loved, has esteem and is valued, and belongs to a network of communication and mutual obligation is social support (Cobb, 1976). Social support is constructed differently in literature, including social embeddedness, perceived social support, and enacted support (Barrera, 1986). Among them, perceived support, the appraisal of available interpersonal resources that could be accessed, is particularly important. Perceived social support is thought to influence an individual's appraisal of the stressfulness associated with a particular event or situation, and lead to the prevention of responses that could negatively affect health (Cohen, Underwood, & Gottlieb, 2000).

Spirituality – Spirituality has been conceptualized as the animating life force, represented by such images as breath, wind, vigor, and courage. It encompasses a variety of phenomena, including experiences, beliefs, and practices (Berkey, 2007).

Theories of Grief: From Classic to Modern

Most classic perspectives on grief are rooted in the psychoanalytic tradition of Sigmund Freud, while newer ones include ethnographic and sociological approaches (Davies, 2004). In Freud's opinion, mourning as a process in which libido formerly invested in the deceased is gradually withdrawn, and eventually detached from the deceased. For Freud, the aim of grief work is to bring up memories related to the deceased and then let them go. Only when completed, does "the ego becomes free and uninhibited again" (Freud, 1917, p. 245). Later, Lindemann (1944, p. 190) proposed similarly that "emancipation from the bondage to the deceased" is necessary in normal

grief coping process. He also systematically summarized the course of the grief response which is composed of five symptoms: somatic distress, preoccupation with the deceased, guilt, anger, and loss of patterns of behavior.

Generally speaking, grief work was a conscious expression of feelings and confronting the reality of loss, and the inability to disengage from the deceased was viewed as an expression of pathology from the psychoanalytic perspective. The failure of grief work eventually results in continued misery and dysfunction. The prime challenges to Freud's theory include: 1) grief is not just intra-psychic but also interpersonal; 2) grieving includes a variety of emotions, not just sadness; 3) the return to "normal" functioning does not mean a return to previous functioning (Hagman, 2001).

The critiques of Freud's grief work have opened the doors to exploring alternative frameworks for considering the course and outcome of grief. Most importantly, the traditional theoretical perspective does not necessarily reflect the unique experiences of parental grief. Bowlby advanced the notion of grief work proposed by Freud and Lindemann; however, he differs from Freud in making no reference to needs or drives. Rather, he believes that the occurrence of attachment behavior is related to activation of certain behavioral systems. According to his attachment theory, human beings and animals instinctively tend to make strong affectional bonds or attachments as a way of adapting to their environment. Attachment behavior was defined by Bowlby (1982, p. 195) as "seeking and maintaining proximity to another individual". Attachment behavior plays an essential role throughout a person's life. A person's personality is affected by

their early attachment experiences. For instance, an untimely loss or prolonged separation from the child's primary caretaker, usually its mother, can result in difficulty in relationships and in handling separations later in life. In his study of bereaved parents, Bowlby (1998) developed the four stages model of grieving, including: (1) numbing, (2) despair and attempts to reverse the outcome, (3) disorganization, and (4) reorganization.

In addition, Bowlby (1998) posited that the intensity of emotion and behavior of a bereaved individual is directly correlated to his or her level of attachment to the deceased. He also indicated that grief responses vary as a function of the uniqueness of individual attachment style. Individuals with secure attachment styles will eventually come to terms with the reality of their loss and experience a full return to function, although initially they may experience intense feelings of grief that could include pining and yearning for the deceased. On the contrary, individuals with less secure attachment styles will have a more difficult time adjusting to the death of a loved one and experience prolonged periods of grief. Following the classic psychoanalytic framework, Bowlby (1998) emphasized that successful resolution of grief was the acceptance of loss and detachment by breaking or severing emotional bonds with the deceased. He concluded that individuals who attempt to maintain a connection to the deceased may develop aggravated symptoms of grief.

Classic 20th century bereavement research was based upon the assumption that individuals who experienced ongoing internal attachments to the deceased demonstrated a form of pathology. However, this assumption did not seem to reflect the experiences of

many bereaved individuals, in particular, bereaved parents (Klass, 1999). From a quantitative perspective, the assumption has neither been confirmed nor disconfirmed empirically (Stroebe, 1992). Classic grief theories view continuing attachment with the deceased as maladaptive which will not result in "successful" bereavement. These early theories are grounded in a positivistic research paradigm. Riches and Dawson (2000) indicated that the positivistic model of science stresses how separate and independent people are from one another. Therefore, relationships are seen as instrumental, and in the case of death the relationship is severed (Silverman & Klass, 1996).

On the contrary, contemporary grief theories consider an ongoing relationship to the deceased is potentially a healthy form of grieving. This continuing relationship is "normative, evolving, and with great capacity to be adaptive" (Rubin, 1996, p. 230). By promoting diverse ways of maintaining a bond with the deceased, a crucial paradigmatic shift, from positivism to postmodernism, was achieved (Hooyman & Kramer, 2008). The newer paradigm emphasizes how connected people are to each other. Behavioral responses that were once deemed pathological were normalized from a perspective of continuing bonds. Bereaved parents could transform their physical bonds to their children into ongoing inner representations. These inner representations of an ongoing bond between parents and their deceased children are construed as actual lived experiences within the social, ethnic, and religious context of bereaved parents (Klass, 1999) and continuing bonds are found to be a comforting and helpful aspect of parental grief (Foster et al., 2011).

Empirically, the bond between the bereaved and the deceased was evidenced in many ways. For instance, memories (Field, Nichols, Holen, & Horowitz, 1999), sensing the presence of the deceased (Datson & Marwit, 1997), conversing with the deceased, or asking for guidance, and reviewing life events (Silverman & Klass, 1996). In addition, materials such as photographs, mementos, and family or cultural rituals (Rando, 1993) are used to reminisce, restructure, and reinforce the bonds (Riches & Dawson, 1997). Continuing bonds with the deceased have been evidenced by many rituals of grief and mourning, and such involvement is valued and directed in different cultures and religions. In China, individuals embrace an active relationship with the deceased; they expect blessings for financial success and fertility in exchange for their performance of certain rituals in memory of the deceased (Lalande & Bonanno, 2006). A group of Jewish mothers were also found to reflect a pattern of continuing attachment to their deceased child (Goodman, Rubinstein, Alexander, & Luborsky, 1991).

The newer theoretical perspectives on grief provide a multifaceted approach to understanding parental grief (Davies, 2004). Research has found bereaved parents engage in more instances of comforting and connecting behaviors than other bereaved populations. For instance, Foster et al. (2011) indicated that parents report higher instances of finding continuing bonds to be a comforting and helpful aspect of grief, compared to bereaved siblings' use of continuing bonds. Parents used various emotionally acceptable ways for memorializing their child and integrating this memory into their everyday lives, such as purposeful reminders, communicating with the

deceased, keeping personal belongings etc. Studies have supported these behaviors as healthy ways for bereaved parents to cope with the death of their child. Similarly, a qualitative study (Gudmundsdottir & Chesla, 2006) with bereaved parents found that connecting and forming a relationship with the deceased child's spirit is comforting, meaningful, and facilitates their mourning.

Key Models of Grief

In the context of the paradigm changes of the grief theories, there are some contextualized and holistic grieving models emerging that recognize the dynamic, multidimensional nature of grieving by focusing on different aspects of the grieving process.

Dual Process Model (DPM) of Coping with Bereavement

DPM (Schut, 1999) was developed to describe coping and predict good versus poor adaptation. The basic assumption behind this model is that "how a person feels and reacts on becoming bereaved is dependent on the meaning that is assigned to the loss" (Stroebe & Schut, 2010, p. 56). In this model, bereaved individuals face two main sources of stress following the death of a loved one: loss and restoration orientations. Loss-orientations involve the painful dwelling on the lost person. Restoration-orientation refers to the struggle to reorient oneself in a changed world without the deceased person. Both orientations are sources of stress and can be associated with distress and anxiety outcomes. They are also part of the coping process of confronting or avoiding these two types of stressors (Stroebe & Schut, 2010).

Furthermore, the process varies based on individual and cultural differences and changes over time. Bereaved individuals must oscillate between both coping orientations over time according to the specific context of their loss. According to the DPM, coping with bereavement is a complex regulatory process of confrontation and avoidance, as well as positive and negative appraisals of the events surrounding the loss. Thus, an important postulate of the model is that oscillation between the two types of stressors is necessary for adaptive coping (Stroebe & Schut, 2010). The DPM was tested by applying it to parents' coping with the death of a child. Results indicated that women appear to be more loss-oriented following bereavement, by showing their feeling and expressing their distress at their loss; whereas men are more restoration-oriented, actively engaging with the problems and practical issues associated with loss (Wijngaards-de Meij et al., 2008).

Tasks of Mourning Model

Building on the critics of early model of grief stages (Kubler-Ross, 1969), the Tasks of Mourning Model views the grieving process not in terms of stages or phases but as tasks that are accomplished by the bereaved. Worden (2009) views mourning as an active process, rather than a state, linear, narrow, and inflexible process. Simply speaking, this model takes a more realist view of the grieving process, since grief does not follow one specific pathway.

Four tasks of mourning are included in this model, and each task puts emphasis on specific types of adjustments that mourners make as they accommodate to their loss. Task I is to accept the reality of the loss. Part of the acceptance of reality is to come to the

belief that reunion is impossible, at least in this life. To fully accept the reality of the loss, the bereaved also need to cease searching behaviors, and confront denial. Acceptance of the reality of the loss takes time since it involves not only an intellectual acceptance but also an emotional one.

Task II is to process the pain of grief. The bereaved must acknowledge that pain will manifest itself through many physical, emotional, and behavioral symptoms. The bereaved try to avoid, negate or minimize the painful experience, however, Worden (2009) believes anything that continually allows the mourner to avoid or suppress this pain can prolong the course of mourning.

Task III is to adjust to a world without the deceased. Adjustment occurs in three areas. External adjustments involve changes in daily routines. The bereaved must come to terms with how the death has affected their everyday functioning. Internal adjustments include changes to self-esteem, identity, and self-efficacy. The bereaved must come to terms with how the death has affected his or her sense of self. Spiritual adjustments involve changes in the meaning of the world. The bereaved must reconcile how the death has affected his or her beliefs, values, and assumptions about the world.

Task IV is to find an enduring connection with the deceased in the midst of embarking on a new life. The bereaved will loosen the ties to the deceased to an extent that allows for involvement with others and reinvest their emotions into life. The model was applied in an intervention study of bereaved parents and the results supported the

uniqueness of parents' grief. Anger and guilt are two emotions that were especially problematic for bereaved parents (Worden & Monahan, 2009).

The Meaning Reconstruction Model

Rooted in constructivism, Neimeyer (2001) proposed the meaning reconstruction model. The fundamental assumption of this model is that the relationship between the bereaved and the deceased is never completed; instead, it is actively explored and re-defined over time. Through the lens of meaning construction, individuals are seen to create many unique systems of meaning which dictate their behavior and perceptions. Generally, these meaning systems are internally consistent, but are also supported by the culture and provide some security for operating in the world. When an individual's experience does not fit into the meaning assumptions, it will be seen as problematic. For instance, the loss of a loved one threatens assumptions and individuals must engage in a process of rebuilding. Therefore, meaning reconstruction is viewed as the central process of grieving (Neimeyer, 1998). For the bereaved, grieving is an act of either affirming or reconstructing a revised personal world of meaning that has been created by the loss.

The process of reconstructions are created through the bereaved person's narrative and are affected by their personal, familial, and cultural experience (Neimeyer, Prigerson, & Davies, 2002). In addition, grief experience is intimately tied to a person's identity. Thus, individuals are faced with asking who they are in light of this loss. Further, individuals' identities continue to be reconstructed in negotiation with others. Therefore, while loss is an individual and personal experience, it is also one that is situated in a

larger social sphere (Neimeyer, Keesee, & Fortner, 2000). Through the lens of the meaning reconstruction model, significant events such as loss are seen as opportunities for growth. Through the process of meaning reconstruction, individuals relearn the world that had been taken for granted, including physical and social surroundings, the self, and the relationship to the person who died (Attig, 2001).

The Model of Adaptive Grieving Patterns

Most extant literature focuses on the process of grieving, instead of the identifying grieving styles in various populations of grievers. The model of adaptive grieving patterns was developed to help understand and identify grief experiences and expressions, especially when such reactions aren't outwardly what might be expected (Doka & Martin, 2010).

Grieving styles are seen as a continuum from intuitive to instrumental; four specific patterns were identified by Doka and Martin: intuitive, instrumental, blended, and dissonant. Intuitive grief consists primarily of profoundly painful feelings, such as shock and disbelief, overwhelming sorrow, and sense of loss of control. Intuitive grievers may express their feelings and emotions through crying and want to share their inner experiences with others, and they may benefit from being allowed to express their emotions. On the other hand, instrumental grief is experienced in more physical and cognitive ways. Instrumental grievers are primarily focused on problem solving and control over the environment. For them, those painful feelings and emotions are

tempered; their grief is more like an intellectual experience. As a result, they may engage in multiple activities and appear more productive with their internal grief unnoticed.

Rather than being a purely intuitive or instrumental, most individual uses both patterns, meaning they experience blended grief. The overall responses of blended grief are more likely to correlate with the phases or stages of grief (Doka & Martin, 2010). Dissonant grief is defined as responses that do not fit with the individual's style of grief. For instance, this situation occurs when intuitive grievers feel they cannot cry or express strong emotions. As a result, individual experiencing dissonant grief may be caught in serious emotional struggles, and in some cases, these responses can be seen as a sign of complicated grief (Wilson, 2013).

Women are seen more likely to be intuitive grievers, and men, more likely to be instrumental grievers. Even though gender influences individual's grieving patterns, it is not a determinant (Doka & Martin, 2010).

The D.I.S.C. Analysis Model

Among all the grief theories and models, the context in which bereavement occurs is an area that has been neglected in the literature. The D.I.S.C. analysis model was developed to address this shortcoming (Dillenburger & Keenan, 2006). It includes the context of the **D**eath itself, the **I**ndividual factors that are unique to each bereavement experience, the **S**ocial factors that can influence the bereavement process, and the **C**ultural and societal norms within which the bereavement takes place.

For Dillenburger and Keenan (2006), the context of the death itself can have a profound impact on the grief process. For instance, deaths by traumatic events are associated with higher levels of psychological dysfunction than the dysfunction that occurs with deaths that occur naturally (Mollica, 2000). From this perspective, an individual's personal context, such as prior life experiences or the nature and type of relationship he or she had with the deceased person, can play a role in the grief process. Therefore, the death of a child has been shown to be significantly more difficult to recover from than the death of either a spouse or parent (Sanders, 1988). Finally, the cultural context of the bereavement is important because each society has rituals and expectations that define the normal bereavement process.

In addition, Dillenburger and Keenan (2006) indicated that the context of the death itself can have an impact on bereavement through conditioned responses. For example, a person may avoid the scene of the death or develop other negative associations with the death, such as odors or colors. The individual factors associated with the death can be understood according to the process of operant extinction, when reinforcing stimuli for a specific behavior are no longer in place. For example, certain behaviors that previously received either positive or negative reinforcement no longer receive that reinforcement following the death. Social contexts can be similarly understood because new social reinforces of behavior take the place of those of the deceased individual. Cultural contexts can be understood from a behaviorist perspective because cultural expectations can play a strong role in the bereavement and cultural

norms and expectations can serve to either positively or negatively reinforce coping styles or behaviors. Empirical research supported the model by finding that the social context of bereavement is a factor that can impact coping for many bereaved parents through the support they receive from support groups (Dyregrov, 2004).

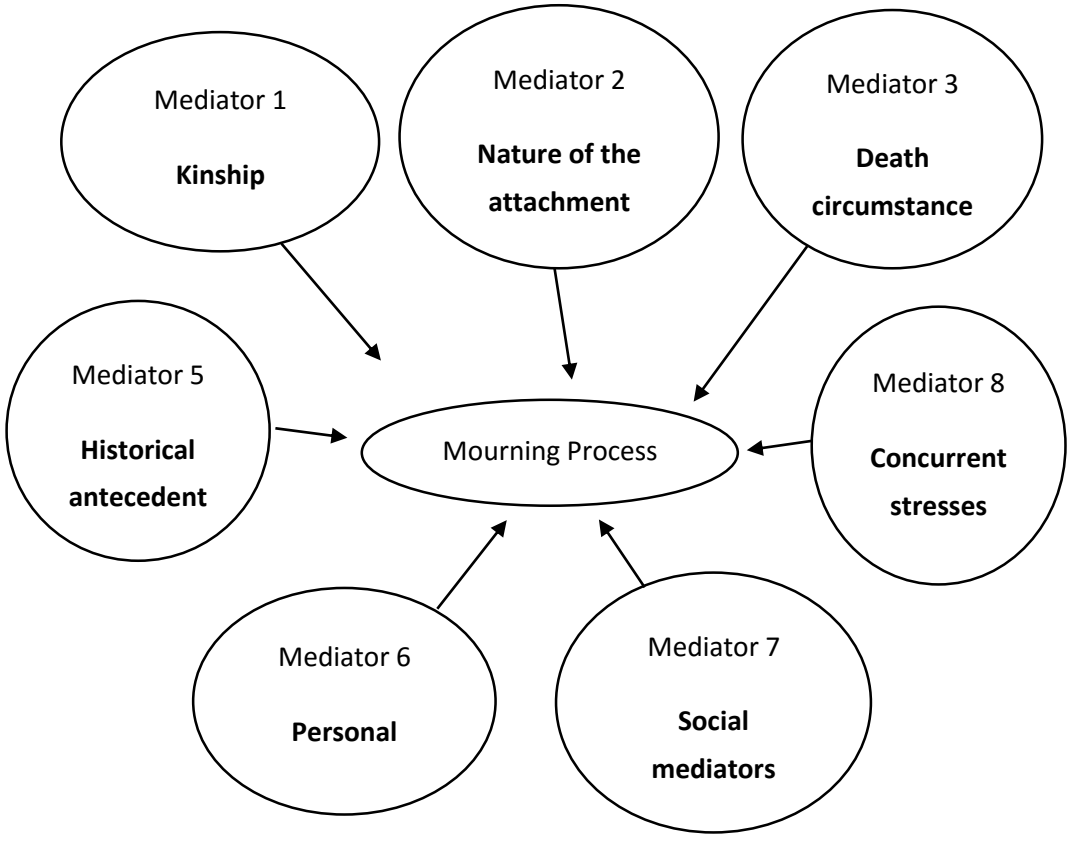
Conceptual Model of the Study

Present grief theories have provided multiple perspectives to understand behavioral reaction after loss. However, the question "what factors determine the level of grief experienced by a person?" is still untouched in a specific theory. To fully understand the grief of each individual or a certain group of individuals, factors influencing the individual/individuals need to be taken into consideration. "Even though the mourning tasks apply to all death losses, how a person approaches and adapts to these tasks can be quite varied" (Worden, 2009, p. 8). Worden calls these factors "mediators of the mourning process", on which the conceptual model of this study is built.

There are a total of 7 mediators included in Worden's theoretical model (see Figure 1.) of "mediators of the mourning process" (Worden, 2009). Mediator 1 is who the person was. The relationship to the deceased is likely to affect the level of grief experienced. Mediator 2 is the nature of the attachment, including attachment strength and security, ambivalence in the relationship, past conflicts with the deceased and the level of dependency the bereaved had on the deceased. Mediator 3 is the mode of death, including sudden or unexpected death, violent or traumatic death, and stigmatized death such as AIDS or suicide. Mediator 4 includes historical antecedents, meaning the mental

health background of the individual and previous losses he/she has experienced. Mediator 5 is personal variables, including age and gender, as well as coping and cognitive style. Mediator 6 consists of social variables, including perceived social and emotional supports as well as satisfaction with the level of this support. Mediator 7 is concurrent stresses, where other stresses in the life of the bereaved need to be considered, such as financial hardships created due to the loss of bread winner in the family.

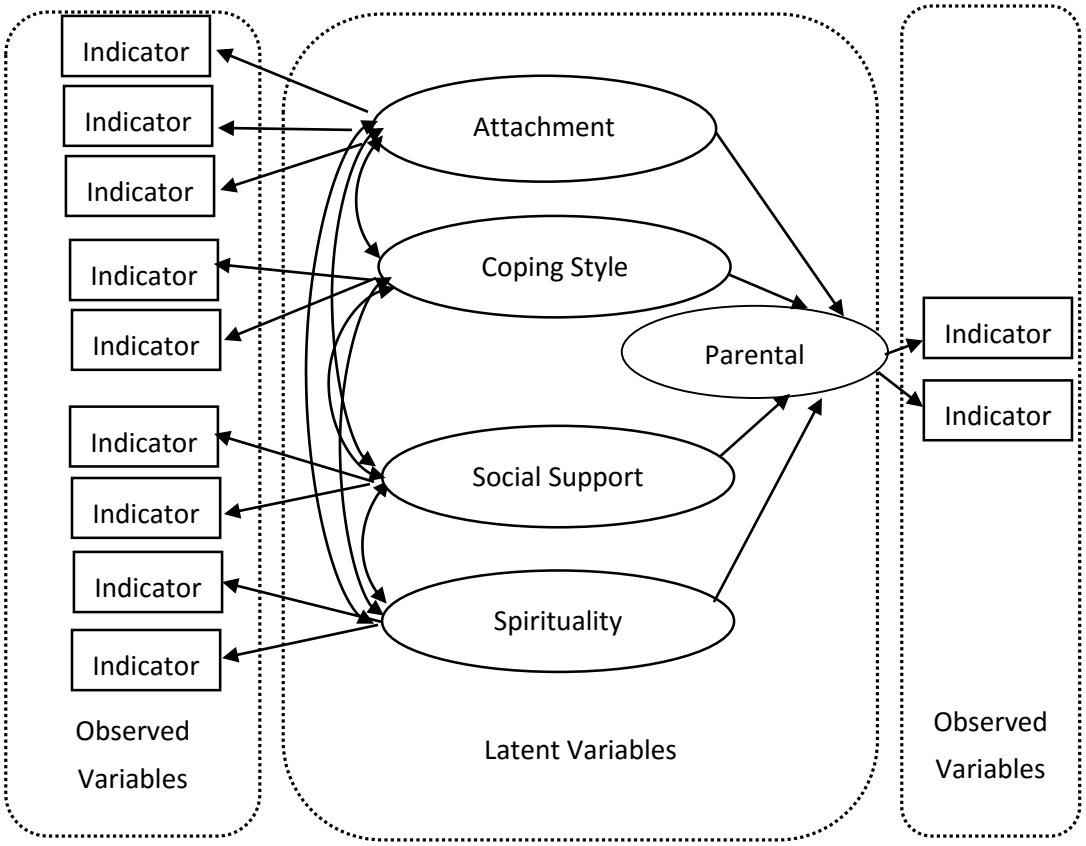
Figure 1. Theoretical model of "mediators of the mourning process" (Worden, 2009)



While it is clear that there is no single predominant factor, the literature reveals certain risk and protective factors that influence the prevalence of complicated grief of

the bereaved. Based on the review of the literature and empirical findings, the hypothesized conceptual framework of the current study is presented in Figure 2. The conceptual model incorporates the principles of the Worden's mourning process model. The proposed model has 5 factors: demographics, attachment style, copying style, spirituality, and social support availability. The model focuses on the direct linkage between demographics, attachment style, coping style, spirituality, social support availability and parental grief while highlighting their interrelatedness.

Figure 2. Conceptual model



Independent variables in the model include: attachment style measured by the Relationship Scales Questionnaire (RSQ) (Griffen & Bartholomew, 1994); coping

strategy measured by the Brief COPE Inventory (BCI) (Carver, Scheier, & Weintraub, 1989); social support measured by the Multidimensional Scale of Perceived Social Support (MSPSS) (Zimet, Dahlem, Zimet, & Farley, 1988); spirituality measured by the Daily Spiritual Experience Scale (DSES) (Underwood & Teresi, 2002). The dependent variable in the model is: parental grief symptoms as measured by the Prolonged Grief Questionnaire-13 (PG-13) (Prigerson et al., 2009).

The model was also tested to see if it fits equally between different gender and age groups, between different time of death and between different types of death. This information was collected in the demographic questionnaire.

Research Factors

A specific literature search was conducted to investigate existing research concerning the influence of the factors on the level of grief of the bereaved.

Gender and age

Gender was found to affect not only how bereaved parents experienced their grief but also how they expressed it (Archer, 1999). On a continuation of grieving styles from instrumental to intuitive, men tend to be found at the instrumental end and women tend to be found at the intuitive end (Martin & Doka, 2000). Quantitatively, fathers were found to have more active methods of grieving and to have less intense grief with less distress than bereaved mothers (Davies et al., 2004). Bereaved mothers engaged in higher instances of loss-oriented behavior, such as activities their deceased child would have liked. Bereaved fathers were more likely to approach mourning with a practical, forward-

focused approach (Foster et al., 2011). Other recent studies confirmed this finding. Fathers were generally less loss-oriented than mothers (Wijngaards-de Meij et al., 2008). A qualitative study of parents of children with terminal illness who died in the hospital provided some similar evidence for the claim that mothers' grief is more severe (Barrera et al., 2009). However, some studies have suggested that bereaved fathers grieve differently as opposed to less (Goodenough, Drew, Higgins, & Trethewie, 2004).

Gender differences have also been found in the quality of life after loss. Research revealed that motherhood is associated with higher mortality rates from overall causes (natural and unnatural) after the loss of a child, while fatherhood is only associated with a slight increase in mortality from unnatural causes (Li et al., 2003). Gender differences were also found in perceived social support among bereaved parents, with men generally reporting very limited or even non-existent sources of social support (Stroebe, Gergen, Gergen, & Stroebe, 1993). From this point of view, men are relatively more vulnerable than women. This is supported by research indicating that women tend to adjust better to bereavement than men (Stroebe, Folkman, Hansson, & Schut, 2006).

Literature about the relationship between the age of bereaved parents and grief symptoms is very limited. One early study found that the lower age, the higher the symptomatology (Reed, 1998). One study found opposite result with older persons exhibiting higher levels of posttraumatic growth than mid-life persons after spousal loss (Caserta, Lund, Utz, & de Vries, 2009). One study found no significant correlations between age and grief symptoms (Dyregrov et al., 2003).

Types of death

The type of death has been found to be related to parents' grieving experiences. Studies confirmed deaths that were expected, such as in the case of long-term illnesses, resulted in less CG than instances where the death was unexpected, such as the results of an accident(Wijngaards-de Meij et al., 2005). A child's violent death, defined as suicide, homicide, and accident, was associated with increased distress and difficulty with finding meaning for parents (Currier, Holland, & Neimeyer, 2009). Similarly, individuals who claimed to be unprepared for the death were 2 to 3 times more likely to suffer more serious symptoms of grief, including depression, than individuals for whom the death was an expected outcome (Zhang et al., 2006). In contrast to the above studies, a study compared 173 parents bereaved by accident, suicide, and homicide and found that suicide survivors did not experience the highest levels of distress, nor the lowest levels of acceptance of the deaths, or marital satisfaction, compared to the other bereaved parents (Murphy, Clark Johnson, Wu, Fan, & Lohan, 2003).

Time since the death

Generally, persons having less time since experiencing loss showed more grief symptoms (Keesee et al., 2008). However, empirical research found that time since the loss may have various impact on parents' grief. One study reported no differences in grief scores of parents who lost their baby child between six months and seven years earlier (Smith & Borgers, 1989). In contrast, other study reported a decrease in the intensity of parental grief between one and 13 months post loss(Dyregrov & Matthiesen, 1991). It

was also indicated that there was a resurgence of grief years later (Rando, 1983), particularly at times surrounding a significant anniversary (Lang, Gottlieb, & Amsel, 1996).

Coping strategy

Based upon theory, coping strategy influences the bereavement process. Active approaches to coping with stress are associated with better psychological outcomes and positive immunologic and health outcomes (Hansen et al., 2006). Research has identified several coping strategies used by bereaved parents as a mechanism of dealing with their grief following the death of a child. One study found that coping styles are likely to be important predictors of symptomatology in bereaved parents (Christiansen, Elklit, & Olff, 2013). Faith in a higher power was identified by many of the parents as an important coping mechanism in dealing with parental grief (Dewees, 2005).

Recognition that each partner had a unique way of grieving was important in helping parents cope. Women are usually more expressive and emotional in their grieving styles, but men tend to be more controlling of their emotions and are not as expressive (DeRidder, 2000). In a sense, the fathers seemed to deal with their grief on an intellectual level but the mothers tended to deal with their grief on an emotional level. Bereaved mothers who used emotion-based coping strategies in seeking emotional support or venting experienced more severe symptoms of grief than those who used avoidance coping techniques (Anderson, Marwit, Vandenberg, & Chibnall, 2005). In addition, religious coping by itself or task-oriented coping by itself was not associated with either

higher or lower grief; only positive religious coping, combined with task-oriented coping, was associated with lower levels of grief (Anderson et al., 2005).

Attachment style

The attachment style of the parent was found to serve as mediating the relationship between PTSD and parental loss (Christiansen et al., 2013). Theoretically, models of attachment lead to the development of specific expectations about self and others in relationships and serve as a basis for interpretation of traumatic events (Shapiro & Levendosky, 1999). Bereavement research found that individuals with a secure attachment style are better able to adjust to bereavement and have decreased risk of developing PTSD than individuals with insecure attachment patterns (Stroebe, Schut, & Stroebe, 2006). Some studies investigated the relationship between specific insecure patterns of attachment and bereavement reactions, finding that anxious or ambivalent attachment was associated with appraised inability to cope with the loss and more severe grief symptomatology (Field & Sundin, 2001; Wayment & Vierthaler, 2002).

The influence of attachment on symptom development is rarely examined in studies of bereaved parents. One study indicated that the more insecurely attached parents were, the higher the symptoms of grief and depression (Wijngaards-de Meij et al., 2007). Similarly, another study examining attachment and PTSD specifically in parents who experienced infant death found that secure attachment was associated with fewer PTSD symptoms, whereas insecure attachment was associated with more PTSD symptoms (Scheidt et al., 2012).

Social support

Social support following bereavement was generally seen as positively correlated with better bereavement outcomes, such as the adaptation to loss and recovery function, identity, and status (Vanderwerker & Prigerson, 2004). Social support in the form of family and friends was also identified as one of the most effective coping strategies during the bereavement process (Joseph, Alex Linley, & Harris, 2004). However, many bereaved parents find that extended family members often are unable to offer the support that the bereaved parents need, because the death of their child can be so traumatic (Marx & Davidson, 2003). Bereaved parents often report being ostracized after the loss, feeling loneliness and lack of available social support (Wing, Burge-Callaway, Rose Clance, & Armistead, 2001), and the lack of support may take the form of avoidance, abandonment of friendship, an unwillingness to listen, lack of concern and understanding, or isolation (Barrett & Scott, 1989). Parents whose loss was from suicide, tended to alienate themselves to reduce the stigmatization they perceived from others in the form of subtle, nonverbal interpersonal exchanges (Reed & Greenwald, 1991).

Several reasons why others may not be able to provide adequate support to bereaved parents were identified. First, potential support providers often have not had experience with loss and may assume that shortly following the loss, particularly in the case of the death of a child, individuals resolve and recover from the death. Second, because of their assumption regarding resolution and recovery, outsiders may regard bereaved parents' continued search for meaning, lack of resolution, or displays of distress

as a sign of character weakness or personal pathology rather than a legitimate response to the loss. Third, potential support providers may have a limited understanding of the sequelae of such a loss such as the sleep and concentration problems and traumatic imagery that may be involved. They also may have little awareness of the accompanying secondary losses facing bereaved parents. Finally, potential support providers may have difficulty offering support because contact and interaction with parents who have suffered such a tremendous loss can evoke powerful negative feelings as well as intense feelings of vulnerability (Davis, Wortman, Lehman, & Silver, 2000).

In addition, lack of social support has been associated with higher levels of distress, psychological morbidity and PTSD following the loss of a child (Scheidt et al., 2012). Research has suggested that group therapy or support groups might serve as an effective form of social support for bereaved individuals who have limited access to social support networks (Zhang et al., 2006). Another study confirmed this finding, suggesting that group therapy for bereaved individuals can result in positive improvements in levels of perceived social support and those improvements also are associated with positive changes in depressive symptoms (Ogrodniczuk, Joyce, & Piper, 2003).

Spirituality

Generally, spirituality and religion were identified as particularly helpful when persons find themselves faced with a crisis that pushes them to the limits of their own personal and social resources (Pargament, 1999). In the midst of such crises, religious

and spiritual beliefs can provide a framework for cognitively integrating losses (Davis et al., 2000). Individuals could rely on faith to explain that which they are not humanly capable of understanding. Activities related to individual spirituality, including attendance at religious services, self-reported importance of religion and spirituality, the use of religious or spiritual activities to cope with loss, involvement in religious social events, and individual spiritual connection, were found to correlate with positive adjustment to loss (Wortmann & Park, 2008). Similarly, involvement in a religious community was found to be correlated with greater well-being and less distress following loss (Matthews & Marwit, 2006).

One early study found that higher subjective ratings of the importance of religion were positively correlated to finding meaning in the loss of a child to Sudden Infant Death Syndrome (SIDS) (McIntosh, Silver, & Wortman, 1993). Another study found that bereaved mothers who attended church on a regular basis seemed to experience lower levels of grief related to anger, guilt, loss of control, rumination, depersonalization, somatization, and despair (Bohannon, 1991). In interviews with bereaved parents, Berkey (2007) found that the faith of the bereaved parents helped them to cope with the loss of their child, and the belief in an afterlife was particularly comforting.

However, research also revealed some contradictory results. For instance, parents who are religiously affiliated experience higher levels of depression than parents who do not report being religiously affiliated (Wijngaards-de Meij et al., 2005). Another study found a relationship between religion and spirituality and negative bereavement outcomes

(Wortmann & Park, 2008). These findings may be indicative of the spiritual struggles of bereaved parents.

Prolonged grief

Prigerson (2004) indicates that the majority of bereaved individuals are able to reach some sort of acceptance, see the potential for future satisfying relationships and ventures, engage in productive work, and find enjoyment in recreational activities by 6 months post-loss. They also show the ability to find some meaning in their lives, maintain connections with others, and develop new relationships. On the contrary, a significant minority of bereaved individuals are found unable to adapt to the loss and experience multiple adjustment difficulties, and these who maintain chronically high levels of a specific prolonged grief (PG) symptom cluster for more than 6 months post-loss are a cause for clinical concern (Prigerson, Vanderwerker, & Maciejewski, 2008).

Studies have investigated prolonged grief reactions in different populations. Most of the research on the prevalence of PG has occurred within the context of studying specific subgroups of the bereaved population. For instance, 4.6% of a sample of 570 elderly Swiss persons who experienced a major bereavement met the criteria for PG (Forstmeier & Maercker, 2007). Another study found 2.4% prevalence rate for PG among individuals between 40 and 79 years of age (Fujisawa et al., 2010). However, because it excluded those who had experienced the loss of a child, this study may have led to underestimation of the phenomenon according to Kersting, Brahler, Glaesmer, and Wagner (2011). Older adults grieving the death of a child or spouse have been found to

have higher prevalence of PG (Ott, Lueger, Kelber, & Prigerson, 2007). A higher PG prevalence rate was also found in numerous studies. For example, 24.3% of individuals with bipolar disorder met the criteria for PG (Simon et al., 2005). A prevalence rate of 18.6% has been reported in hospitalized patients with unipolar depression (Kersting et al., 2009).

Summary

In conclusion, much theory-based literature exists to inform the understanding of parental grief, yet very few quantitative studies exist, and even fewer studies have been conducted with older parents. Prior research on factors influencing grief lays the ground work for the present study. However, the significance of the study is to integrate disconnected existing research into a comprehensive model. Based upon Worden's mourning process model, the study proposes a model for use with a more powerful analytic tool on this critically understudied population. The next chapter will describe the plan and analytic strategy for addressing the current research gap by studying personal and social variables and how they affect older parents' grief.

METHODOLOGY

This chapter describes the methodology of this study. First of all, the study goals and hypotheses are presented. These hypotheses test the direct and indirect relationship between grief as well as the relationships among the influential factors. Next, research design, ethical issues, sample selection, data and collection methods are discussed. Lastly, instruments used to measure the observed variables are described.

Research Goals and Hypotheses

The overarching aim of the study is to determine patterns of grief among older bereaved parents and those factors which are effectively mediating or aggregating the extent of parental grief following their loss. More specifically, the study tests a conceptual model integrating the work of Worden's mourning process model (Worden, 2009). This model investigates the influence of gender and age, coping style, attachment style, social support and spirituality on older bereaved parents' grief focusing on how these factors influence older bereaved parents. The following specific research goals were formulated:

Goal 1: To test if the data support a structural model explicating the relationship between the specific influential factors and parental grief.

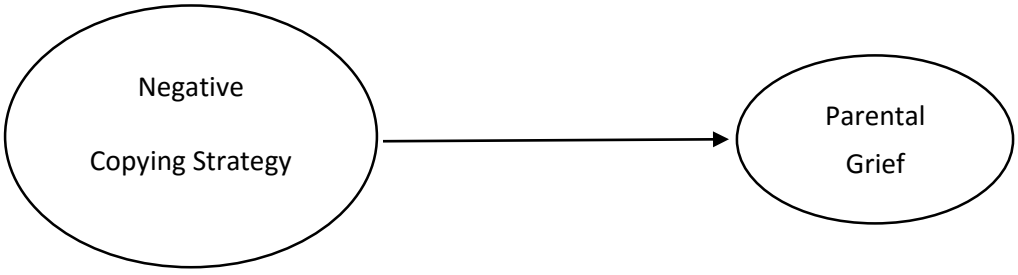
Goal 2: To identify significant relationships between influential factors (including: attachment style, coping strategy, social support and spirituality) and the measure of parental grief.

Goal 3: To determine if differences in age, gender, types of the child's death, time since the loss will have a differential effect on parental grief.

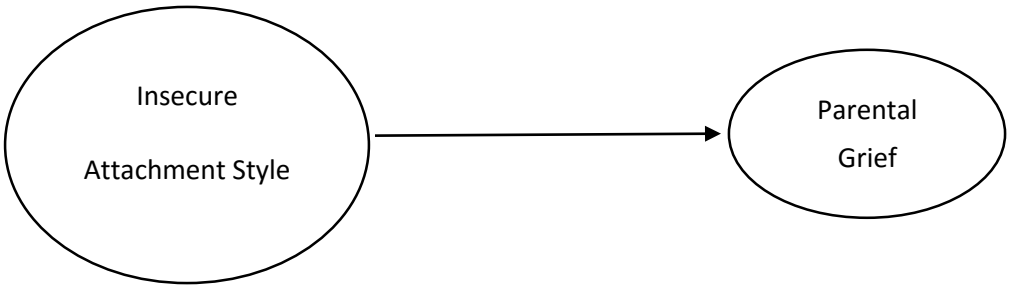
Generally, the study hypothesizes that the measures of influential factors, including coping strategy, attachment style, social support and spirituality will have a significant relationship with the measure of the older parents' grief. Those with prolonged grief disorder are hypothesized to be parents who are with less positive copying skills, less healthy attachment style, weaker spirituality and less social support.

Specifically, the following hypotheses guide and are tested in this study.

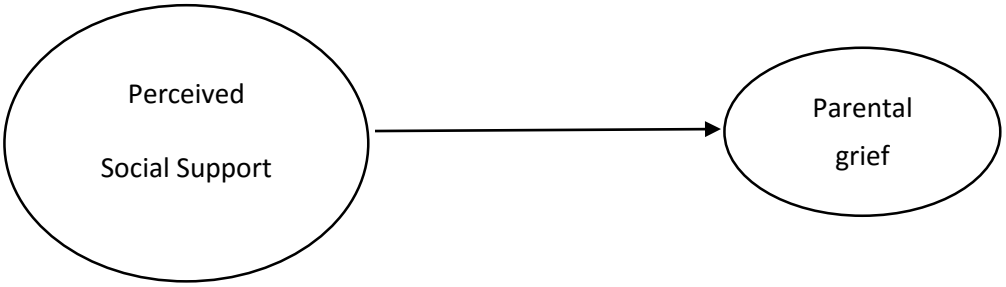
Hypothesis 1: Negative coping strategy has a positive direct effect on parental grief.



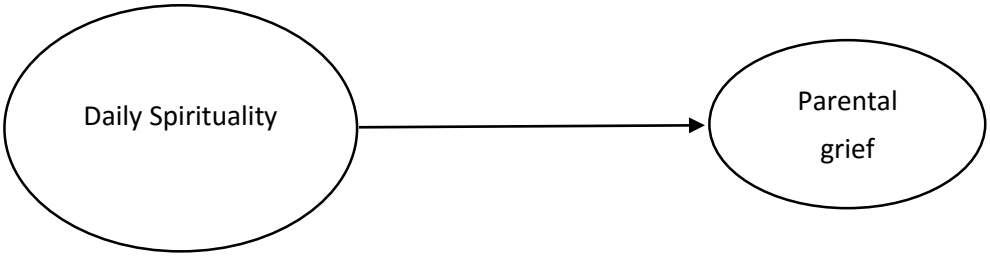
Hypothesis 2: Insecure attachment style has a positive direct effect on parental grief.



Hypothesis 3: Perceived social support has a negative direct effect on parental grief.



Hypothesis 4: Individual spiritual experience has a negative direct effect on parental grief.



Research Design

The study is a cross-sectional study with a quasi-experimental posttest only design, utilizing a quantitative survey developed for use with bereaved parents. Advantages of a cross-sectional survey approach include: (a) participants' privacy can be maintained with relative ease, compared with, for example, one-on-one interview research; (b) data can be

collected by having participants directly code their answers on to optical scan sheets, thereby, facilitating data entry and guarding against erroneous data entered by human error; and (c) a large number of participants can be sampled quickly and efficiently (Alreck & Settle, 1995).

Participants

Study participants had to meet the following inclusion criteria:

1. Self-identified as a parent who experienced the death of a child.

2. The deceased child has been dead for more than 6 months.

In addition, participants had to be able to read and write, and have access to a computer and Internet.

Individuals were excluded from the study if they met the following criteria:

1. Individuals whose child died less than 6 months prior to being contacted to complete the questionnaire.

2. Individuals who self-admit to having significant mental or physical conditions, for example, individuals who were on any medicines or diagnosed with depression.

Data Collection Methods

Data was collected between July and November of 2015. An online survey using self-completed questionnaire was utilized to collect all the data. The questionnaire took about 20-30 minutes to complete. The survey site opened with an instruction letter. Prior to the survey, the study adopted a self-screening procedure (presented in Figure 3.) to make sure only those who meet the study criteria were included in the study. Participants could not begin the survey until they complete the self-screening procedure and sign the

informed consent. The survey was hosted on the SOJUMP website (one of the biggest online survey providers in China).

Setting

The Internet served as media for conducting the study. Participants could complete the survey at a site of their own choosing. Anonymity was maintained because no identifying information was obtained from the participants.

Rationale for online survey

Three important advantages of using an online include: (1) obtaining large samples which improves statistical power and "model fitting"; (2) increasing diversity; and (3) recruiting a "specialized" population (Birnbaum, 2004). One of the most important advantages of using an online survey in this study is that the survey is conducted through a virtual media without personal, physical contact with the participant. Lack of contact may be seen as a limitation by some researchers; however, it is considered a strength in this study. In this way, the researchers' influence on the participant responses can be minimized (Hewson, 2003). Another advantage of an online survey is that participants directly enter data without an intermediary interpreting the intent of the participant responses or incorrectly entering the data. This simplifies data entry and minimizes errors. Missing data are also decreased because the participants are responding to questions in a systematic and linear manner. In addition, the anonymity of an online survey encourages participants to freely and honestly express themselves, knowing they are free of ridicule or judgment (Hewson, 2003). Online surveys can

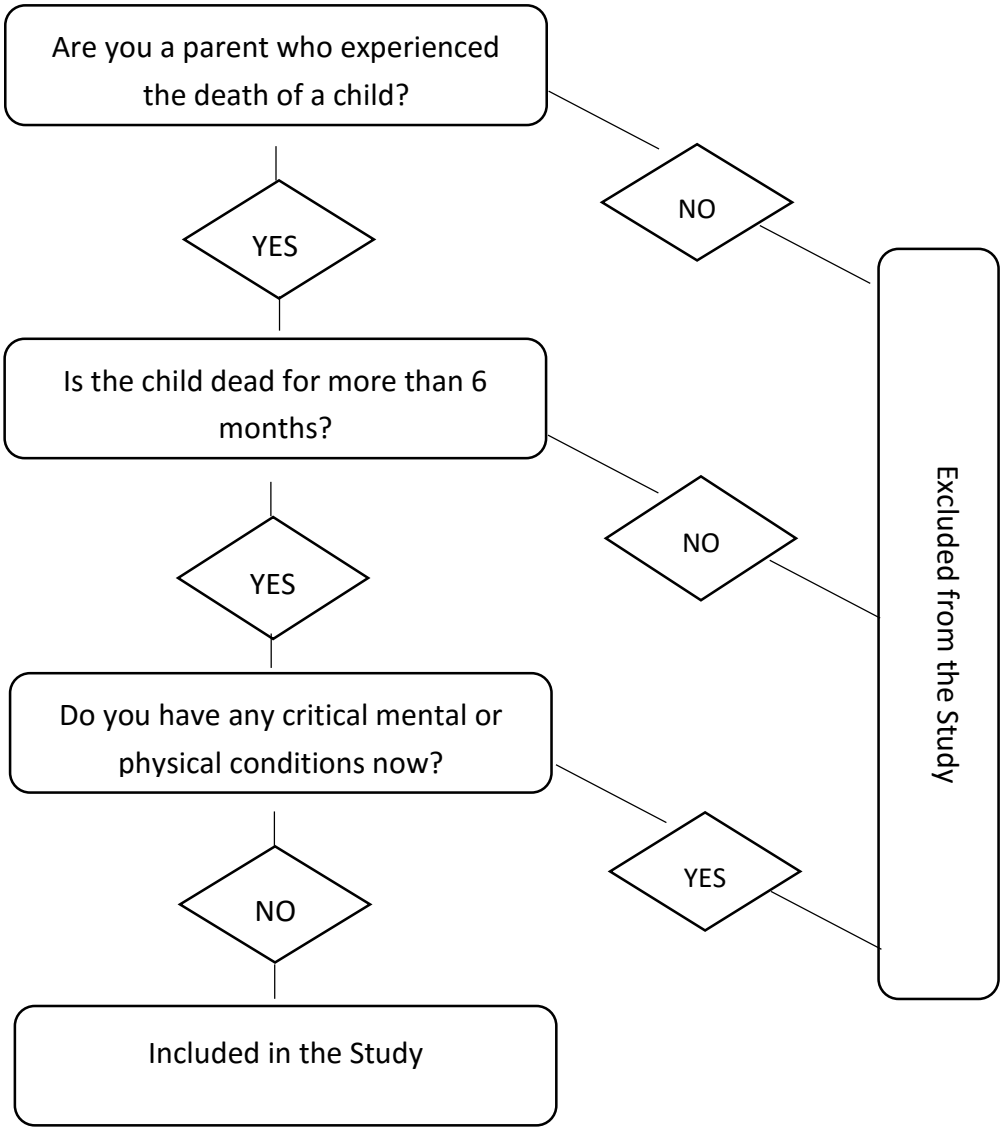
substantially decrease the cost of conducting research and provide a quicker response time for completion of the survey (Dillman, 2000).

The limitations of online survey include that it does not allow participants the discretion to respond to questions in the order they deem most appropriate as do traditional questionnaires in which participants are able to skip or review upcoming questions and navigate between questions at their own will. The online survey in this study, like many online survey questions, was presented in a linear fashion requiring the participant to respond sequentially. Participants completing an online survey are required to use a sequence of computer steps that may be problematic depending on the computer skills of the participant. In this study, omitting one step of the sequence will result in the participant not being allowed to complete the survey. In addition, researchers reported that additional confusion may arise when the software and hardware used by the participant is incompatible with software and hardware used by the designer of the survey. This may result in an inability to properly complete the survey (Dillman, 2000).

Exclusion of potential participants who did not have access to a computer or internet was another limitation of using an online survey in this study. This resulted in sample bias because study participants were self-selected from online groups. Online surveys might result in systemic bias due to the propensity of some individuals to complete surveys, whereas other participants may choose not to do so (Wright, 2005). Furthermore, when using an online survey, it may be difficult to discern whether the

participant is providing correct demographic information or other pertinent data because they are self-reported.

Figure 3. Online survey self-screening procedure.



Sampling

A non-probabilistic convenience sampling method that relies on available subjects was used for the study. Since the possible sampling frames on bereaved parents are not

available, it is not feasible to select a probability sample. While non-probabilistic convenience sampling was used to assure adequate sample size, caution will be exercised in generalizing the findings to a larger population.

Participants were recruited via several online bereaved parents' support groups, specific websites and chat rooms addressing parental grief were targeted as well. These are informal internet communities organized by older adults for information exchange and emotional support. People in these groups use a screen name instead of their real name. In China, formal bereaved parents' organizations are nearly non-existent. These informal online groups provided the investigator an opportunity to contact parents whose child have died. The online recruitment strategy was used to attract specific populations for the study. However, this strategy prevents randomness and results in a biased sample.

An invitation letter (See Appendix A and B) from the researcher was presented to the members of the bereaved parents' online group, inviting them to participate in this study. The content of the letter included: (1) identification of the researcher, mentor, and institution; (2) approval from the Human Subjects Protection Program; (3) purpose and nature of the study; (4) potential risks and benefits of participating; (5) participant rights; and (6) limits of confidentiality.

The description of the study also stated that involvement was voluntary, responses were anonymous, and completion of the survey served as consent to participate. The invitation letter also contained the internet address of the online survey. Potential

participants could go to the address of the online survey later, where more information of the study was presented in detail before they finally agreed to participate in the study.

In addition, the participants were notified that the study focused on general grief symptoms experienced by bereaved parents, not on specific clinical symptoms of grief. No participants asked that a list of mental health resources be prepared for them to consult professional help later as was offered in the letter introducing the study.

Sample size

Calculations were undertaken to determine the required number of responses for analysis to test the proposed theoretical model using structural equation modeling (SEM). Most researchers in SEM recommend a minimum sample of 100 to 150 (Anderson, 1988; Ding, Velicer, & Harlow, 1995). In this study, the investigator obtained a total sample of 206.

Measures

The survey in the present study consisted of two parts: Part I was a demographic questionnaire designed to gather information such as participant's gender, age, and education. Part II included 4 standardized instruments: the Relationship Scales Questionnaire (Griffen & Bartholomew, 1994); The Brief COPE Inventory(Carver et al., 1989); the Multidimensional Scale of Perceived Social Support (Zimet et al., 1988); the Daily Spiritual Experience Scale (Underwood & Teresi, 2002); and the Prolonged Grief Questionnaire-13 (Prigerson et al., 2009).

Demographic Information

The demographic questions included 5 items, developed by the investigator in consultation with his research mentors. Bereaved older parents were asked to provide information about age, gender, the cause of their child's death, the time since the child's death, and whether the deceased child was the only child. The study provided the participants with the option of "I chose not to answer" as a response for all demographic questions.

Attachment Style

The Relationship Scales Questionnaire (RSQ) is a self-report inventory which measures attachment styles (Griffen & Bartholomew, 1994). The RSQ contains 30 items designed to tap each of Bartholomew's four prototypes (Bartholomew & Horowitz, 1991). The RSQ conceptualizes categorical differences in attachment style along two dimensions, a view of self as either positive or negative, and a view of others as either positive as negative. Each prototype consists of a combination of view of self and view of others as either positive or negative. The resulting four-group taxonomy includes the Secure attachment category that reflects a positive view of both self and others; the Preoccupied attachment category that reflects a negative view of self along with a positive view of others; the Fearful attachment category that reflects a negative view of both self and others; and the Dismissing attachment category that reflects a positive view of self and a negative view of others.

On a 5-point scale ranging from "not at all like me" to "very much like me", participants rate the extent to which each statement best described their characteristic

style in close relationships. The scores for each attachment dimension are calculated by taking the mean of the scores for those items representing that attachment dimension. Then, the category with the highest score is considered the individual's best-fitting categorical attachment style (Griffin & Bartholomew, 1994a).

The RSQ shows moderate convergent validity. Convergent validity coefficients between the indirect self-report pattern ratings of the RSQ and interview prototype ratings ranged from 0.25 to 0.47 (Griffin & Bartholomew, 1994b). The internal consistency is not uniform throughout the RSQ (e.g. $\alpha = 0.70$ for dismissing, $\alpha = 0.41$ for secure). The RSQ has been translated and tested in China. In a sample of 71 conjugally bereaved Chinese individuals, the anxiety and avoidance attachment scales showed good alpha reliability at 0.81 and 0.72, respectively (Ho, Chan, Ma, & Field, 2013). However, only these two theoretical attachment styles were addressed in this study; the validity of other attachment styles was not reported.

Coping Strategy

The Brief COPE Inventory (BCI) was used in the present study to measure individual coping strategy. It is a shortened version of the COPE (Coping Orientation with Problem Experiences Inventory) (Carver et al., 1989) with 28 items. The scale contains 14 coping strategies: self-distraction, active coping, denial, substance use, use of emotional support, use of instrumental support, behavioral disengagement, venting, positive reframing, planning, humor, acceptance, religion, and self-blame. Each of the 14 coping strategies has 2 items. These strategies are seen as a person's response to a

stressful situation or event. The instrument does not measure the effectiveness of the coping methodology, only whether or not the respondent has utilized the method.

On a 4-point scale ranging from "I usually don't do this at all" to "I usually do this a lot", participants respond to each of the 28 items. Each category of the coping strategy scores ranges from 2 to 8. Carver (1997) reported evidence supporting the factorial validity of the BCI; Cronbach's alpha for each strategy varied from 0.54 to 0.90. In addition, Carver explained that he had not combined the scales to measure a total score or subscale scores. It is beneficial to review each scale separately and then to identify correlations between variables. He also encouraged individual researchers to develop their own subscale scores (Carver, 2007).

Cooper, Katona, and Livingston (2008) concluded that the BCI has three composite subscales: measuring emotion-focused coping, problem-focused coping, and dysfunctional coping; and the subscales showed content validity and internal consistency, with Cronbach's alpha of 0.72, 0.84, and 0.75. In their study, emotional-focused coping strategy included acceptance, use of emotional support, humor, positive reframing and religion; problem-focused coping strategy included active coping, planning and use of instrumental support; and dysfunctional coping strategy included venting, behavioral disengagement, self-distraction, self-blame, substance use and denial.

The BCI has been translated and tested in China. In a study of 301 Chinese caregivers of cancer patients, the scale showed a reliability coefficient of 0.85 (Han et al.,

2014). Another study reported that the Chinese version of the BCI had a Cronbach alpha value of 0.83 (Qiu & Li, 2008).

Social Support

In this study, social support was measured by the Multidimensional Scale of Perceived Social Support (MSPSS). It contains 12 items that are rated on a 7-point scale ranging from "1 = very strongly disagree" to "7 = very strongly agree" (Zimet et al., 1988). The MSPSS was designed to measure participant's subjective assessment of social support adequacy. Perceived social support was found to be a better predictor of psychological status than objectively measured social support (Brandt & Weinert, 1981).

The MSPSS has three separate, four item subscales. The first subscale measures perceived social support from friends, the second subscale measures perceived social support from family, and the third subscale measures perceived social support from a significant other. The overall scale has high internal reliability, stable factor structure and good validity, with a Cronbach's alpha of 0.88. The subscales also showed high internal reliability; significant other was 0.91 and family and friends were both 0.85. Perceived social support was found to be negatively related to reported symptoms of anxiety and depression (Zimet et al., 1988). Total scores range from12 to 84 and subscale scores from 4 to 28 with a higher score indicating greater perceived support.

The MSPPS has been reliably utilized with populations diverse in race, socioeconomic status, gender, nationality, and age (Canty-Mitchell & Zimet, 2000). It has been translated and tested in China. During the validation of the Chinese scale, examples

were added to help understand that the significant other could be supervisors, colleagues, and relatives. The Chinese version has a test-retest reliability of 0.81, internal consistency of 0.85 (Huang, Jiang, & Ren, 1996).

Spirituality

Individual spirituality was measured by the Daily Spiritual Experience Scale (DSES). Instead of focusing on specific religious beliefs or practices, it was developed to measure a person's perception of the transcendent (God, the divine) in daily life and his or her perception of his or her interaction with or involvement of the transcendent in life" (Underwood & Teresi, 2002, p. 23). The scale includes 16 items; the first 15 are scored with response categories of frequency. The last item (''In general, how close do you feel to God?'') is reverse-scored for responses: "not at all close", "somewhat close", "very close", and "as close as possible". Items on the DSES address concepts such as perceived relationship with the transcendent, inspiration, inner harmony, awe, gratefulness, and mercy.

The scale has shown moderate to high internal consistency, with Cronbach's alpha of 0.88 for test and 0.92 for retest (Underwood & Teresi, 2002). The DSES is scored with higher scores indicating more frequent daily spiritual experiences. The scale has a unique strength in that it allows researchers to measure spirituality in less religious or non-Western populations; it has been tested in many cultures and has demonstrated satisfactory psychometric properties (Bailly & Roussiau, 2010; Kalkstein & Tower, 2009).

The DSES has been translated and tested in China. Minor adjustments were made in the translation to ensure that it is culturally relevant to Chinese speakers while it remains as close to the English version as possible. The Chinese version (DSES-C) demonstrated high internal consistency with Cronbach's alpha of 0.97 (Ng, Fong, Tsui, Au-Yeung, & Law, 2009).

The exploratory factor analysis found nearly all items had high loadings on the one factor, ranging from 0.69 to 0.93 (Underwood, 2011) , except for item 13 ("feels a selfless caring for others.") and item 14 ("accepts others even when they do wrong things."). The DSES was found to be significantly negatively correlated with a variety of psychosocial measures of stress, anxiety and depression and positively correlated with measures of optimism and perceived social support (Ellison & Fan, 2008). The original scale uses lower scores to indicate more frequent daily spiritual experience. For purposes of the present analysis, these scores were reversed so that a higher DSES score represented a higher frequency of daily spiritual experiences. The analysis in this study employed the mean score of the DSES.

Prolonged Grief

Parental grief symptoms were measured by the Prolonged Grief Questionnaire-13 (PG-13) (Prigerson et al., 2009) in this study. The PG-13 is a 13-item, self-report questionnaire for the diagnosis of PGD. The PG-13 includes 11 questions on a 5-point Likert scale, ranging from "1 = almost never" to "5 = always", and a duration criterion question and a dysfunction criterion question. The total score of PG symptom varies from

1 to 55. Clinically, the presence of prolonged grief disorder must meet five criteria. They are: (1) event criterion: the respondent has experienced loss; (2) separation distress: the respondent must endorse questions No. 1 or 2 at least daily; (3) cognitive, emotional and behavioral symptoms: the respondent must endorse at least 5 symptoms based on the PG-13 question No. 4–12 at least "once a day" or "quite often"; (4) duration criterion: the symptoms of separation distress must be elevated at least 6 months after the loss, that is, PG-13 question No.3 must be answered as "Yes"; (5) impairment criterion: the respondent must show significant impairment in social, occupational or other important areas of functioning. That is, PG-13 question No. 13 must be answered as "Yes" (Prigerson et al., 2009).

The scale has a Cronbach's alpha of 0.94 (Holland, Neimeyer, Boelen, & Prigerson, 2009). The PG-13 has been translated and tested in China. The Chinese version of the PG-13 was found to have satisfactory psychometric properties, with Cronbach's alpha of 0.94 (He, Wang, Wei, & Tang, 2013).

PG-13 was initially developed to classify a diagnosis of PGD as opposed to serving as a continuous measure of PGD severity. Later, a PGD factor was devised to provide a continuous score of PGD, using 9 (item 1, item 4, item 5, item 6, item 7, item 8, item 9, item 11, item 12) of the total 13 items (Boelen & Prigerson, 2007). Total scores on the PGD factor can range from 9 to 45, with higher scores indicating greater PGD symptomatology severity. The factor score was also found to be able to predict severity

of PGD symptoms occurring later in life (Boelen & Prigerson, 2007). This study used the PGD factor score calculated from each participant's responses to the PG-13.

Research Ethics

Literature suggests that bereaved parents are a vulnerable population (Dyregrov et al., 2011; Meert et al., 2008; Stroebe, Stroebe, & Schut, 2003). Research on parental bereavement encounters numerous ethical challenges throughout the research process, such as confidentiality, recruitment methods, timing of recruitment, methods of data collection, training and support, researcher qualifications, informed consent, voluntariness, unanticipated disclosures, and research induced stress (Meert et al., 2008). Therefore, certain safeguards were installed in the process of the present study.

Confidentiality and Human Subjects Considerations

In this study, confidentiality has been preserved through the use of pseudonyms and the removal of personal identifiable information. Each participant was given a study ID. No names or identifying information were retained by the University of Louisville. No names or identifying data will be revealed when the study results are published in the future. Data was discussed only in summary. Procedures for the protection of human subjects were followed throughout this study. All participants were given the option to refuse participation or completion of any or all of the questionnaires, and were informed of their right to exit the study at any time.

Data and Safety Monitoring

The investigator was responsible for complying with all the policies, procedures, and recommendations for data and safety monitoring. Rigorous control of data was

implemented and all necessary provisions were made. The data were downloaded from the server and stored in a password-protected database on the researcher's personal computer. Access to the data was limited to the investigator and the Dissertation Faculty Committee chairperson.

Implied Consent

Each participant was informed of the nature of the study and voluntarily consented to participate in the research. The participants were informed about the focus of the study, why the study was being conducted, potential benefits and risks, the expected time commitment to complete the research process and protection of confidentiality for the research participants. Participants were informed that they would not be signing a consent form but consent was implied by completion of the online survey.

Data Analysis

Preliminary Data Analysis

Prior to addressing the research hypotheses, variables were screened for accuracy and statistical assumptions using various SPSS (Statistical Package for the Social Sciences) and AMOS (Analysis of Moment Structures) procedures. Specifically, preliminary analyses included: (1) examination of descriptive statistics for data accuracy, (2) identification and treatment of missing data, (3) detection and treatment of outliers, (4) evaluation of multicollinearity among variables, (5) computation of scale reliabilities, and (6) testing of variables for mean differences between groups (e.g., gender).

Structural Equation Modeling

Rationale for methodological selection

Structural equation modeling (SEM) is an established analysis method for this type of study. One of the primary purpose of SEM is to test newly developed models. In structural equation modeling, relationships among variables are represented by a series of structural (i.e., regression) equations, and these structural relations can be modeled pictorially to enable a clearer conceptualization of the theory under study (Byrne, 2001). Generally speaking, the methodological steps of theory construction resemble a circular progression that starts from theory and moves through consecutive phases of model construction, instrument construction, data collection, model testing, results, and interpretation.

SEM provides researchers with more information in terms of model testing than the older generation of multivariate procedures. Specifically, it can take a confirmatory, in addition to an exploratory, approach to data analysis. Most other multivariate procedures are essentially descriptive by nature (e.g., exploratory factor analysis), making hypothesis testing more difficult. In addition, although traditional multivariate procedures are incapable of either assessing or correcting for measurement error, SEM provides explicit estimates of these error variance parameters. Furthermore, those using SEM procedures can incorporate both unobserved and observed variables.

In the present study, the influential factors of parental grief such as attachment style, coping strategy, spirituality, and social support are theoretical constructs that cannot be observed directly. In SEM, these abstract phenomena are called latent variables

or factors. Because latent variables are not observed directly, they cannot be measured directly. Researchers can operationally define the latent variable of interest in terms of the behavior believed to represent it. As such, the unobserved variable is linked to one that is observable, thereby making its measurement possible (Byrne, 2001). Therefore, observed variables are measured directly, and serve as indicators of the unobserved variables (or underlying constructs).

In SEM, exploratory factor analysis (EFA) is designed for the situation where links between the observed and latent variables are unknown or uncertain. Confirmatory factor analysis (CFA) is appropriately used when the researcher has some knowledge of the underlying latent variable structure (Byrne, 2001). EFA or CFA can help the researcher understand how and to what extent the observed variables are linked to their underlying latent factors. In SEM, the model fit is evaluated by using the χ^2 goodness of fit index, where the standardized residuals are examined. A good fit requires that Chi-squared for the model to be approximately twice its degrees of freedom or smaller. However, because the χ^2 index is sensitive to sample size and violations of the assumptions of multivariate normality, a significant χ^2 does not rule out model adequacy and alternative fit indexes are generally used (Schumacker & Lomax, 2004). Therefore, several other indices of fit will be used to determine the accuracy of model specification, including the Tucker-Lewis Fit Index (TLFI), the Comparative Fit Index (CFI), the Root Mean Square Error Approximate (RMSEA) and its 90% confidence interval, and the p-value for the Test of Close Fit.

Another advantage that SEM holds is that it can graphically represent theory-driven concepts and relationships. SEM uses the graphical representation of statistical relationships and eases communication of model information. The specific models are often portrayed graphically using particular configurations of four geometric symbols: an ellipse, a rectangle, a single-headed arrow, and a double-headed arrow. Byrne (2001) indicated that ellipses or circles represent unobserved latent factors and rectangles or squares represent observed variables; single-headed arrows represent the impact of one variable on another; double-headed arrows represent covariances or correlations between pairs of variables.

In summary, the present study included the development of initial theory and model construction aided by data collection, model testing, and result interpretation. Second, most of the influential factors in this study were multifaceted constructs. Components of the constructs were measured separately and were conveniently considered as observed variables. SEM allows incorporation of latent variables in the present study into the analyses. It enabled the examination of both direct and indirect (mediating) effects among latent variables. Third, SEM can examine the relationship among constructs that are not influenced by measurement errors (Newcomb & Bentler, 1988).

Procedure

For structural equation modeling, there are 4 steps: (1) the development and specification of a model to be estimated. Formally, the investigator will draw the model

indicating the variables and their relationships with each other—basically the translation of the theory into equations; (2) the model estimation, estimates of the parameters are obtained from the data and model testing begins; (3) assessing the fit of the model to determine if the variables and the relationship between the variables are correct for the model; (4) after model fitting, interpreting the model.

Summary

This chapter detailed the methodological plan and analytic strategy for the influential factors and how they affect grief for older bereaved parents. Participants for this study include parents who experienced the death of their child over 6 months ago. A self-report, cross-sectional design is employed with participants completing measures of attachment style, coping style, social support, spirituality and demographic information. Structural equation modeling (SEM) is used (1) to perform tests of the hypothesized relations between the aforementioned measures, (2) to identify group differences (e.g., gender) in the relations among these measures. The selection of participants, design, instrumentation, and analyses are in accordance with the standards of the University of Louisville Institutional Review Board. The next chapter will provide details of the analysis as well as results.

RESULTS

The study aimed to develop an understanding of the factors that influence grief in older parents whose child has died. More specifically, the study attempted to test a conceptual model integrating William Worden's mourning mediators model (Worden, 2009), which conceptualized the influence of death circumstances, personal mediators such as age, sex, attachment styles, spirituality, and social mediators, such as social support and coping strategy. It focused on how these factors influenced older parents whose child died differently, by examining whether a relationship existed between the level of these influential factors and the parent's level of prolonged grief. This chapter will explain data preparation and preliminary analyses, describe the study sample, detail the model building process and present the results.

The content of this chapter is organized according to the research hypotheses and questions that directed the study. The results are divided into several sections: the first section provides descriptive statistics, including demographic characteristics of the participants, characteristics of the death circumstances, review of the study variables; the second section includes the measurement model and structural model building and

testing; the third section is hypothesis testing and results; and the fourth is multi-group analysis, comparing the model between different groups.

Descriptive Statistics

Demographic Characteristics of the Participants

All of the 206 participants who completed the survey were recruited from various online parental bereavement support groups. Demographic characteristics of the participants are presented in Table 1. Gender was recoded with 0 = male and 1 = female. Age was recorded as the actual age of the participants. The mean age of participants was 53.9 years old (SD=6.3). The youngest participant in the study was 37 and the oldest was 77 years. Female comprised of 65.3% of the participants (n=135) and 34.7% of the participants were male (n=71).

Table 1 Participants demographics (N=206)

	n	%	M	SD	Range
Age (in years)			53.9	6.3	37-77
Gender					
Female	135	65.3			
Male	71	34.7			

Characteristics of the Death Circumstances

The characteristics of death circumstances are presented in Table 2. Mean years since the death of the child was 4.9 (SD = 4.2), with a range of 0.5 to 20. For 96.8% (n=199) of the parents in this study, their only child died. The reasons for the death of the

child included sudden illness (n=85, 41.1%), accident (n= 61, 29.8%), chronic illness (n=20, 9.7%), homicide (n=8, 4.0%), suicide (n=6, 3.2%), and other (n=26, 12.1%).

Table 2 Characteristics of the death circumstances (N=206)

	n	%	M	SD	Range
Years since the death			4.9	4.2	0.5-20
Only child					
Yes	199	96.8			
No	7	3.2			
Reasons for death					
Sudden illness	85	41.1			
Chronic illness	20	9.7			
Accident	61	29.8			
Suicide	6	3.2			
Homicide	8	4.0			
Other	26	12.1			

Description of the Study Variables

This section provides the results of the four self-report scales completed by the participants. The Relationship Scales Questionnaire (RSQ) (Griffen & Bartholomew, 1994) measured the different the models of attachment; those models were seen as the development of specific expectations about self and others in relationships and as a basis for interpretation of traumatic events. An individuals' coping strategy used in response to traumatic loss such as the death of a child was measured by the Brief COPE Inventory

(Carver et al., 1989). The Multidimensional Scale of Perceived Social Support measured the various types of support from family and friends that older parents perceived during the bereavement process (Zimet et al., 1988). Individual spiritual beliefs provide a framework for cognitively integrating losses and was measured by the Daily Spiritual Experience Scale (Underwood & Teresi, 2002). Grief symptoms of the participants were measured by the Prolonged Grief Questionnaire-13 (Prigerson et al., 2009) . Finally, the reliability of the scales and subscales used on this sample are reported.

The Relationship Scales Questionnaire (RSQ)

Descriptive statistics for the RSQ are displayed in Table 3. The RSQ had a mean of 92.37 (SD = 16.31, range = 43.00-129.00). The mean RSQ subscale scores were as follows: secure subscale had a mean of 3.27 (SD = 0.83, range = 1.20-4.80); fearful subscale had a mean of 3.21 (SD = 0.91, range = 1.00-5.00); preoccupied subscale had a mean of 2.79 (SD = 0.77, range = 1.00-5.00), and dismissing subscale had a mean of 3.35 (SD = 0.74, range = 1.00-5.00). According to the RSQ, the category with the highest score is considered the individual's best-fitting categorical attachment style. Almost 38% (37.9%, n = 47) fell in the secure attachment category, reflecting a positive view of both self and others. Another study found 21.0% (n = 26) fell in the fearful attachment category, reflecting a negative view of both self and others. It is also found that 7.3% (n = 9) fell in the preoccupied attachment category, reflecting a negative view of self along with a positive view of others. Further, 33.1% (n = 41) of the sample were in the dismissing attachment category, reflecting a positive view of self and a negative view of

others. Cronbach's α for the whole scale was 0.66, suggesting that the internal consistency for this sample was questionable (George & Mallery, 2003). Cronbach's α for the subscales varied and were low, secure was 0.58, fearful was 0.60, preoccupied was 0.27 and dismissing was 0.55. The Cronbach's α of the subscales suggest that the internal consistency for this sample was poor. The low value of alpha could be due to a low number of questions; for instance, the subscale of preoccupied attachment only has 4 items. In addition, poor inter-relatedness between items or heterogeneous constructs can also contribute to a low alpha value (Tavakol & Dennick, 2011). Although the analysis did not obtain a satisfying Cronbach's α for some of the subscales, they were still included in model building and testing.

Table 3 The Relationship Scales Questionnaire scores and Cronbach's alpha (N=206)

	M	**SD**	**Range**	**%**	**n**	**Cronbach's α**
Total scores	92.37	16.31	43.0-129.0			0.66
Subscale scores						
Secure	3.27	0.83	1.20-4.80	37.9	47	0.58
Fearful	3.21	0.91	1.00-5.00	21.0	26	0.60
Preoccupied	2.79	0.77	1.00-5.00	7.3	9	0.27
Dismissing	3.35	0.74	1.20-5.00	33.1	41	0.55

The Brief COPE Inventory (BCI)

Descriptive statistics for the original 14 factor Brief COPE are displayed in Table 4. The BCI total score mean was 68.02 (SD = 11.92, range = 31.00-110.00). The original

14 factor BCI subscale scores were as follows: Self-distraction (mean = 5.65, SD = 1.53), Active coping (mean = 5.50, SD = 1.42), Denial (mean = 4.95, SD = 1.73), Substance use (mean = 4.19, SD = 1.90), Use of emotional support (mean = 4.72, SD = 1.77), Use of instrumental support (mean = 4.55, SD = 1.48), Behavioral disengagement (mean = 4.92, SD = 1.82), Venting (mean = 4.19, SD = 1.90), Positive reframing (mean = 4.06, SD = 1.75), Planning (mean = 5.90, SD = 1.45), Humor (mean = 3.32, SD = 1.43), Acceptance (mean = 5.27, SD = 1.53), Religion (mean = 3.97, SD = 1.73), Self-blame (mean = 6.21, SD = 1.64). Subscale scores range from 2.00 to 8.00.

Table 4 The Brief COPE Inventory scores (N=206)

	M	**SD**	**Range**
Total score	68.02	11.92	31.0-110.0
Subscales			
Self-distraction	5.65	1.53	2.00-8.00
Active coping	5.50	1.42	2.00-8.00
Denial	4.95	1.73	2.00-8.00
Substance use	4.19	1.90	2.00-8.00
Emotional support	4.72	1.77	2.00-8.00
Instrumental support	4.55	1.48	2.00-8.00
Disengagement	4.92	1.82	2.00-8.00
Venting	4.81	1.82	2.00-8.00
Positive reframing	4.06	1.75	2.00-8.00
Planning	5.90	1.45	2.00-8.00

Humor	3.32	1.43	2.00-8.00
Acceptance	5.27	1.53	2.00-8.00
Religion	3.97	1.73	2.00-8.00
Self-blame	6.21	1.64	2.00-8.00

Following ranking the mean of all subscales, older parents most frequently used copying strategies in response to the death of a child were: (1) self-blaming, meaning bereaved older parents in this sample tend to criticize themselves, or blame themselves for things that happened; (2) planning, trying to come up with a strategy about what to do and thought hard about what steps to take; and (3) self-distraction, where parents turned to work or use other activities to take their mind off things or did something to think about it less after the death. Furthermore, findings suggest that older parents were less likely to use the follow strategies to cope with their significant loss: (1) humor, they did not tend to make jokes about it or make fun of their situation; (2) religion, the bereaved parents seldom found comfort in their religious or spiritual beliefs. They were less likely to pray or meditate after the death of their child; and (3) substance use: most of them did not use alcohol or other drugs to make them feel better or to help them get through it.

Descriptive statistics for the 3 factor BCI are displayed in Table 5. In previous research, it was found that the original 14 factor BCI can be narrowed down to a three factors scale with satisfying content validity and internal consistency, including emotion-focused coping, problem-focused coping, and dysfunctional coping (Cooper et al., 2008).

The mean score for emotion-focused coping was 4.27 (SD = 0.97), for problem-focused coping was 5.31 (SD = 1.05), and for dysfunctional coping 5.12 (SD = 1.08). The Cronbach's α was 0.84 for overall scale, indicating that the internal consistency was good. Cronbach's α for the subscales varied. For emotion-focused copying, it was 0.66; for problem-focused copying, it was 0.61. The Cronbach's α of these two subscales suggest that the internal consistency was clearly questionable. For dysfunctional coping, it was 0.78, suggesting the internal consistency for this sample was acceptable (George & Mallery, 2003).

Table 5 The Brief COPE Inventory subscale scores and Cronbach's alpha (N=206)

	M	**SD**	**Range**	**Cronbach's α**
Total scale				0.84
Subscales				
emotion-focused	4.27	0.97	2.00-7.60	0.66
problem-focused	5.31	1.05	2.33-8.00	0.61
dysfunctional	5.12	1.08	2.33-8.00	0.78

The Multidimensional Scale of Perceived Social Support (MSPSS)

Descriptive statistics for the MSPSS are presented in Table 6. The mean score on the MSPSS scale was 48.30 (SD = 14.01) with a Cronbach's α of 0.90, suggesting that the internal consistency was excellent. The MSPSS consists of three subscales: Family (4 items), Friends (4 items), and Significant other (4 items). The family subscale mean score

was 4.31(SD = 1.48) and ranged from 1.00 to 7.00 with a Cronbach's α of 0.87, suggesting that the internal consistency was good. The friend subscale mean score was 3.78 (SD = 1.43) and ranged from 1.00 to 7.00 with a Cronbach's α of 0.88, suggesting that the internal consistency was good. The significant other subscale had a mean score of 3.98 (SD = 1.35), ranging from 1.00 to 7.00. Cronbach's α for this subscale was 0.85 suggesting that the internal consistency was good.

Almost 48% (47.6%, n = 47) of the bereaved parents perceived more help came from their families. The study found 20.2% (n = 25) of them perceived more help came from their friends and 23.4% (n = 29) of them perceived more help came from significant others; where 8.9% (n = 11) of the bereaved parents in the sample perceived the same amount of help came from their families, friends and significant others.

Table 6 The Multidimensional Scale of Perceived Social Support scores and Cronbach's alpha (N=206)

	M	**SD**	**Range**	**%**	**n**	**Cronbach's α**
Total scores	48.30	1.17	12.00-84.00			0.90
Subscale scores						
Family	4.31	1.48	1.00-7.00	47.6	59	0.87
Friends	3.78	1.43	1.00-7.00	20.2	25	0.88
Significant other	3.98	1.35	1.00- .00	23.4	29	0.85

The Daily Spiritual Experience Scale (DSES)

Descriptive statistics for the DSES are presented in Table 7. On the DSES, the mean score was 31.98 with a SD of 14.95. The Cronbach's α was 0.90, suggesting that the internal consistency for this sample was excellent.

A short 6-item DSES scale was adapted for the measurement of religiousness and spirituality (Idler et al., 2003). In this study, the 6-item DSES scale had an excellent internal consistency (Cronbach's α = 0.90). The 6-item scale was used for the purpose of model building and testing in this study.

Table 7 The Daily Spiritual Experience Scale scores and Cronbach's alpha (N=206)

	M	SD	Range	Cronbach's α
Total scores	31.98	14.95	16.00-94.00	0.90

The Prolonged Grief Questionnaire-13 (PG-13)

Descriptive statistics of the PG-13 diagnostic results are presented in Table 8. All of the participants experienced the death of a loved one. In this study, the participants' child died. This study found 63.71% of the participants (n = 131) met the separation distress criteria, indicating they experienced emotional pain on a daily basis. And 84.70% of the participants (n = 174) met the duration criteria, indicating the symptoms of separation distress were elevated at least 6 months after the death. Furthermore, 54.84% of the participants (n = 113) met the cognitive, emotional and behavioral symptoms

criteria. There was 75.00% of the participants (n = 155) who met the impairment criteria, indicating they had significant impairment in social, occupational, or other important areas of functioning. Clinically, the presence of prolonged grief disorder has to meet five criteria. In this sample, 35.50% of the participants (n = 73) met the clinical diagnosis criteria of prolonged grief.

Table 8 The Prolonged Grief Questionnaire diagnostic results (N=206)

Diagnostic Criteria	**n**	**%**
Event	206	100
Separation distress	131	63.71
Duration	174	84.70
Cognitive, emotional and behavioral symptoms	113	54.84
Impairment	155	75.00
Persons met clinical diagnosis criteria	73	35.5

Another method to assess the severity of Prolonged Grief Disorders (PGD) combines the scores of nine items from the PG-13 to create the PGD factor (Boelen & Prigerson, 2007). This study used it in order to assess PGD severity as a continuous variable, not as a PGD diagnostic tool. PGD factor potential scores range from 9 to 45, with higher scores being indicative of greater PGD symptomatology. Descriptive statistics for the PGD factor are displayed in Table 9. It had a mean of 32.31 (SD = 8.98), ranging from 9 to 45 and a Cronbach's α value of 0.90, suggesting that the internal consistency was excellent.

Table 9 The Prolonged Grief Questionnaire scores and Cronbach's alpha (N=206)

	M	SD	Range	Cronbach's α
Total scores	32.31	8.98	9.00 - 45.00	0.90

Data Screening

In this section, the process of data preparation and screening is discussed. It is recommended that original data should be carefully screened for problems with underlying assumptions before a raw data file is created for Structural Equation Modeling (SEM) (Kline, 2015). Different assumptions for SEM are evaluated and appropriate decisions were made based on each of the diagnostic statistics.

Missing Data

Prior to conducting hypothesis testing, data-screening was performed. Missing data was managed through missing value analysis to identify trends in the data. Missing data points were very small and managed via mean substitution.

Normality

Normality tests were performed and results are presented in Table 10. According to George and Mallery (2003), the values for asymmetry and kurtosis between -2 and +2 are considered acceptable. All variables in the current sample fell within a normal distribution with normative skewness and kurtosis values, except the kurtosis was 2.69 for the DSES. In addition to skewness and kurtosis statistics, graphic inspection and

specific statistical tests for normality were also used. Following all data cleaning, 206 cases remained eligible for analysis.

Table 10 Normality tests results (N=206)

	skewness	kurtosis
Age	0.29	0.88
Total RSQ	-0.48	0.57
RSQ secure	-0.40	-0.57
RSQ fearful	0.22	-0.28
RSQ preoccupied	-0.21	0.46
RSQ dismissing	-0.51	0.43
Total BCI	0.54	2.00
BCI emotion focused	0.73	1.26
BCI problem focused	0.16	0.31
BCI dysfunctional	0.06	0.18
Total MSPSS	-0.34	0.24
MSPSS family	-0.60	-0.28
MSPSS friends	-0.53	0.05
MSPSS significant	-0.01	-0.42
Total DSES	1.45	2.69
Total PG	-0.56	-0.29

Correlations and Other Date Preparation

Correlations were also examined to determine the relatedness of the study variables; results are presented in Table 11. Generally, intercorrelation above should not

be above 0.85 or 0.90 (Keith, 2014). In this study, all correlations were less than 0.70 indicating little likelihood of multicollinearity in the sample.

In this study, examining Mahalanobis D^2 was utilized to test for the presence of multivariate outliers. Mahalanobis measures the distance in standard deviation units between the sample means for all variables (centroids) and a set of scores (vector) for an individual case in the analysis (Kline, 2015). No outliers were identified in the study sample.

Table 11 The correlation coefficient (Pearson's r) (N=206)

RSQsecure	1										
RSQfearful	0.15										
RSQpreoccupied	0.56	0.21									
RSQdismissing	-0.03	0.27	0.03								
MSPSSsignificant	0.08	-0.10	-0.15	0.01							
MSPSSfamily	0.24	-0.20	-0.11	-0.04	0.40						
MSPSSfriends	0.27	-0.18	-0.05	-0.14	0.64	0.51					
BCIemotion	0.14	-0.01	0.10	0.03	0.16	0.12	0.22				
BCIproblem	0.24	0.14	0.06	0.07	0.14	0.20	0.28	0.59			
BCIdysfunctional	0.28	0.27	0.06	-0.12	0.04	0.20	0.19	0.38	0.62		
totalDSES	-0.09	-0.01	0.09	-0.03	0.18	-0.08	-0.01	-0.38	-0.01	-0.19	
totalPG	0.13	0.40	-0.04	-0.26	-0.21	-0.01	-0.08	-0.02	0.17	0.50	0.18

Structural Equation Modeling

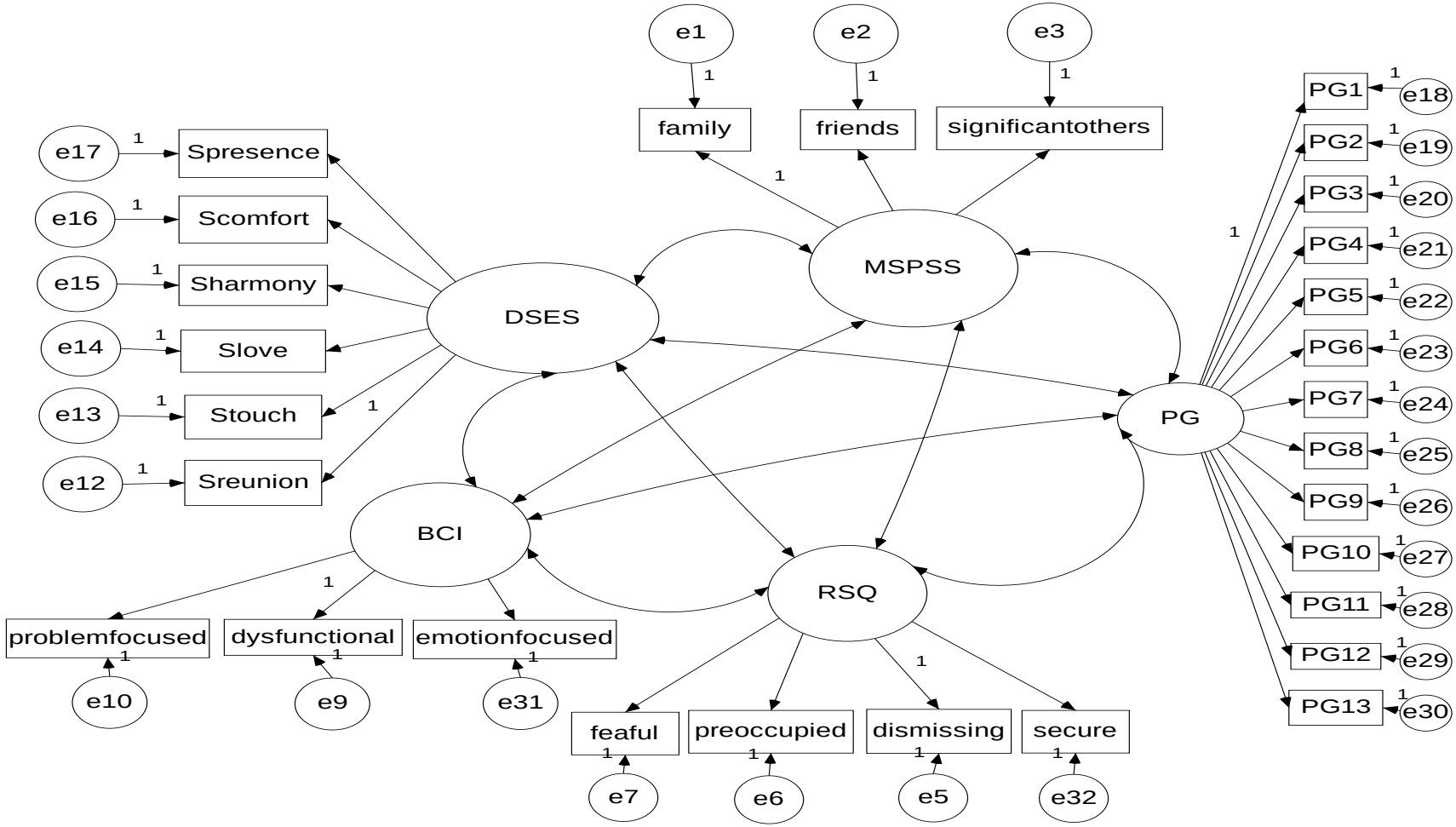
To test the structural model a two-step model testing method was employed (Kline, 2015). First, a measurement model was tested. Followed by, testing the structural model through path analysis with latent variables. It is recommended that the measurement model be evaluated before the structural component of SEM is tested. AMOS 17.0 was used to test the model with robust maximum likelihood (MLM).

Measurement Model

The purpose of the first analysis is to validate the measurement model through confirmatory factor analysis. The measurement model is specified with 5 latent constructs and 30 indicator variables as presented in Figure 4.

By testing a measurement model, the overall model fit can be assessed and problematic predictor indicators can be evaluated and eliminated and eventually structural paths can be hypothesized (Kline, 2015).

Figure 4. Measurement Model.



Fit indices were selected a priori and are used to evaluate the models tested. The fit indices used in model testing were: (1) χ^2, smaller indicates better model fit, should be non-significant; (2) Normed χ^2 (χ^2/df), 2 or less indicates good fit and 3 or less indicates adequate fit; (3) Root Mean Square Error of Approximation (RMSEA), 0.05 indicates good fit, 0.08-0.10 indicates adequate; (4) Goodness of Fit Index (GFI), > 0.90 indicates good fit; (5) Comparative Fit Index (CFI), > 0.90 indicates good fit; (6) NNFI (TLI), > 0.90 indicates good fit; (7) Standardized Root Mean Square Residual (RMR) < 0.10 indicates good fit. There are many measures of model fit for SEM, therefore, it is recommended to look at more than one fit index when evaluating models because they each calculate model fit in slightly different ways (Kline, 2015).

The χ^2 fit statistics for the measurement model was 898.72 (df = 367, p = 0.00), CFI = 0.76, GFI = 0.76, TLI = 0.73, RMR = 0.09, RMSEA = 0.08, indicating the model did not fit the data adequately. Since the model chi-square is influenced by sample size based on the parsimony principle, the normed chi-square (χ^2/df) of the measurement model was also calculated. The normed chi-square of this study was 2.45, indicating an inadequate fit based on the criteria of χ^2 /df < 2 (Bollen, 1989). Overall, the measurement model did not adequately fit the data.

The negative error variance of perceived social support from friends was found as a result of measurement model testing. the negative error variance is seen as common type of improper solutions in SEM (Chen, Bollen, Paxton, Curran, & Kirby, 2001). Chen et al. (2001) also suggested that several reasons can contribute to the negative error

variance. For this study, the reasons could be: only two indicators per factor, population correlation close to 1 or 0 that causes empirical under-identification, specification errors, and bad starting values in maximum likelihood estimation. To solve the problem of the negative error variance, this study adopted suggestions from Chen et al. (2001) to constrain the negative error variances to be zero.

Model Re-specification

Since the proposed measurement model did not adequately fit the data, the model was re-specified. The first step of model re-specification is to evaluate factor loadings to see if there is any indicator that fails to have substantive loading on the factor. Kline (2015) suggests assigning the indicator with poor factor loading to a different factor or deleting the indicator. The factor loading for coping style (CBI) to emotion-focused coping is very low (standardized path coefficient = 0.04), with a corresponding squared multiple correlations of 0.002. Since it is not theoretically reasonable to load the indicator of emotion-focused coping on the other factors, it was deleted. Another factor loading from attachment style (RSQ) to secure was also low, with standardized coefficient of -0.22 and its corresponding R^2 of 0.05. It was also not reasonable to load the indicator of secure attachment style on the other factors. Therefore, it was deleted.

Kline (2015) indicates the second step of model re-specification is to evaluate the values of Modification Indices (M.I.) to see if any additional paths can improve the model fit by reducing the chi-square value. After examining the M.I. values, several correlated errors were identified.

Modified Measurement Model

After model re-specification, a modified measurement model is presented in Figure 5. The modified model was specified with 5 latent constructs and 15 indicator variables.

The chi-square of the measurement model decreased to 360.00 (df =234, p = 0.00). The normed chi-square was 1.54for the modified model. Additional fit indices were: CFI = 0.93, GFI = 0.87, TLI = 0.92, RMR = 0.08, RMSEA =0.05. Although the chi-square statistic was significant, the other fit indices showed adequate model fit to the data. Overall, modification procedures significantly improved the overall model fit. The comparison between the initial measurement model and the modified measurement model is presented in Table 12.

Figure 5. Modified Measurement Model.

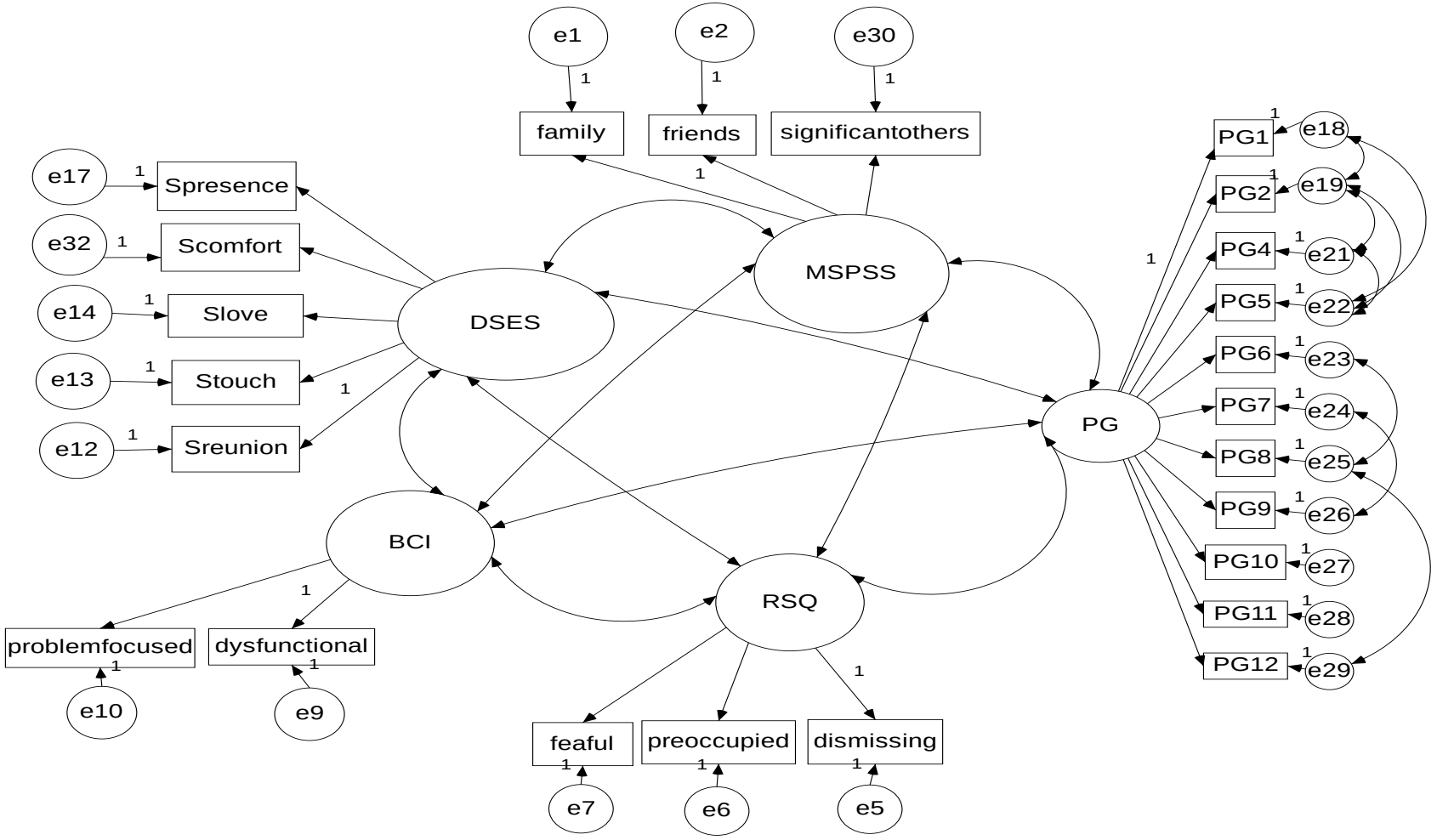


Table 12 Measurement model comparison

Fit indices	Initial Model	Modified Model
χ^2	898.72	360.00
df/*p*	367/0.00	234/0.00
Normed χ^2 (χ^2/df)	2.45	1.54
CFI	0.76	0.93
GFI	0.76	0.87
TLI	0.73	0.92
RMR	0.09	0.08
RMSEA	0.08	0.05

Standardized and unstandardized estimates of the path coefficients for the modified measurement model. Loadings of 0.71 and higher are considered excellent, loadings of 0.63 to 0.70 are considered very good, loading of 0.55 to 0.62 are good, loadings of 0.45 to 0.54 are fair, loadings 0.32 to 0.44 are low, and loadings below than 0.32 are poor (Tabachnick & Fidell, 2007). Standardized and unstandardized path coefficients, error variances, and squared multiple correlations are presented in Table 13. The relationship between the factors and their corresponding indicators were significant and in the expected direction.

Table 13 Factor loadings, R^2, and Error variances of the Measurement Model

Model paths	Unstandardized coefficients	Standardized coefficients	R^2	Error variances

RSQ				
dismissing	1.00	0.62	0.39	0.33
preoccupied	1.39	0.77	0.59	0.27
fearful	1.43	0.82	0.67	0.20
BCI				
dysfunctional	1.00	0.84	0.71	0.20
problem-focused	0.69	0.57	0.33	0.47
MSPSS				
family	1.00	0.42	0.16	0.18
friends	2.21	1.00	1.00	0.00
significant others	1.11	0.46	0.19	0.21
DSES				
reunion	1.00	0.61	0.37	0.93
touch	0.98	0.66	0.44	0.67
love	0.85	0.70	0.49	0.42
harmony	0.56	0.42	0.18	0.80
comfort	0.95	0.67	0.46	0.60
presence	0.96	0.70	0.49	0.53
PG				
totalPG	1.00	0.47	0.10	0.22

The standardized factor loadings from the attachment style (RSQ) to the 3 indicators ranged from 0.62 to 0.82. Specifically, the loading from RSQ to dismissing (0.62) was good; the loadings from RSQ to preoccupied (0.77) and from RSQ to fearful (0.82) were both excellent. The standardized factor loadings from coping style (BCI) to

the 2 indicators ranged 0.57 to 0.84, the loading on problem-focused coping (0.57) was good and the loading on dysfunctional copying (0.84) was excellent. The standardized factor loadings from the perceived social support (MSPSS) to the indicators ranged 0.40 to 1.05, the loadings on family (0.40) and significant others (0.44) were both low and the loading on friends (1.05) was excellent. The standardized factor loadings from the spirituality (DSES) to the indicators ranged 0.42 to 0.70. The loading from DSES to harmony (0.42) was low; the loading from DSES to reunion (0.61) was good; and the loadings from DSES to presence (0.70), comfort (0.68), love (0.70), touch (0.66) were very good.

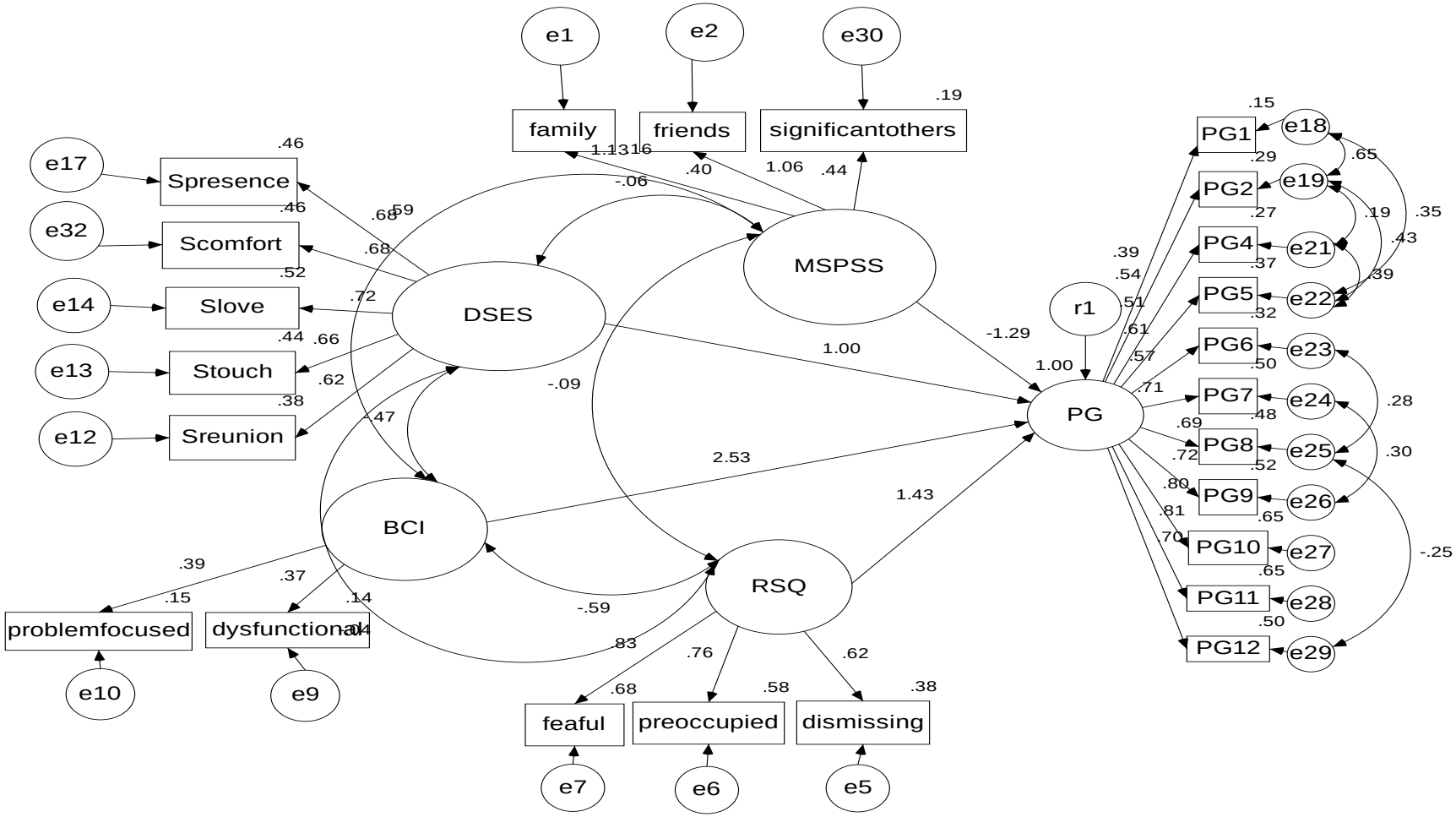
Structural Model

After conducting CFA to support the validity of the measurement model, the result confirmed that relationships existed between the variables of interest prior to restricting the direction of such relationships. In the present study, the next step was to test the structural model. By testing the structural model, the goal was to test the direct effect between attachment style, copying style, perceived social support and personal spirituality on bereaved parents' grief. This step tested direct paths from attachment style, copying style, perceived social support and personal spirituality to the construct of parental grief to examine whether these four latent variables predicted the level of prolonged grief.

The structural model of this study is displayed in Figure 6. The method utilized to test the fit of the model was maximum-likelihood with the following fit statistics. Chi-

square was 395.85 (df = 235, p = 0.00). The normed chi-square was 1.68 for this model. The other fit indices were: CFI = 0.91, GFI = 0.87, TLI = 0.87, RMR = 0.08, RMSEA = 0.06, showing adequate model fit to the data. Although the chi-square value yielded statistical significance, the ratio between the chi-square and the degrees of freedom was less than 2.0 for small samples; it indicated a good fitting model. Considering that a non-significant finding is rare for SEM, the collection of fit indices yielded mixed support for the model.

Figure 6. Structural Model.



Standardized and unstandardized path coefficients of the structural model are presented in Table 14.

Table 14 Path Coefficients of the Structural Model

structural paths	Unstandardized coefficients	Standardized coefficients	SE
RSQ			
BCI	-0.08	-0.59	0.03
DSES	-0.01	-0.04	0.03
MSPSS	-0.02	-0.09	0.02
PG	1.27	1.43	0.58
BCI			
DSES	0.09	-0.47	0.40
MSPSS	0.08	0.59	0.32
PG	3.30	2.53	1.31
MSPSS			
DSES	-0.02	-0.06	0.03
PG	-1.14	-1.29	0.56
DSES			
PG	0.53	1.00	0.30

Structural path coefficients in a standardized solution can be used to compare the relative importance of the variables across scales and samples. The standardized estimate of the direct effect of attachment style on parental grief was 1.43, meaning that for each

standard deviation change in attachment style, parental grief level would increase by 1.43 of a standard deviation, all other things being equal. Similarly, the standardized direct effect of perceived social support on parental grief is -1.29, which means for each standard deviation change in perceived social support, parental grief level would decrease by1.29 of SD, with all other things being equal.

In SEM, structural path coefficients can also be interpreted as the effect of one latent variable on another. According to Kline (2015), evaluation of the effect is based on Cohen's effect size criteria. Therefore, path coefficients with absolute values less than 0.10 are considered small effects, values around 0.30 as medium effects, and absolute values of 0.50 or higher are large effects. In this study, the structural model had the total effect of attachment style on parental grief of 2.53, the total effect of perceived social support on parental grief was -1.29, the total effect of spirituality on parental grief was 1.00, and the total effect of coping strategy on parental grief was 1.05. Thus all were considered large.

Research Hypothesis Testing

In general, the paths identified in the structural model supported the hypothesized association and relationships between the latent constructs. The hypothesis testing result were as following:

Hypothesis 1 in this study assumes the positive direct effect of coping strategy on parental grief. The data supported the hypothesis. There was a positive direct effect of

coping style on parental grief (2.53, $p < 0.05$) and is statistically significant. Since the model re-specification process already deleted the emotion-focused coping due to its low factor loading, coping style as a latent variable in this study indicated problem-focused and dysfunctional copying strategies. The confirmed hypothesis revealed parents who use more problem-focused and dysfunctional copying strategy showed more prolonged grief. This finding is consistent with previous empirical research.

Hypothesis 2 assumes the positive direct effect of attachment style on parental grief. This hypothesis was supported. There was a positive direct effect of attachment style on parental grief (1.43, $p < 0.05$) and the effect was statistically significant. Since the model re-specification process already deleted the secure attachment due to its low factor loading, attachment style as latent variable in this study indicated general insecure attachment styles. The result revealed parents who had more insecure attachment behavior showed higher level of prolonged grief. This finding is consistent with previous studies.

Hypothesis 3 assumes the negative direct effect of perceived social support on parental grief. This hypothesis was supported. There was a negative direct effect of perceived social support on parental grief (-1.29, $p < 0.05$) and the effect was statistically significant. The result indicated that parents who perceived less social support showed higher level of prolonged grief. This finding is consistent with previous research.

Hypothesis 4 assumes the negative direct effect of spirituality on parental grief. This hypothesis was not supported. There was a positive direct effect of spirituality on

parental grief (1.00, $p = 0.07$) and the effect was not statistically significant. The result indicated that parents who had more daily spiritual experiences tended to have higher level of prolonged grief. This finding is not consistent with previous research.

Furthermore, overall research goals of the study are reviewed. The first goal was to identify significant relationships between the influential factors (including: coping strategy, attachment style, social support and spirituality) and the measure of parental grief. In the current structural model, all the influential factors had a statistically significant relationship with parental grief, except for the factor of daily spirituality. The second goal was to test the theory utilizing a structural model about parental grief. The results supported a structural model explicating the relationship between the influential factors and parental grief.

Multi-group Analyses

The differences between groups of individuals based on demographic variables were examined to determine if the proposed structural model fits equally well with diverse groups.

Gender Group Comparison

The model was tested with respect to gender. Findings confirmed the two gender groups were significantly different in terms of the model construct. The model fit test results are presented in Table 15.

When examining the model with respect to gender, men and women had similar indices. The model in the current study did not adequately fit the data for either the

female sample or male sample. However, the collection of fit indices from the female sample provided more support for the model than the fit indices from the male sample did. When the initial structural model was tested with the data from the female sample, the value of χ^2 and Normed $\chi 2$ are both smaller, the values of CFI, GFI and RMSEA are all very close to the good or adequate fit values.

Table 15 Structural models for females and males

Fit indices	Initial Model	Female sample	Male sample
χ^2	395.85	350.53	407.41
df/*p*	235/0.00	235/0.00	235/0.00
Normed $\chi 2$ ($\chi 2$/df)	1.68	1.49	1.73
CFI	0.91	0.90	0.80
GFI	0.87	0.83	0.68
TLI	0.90	0.89	0.76
RMR	0.08	0.08	0.16
RMSEA	0.06	0.06	0.11

Standardized and unstandardized path coefficients of the structural model from different gender samples are presented in Table 16. The study found positive direct effects of insecure attachment style on parental grief in both the female sample (2.54) and the male sample (1.62) and the effects are all considered large. Male and female participants showed a statistical significant difference ($p = 0.01$) on the path of insecure attachment style on parental grief and it was, indicating women showed more insecure

attachment behavior than men. This finding is consistent with the finding in the overall sample. The study also found positive direct effects of negative coping strategy on parental grief for both males and females which are all considered large (female=8.26; male=1.88). This finding is consistent with the findings in overall sample. However, male and female participants showed no statistically significant difference on the path of negative coping strategy on parental grief.

In addition, the negative direct effect of perceived social support on parental grief in the female sample was confirmed (-6.80) and this effect is large. The positive direct effects of perceived social support on parental grief in the male sample was confirmed (0.16) and this effect is small. Male and female participants showed a statistical significant difference ($p = 0.01$) on the path of perceived social support on parental grief, indicating women showed perceived more social support or men perceived significantly less social support from their family, friends or significant others.

The study found positive direct effects of direct effects of spirituality on parental grief in both females (4.10) and males (0.86). Male and female participants showed statistical significant difference ($p = 0.01$) on the path of spirituality on parental grief, indicating women had more daily spiritual experiences than men.

Table 16 Path coefficient (Effect) comparison between females and males

Structural paths	Unstandardized coefficients	Standardized coefficients	*p value*

	Female	Male	Female	Male	
PG					
←RSQ	1.78	2.62	2.54	1.62	0.01
←BCI	8.13	2.00	8.26	1.88	0.10
←MSPSS	-10.10	0.06	-6.80	0.16	0.01
←DSES	2.60	0.31	4.10	0.86	0.01

Age Group Comparison

The structural model was tested in two age groups. All the participants in the current study were regrouped. Using the mean age (53.99) as a criterion, those participants who are 54 or younger were grouped in the younger group and those participants who are older than 55 were grouped in the older group. When examining the model with respect to age, younger participants and older participants had similar fit indices. The model in the current study does not adequately fit either group. The findings confirmed the two age groups had no statistically significant difference in terms of the model construct.

Standardized and unstandardized path coefficients of the structural model for different age groups are presented in Table 17. The result confirmed negative direct effects of insecure attachment style on parental grief in the younger group (-0.73) and positive direct effects of attachment style on parental grief in the older group (2.54). The effects were considered both large. However, male and female participants showed no

statistically significant difference on this path of insecure attachment style on parental grief.

The study also revealed negative direct effects of negative coping strategy on parental grief among the younger group (-2.34) and positive direct effects of negative coping strategy on parental grief in the older group (3.24). However, male and female participants showed no statistically significant difference on this path of negative coping strategy on parental grief.

Moreover, a negative direct effect of perceived social support on parental grief was found in the older participant group (-0.61) and the effect was large. The positive direct effects of perceived social support on parental grief was found in the younger participant group (1.61) and the effect was large. Younger and older participants showed a statistical significant difference ($p = 0.01$) on the path of perceived social support on parental grief. The results revealed that older participants perceived less social support from their family, friends or significant others.

Study findings also confirmed large positive direct effects of direct effects of spirituality on parental grief in both the younger group (0.87) and the older group (1.31). Younger and old participants showed a difference on the path of spirituality on parental grief and it was statistical significant ($p = 0.01$), indicating older participants had more daily spiritual experiences than younger participants.

Table 17 Path coefficient (Effect) comparison between young and old participants

Structural paths	Unstandardized coefficients		Standardized coefficients		*p value*
	Younger	Older	Younger	Older	
PG					
←RSQ	-0.01	2.36	-0.73	2.54	0.10
←BCI	-0.02	4.14	-2.34	3.24	0.10
←MSPSS	0.16	-0.42	1.61	-0.61	0.01
←DSES	-0.00	0.81	0.87	1.31	0.01

Type of Death Group Comparison

The structural model was tested among older parents whose child died in different ways. All the participants in the current study were categorized with 2 groups. Those whose child died by sudden illness, accidents, suicide or homicide were into the unexpected death group and those whose child died by non-violent were into the expected death group. Then, the structural model was tested on these two groups. When examining the model with respect to the reasons of the child's death, participants in the two groups had a similar fit. The proposed structural model was tested on the two types of death groups and the findings confirmed the two groups had no statistically significant difference in terms of the model construct.

Standardized and unstandardized path coefficients of the structural model from different type of death groups are presented in Table 18. The study found large positive direct effects of insecure attachment style on parental grief in both the unexpected death group (1.25) and the expected death group (0.52). The unexpected death group and he

expected death group showed no statistically significant difference on the path of insecure attachment style on parental grief. This finding was consistent with the findings in the overall sample.

The study also confirmed positive direct effects of negative coping strategy on parental grief from both groups and the effects were all considered large (the unexpected death group = 2.43; the expected death group = 2.35). The two groups showed no statistically significant difference on the path of negative coping strategy on parental grief. This finding was consistent with the findings in overall sample. In addition, the negative direct effects of perceived social support on parental grief in the two groups were confirmed (the unexpected death group = -1.28; the expected death group = -0.33) and the effect in the unexpected death group was considered large and the effect in the expected death group was considered medium. The two groups showed no statistically significant difference on the path of negative coping strategy on parental grief. This finding was consistent with the findings in overall sample.

The study found large positive direct effects of spirituality on parental grief in both the unexpected death group (0.98) and the expected death group (2.12). The two groups showed no statistically significant difference on the path of spirituality on parental grief. This finding was consistent with the findings in overall sample.

Table 18 Path coefficients (Effects) comparison between the group that experienced unexpected death and the group that experienced expected death.

Structural paths	Unstandardized coefficients		Standardized coefficients		*p value*
	UDG	EDG	UDG	EDG	
PG					
←RSQ	1.01	0.75	1.25	0.52	0.10
←BCI	2.62	5.16	2.43	2.35	0.10
←MSPSS	-1.03	-0.95	-1.28	-0.33	0.10
←DSES	0.49	1.47	0.98	2.12	0.10

(UDG=Unexpected Death Group, EDG=Expected Death Group)

Time Since Death Group Comparison

Lastly, the proposed structural model was tested on groups with two different lengths of time since the death of a child. All the participants were regrouped by using the median death time of 2.5 years as a criterion. Those participants whose child died over 2.5 years were placed in one group and those participants whose child died for 2.5 years and less were grouped in another group. Then, the structural model was tested on the two groups. Participants who lost their child 2.5 years and under and participants who lost the child for over 2.5 years had similar fit indices. The structural models in the current study did not adequately fit the data from either group.

Standardized and unstandardized path coefficients of the structural model from both groups are presented in Table 19. Like the overall sample model, the result confirmed positive direct effects of insecure attachment style on parental grief in the group of the child died for over 2.5 years (0.31) and the group of the child died for 2.5

years and less (2.55). The effect in the group experienced the death for over 2.5 years was considered large and the effect in the group experienced the death for 2.5 years and less was considered medium. The two groups showed a statistically significant difference on this path of insecure attachment style on parental grief ($p = 0.05$).

The study also revealed positive direct effects of negative coping strategy on parental grief among the group of the child died for over 2.5 years (1.51) and the group of the child died for 2.5 years and less (4.02). The effects were considered large. However, the two groups showed no statistically significant difference on the path of negative coping strategy on parental grief. In addition, the negative direct effect of perceived social support on parental grief was found in both groups (the group of the child died for over 2.5 years was -1.08; the group of the child died for 2.5 years and less was -1.38) and the effect was both large. The two groups showed statistically significant difference on this path of perceived social support on parental grief ($p = 0.01$). The results revealed the participants whose child died for over 2.5 years perceived less social support from their family, friends or significant others.

Study findings also confirmed positive direct effects of spirituality on parental grief in both groups. The effect in the group of whose child died for over 2.5 years was 0.31 and was considered medium. The effect in the group of the child died for 2.5 years and less was 2.03 and it was considered large. The two groups showed no statistically significant difference on this path of spirituality on parental grief.

Table 19 Path coefficient (Effect) comparison between the group that had a child dead for 2.5 years and less and the group that a child died over 2.5 years.

Structural paths	Unstandardized coefficients		Standardized coefficients		*p value*
	Under 2.5 yrs	Over 2.5 yrs	Under 2.5 yrs	Over 2.5 yrs	
PG					
←RSQ	2.82	0.24	2.55	0.31	0.05
←BCI	5.57	1.67	4.02	1.51	0.10
←MSPSS	-1.16	-0.91	-1.38	-1.08	0.01
←DSES	1.06	0.18	2.03	0.31	0.10

Only Child and Non-Only Child Group Comparison

Since only 8 participants in this study indicated the deceased child was not their only child, the structural model could not be tested by data from only-child participants and non-only child participants. However, independent t-test revealed more prolonged grief symptoms among parents who lost their only child (PG M = 32.41) than parents who lost their non-only child (PG M = 29.25). This difference was not statistically significant ($t_{(122)} = 0.76$, $p = 0.39$).

Summary

Overall, older bereaved parents reported a high prevalence of prolonged grief. A measurement model that integrated bereaved parents' prolonged grief symptoms and its

influential factors (including: coping strategy, attachment style, social support and spirituality) was tested, and the model fit improved significantly after re-specification. Data from the overall sample supported the structural model explicating the relationship between the influential factors and parental grief.

Problem-focused and dysfunctional coping strategies were found to significantly contribute to severe parental grief symptoms. Perceiving less social support led to severe parental grief as well as insecure attachment style. Women, compared to men, showed more insecure attachment style, had more daily spiritual experiences and perceived more social support. Older bereaved parents, compared to their younger peers, perceived less social support, however, they had more daily spiritual experiences. Parents who lost the child for less than 2.5 years showed more insecure attachment style and perceived less social support, compared to those who lost the child for over 2.5 years.

The next chapter discusses the relevance of these findings, specifically addressing the implications for future social work practice and education, and social work research.

DISCUSSION

This chapter will discuss the findings and implications of the results presented in the prior chapter. The content of this chapter is organized in the following order: first, the findings of the analyses will be discussed, along with their convergence or divergence with previous literature; secondly, practice and education implications will be presented; finally, strengths, limitations, and future research recommendations will be discussed.

Discussion for the Research Findings

Descriptive analysis found a high prevalence of prolonged grief disorder among older bereaved parents. According to the prolonged grief diagnostic criteria, 35.5% (n = 73) of the total participants met the clinical criteria of prolonged grief. Among them, 90.9% (n = 66) were females and 9.1% (n = 7) were males. The prevalence rate of prolonged grief disorder was evaluated by comparing it to other studies. The result is presented in Table 20. The comparison confirmed the highest prevalence rate of PG among older bereaved Chinese parents, compared to studies conducted in other countries. The second highest PG prevalence (30%) was reported by Keesee et al. (2008). This result also confirmed parental loss (death of a child) led to higher PG prevalence compared to other types of loss, such as the death of a spouse or sibling.

Table 20 Prevalence rate of prolonged grief disorder comparison between studies

Author/Year	PG prevalence	Participants/Nationality	Age
Zheng/2015	35.5%	206/China	M = 53.9
Ott/2003	10%	120/the U.S.	M = 60.6
Keesee et al./2008	30%	157/the U.S.	M = 49.4
Maercker et al./2008	4.2%	712/Swiss	60-94
Kersting et al./2011	4.0%	122/Germany	M = 44.0
Simon et al./2007	32.0%	206/the U.S.	M = 46.5
Goldsmith et al./2008	11.6% for Whites 21.2% for African Americans	222/the U.S.	M = 59

Findings revealed the positive direct effect of problem-focused and dysfunctional copying strategies on parental grief. The effect was confirmed in the overall sample and also in the multi-group samples. Emotion-focused coping strategies were deleted from the final structural model due to its low factor loadings, and the specified structural model did not include emotion-focused coping. Many researchers have reported that coping is positively associated with well-being, but this general conclusion was problematic because not all coping strategies are effective (Carver et al., 1989). Mainly, emotion-focused coping strategy involves efforts to regulate the emotional distress associated with the situation and typically includes both active and avoidant strategies (Holahan & Moos, 1987). Examples include acceptance, focusing on positive aspects of the situation, seeking emotional support from others. Dysfunctional coping strategies involve some

form of escape from the situation and the feelings and cognitions associated with it (Carver et al., 1989). Although such coping strategies may help individuals manage their day-to-day activities soon after a crisis, reliance on these coping strategies over time can lead to mental health problems(Holahan & Moos, 1987). The study found dysfunctional coping was more likely to be related to more prolonged grief disorders and this finding is consistent with previous literature.

Problem-focused coping refers to efforts to manage or change a problem that is causing distress, and involves active planning or engaging in specific behaviors to overcome problems that create distress in the individual (Folkman & Lazarus, 1985). Many studies suggest that problem-focused coping is routinely associated with better psychological outcomes (Madden, Hinton, Holman, Mountjouris, & King, 1995; McCabe, McKern, & McDonald, 2004), which made the finding in this study inconsistent with previous literature. However, coping strategies appear to differ for events appraised as controllable versus uncontrollable according to Lazarus and Folkman (1984). Problem-focused coping is found as the effective strategy to utilize in coping with controllable situations, but is not as an effective in uncontrollable situations, such as death of a loved one (Schnider, Elhai, & Gray, 2007). Given that death of a child is an uncontrollable event for the bereaved parents, the findings in the study were consistent with Lazarus and Folkman's goodness-of-fit hypothesis. Further, Holahan and Moos (1987) indicated that problem-focused coping may not lead to a positive psychological adjusted outcome in the absence of active emotional coping.

The study found large and statistically significant negative direct effects of perceived social support on parental grief, indicating that perceiving significantly less social support from family, friends or significant others could lead to more severe parental grief. This is consistent with previous research. Although both men and women were found to have a lack of available social support after the death of their child (Wing et al., 2001), gender difference on accessing and using social support were supported by the study. Bereaved mothers had more sources of support and the main sources include: spouse, children, grandparents, next of kin, friends and colleagues (Laakso & Paunonen-Ilmonen, 2002b). Conversely, bereaved fathers reported that their support networks included either just the spouse or the spouse and other people (Aho, Tarkka, Astedt-Kurki, & Kaunonen, 2009); and they also expressed difficulty in asking for social support (Mandell, McAnulty, & Reece, 1980).

There was a positive direct effects of insecure attachment style on parental grief in the overall sample and the effect was large and statistically significant, indicating that older bereaved parents showed more insecure attachment behaviors and it led to more prolonged grief symptoms. The findings is consistent with previous research, as the more insecure attachment behaviors bereaved parents had, there were more symptoms of grief (Wijngaards-de Meij et al., 2007). Specifically, preoccupied individuals tend to engage in chronic mourning, and dismissing individuals tend not to consciously mourn at all (Fraley & Shaver, 1999). In addition, bereavement-related anxiety symptoms were found

to significantly increase over time for individuals that were fearfully avoidant (Fraley & Bonanno, 2004).

However, little is known about why only older adults showed significantly more insecure attachment behavior. The function of the attachment system seems stable across lifespan. For older adults, the attachment system continues to perform an adaptive function that can provide individuals with a sense of security in coping with the stressors of everyday life, helping them to adjust to the changing physical and psychological realities of late life. Questions remain regarding who should be considered the primary attachment figures for older adults. In general, as parents age, they tend to increase contact and involvement with their children and grandchildren. As Zhang and Labouvie-Vief (2004) indicated old age may be such a time when relationships and self-perceptions undergo transformation as a person loses close relationship partners to death and become increasingly aware of dependency and mortality. Aging highlights the shift from children depending on their parents to older parents needing to rely more heavily on their children, particularly in times of illness or disability. Overall, older adults experience the decline of the total number of attachment figures in their life (Cicirelli, 2010). However, death of an attachment figure, such as death of a child, specially an adult child, means that the attachment figures are unable to fulfill the attachment needs of the older adults. This could explain why older participants showed significantly more insecure attachment behavior in the study.

Implications for Social Work Practice and Education

This study contributes to building the knowledge about older bereaved Chinese parents' prolonged grief. Results show the prevalence of older adults with PG, and supports the need for effective clinical care and mental health concerns for this particular population. This study confirms the view that there are multiple types of factors influencing parental grief simultaneously.

Worden (2009) indicated that research about grief tend to simplify it by study "determinants of grief" or "mediators of mourning", and this tendency overlooks some other important factors. Testing a structural model may benefit social workers and social work researchers by providing a holistic picture of the influential factors of parental grief in a quantitative way. However, there are two important factors that were not included in the structural model, which are particularly crucial to social work practice.

First of all, understanding the significance of the death of an only child is relevant to social work practice with bereaved parents. The only child in China is in most cases a consequence of the one-child policy. As the boldest and largest experiment in population control in the history of the world (McLoughlin, 2005), the one-child policy changed not only the demographics of the country but also the behavior patterns of the people. Research indicates that parents in one-child families demonstrate "child-centeredness" significantly more than parents in multiple-child families: "one child parents were more likely to rank having one child as the most important aspect of their lives…to consider having a child a major life fulfillment, and to regard the child as the hope of their lives"

(Chow & Zhao, 1996, p. 44). This could be the reason why parents who lost their only child appear to have a more difficult time. The only child family model contributed to the worse psychological adjustment outcome was also confirmed by study in a non-Chinese country (Dyregrov et al., 2003).

The significance of the death of the only child also exists in the care-giving role of the child. In China, children are seen as their older parents' main caregivers; this is not only a cultural expectation but also a legal responsibility. The model of family members caring for the elderly has been strengthened though several legislative acts during the past 30 years. The Constitution of 1982 stresses the need for adult children to support elderly parents (Huang, 2003). The Marriage Law of 1980 reinforces children's obligations to care for aging parents (Palmer, 1995). The 2013 Amendment to Elderly Rights Protection Law of 1996 stresses that family care is the fundamental way of caring, and adult children, as main caregivers, have the responsibility to meet the mental health needs of the elderly (Zheng, Lawson, & Head, 2015).

Secondly, understanding the significance of the culture of the bereaved is relevant to social work practice. In The D.I.S.C. analysis model proposed by Dillenburger and Keenan (2006), cultural and societal norms within which the bereavement takes place is included. For social work practitioners who work with the bereaved, cultural contexts are important for a comprehensive analysis (Lamal, 1991).

Chinese culture categorizes the death of an adult child as a "bad" death because the death of children places the parents in a very painful situation as "the white headed

witnesses the death of the black headed" (Chan et al., 2005). Additionally, the death of children is a taboo subject associated with numerous superstitions and customs (Lee, 2000); For instance, the death of children is seen as a result of karma (Chan et al., 2005).

The death of a child deprives Chinese parents of a continuation of their heredity. In Confucianism, the belief is that "having no posterity is extremely non-filial". Those who do not have a child are culturally stigmatized as "juehu", which literally means those who are going to become extinct, simply because they failed to take the responsibility of passing on the family name. In addition, the dominant Confucian philosophy regard death as a negative event in life (Xu, 2007); it makes death a taboo topic which hinders acceptance of grief counseling or other forms of professional intervention.

In addtion to understanding how the bereaved parents' experiences were framed by particular cultural beliefs, it is also relevant to understand how culture influence bereaved parents' coping style, attachment style, social support and spirituality. Cultural values are seen to influence the choice of a certain coping strategy used by members of the culture (Phillips & Pearson, 1996). The problem-solving strategy is frequently used by Chinese people, reflecting the pragmatic nature of Chinese people in dealing with difficulties in their lives (Wong, 2002). Chinese people are also being found to utilize an acceptance strategy frequently. This strategy is consistent with the Taoist philosophy of doing nothing, which suggests that individuals in adverse life circumstances have to persevere, and accept whatever comes (Hwang, 1977). Furthermore, avoidance and compromise have become more normative responses to resolving interpersonal conflicts

among Chinese people, and may be related to the Chinese Confucius ethics of maintaining harmony among individuals (Gabrenya Jr & Hwang, 1996).

Chinese culture as a collectivism oriented one values harmonious interpersonal relationships, meeting one's social obligations, fitting in, and maintaining esteem and status as viewed by other members of one's social group (Markus & Kitayama, 1991). Individuals draw more happiness and satisfaction from relationship harmony than from self-extension, and from being part of closer and more supportive social networks. On the other hand, negative psychological outcomes are seen to be due to distress about not belonging to or maintaining a relationship, and the need to seek approval from significant others (Wang & Mallinckrodt, 2006). In addition, Chinese culture in general prescribes a more reserved norm for interpersonal interactions, promoting indirect communication, discouraging overt expressions of adverse feelings toward others, and devaluing directly asking others to provide help to reduce risks of damaging interpersonal harmony (Tamura, 1997).

Social work practitioners need to be aware of a different construct of spirituality in Chinese people's daily life. For them, spirituality includes the capacity to: endure, even accept, suffering or misfortune; to construct and reconstruct meaning; to maintain peace of mind and spirit and a sense of direction, even in the face of misfortune or harsh external circumstances (Wang, Chan, Ng, & Ho, 2008). It is also believed that people in eastern countries are less religion-orientated than that in western countries (Wang et al.,

2008). This could explain why spirituality is less likely to be used to deal with tragic loss as found in the current study.

The above discussion points to the need for social workers to be sensitive to the impacts of the only-child family model and cultural values on parental grief of the older Chinese parents. This is particularly relevant to workers who often come into contact with clients of a different cultural background. Findings support the need to focus social work support on those whose only child died in a particular cultural context. Findings can also provide support for therapeutic interventions that are based on Chinese bereaved parents' particular grief experiences. It is particularly important for social work education that students learn about the wide variety of models constructs of parental grief and the complexity of their grief experiences. Familiarity with the variety of influential factors will enable social workers to be more effective in empowering older bereaved parents, choosing appropriate therapeutic approach, and helping them with their urgent needs.

Conclusions

Limitations of the Study

This study was basically an exploratory, cross-sectional study and the analysis was based upon a sample that may differ substantially from other populations. The study is subject to a number of limitations as noted below.

The primary threat to this study is the selection bias inherent in the sampling and data collection procedures used. The study utilized a purposeful convenience sampling strategy. All the participants were recruited via the Internet, therefore, excluding older

bereaved parents who do not use the Internet. The deliberate use of a sample of individuals who have been reaching out to online mutual support group has certain advantage of providing insights into the impact of the death of a child. However, significant differences might exist for those who have not reached out for any kind of assistance. In addition, the use of a self-administered, online survey may have altered the responses obtained, threatening its internal validity. Due to the purposeful sampling strategy use in the current study, the results of this study cannot be generalized to other populations. Further research is needed with different populations in order to explore the differences between bereaved individuals.

Strengths of the Study

One of the strengths of this study was the use of a structural equation modeling. It presents an innovative approach by using a sophisticated quantitative methodology in the field of grief research and integrating a theoretical model. Some of the foundational assumptions in grief research have been questioned due to lack of empirical validation (Wortman & Silver, 2001). Findings of this study provide a foundation for a validated theoretical model and further model testing.

This study answers a timely and relevant question about older Chinese bereaved parents' unique experiences in their cultural and societal context. The focus of this study was on exploring the impact of a variety of influential factors that social workers can incorporate into interventions with older bereaved adults. Understanding the multiple

influencing factors is critical for social workers to design interventions and to improve the effectiveness of the interventions.

Lastly, in the context of global aging, the study results highlight the importance of long-term planning for the elderly that considers support for bereaved parents, as many older adults have often experienced the death of a child during their lifetime. There is very limited research focusing on older Chinese bereaved parents, the current study serves as a baseline to critically evaluate the policy implications and develop further measures to address their psychosocial needs.

Future Research

Future research could utilize a prospective longitudinal design to test the relationship of the influential factors and parental grief over time and to gain a more complete understanding of the complex relationships of personal and situational factors and bereaved parents' unique experiences. Longitudinal research can help researchers explore how relationships between the influential factors change over time and how bereaved parents' grief changes according to fluctuations that occur in grief transition within the individual and their social context. Longitudinal research can also clarify the causal relationships between the theoretical mediators and the actual bereavement outcomes of the older bereaved parents. Studies using qualitative methods are also needed in the future, this type of research can give social workers insight into the primary issues and concerns experienced by the bereaved parents.

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APPENDIX A

English Version of Introduction Letter and Questionnaire

Date 07/07/2015

Dear Sir or Madam:

You are being invited to participate in a research study by answering the attached survey about parental grief. There are no known risks for your participation in this research study. The information collected may not benefit you directly. The information learned in this study may be helpful to others. The information you provide will be used to study factors influencing parental grief. Your completed survey will be stored at a locked file at Kent School of Social Work, University of Louisville. All date on computer will encrypted. The survey will take approximately 30 minutes to complete.

Individuals from Kent School of Social Work, the Institutional Review Board (IRB), the Human Subjects Protection Program Office (HSPPO), and other regulatory agencies may inspect these records. In all other respects, however, the data will be held in confidence to the extent permitted by law. Should the data be published, your identity will not be disclosed.

Taking part in this study is voluntary. By completing this survey, you agree to take part in this research study. You do not have to answer any questions that make you uncomfortable. You may choose not to take part at all. If you decide to be in this study you may stop taking part at any time. If you decide not to be in this study or if you stop taking part at any time, you will not lose any benefits for which you may qualify.

If you have any questions, concerns, or complaints about the research study, please contact: Bibhuti Sar 502-852-3932 (U.S.) Yongqiang Zheng 502-681-4568 (U.S.) 13583193663 (China)

If you have any questions about your rights as a research subject, you may call the Human Subjects Protection Program Office at (502) 852-5188. You can discuss any questions about your rights as a research subject, in private, with a member of the Institutional Review Board (IRB). You may also call this number if you have other questions about the research, and you cannot reach the research staff, or want to talk to someone else. The IRB is an independent committee made up of people from the University community, staff of the institutions, as well as people from the community not connected with these institutions. The IRB has reviewed this research study.

If you have concerns or complaints about the research or research staff and you do not wish to give your name, you may call 1-877-852-1167. This is a 24-hour hot line answered by people who do not work at the University of Louisville.

Sincerely,

Bibhuti Sar Yongqiang Zheng

Created: 7/8/15

UofL Institutional Review Boards

IRB NUMBER: 15.0606

IRB APPROVAL DATE: 07/13/2015

IRB EXPIRATION DATE: 07/12/2016

1. What is your gender?

○ Male ○ Female

2. What is your age (in years)?

_____

3. For how many years your child has been dead?

_____

4. Was the deceased child your only one?

○ Yes ○ No

5. How did your child die?

○ Sudden Illness ○ Chronic Illness ○Accident ○ Suicide ○ Homicide ○ Other

6. Please read each of the following statements and rate the extent to which you believe each statement best describes your feelings about close relationship.

	Not at all like me	2	Somewhat like me	4	Very much like me
(1) I find it difficult to depend on other people.	○	○	○	○	○
(2) It is very important to me to feel independent.	○	○	○	○	○
(3) I find it easy to get emotionally close to others.	○	○	○	○	○
(4) I want to merge completely with another person.	○	○	○	○	○
(5) I worry that I will be hurt if I allows myself to become too close to others.	○	○	○	○	○
(6) I am comfortable without close emotional relationships.	○	○	○	○	○
(7) I am not sure that I can always depend on others to be there when I need them.	○	○	○	○	○
(8) I want to be completely emotionally intimate with others.	○	○	○	○	○

(9) I worry about being alone.	○	○	○	○	○
(10) I am comfortable depending on other people.	○	○	○	○	○
(11) I often worry that romantic partners don't really love me.	○	○	○	○	○
(12) I find it difficult to trust others completely.	○	○	○	○	○
(13) I worry about others getting too close to me.	○	○	○	○	○
(14) I want emotionally close relationships.	○	○	○	○	○
(15) I am comfortable having other people depend on me.	○	○	○	○	○
(16) I worry that others don't value me as much as I value them.	○	○	○	○	○
(17) People are never there when you need them.	○	○	○	○	○
(18) My desire to merge completely sometimes scares people away.	○	○	○	○	○
(19) It is very important to me to feel self-sufficient.	○	○	○	○	○
(20) I am nervous when anyone gets too close to me.	○	○	○	○	○
(21) I often worry that romantic partners won't want to stay with me.	○	○	○	○	○

(22) I prefer not to have other people depend on me.	○	○	○	○	○
(23) I worry about being abandoned.	○	○	○	○	○
(24) I am somewhat uncomfortable being close to others.	○	○	○	○	○
(25) I find that others are reluctant to get as close as I would like.	○	○	○	○	○
(26) I prefer not to depend on others.	○	○	○	○	○
(27) I know that others will be there when I need them.	○	○	○	○	○
(28) I worry about having others not accept me.	○	○	○	○	○
(29) Romantic partners often want me to be closer than I feel comfortable being.	○	○	○	○	○
(30) I find it relatively easy to get close to others.	○	○	○	○	○

7. These items deal with ways you've been coping with the stress in your life since you found out you were going to have to have this operation. There are many ways to try to deal with problems. These items ask what you've been doing to cope with this one. Obviously, different people deal with things in different ways, but I'm interested in how you've tried to deal with it. Each item says something about a particular way of coping. I want to know to what extent you've been doing what the item says. How much or how frequently. Don't answer on the basis of whether it seems to be working or not—just whether or not you're doing it. Use these response choices. Try to rate each item

separately in your mind from the others. Make your answers as true FOR YOU as you can.

	I haven't been doing this at all	I've been doing this a little bit	I've been doing this a medium amount	I've been doing this a lot
(1) I've been turning to work or other activities to take my mind off things.	○	○	○	○
(2) I've been concentrating my efforts on doing something about the situation I'm in.	○	○	○	○
(3) I've been saying to myself "this isn't real.".	○	○	○	○
(4) I've been using alcohol or other drugs to make myself feel better.	○	○	○	○
(5) I've been getting emotional support from others.	○	○	○	○
(6) I've been giving up trying to deal with it.	○	○	○	○
(7) I've been taking action to try to make the situation better.	○	○	○	○
(8) I've been refusing to believe that it has happened.	○	○	○	○
(9) I've been saying things to let my unpleasant feelings escape.	○	○	○	○
(10) I've been getting help and advice from other people.	○	○	○	○

(11) I've been using alcohol or other drugs to help me get through it.	○	○	○	○
(12) I've been trying to see it in a different light, to make it seem more positive.	○	○	○	○
(13) I've been criticizing myself.	○	○	○	○
(14) I've been trying to come up with a strategy about what to do.	○	○	○	○
(15) I've been getting comfort and understanding from someone.	○	○	○	○
(16) I've been giving up the attempt to cope.	○	○	○	○
(17) I've been looking for something good in what is happening.	○	○	○	○
(18) I've been making jokes about it.	○	○	○	○
(19) I've been doing something to think about it less, such as going to movies, watching TV, reading, daydreaming, sleeping, or shopping.	○	○	○	○
(20) I've been accepting the reality of the fact that it has happened.	○	○	○	○
(21) I've been expressing my negative feelings.	○	○	○	○

(22) I've been trying to find comfort in my religion or spiritual beliefs.	○	○	○	○
(23) I've been trying to get advice or help from other people about what to do.	○	○	○	○
(24) I've been learning to live with it.	○	○	○	○
(25) I've been thinking hard about what steps to take.	○	○	○	○
(26) I've been blaming myself for things that happened.	○	○	○	○
(27) I've been praying or meditating.	○	○	○	○
(28) I've been making fun of the situation.	○	○	○	○

8. We are interested in how you feel about the following statements. Read each statement carefully. Indicate how you feel about each statement.

	Very Strongly Disagree	Strongly Disagree	Mildly Disagree	Neutral	Mildly Agree	Strongly Agree	Very Strongly Agree
(1) There is a special person who is around when I am in need.	○	○	○	○	○	○	○
(2) There is a special person with whom I can share joys and sorrows.	○	○	○	○	○	○	○

(3) My family really tries to help me.	○	○	○	○	○	○	○
(4) I get the emotional help & support I need from my family.	○	○	○	○	○	○	○
(5) I have a special person who is a real source of comfort to me.	○	○	○	○	○	○	○
(6) My friends really try to help me.	○	○	○	○	○	○	○
(7) I can count on my friends when things go wrong.	○	○	○	○	○	○	○
(8) I can talk about my problems with my family.	○	○	○	○	○	○	○
(9) I have friends with whom I can share my joys and sorrows.	○	○	○	○	○	○	○
(10) There is a special person in my life who cares about my feelings.	○	○	○	○	○	○	○
(11) My family is willing to help me make decisions.	○	○	○	○	○	○	○
(12) I can talk about my problems with my friends.	○	○	○	○	○	○	○

9. The list that follows includes items you may or may not experience. Please consider how often you directly have this experience, and try to disregard whether you feel you should or should not have these experiences. A number of items use the word 'God.' If this word is not a comfortable one for you, please substitute another word that calls to mind the divine or holy for you.

	Many times a day	Every day	Most days	Some days	Once in a while	Never
(1) I feel God's presence.	○	○	○	○	○	○
(2) I experience a connection to all of life.	○	○	○	○	○	○
(3) During worship, or at other times when connecting with God, I feel joy which lifts me out of my daily concerns.	○	○	○	○	○	○
(4) I find strength in my religion or spirituality.	○	○	○	○	○	○
(5) I find comfort in my religion or spirituality.	○	○	○	○	○	○
(6) I feel deep inner peace or harmony.	○	○	○	○	○	○
(7) I ask for God's help in the midst of daily activities.	○	○	○	○	○	○
(8) I feel guided by God in the midst of daily activities.	○	○	○	○	○	○
(9) I feel God's love for me, directly.	○	○	○	○	○	○
(10) I feel God's love for me, through others.	○	○	○	○	○	○

(11) I am spiritually touched by the beauty of creation.	○	○	○	○	○	○
(12) I feel thankful for my blessings.	○	○	○	○	○	○
(13) I feel a selfless caring for others.	○	○	○	○	○	○
(14) I accept others even when they do things I think are wrong.	○	○	○	○	○	○
(15) I desire to be closer to God or in union with the divine.	○	○	○	○	○	○

10. Please tell us.

	Not at all	Somewhat close	Very close	As close as possible
In general, how close do you feel to God?	○	○	○	○

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

	Not at all	At least once	At least once a week	At least once a day	Several times a day
(1) In the past month, how often have you felt yourself longing or yearning for the person you lost?	○	○	○	○	○
(2) In the past month, how often have you had intense feelings of emotional pain, sorrow, or	○	○	○	○	○

pangs of grief related to the lost relationship?					
(3) In the past month, how often have you tried to avoid reminders that the person you lost is gone?	○	○	○	○	○
(4) In the past month, how often have you felt stunned, shocked, or dazed by your loss?	○	○	○	○	○

12. PART II INSTRUCTIONS: FOR EACH ITEM, PLEASE INDICATE HOW YOU CURRENTLY FEEL. CIRCLE THE NUMBER TO THE RIGHT TO INDICATE YOUR ANSWER.

	Not at all	Slightly	Somewhat	Quite a bit	Overwhelmingly
(5) Do you feel confused about your role in life or feel like you don't know who you are (i.e., feeling that a part of yourself has died)?	○	○	○	○	○
(6) Have you had trouble accepting the loss?	○	○	○	○	○
(7) Has it been hard for you to trust others since your loss?	○	○	○	○	○
(8) Do you feel bitter over your loss?	○	○	○	○	○
(9) Do you feel that moving on (e.g., making new friends, pursuing new interests) would be difficult for you now?	○	○	○	○	○

(10) Do you feel emotionally numb since your loss?	○	○	○	○	○
(11) Do you feel that life is unfulfilling, empty, or meaningless since your loss?	○	○	○	○	○

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

	Yes	No
(12) For questions (1) or (2) above, have you experienced either of these symptoms at least daily and after 6 months have elapsed since the loss?	○	○
(13) Have you experienced a significant reduction in social, occupational, or other important areas of functioning (e.g., domestic responsibilities)?	○	○

APPENDIX B

Chinese Version of Introduction Letter and Questionnaire

您好，

我们诚挚地邀请您参与这项由中美大学研究人员开展的关于父母哀伤的研究。失去子女是悲痛的人生经历，但目前科学界对于父母哀伤---这一特殊的哀伤的特点及影响因素所知还极为有限。我们的研究的可能不会直接使您受益，但它有助于心理健康专业服务人员更多的了解父母哀伤的特点，继而能够制定更有效的介入手段，从而为失去子女的父母提供有效的帮助。

只要您作为父母曾有过失去子女的经历即可参与这项研究。这份网上问卷大约需要 30 分钟来完成。研究数据将会加密保存。来自路易维尔大学肯特社会工作学院，伦理审核委员会和研究对象保护办公室的工作人员将会保证研究资料的安全完整。研究数据同时也受法律的保护，如研究结果发表您的个人信息也不会列在发表的结果中。

参与本研究是一项志愿活动，如您完成本问卷我们即认为您同意参与此项研究。您不需要回答使您感觉不舒服的问题，参与过程中您也可以随时终止，终止参与研究不会导致您任何损失。

如您有任何问题，可以联系如下研究人员：

布提•萨 电话号码：502-852-3932 (美国)

郑永强 电话号码：502-681-4568 (美国) 13583193663 (中国)

如您有关于您自身权利的问题，您也可以致电路易维尔大学研究对象保护办公室，电话号码是 502- 852-5188(美国)。您也可以与大学伦理审查委员会直接讨论您的问题，伦理委员会是一个由来自大学和地方社区各个部门机构的人员组成的独立组织，本研究已经经过伦理委员会的审核，审核号码 1 是 5.0606。

如果您想要反应关于研究的问题但不想透露您的个人信息，您可以致电 1-877-852-1167 (美国) 。这是一个 不由路易维尔大学人员参与的 24 小时值守电话。

致礼！

布提•萨　郑永强

2015 年 7 月

1. 你的性别是?

○ 男性　　○ 女性

2. 你的年龄是?

_____

3. 你的孩子已经去世多久（单位：年）?

_____

4. 去世的孩子是你的独生子（女）吗?

○ 是　○ 否

5. 你的孩子是因何去世的?

○ 突发疾病
○ 慢性疾病
○ 事故

○ 自杀
○ 他杀
○ 其他

6. 请评估下列各项是否跟你的情况相似

	完全不像我	少许不像我	有点像我	少许像我	非常像我
我认为自己很难依靠别人。	○	○	○	○	○
对于我来说，感觉独立的是很重要的。	○	○	○	○	○
我认为自己很容易在情感上与人亲近。	○	○	○	○	○
我想与另一个人完全融合在一起。	○	○	○	○	○
我担心如果我容许自己与别人的关系太密切，我会受伤害。	○	○	○	○	○
在没有亲近的情感关系时，我也感到舒服。	○	○	○	○	○
当我需要别人时，我不肯定自己可以找到依靠。	○	○	○	○	○
我想跟别人有完全密切的关系。	○	○	○	○	○

我担心自己孤独一人。	○	○	○	○	○
我依靠别人时感到舒服。	○	○	○	○	○
我经常担心伴侣不是真心爱我。	○	○	○	○	○
我发觉自己很难完全相信别人。	○	○	○	○	○
我担心别人和我太亲近。	○	○	○	○	○
我想有亲近的关系。	○	○	○	○	○
别人依靠我时，我会感到舒服。	○	○	○	○	○
我担心别人重视我不如我重视他们。	○	○	○	○	○
当你需要别人时，他们从来不会在你身边。	○	○	○	○	○
我渴望与人完全融合，但有时却会吓怕他们。	○	○	○	○	○
对我来说，感到自给自足是很重要的。	○	○	○	○	○
有人与我太亲近时，我会紧张起来。	○	○	○	○	○

我常担心伴侣不想和我在一起。	○	○	○	○	○
我较喜欢没有人依靠我。	○	○	○	○	○
我担心遭人抛弃。	○	○	○	○	○
与人亲近时，我会感到不自在。	○	○	○	○	○
我虽然希望与别人更亲近，但别人并不太愿意。	○	○	○	○	○
我较喜欢不依靠别人。	○	○	○	○	○
我知道当我需要别人时，他们会在我身边。	○	○	○	○	○
我担心别人不接受我。	○	○	○	○	○
伴侣常想与我更亲密的程度，过于我感觉舒服的程度。	○	○	○	○	○
我发觉自己相对地容易与别人亲近。	○	○	○	○	○

7. 这些题目就在了解您如何去应对生活中压力。当然，每个人在面对压力时都有其特殊的因应方式，而我们所想要了解的是您的方法。以下的每一题都会说明一种特殊的应对方式，在回答时您只要将您是否曾经使用过或是多常使用这样的应对方式 做答题目即可。做答的过程中，请您凭着自己的感受回答，不须考虑太多

	我从未这样做过	我曾尝试这样做过	我时常这样做	我总是这样做
我藉由工作或是做其他的事情让我转移注意力。	○	○	○	○
会让自己专注在某一个特殊情境里不去想这件事。	○	○	○	○
我会告诉自己“这不是真的”。	○	○	○	○
我会服用一些药物或喝酒让自己感觉舒服些。	○	○	○	○
我会从其他亲友中得到情绪上的支持与鼓励。	○	○	○	○
我曾试着放弃面对及处理它。	○	○	○	○
我会试着做某些事情让情况好转。	○	○	○	○
我拒绝相信这件事情已经发生了。	○	○	○	○
我曾对自己说话，让不愉快的感觉消失。	○	○	○	○
我会试着寻找他人的建议与协助。	○	○	○	○

我曾使用酒精或药物以让自己度过难关。	○	○	○	○
我曾使用另外的角度去看待这件事情，让它看起来更正面。	○	○	○	○
我曾对此批判我自己。	○	○	○	○
我曾尝试找出该如何处理事情的决策。	○	○	○	○
我会从其他人那里得到安慰与了解。	○	○	○	○
我曾放弃尝试去应对这件事。	○	○	○	○
我曾在所发生的事情中寻找好的一面。	○	○	○	○
我曾拿这样的事情来开玩笑。	○	○	○	○
我会做一些事情让自己尽量少去想它，像是去看电影、看电视、读书、做白日梦、睡觉或去购物。	○	○	○	○
我会接受并承认这是一件已经发生的事实。	○	○	○	○
我会表达出我不舒服的感受。	○	○	○	○

我会试着从宗教或精神上的信仰得到慰藉。	○	○	○	○
我会试着接受他人的建议或是协助我该如何应对。	○	○	○	○
我会试着学习与这件事共处。	○	○	○	○
我曾为下一步该如何走而苦恼。	○	○	○	○
我会责怪我自己为什么会让这件事发生在我身上。	○	○	○	○
我会祷告或冥想。	○	○	○	○
我曾在这样的处境中被嘲笑。	○	○	○	○

8. 以下有 12 个句子，每一个句子后面有 7 个答案。 请您根据自己的实际情况在每句后面选择一个答案。 例如，选择（ 1 ）表示您极不同意，即说明您的实际情况与这一句子极不相符；选择（ 7 ）表示您极同意，即说明您的实际情况与这一句子极相符；选择（ 4 ）表示中间状态。其余类推。

	极不同意	很不同意	稍不同意	中立	稍同意	很同意	极同意
在我遇到问题时，有些人（领导、亲戚、同学）会出现在我身旁。	○	○	○	○	○	○	○

我能够与有些人（领导、亲戚、同学）共享快乐与忧伤。	○	○	○	○	○	○	○
我的家庭能够切实具体地给我帮助。	○	○	○	○	○	○	○
在需要时，我能够从家庭获得感情上的帮助和支持。	○	○	○	○	○	○	○
当我有困难时，有些人（领导、亲戚、同学）是安慰我的真正源泉。	○	○	○	○	○	○	○
我的朋友能真正地帮助我。	○	○	○	○	○	○	○
在发生困难时，我可以依靠我的朋友们。	○	○	○	○	○	○	○
我能与自己的家庭谈论我的难题。	○	○	○	○	○	○	○
我的朋友们能与我分享快乐和忧伤。	○	○	○	○	○	○	○
在我的生活中，有些人（领导、亲戚、同学）关心着我的感情。	○	○	○	○	○	○	○
我的家庭能心甘情愿协助我做出各种决定。	○	○	○	○	○	○	○

我能与朋友们讨论自己的难题。	○	○	○	○	○	○	○

9. 以下的经验，你可能有或没有遇到过，请先不要考虑这些经验是应该或不应该，你只须要回答这些经验出现在你日常生活的次数。
注： 以下项目中多次使用“神”这个名称，如果你是有宗教信仰的，这名称就是指你信仰的神。如果你并没有宗教信仰，这“神”是泛指世界、大自然或宇宙中的更高力量、规律或道理。

	每日多次	每日	大多数日子	有些日子	很少	没有或近乎没有
我感到神的存在。	○	○	○	○	○	○
我感到与大自然联系一起。	○	○	○	○	○	○
每当进行宗教崇拜或其他灵性修养的活动时，我感到喜悦，而那份感觉带我离开日常的烦忧。	○	○	○	○	○	○
我从宗教信仰或灵性修养中找到力量。	○	○	○	○	○	○
我从宗教信仰或灵性修养中找到安慰。	○	○	○	○	○	○
我感到内心深处的平静及和谐。	○	○	○	○	○	○

在日常生活中，我请求神的帮助。	○	○	○	○	○	○
在日常生活中，我感觉到神的引导。	○	○	○	○	○	○
我直接地感到神的爱。	○	○	○	○	○	○
我从别人身上感到神对我的爱。	○	○	○	○	○	○
奇妙的万物创造感动了我的心灵。	○	○	○	○	○	○
我感恩我所得到的祝福。	○	○	○	○	○	○
我不计较自己的益处而关怀别人。	○	○	○	○	○	○
当别人做一些我不认同的事情，我仍能接受他们。	○	○	○	○	○	○
我渴望与神更亲密或与他合而为一。	○	○	○	○	○	○

10. 那么请告诉我们 [矩阵单选题] [必答题]

	毫不接近	有些接近	接近	极为接近
一般来说，你感觉你与神有多接近？	○	○	○	○

11. 第一部分：下列描述是人们在经历亲朋离世后可能出现的反应。回答没有好坏之分，请您根据自己的实际情况，选择在过去一个月里，与您最相符的描述，请在每一描述后选出相应的数值。 [矩阵量表题] [必答题]

	从未如此	至少一次	至少每周一次	至少每天一次	每天几次
我经常怀念并渴望见到死者。	○	○	○	○	○
我经常出现与失去死者有关的强烈情感痛苦、悲痛及剧烈的哀伤。	○	○	○	○	○
我经常试图回避提醒死者离世的线索。	○	○	○	○	○
我经常对这件事感到惊讶、震惊或难以相信。	○	○	○	○	○

12. 第二部分：下列描述是您目前可能的感受，请回答这些描述在多大程度上符合您的实际情况。

	不符合	有点符合	比较符合	非常符合	完全符合
我对自己在生活中的角色感到困惑，或不知道自己是谁。	○	○	○	○	○
我难以接受这件事。	○	○	○	○	○

这件事发生后，我难以信任他人了。	○	○	○	○	○
我对这件事感到怨恨。	○	○	○	○	○
对我来说，现在让生活继续前进（如结交新朋友、培养新兴趣）有些困难。	○	○	○	○	○
这件事发生后，我觉得自己情感麻木了。	○	○	○	○	○
这件事发生后，我觉得生活是不美满、空虚或毫无意义的。	○	○	○	○	○

13. 第三部分

	是	不是
距死者离世 6 个月后，我仍然每天都出现问题 1 或 2 中的情况。	○	○
我在社交、职业及其他重要方面（如履行家庭责任）的能力明显下降了。	○	○

CURRICULUM VITAE

Yongqiang Zheng

EDUCATION

Doctor of Philosophy in Social Work

June 2016 University of Louisville, Kent School of Social Work

Dissertation Title: *Effects of Attachment Style, Coping Strategy, Social Support and Spirituality on Parental Grief Among Older Chinese Parents: Structural Equation Modeling*

Committee Members: Drs. Thomas Lawson (Chair), Barbara Head, Bibhuti Sar, Anna Faul, Maire Sossou

Master of Science in Social Work

2013–2015 University of Louisville

Master of Arts in Sociology

2003–2006 Shandong University

Bachelor of Arts in Sociology

1996–2000 Shandong University

RESEARCH INTERESTS

Gerontology; Death and Grief; End of Life Care; Palliative Care; Aging Policy, International Social Work and Social Work Education

TEACHING INTERESTS

Gerontology; Death and Grief; Research Methods; Human Behavior and the

Social Environment; International Social Work; Social Work Practice with Communities and Organizations; Cultural Sensitivity in Social Work Practice

FELLOWSHIPS AND RESEARCH ASSISTANTSHIPS

2012–2016 University Fellowship, University of Louisville

2015–2016 Graduate Research Assistant, University of Louisville

- Assisting with developing the international academic exchange program between Kent School of Social Work and Chinese universities
- Assisting with developing an English-Chinese social work dictionary
- Implementation of funded studies
- Data collection and analysis for funded studies
- Professional writing and preparation of abstracts, manuscripts, posters and presentations related to completed studies

PROFESSIONAL EXPERIENCE

2009–2012 Supervisor, Shanquan Social Work Service Agency, Jinan, China,

- Participation in the planning and implementation of the empty-nest elderly day care program.
- Supervision responsibility including psychosocial assessments, crisis intervention, financial counseling, family education, resource linkage, and discharge planning.
- Collaborative work with government officials, physicians and nursing staff, volunteers, and other social work organizations to insure optimal patient/family care.
- Practicum supervisor for bachelor level social work students.

ACADEMIC APPOINTMENTS

July 2007 to August 2012 Lecturer, Department of Social Work

School of Law

Shandong University of Finance and Economics

July 2006 to June 2007	Assistant Professor, Department of Social Work School of Law Shandong University of Finance and Economics

TEACHING EXPERIENCE

Shandong University of Finance and Economics

Title	Semester	Enrollment
Introduction to Sociology	Fall 2006-2012	185
Community Work	Spring 2007-2012	185
Social Research Essentials	Spring 2010-2012	55

University of Louisville

Introduction to Social Work	Fall 2013	20
Death and Grief	Fall 2014 Spring 2015	27

GRANTS

President's Commission on Diversity and Racial Equality (CODRE), Graduate Student Research Grant, University of Louisville, Lawson (Co-PI), 2013–2014

A Pilot Study on Elderly Who Lost Their Only Child in China (The only funded research in 2013).

Role: Principal Investigator

CERTIFICATIONS and PROFESSIONAL SOCIETIES

Certified Social Worker, Ministry of Human Resources and Social Security, China, 2009 to present

National Association of Social Workers (NASW), Kentucky Chapter, 2013-2014

BIBLIOGRAPHY

Peer-reviewed Publications

Zheng, Y., Head, B. A., & Schapmire, T. (2016). A Systematic Review of Telehealth in Palliative Care: Caregiver Outcomes. *Telemedicine and e-Health, 22*(4), DOI: 10.1007/s11136-011-9934-3.

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Book Chapters

Zheng, Y. (2011). Chapter 14: Project Management in Community Organizing. In J. Gao (Eds.), Community *Work* (pp.252-279). Jinan, China: People's Press of Shandong.

Zhang, H., Wang, W., & **Zheng, Y.** (2010). Chapter 5: Theories of Community Organizing. In Y. Li, H. Zhang & B. Tang (Eds.), *Community Work* (pp.78-94). Beijing, China: Social Press of China.

Zheng, Y. (2009). Chapter 8: How does Social Capital Influence the Supply of Public Goods in Rural Community? In J. Gao, & G. Gao (Eds.), *Supply Mechanism of Public Goods in Rural China* (pp.213-242). Jinan, China: People's Press of Shandong.

Zheng, Y., & Liu, Z. (2008).Chapter 6: Social Work Practice: Part One. In Z. Ji (Eds.), *Textbook of National Professional Certification: Social Worker* (pp.106-138). Beijing, China: Chinese Labor and Social Security's Press.

INVITED ACADEMIC PRESENTATIONS

Lawson, T. R., & **Zheng, Y.** (2016, June). *Social Workers' Role in the Interdisciplinary Medical Team.* Presented at the Medical Social Worker Workshop, Shanghai, China

Lawson, T. R., & **Zheng, Y.** (2015, August). *Thoughts and Ideas about Social Work in the Global Context.* Presented at the Social Worker Association of Shanghai Pudong, Shanghai, China

Lawson, T. R., & **Zheng, Y.** (2015, August). *Social Work Education in the US.* Presented at the 12th Annual Conference of the Chinese Association of Social Work Education, Hohhot, China

Boamah, D., Fields, M., Brown, L., & **Zheng, Y.** (2014, April). *Impact of Nutrition Programs on the Overall Health of Community-Dwelling Older Adults*. Presented at the 2014 Kentucky Association of Social Work Educators (KASWE) conference, Bowling Green, KY

Faul, A., Lawson, T., Boamah, D., Boes, C., Brown, L., Fields, M., Thompson, J., & **Zheng,**

Y. (2013, June). *Lower-Income, Vulnerable Older Adults: Effects of Nutritional Programs on Aging in Place.* Poster presented at the 30th Summer Series on Aging, University of Kentucky, Lexington, KY

Zheng, Y. (2006, August). *Social Capital and Public Goods Supply: A Case Study in Shandong Province.* Paper presented at the 5th Annual Conference of Chinese Association of Social Work Education, Jinan, China

FAULTY CAREER DEVELOPMENT ACTIVITIES

Attended Training, "Developing Clinical Competency in Dementia Management: An Interdisciplinary, Longitudinal Standardized Patient Trainings", University of Louisville, Ohio Valley Appalachia Regional Geriatric Educational Center, 2014

Attended Conference, "2013 Celebration of Teaching and Learning: Teaching in Harmony with the Brain", University of Louisville, Louisville, 2013

Attended Symposia, "Second Annual Multidisciplinary Symposium: Faces of Childhood Trauma Preventing System Re-Traumatization", Louisville, 2013

Attended Conference, "The 2010 Conference of Managing Diversity within a Human Rights Framework: Social Inclusion Policy and Practice in China and Canada", Jinan, China, 2010

Attended Symposia, "The 5th International Symposium and Lectures on Social Policy", Jinan, China, 2009

Attended Symposia, "The 1st International Symposium and Lectures on Social Policy", Tianjin, China, 2005

Attended Workshop, "The 3rd Workshop for Organizational Sociology", Shanghai, China, 2005

Attended Conference, "The 3rd Annual Conference of Chinese Association of Social Work Education", Beijing, China, 2004

Attended Conference, "International Conference on Asset Building and Social Development", Jinan, China, 2004

HONORS AND AWARDS

Outstanding Graduate Thesis, 2006, Shandong University

Tuition Award for Outstanding Graduate Students, 2003-2006, Shandong University, Shandong Provincial Government

Second Prize in the Annual Essay Competition, 2000, Sociological Association of Shandong Province

University Outstanding Student, Fall of 1997, 1998 and 1999, Shandong University