

## **Predictors of Complicated Grief: A Systematic Review of Empirical Studies**

Elizabeth A. Lobb,<sup>1,2,3</sup> Linda J. Kristjanson,<sup>2</sup> Samar M. Aoun,<sup>2</sup> Leanne Monterosso,<sup>2,3</sup>

Georgia K.B.. Halkett,<sup>2</sup> and Anna Davies<sup>4</sup>

<sup>1</sup>Cunningham Centre for Palliative Care, Calvary Health Care Sydney, Kogarah, New South Wales, 2217.

<sup>2</sup>WA Centre for Cancer & Palliative Care, within the Curtin Health Innovation Research Institute, Curtin University of Technology, Perth, Western Australia 6845

<sup>3</sup>School of Nursing, Midwifery and Post Graduate Medicine, Edith Cowan University, Perth, Western Australia 6027.

<sup>4</sup>National Centre for Epidemiology and Population Health, Australian National University, Canberra, Australian Capital Territory 2002.

## ABSTRACT

A systematic review of the literature on predictors of complicated grief was undertaken with the aim of clarifying the current knowledge and to inform future planning and work in complicated grief following bereavement. Predictors of complicated grief prior to the death include previous loss, exposure to trauma, a previous psychiatric history, attachment style, and the relationship to the deceased. Factors associated with death include violent death, the quality of the care-giving or dying experience, close kinship relationship to the deceased, marital closeness and dependency, and lack of preparation for the death. Perceived social support played a key role after death, along with cognitive appraisals and high distress at the time of the death. Inconsistent definitions of CG and measurement tools were noted in the earlier studies reviewed. Limitations identified in the studies included use of cross-sectional designs, heterogeneous samples, high attrition, demographic differences between cases and controls, differences in length of time since death, and differences in types of death experienced. Notwithstanding these limitations, some consistent findings have emerged. Further research into conceptualisations of CG in terms of attachment theory and constructivist and cognitive-behavioural concepts of finding purpose and meaning after bereavement is warranted. [200 words]

Key words: systematic review, complicated grief, predictors, risk factors

Correspondence to:

A/Professor Elizabeth Lobb, Calvary Health Care Sydney, Kogarah, NSW. 2217.

Ph: [02] 9553 3093; Fax: [02] 9553 3159; e-mail: Liz.Lobb@sesiahs.health.nsw.gov.au

Our research team undertook a systematic review of literature on complicated grief and this paper reports our analysis of the research that examined its predictors. The term, complicated grief (CG), adopted in this review, refers to a pattern of adaptation to bereavement that involves the presentation of certain grief-related symptoms at a time beyond that which is considered adaptive. These symptoms include: marked and chronic separation distress, such as longing and searching for the deceased, loneliness, preoccupation with thoughts of the deceased; and symptoms of traumatic distress, such as feelings of disbelief, mistrust, anger, shock, detachment from others, and experiencing somatic symptoms of the deceased. These symptoms have been shown to be distinct from depressive and anxiety symptom clusters (Bonanno et al., 2007; Lichtenthal, Cruess, & Prigerson, 2004; Prigerson, Bierhals, Kasl, Reynolds, Shear, Newsom et al., 1996; Prigerson, Frank, Kasl, Reynolds, Anderson, Zubenko et al., 1995; Prigerson, Bridge, Maciejewski, Berry, Rosenbeck, Jacobs et al., 1999). People who suffer from complicated grief experience a sense of “persistent and disturbing disbelief regarding the death” and resistance to accepting the painful reality (Shear & Shair, 2005, p.253) for at least six months to the point of functional impairment. Intense yearning and longing for the deceased continues, along with frequent pangs of intense, painful emotions. “Thoughts of the loved one remain preoccupying, often including distressing intrusive thoughts related to the death, and there is avoidance of a range of situations and activities that serve as a reminder of the painful loss. Interest and engagement in ongoing life is limited or absent” (Shear & Shair, 2005, p.253). It is estimated that between 10% and 20% of bereaved people experience complicated grief (Byrne & Raphael, 1994; Middleton, Burnett, Raphael, & Martinek, 1996; Prigerson et al., 1996; Prigerson, et al., 1995; Prigerson & Jacobs, 2001a; Prigerson et al., 1999). Complicated grief was previously referred to as “traumatic grief” but was renamed to avoid confusion with posttraumatic stress disorder (PTSD). More recent terminology has been reported as Complicated Grief Disorder (Zhang,

El-Jawahri, & Prigerson, 2006) or Prolonged Grief Disorder (PGD) (Prigerson, Horowitz, Jacobs, Parkes, Aslan, Goodkin et al, 2009).

### **Literature search strategy and results**

The following specialist databases and resources were searched: MEDLINE; PsychInfo; CINAHL; EMBASE; APAIS; DRUG; AIATISIS bibliography; Current Contents; Science Citation Index; Cochrane Collaboration/Evidence Based Medicine; PsychBOOK; Dissertation Abstracts International; CareSearch; Australian Government Department of Health and Ageing Website; and other additional websites. The following criteria were used to identify material that would be included in the review: evidence based; published in a peer-reviewed journal; published between 1990 and 2007; seminal work published pre-1990, and published in the English language. Relevant professional and research organisations and leading authors in the field were contacted to identify any additional published or “in press” research of relevance; consequently some recent relevant papers have also been included.

Abstracts that appeared to discuss complicated grief, and met the inclusion criteria were selected and retrieved (AD). Due to the inconsistent use of adjectives to describe complicated grief and the various conceptualisations of the disorder, if the abstract did not contain enough information to ascertain whether or not the article was relevant, the full article was retrieved. A second reviewer (EL) assessed 50% of the abstracts to confirm appropriateness of inclusion of the articles. Full text versions of the abstracts were then obtained. Articles that met the inclusion criteria and presented original research about complicated grief were evaluated and data from these articles were extracted into evidence tables (AD). Eighty percent of the included material was checked by a second reviewer to determine if it met the inclusion criteria (GH) and 10% of these studies were cross-checked by a third reviewer to confirm the evidence ratings for the papers (SA). Fifty percent of excluded materials were checked by a second reviewer (EL) to confirm exclusion. In summary, the literature review identified

2,518 references as potentially relevant. Of these, 889 references were selected for evidence-based assessment and 151 were reviewed. Forty articles examined predictors of complicated grief and a synthesis of these findings is reported here.

## RESULTS

### **Predictors for Complicated Grief**

Our review identified forty studies that examined predictors of risk for CG within the construct of “complicated grief” as defined in this review (see Table 1). The majority of studies measured complicated grief using the Inventory of Complicated Grief (Prigerson, Maciejewski, Reynolds, Bierhals, Newsom, Fasiczka, et al., 1995) or the Texas Revised Inventory of Grief (Faschingbauer, 1981).

### **Predictors associated with childhood**

Risk factors specific to complicated grief suggest that insecure attachments play a crucial role. Participants in studies who reported prior adversities in life were generally more distressed following bereavement than those who did not report adversities. In particular, childhood separation anxiety, adversities occurring in childhood such as the death of parent and childhood abuse had a greater impact and were associated with CG in response to subsequent bereavement in adult life (Silverman, Johnson, & Prigerson, 2001; Vanderwerker, Jacobs, Murray-Parkes, & Prigerson, 2006).

### **Predictors associated with dependency**

In a study of pre-loss predictors of CG as a consequence of conjugal loss, widowed persons who displayed excessive dependency both in relation to their spouse and as a more general personality trait showed more chronic grief trajectories. Greater levels of support and loss of a spouse who suffered long illness mitigated such complication (Bonanno, Wortman, Lahman, Tweed, Haring, Sonnega, 2002). In examining the relationship between marital quality and adjustment to the impending death of a terminally ill spouse, van Doorn and

colleagues found that having a secure, supportive spouse and an insecure attachment style contributed independently to the severity of CG symptoms (van Doorn, Kasl, Beery, Jacobs, & Prigerson, 1998). Other studies found that relationships with the deceased that were close, supportive, confiding, and dependant were associated with an increased risk of CG (Bonanno et al., 2002; Carr, House, Wortman, Nesse, & Kessler, 2001; Prigerson, Maciejewski, & Rosenheck, 2000). A history of strict parental control during childhood may be associated with risk for the development of spousal dependence and post-bereavement CG symptoms (Johnson, Zhang, Greer, & Prigerson, 2007). Expressions of continuing bonds were found to be related to maladjustment in bereavement (Boelen, Stroebe, Schut, & Zijerveld, 2006a). Maintaining continuing bonds by feeling calmed and supported by memories of the deceased were reported as a strong predictor of intensity of grief symptoms independent of initial grief symptom severity (Boelen et al., 2006a).

Gender differences in spousal bereavement was examined by Chen and colleagues (Chen, Bierhals, Prigerson, Kasl, Mazure & Jacobs, 1999). Widows had higher mean symptom levels of CG which were found to predict sleep changes at the anniversary of the death of the spouse. For widowers, high symptoms of CG predicted hospitalisation, having a physical health event such as cancer, stroke, or a heart attack (Chen et al., 1999). Bereavement-related sleep variables (dreaming of- and ruminating about the deceased) were significantly associated with CG symptomatology. Insomnia proved to be a significant predictor of CG, along with the nature of the death (whether violent or not), the younger age of the deceased, level of closeness with- and relationship to the deceased, recency of the loss, and gender of the bereaved, with women showing greater grief (Hardison, Neimeyer, & Lichstein, 2005).

### **Predictors associated with cognitive behavioural conceptualisations**

Cognitive behavioural conceptualisations of CG propose that negative cognition plays a core role in the development and persistence of emotional problems after bereavement, as it

generates negative emotions which can lead mourners to engage in counterproductive attempts to avoid the implications and the pain of the loss (Boelen, van den Bout, & van den Hout, 2006c). Boelen and colleagues (2006b) found cognitive variables such as negative beliefs about the self, life, and the future, and threatening interpretations of grief reactions to be strongly related to concurrent and prospective levels of CG. These findings support their earlier work where cognitive variables such as global negative beliefs, negative world view (Boelen, van den Bout, & van den Hout, 2003) and avoidance of emotional problems (Boelen, van den Bout, & van den Hout, 2003a) predicted CG. Additionally, individuals who are generally averse to lifestyle change were more vulnerable to CG (Beery, Prigerson, Berhals, Santucci, Newsom, & Maciejewski, 1997). Conversely, a study of bereaved parents by Riley and colleagues (2007) found that dispositional factors such as optimism, active coping, positive reframing, support seeking, and perceived social support were associated with less symptoms of CG (Riley, LaMontagne, Hepworth, & Murphy, 2007).

The various component processes of meaning reconstruction (sense making, benefit finding, and progressive identity change) and their relationship to CG have been studied by Neimeyer and his colleagues. Currier, Holland and Neimeyer (2006) evaluated the possible mediating role of sense making between the cause of death and CG. Results support the notion that although the objective circumstances of the loss carry weight, the survivor's subjective interpretation of the loss is more influential in explaining ensuing grief responses and that sense making is a more critical pathway to CG than the objective cause of death (violent or natural) (Currier et al., 2006). This is supported by a study of bereaved parents, where inability to make sense of the death emerged as the most salient predictor of grief severity, greatly outweighing such factors as cause of death, gender of the parent, or number of months or years since the loss (Keesee, Currier & Neimeyer, 2008).

Similarly, Holland, Currier and Neimeyer (2006) examined the role of sense making, benefit finding, and time since loss in predicting CG among a sample of college students. They reported that when a great deal of sense has been made of the loss, finding benefit or a “silver-lining” in the grief experience was associated with *poorer* grief outcomes, although in the absence of sense making, it may mitigate grief. Moreover, the interaction of sense making and benefit finding in predicting symptoms of CG remained robust regardless of cause of death or relationship to the deceased (Holland et al., 2006).

Finally, several variables concerning the survivor, his or her relationship to the deceased, and the nature of the death as risk factors for CG were studied by Neimeyer, Baldwin and Gillies (2006). An interaction emerged between sense making and ongoing attachment to the deceased, suggesting that strong continuing bonds predicted greater levels of CG, but only when the survivor was unable to make sense of the loss in personal, practical, existential, and spiritual terms (Neimeyer et al., 2006).

### **Predictors of CG in traumatic death**

In studies of adolescents exposed to a peer’s suicide, CG at six months was significantly associated with gender (female). The presence of a previous history of anxiety disorders, feeling that they could have done something to prevent the death, financial problems, and a previous history of depression were associated with PTSD at 6 months and were associated with an 81% risk of CG (Melhem, Day, Shear, Reynolds, Brent, 2004a). In an ongoing five year study of the impact of parental loss on adolescents, the correlation between CG and the number of months since the death was low but statistically significant (Melhem, Moritz, Walker, Shear, & Brent, 2007). The offspring’s feelings that others were accountable for the death were associated with higher scores of CG, along with the offspring feeling that others blamed him or her for the death. CG scores were not higher in children and adolescents who

had a parent die from suicide compared to children who had a parent die from an accident or sudden, natural death (Melhem et al., 2007).

Adults bereaved by suicide of a family member experienced nearly twice the level of CG as distantly related survivors (Mitchell, Kim, Prigerson, & Mortimer-Stephens, 2004). In particular, spouses, parents, and children had significantly higher mean CG scores than in-laws, friends, or co-workers. Relationship classification to the deceased explained 43% of variance in CG scores, suggesting that professional assessments and interventions should take into account the familial and/or social relationship of the bereaved to the deceased. Similarly, Shear and colleagues (2006) found that individuals whose family member died in the September 11, 2001 terrorist attacks were more likely than those whose acquaintance died to screen positive for CG (Shear, Jackson, Essock, Donahue, & Felton, 2006).

A report on parents bereaved by their child's death by suicide, sudden infant death, and fatal accidents found that there was no evidence of suicide survivors having greater difficulties in adapting to the death compared with survivors of SIDS or accidents; however being female predicted CG in the suicide and SIDS sample (Dyregrov, Nordanger, & Dyregrov, 2003). In studies of bereaved parents, a shorter time from diagnosis of cancer to death (Goodenough, Drew, Higgins, & Trethewie, 2004); the death of the child in hospital following stem cell transplantation versus death at home (Drew, Goodenough, Maurice, Foreman, & Willis, 2005); and the child's age, cause and unexpectedness of the death, and the number of remaining children (Wijngaards-de Meij, Stroebe, Schut, Stroebe, van den Bout, van der Heijd et al., 2007) were found to be associated with CG.

### **Predictors associated with caregiving**

Advance preparations for the loss as well as having a good support network have been associated with lower risk for bereavement-related complications in caregivers (Vanderwerker & Prigerson, 2004). Conversely, pessimistic thinking and experiencing a number of severe

stressful life events in caregivers of cancer patients were important predictors in their developing CG (Tomarken, Holland, Schacter, Verderwerken, Zuckerman et al 2008). A study by Barry, Kasl, and Prigerson (2002) evaluated the association between a bereaved person's perceptions of the death (i.e. the extent of their loved one's suffering) and preparedness for the death, and found that lack of preparedness for the death was associated with CG at baseline, and again at 4 and 9 months post-loss, suggesting that persons who perceive themselves as unprepared for the death may be at risk of bereavement associated morbidity. Similarly, a study in a large cohort of caregivers of persons with dementia found that caregivers who were not at all prepared for the death had worse mental health, exhibited more depressive, complicated grief, and anxiety symptoms at the first and subsequent assessment after the death, even when controlling for multiple factors such as the caregiver's physical and mental health before the death (Herbert, Dang, & Schulz, 2006). In another study from this group of researchers, religious beliefs and practices were found to be important for all caregivers of persons with dementia, but after controlling for significant covariates, frequent attendance at religious services, meetings, or activities were associated with less depression and less CG in the bereaved (Herbert, Dang, & Schulz, 2007).

Caregivers of terminally ill spouses, who had higher levels of depression and burden pre-loss, and who reported positive aspects of caregiving pre-loss were found to be at a heightened risk of CG, along with caregivers who perceived they were socially unsupported after the death (Schulz, Boerner, Shear, Zhang, & Gitlin, 2006). A study that examined the effects of changes in role function, caregiving tasks, caregiver burden, and caregiver gratification on symptoms of CG found that caregiver burden was significantly associated with the bereaved's level of depression and CG (Beery, Prigerson, Bierhals, Santucci, Newsom, Maciejewski et al., 1997). Conversely, bereaved family members and close friends of terminally ill cancer patients who died by legal euthanasia in the Netherlands coped better

with respect to grief symptoms and PTSD than bereaved family and friends of comparable cancer patients who died a natural death (Swarte, van der Lee, van der Bom, van der Bout, & Heintz, 2003). In another study, as caregivers' level of interaction with a dying loved one increased, they endorsed more features of CG (Metzger & Gray, 2008). Specifically, expressions of love, affection, continued affiliation, and closeness were positively associated with CG. In addition, a greater degree of communication was related to higher levels of CG when the loss was expected. Similar to other studies, pre-loss acceptance was associated with less CG (Metzger & Gray, 2008).

### **Predictors of CG among adults with serious mental illness**

Predictors of CG among adults with serious mental illness indicate the situational factors surrounding the death, including residing with a close friend or family member at the time of the death, the suddenness of the death, low social support, concurrent stressors, lack of preparation for parental death, and higher levels of social dysfunction (Jones, Harvey, Giza, Rodican, Barreira, & Macias, 2003; Macias, Jones, Harvey, Barreira, Harding, & Rodican, 2004; Piper, Ogrodniczuk, Azim, & Weideman, 2001). In another population of psychiatric patients, self-reported anxiety, depression, and a concurrent Axis I diagnosis was associated with CG (Melhem, Day, Shear, Day, Reynolds, Brent, 2004a). Increased panic attacks, alcohol abuse co-morbidity, higher rates of suicide attempts, greater functional impairment, and poorer social support were found in a population of patients with bipolar disorder who had a loved one die (Simon, Pollack, Fischmann, Perlman, Muriel, Moore et al., 2005). In particular in the CG group, more patients reported a lifetime history of suicide attempts and this association did not diminish after controlling for lifetime panic disorders, with CG more than doubling of the odds of a lifetime suicide attempt (Simon et al., 2005).

### **Discussion**

The nature of CG and its relationship to other syndromes and conditions, and questions about how CG should be defined, assessed, and classified, have been topics of significant and persistent debate (Stroebe, van Son, Stroebe, Kleber, Schut, & van den Bout, 2000). However, there has been a lack of evidence for good practice in bereavement research and services, especially for those who might be at risk of CG following loss. Moreover, there is great diversity in the adjectives used to describe variations of normal grief and conceptualisations of CG, as these differed according to the theoretical approach of the investigators. This definitional and theoretical confusion has created uncertainty for health care providers who endeavour to make sense of the complex and conflicting literature. In undertaking this systematic review, we note that in more recent studies there is increased consistency in the terminology and measurement of CG.

A small percentage of the population (approximately 10% to 20%) experiences complicated grief. CG symptoms, which when elevated and protracted beyond six months, (Prigerson & Jacobs, 2001b) predict substantial morbidity such as risk of cancer, cardiac events, increased alcohol and tobacco consumption, and suicidal ideation (Chen et al., 1999; Prigerson et al., 1997; Prigerson, et al., 1995). Unlike the symptoms of bereavement-related depression, the symptoms of CG have been found to persist despite the passage of time and the treatment of the bereaved with tricyclic antidepressants (Jacobs, Nelson, & Zisook, 1987; Pasternak et al., 1991; Prigerson, et al., 1996; Prigerson, et al., 1995).

The framework developed by Stroebe and Schut provides a succinct categorisation for the consideration of risk factors (Stroebe, Hansson, Stroebe, & Schut, 2001). These are: situational factors related to the death, personal factors such as gender and characteristics prior to the death, and interpersonal factors such as the availability of social and emotional support from family and friends.

Our review relating to situational factors associated with the death provides some evidence that those bereaved by traumatic death such as suicide have an increased risk of CG. This supports the notion that the unique features of traumatic death, when present in suicide or in any other traumatic loss, account for much of the variance in bereavement outcome in comparison to natural causes of death. There were a number of limitations in these studies, and further investigations are warranted, such as longitudinal studies to determine whether CG and depression are preludes to suicidal ideation. However, in studies on suicidal ideation, we noted the consistent use of the Inventory of Complicated Grief for assessment (Mitchell, Kim, Prigerson, & Mortimer, 2005; Prigerson et al., 1999).

Consistent with the notion that CG is fundamentally an attachment disorder, personal factors—in particular, insults to a sense of security caused by weak parental bonding in childhood—present a vulnerability to the onset of CG later in life (Silverman et al., 2001; Vanderwerker et al., 2006). Due to the cross-sectional designs of these studies, recall bias could have inflated the associations between reports of current symptomatology and prior adversities. Additionally, the small sample sizes, stratification, and the rarity of some outcomes suggest that the estimate of risk may not be reliable. Given the findings that having an insecure attachment style and excessive dependency, both in the form of dependency on the spouse and as a more general personality trait, are predictive of CG (van Doorn et al 1998; Bonanno et al., 2002), interventions that promote secure alternative attachments to others and emotional re-engagement are needed. Results of studies on cognitive appraisal, such as interpreting grief reactions as indicating mental insanity, inadequate adaptation, or personal incompetence (Boelen et al., 2003b); assigning negative meanings to grief reactions (Boelen et al., 2003b) and cognitive and emotional upheaval surrounding the death of a healthy spouse (Bonanno, Wortman, & Nesse, 2004), support the notion that negative interpretations of grief reactions in themselves do not indicate disturbance. They can; however, play a role in the

development and maintenance of emotional problems after bereavement. As Bonnano and colleagues (2004) would argue, perhaps cognitive appraisals influence the degree to which these reactions are experienced as distressing. Consequently, they can then influence the degree to which mourners engage in avoidance strategies that are likely to impede recovery and may serve to exacerbate and prolong grief rather than ameliorate grief reactions.

The role of meaning making has emerged as a key factor in CG. Although the circumstances of the death are influential in grief responses, it appears that the survivor's subjective interpretation of the loss and being able to make sense of the loss in personal, practical, existential, and spiritual terms is influential in explaining ensuing grief responses, as documented in several studies (Neimeyer, Burke, Mackay, & Stringer, 2010).

Situational factors related to the death include: place of death (e.g. hospital vs. home), the time from diagnosis to death (Goodenough et al., 2004), perceptions of the death being more violent, and lack of preparedness for the death (Barry et al., 2002), a pattern of high distress pre-death (Boerner, Wortman, & Bonanno, 2005), and persistent feelings of being stunned or shocked by the death (Prigerson, 1996). The question of "preparedness" for death and the degree of trauma and suffering associated with the person's death may be pertinent issues when examining family members who may be at greater risk for a complicated grief response. Preparation for the person's death and a sense that death was peaceful and not distressing may be factors associated with a more favourable bereavement response. Reducing caregiver burden, treating depression before the death of the loved one, and providing supportive psychosocial- or caregiver skills training can help the caregiver better manage the sequelae of death (Schulz, Boerner, Shear, Zhang, Gitlin, 2006).

### **Limitations**

We acknowledge two types of limitations: those related to the methodology of conducting systematic reviews and those more specific to the nature of CG. All studies are subject to

bias, with systematic reviews being subject to the same biases possible in the original studies, as well as biases specifically related to the review process. Biases include publication bias, multiple publication bias, time-lag bias, language bias, and outcome reporting bias (Egger, Juni, Bartlett, Holenstein, & Sterne, 2003). Other biases can result if the methodology to be used in a review is not defined before the review commences. Detailed knowledge of studies performed in the area of interest may influence the eligibility criteria for inclusion of studies in the review and may therefore result in biased results. For example, studies with more positive results may preferentially be included in a review, thus biasing the results and overestimating effects.

We endeavoured to conduct a comprehensive review by contacting key authors for information about current studies that may be either “in press” or published recently. In addition, the use of broad terms in our searches, cross-referencing, and searches by author’s name has produced a thorough systematic review. Searches were limited to articles published in English. English language journals are predominantly published in first world countries and this may subsequently limit exposure to some bereavement issues. In addition, studies might not be listed in this review because the journal was not cited on the database or the database did not provide an abstract.

The challenges of undertaking research to investigate complicated grief have been well documented and include inconsistent use of definitions, instruments, cross-sectional designs, heterogeneous samples, high attrition, demographic differences between cases and controls, differences in length of time since death, differences in types of death experienced, and use of recruitment techniques that may contribute to biases in sample characteristics. In addition, the relation between the date of the loss and when the self-report measurements were taken may have created recall biases. The limitations in the studies on predictors of CG typically included small sample sizes, particularly, in studies where stratification was used. However,

some recent exceptions in the form of large-scale studies suggest that stronger evidence in predicting CG is emerging (e.g. Currier et al 2006; Neimeyer et al. 2006).

In undertaking our systematic review, the evidence base applied in classifying literature was the Australian National Health & Medical Research Council's evidence hierarchy (NH&MRC, 2000). Levels of Evidence range from Level 1 (systematic review of all relevant randomised controlled trials) to Level IV (case series—either pre-test or post-test). The majority of studies in our review (n=40) were categorised as Level of Evidence III-2 – IV, that is, either comparative studies with concurrent or historical controls, case-control studies (i.e. interrupted time series with a control group), or two or more single arms or case series (e.g. either post-test, or pre-test and post-test); (Kristjanson, Lobb, Aoun, Monterosso, 2005). However, other indicators of quality in individual studies, such as sample size, quality of instrumentation, reliability of interviews, or diagnosis can be of more relevance. For example, we noted in later studies, an increased consistency in the use of measurement tools, along with the use of larger sample sizes.

## **Conclusions**

A large proportion of studies on predictors of CG have related to spousal/conjugal grief in later life. Few studies addressing CG have been undertaken with children or adolescents; although, more recently, Melham and colleagues (2004a) have begun to build a body of work with adolescents. No studies were identified in this review that specifically addressed CG in indigenous populations. The bulk of the research material identified in this area focussed on intergenerational grief or historical grief.

Notwithstanding the limitations mentioned in the previous section, some direction has emerged through our review. Further research into conceptualisations of CG in terms of attachment theory, and constructivist and cognitive-behavioural concepts of finding purpose and meaning after bereavement is warranted. This systematic review has confirmed the need

for targeted research to address the gaps in knowledge that exist in the area of CG. Without systematic and trustworthy investigations, health professionals and service providers endeavour to provide interventions and services based on anecdotal experiences and trial-and-error approaches.

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<b>Table 1. Summary of Studies on Predictors of Complicated Grief (n=40)</b>		
Authors	Population	Results
Beery et al. 1997	Elderly spouses of terminally ill [n=70]	Caregiver burden was found to be significantly associated with both traumatic grief and depression. No significant association was found between the time spent caring and duration of care-giving with either depression or traumatic grief. Change in role function of the caregiver was associated with depression but not traumatic grief. No significant association was found between caregivers' gratification and either depression or traumatic grief.
Van Doorn et al. 1998	Carergivers of terminally ill spouse	Security-enhancing- and supportive marriages (pre-loss) were positively associated with severity of traumatic grief

	[n=59]	symptoms. Insecure attachment styles were significantly associated with borderline levels of traumatic grief. Attachment style and marital quality did not interact and were not associated with depression.
Brintzen-hofeSzoc et al. 1999	Elderly spouses of cancer patients [n=37]	Enmeshment was associated with increased psychological distress. In particular, complicated grief in the surviving spouse was associated with higher levels of distress, depression, and anxiety. This study supports the merits of screening surviving spouses before the death of their spouse.
Chen et al. 1999	Future bereaved spouses [n=150]	Widows had higher mean symptom levels for traumatic grief, depression, and anxiety at all four time points post-loss. High traumatic grief symptom levels at 6 months

		<p>predicted physical health outcomes at 25 months for both men and women. High traumatic grief symptom levels in first year post-loss tended to have a stronger influence on the physical and mental health of widowers including hospitalization, cancer, stroke, or heart attack.</p>
<p>Silverman et al. 2001</p>	<p>Recently widowed [n = 85]</p>	<p>Participants who reported prior adversities in their life were generally more distressed following bereavement than those who did not report adversities. In particular, adversities occurring in childhood such as death of a parent and abuse seemed to have a greater impact and were significantly associated with traumatic grief.</p>
<p>Melhem et al.</p>	<p>Bereaved in</p>	<p>Complicated grief scores and functional</p>

2001	psycho-therapy group [n=23]	impairment were higher among patients with more than one concurrent Axis I diagnosis. Hence, prior psychiatric illness may be a risk factor for traumatic grief.
Piper et al. 2001	Psychiatric outpatients [n = 235] Axis I diagnosis	Time since loss was indicative of long-term CG. Significantly higher levels of social dysfunction and depression disturbance variables were found in the severe CG group (n = 79). Depression, anxiety, and grief symptomatic distress were significantly higher for severe CG group compared to moderate CG and those who had not experienced loss.
Barry et al. 2002	Elderly bereaved [n=122]	Lack of preparation for the death was associated with CG. Perception of suffering, duration of illness, or violent death was not

		associated with CG.
Bonanno et al. 2002	Widowed older persons [n=205]	Excessive dependency on spouse, specifically, and as a general personality variable, less instrumental support, and the greater likelihood of having a healthy spouse were associated with CG.
Boelen et al. 2003a	Bereaved 1 <sup>st</sup> degree relatives [n=329]	Each of the cognitive variables was significantly related to traumatic grief, depression, and anxiety symptom severity. 49% of variance in traumatic grief severity was explained by global negative beliefs about life, threatening interpretations of grief reactions, negative beliefs about the world, and the future. 10% of ITG score variance was explained by demographic variables (age, time since loss, and level of education).

Dyregrov et al. 2003	Child loss [n=232] Suicide [n=128] SIDS [n=36] Accident [n=68]	Self-isolation was found to be the best predictor of psychosocial distress, and being female predicted CG in the suicide and SIDS samples. There was no evidence of suicide survivors having greater difficulties in adapting to the death compared with survivors of SIDS or accidents.
Jones et al. 2003	Severely mentally ill adults [n=148]	Lack of preparation for parental death resulted in more severe and prolonged grief (n = 33)
Swarte et al. 2003	Survivors of cancer patients who died by	Less traumatic grief, less current feelings of grief, and less PTSD reactions were found in family and friends of cancer patients who died from euthanasia in comparison with

	euthanasia [n=189] and natural death [n=316]	natural death, even after adjustment for other risk factors.
Boelen et al. 2003b	Bereaved individuals [n=234]	Negative interpretations of grief reactions were highly associated with the degree to which these reactions were experienced as distressing, the degree to which mourners engaged in avoidance behaviors, and the severity of the symptoms of traumatic grief and depression. Behavioral and cognitive avoidance strategies were significantly related to the severity of traumatic grief and depression.
Mitchell et al. 2004	Bereaved by suicide	Closely related suicide survivors experienced nearly twice the level of CG

	<p>[n=60]</p> <p>Closely related</p> <p>[n=27],</p> <p>distantly related</p> <p>[n=33]</p>	<p>than distantly related survivors</p>
<p>Melhem et al. 2004</p>	<p>Bereaved adolescents of peer suicide</p> <p>[n=146]</p>	<p>Complicated grief at 6 months was significantly associated with female gender, participants' feeling that they could have done something to prevent the death, and a previous history of depression.</p>
<p>Goodenough et al. 2004</p>	<p>Bereaved parents of cancer</p>	<p>Fathers reported significantly higher levels of depression, anxiety, and stress when a child died in the hospital rather than at home. Mothers tended to show smaller</p>

	patients [n =25 mother-father dyads]	differences in psychological outcomes as a function of place of death. Shorter time since child's death, higher depression scores, and higher level of family friction were associated with higher ratings of traumatic distress, separation distress, and core grief. Mothers had higher ratings of traumatic distress and core grief. Death in hospital was associated with higher core grief scores.
Macias et al. 2004	Severely mentally ill adults [n = 148]	Complicated grief was associated with the number of situational factors that occurred closer to death [n = 18] e.g. residing with the individual, suddenness of the death, having low social support, and concurrent stressors.
Hardison et al. 2005	Bereaved psychology students [n=508]	Bereaved insomniacs had significantly higher CG scores than bereaved non-insomniacs. Bereavement-related sleep variables (dreaming of deceased and

		<p>ruminating about the deceased) were significantly related to CG symptoms. CG was more frequent in traumatically bereaved young adults.</p>
<p>Drew et al. 2005</p>	<p>Bereaved parents [n = 56]</p>	<p>Parents of a child who had a stem cell transplant (SCT) and died in hospital had a greater likelihood of meeting the criteria for CG than for those parents whose child had not received a SCT.</p>
<p>Simon et al. 2005</p>	<p>Individuals with bipolar disorder [n = 103]</p>	<p>CG sample reported lifetime history of a suicide attempt. CG associated with higher rates of current alcohol abuse, current panic disorder (with or without agoraphobia), phobic avoidance, and lifetime obsessive-compulsive disorder. CG was associated with poorer functioning and lower levels of</p>

		social support.
Wijngaards-de Meij et al. 2005	Bereaved parents [n=219]	Grief was predicted by child's age, cause- and unexpectedness of death, and the number of remaining children.
Vanderwerker et al. 2006	Recently bereaved community members [n = 283]	Childhood separation anxiety was significantly associated with CG after controlling for gender, level of education, kinship relationship, history of psychiatric disorders, and history of childhood abuse.
Johnson et al. 2006	Bereaved community members [n = 170]	Respondents with CG, general anxiety disorder, major depressive disorder, and those who reported significant suicidal ideation had significantly elevated Bereavement Dependency Scale scores, relative to those without these conditions.
Boelen et al.	Bereaved	Negative beliefs about self, life, and the

2006a	Individuals <5 months post-loss [n = 97]	future, and threatening interpretations of grief reactions were associated with symptoms of concurrent and/or prospective CG.
Boelen et al. 2006b	Bereaved individuals [n = 56]	Continuing bonds with the deceased through recovering memories was a strong predictor of grief but not depression, whereas continuing bonds through the use of the deceased person's possessions was a weak predictor of both grief and depression.
Schulz et al. 2006	Bereaved caregivers [n = 217]	Caregivers who had high levels of pre-loss depressive symptoms and burden, who reported positive features of caregiving, and who were caring for more cognitively impaired patients were more likely to report clinical levels of CG post-loss.

Neimeyer et al. 2006	Bereaved psychology students [n=506]	An interaction emerged between sense making and ongoing attachment to the deceased, suggesting that strong continuing bonds predicted greater level of traumatic grief and separation distress, but only when the survivor was unable to make sense of the loss in personal, practical, existential, or spiritual terms.
Holland et al. 2006	Bereaved college students [n=1,022]	Low sense-making and low benefit finding were associated with higher levels of CG.
Hebert, et al. 2006	Bereaved caregivers [n=222]	Caregivers who were unprepared for the death had more depression, anxiety, and CG symptoms.
Currier et al.	Bereaved	A low capacity for sense making emerged as

2006	psychology students [n=1056]	an explanatory mechanism for the association between violent loss and CG.
Shear et al. 2006	Bereaved from September 11 [n=149]	Individuals who had a family member die were more likely to screen positive for CG than those who had an acquaintance die.
Herbert et al. 2007	Bereaved caregivers [n=1,229]	After controlling for significant covariates, frequent attendance at religious services, meetings, and/or activities were associated with less depression and less CG in the bereaved.
Melhem et al. 2007	Bereaved children and adolescents [n = 129]	CG in children and adolescents was significantly related to functional impairment even after controlling for current depression, anxiety, and PTSD. CG was also

		associated with other measures of psychopathology, including suicidal ideation.
Johnson et al. 2007	Widowed adults [n = 192]	A high level of perceived parental control during childhood was associated with elevated levels of dependency on the deceased spouse and with symptoms of CG.
Riley et al. 2007	Bereaved mothers [n =35]	More optimistic mothers reported less intense grief reactions and less distress indicative of CG. Additionally, mothers who usually coped actively had less intense grief reactions. Mothers who habitually coped using positive reframing has less intense grief reactions and less CG.
Ott et al. 2007	Bereaved	Those categorised in the chronic grief cluster

	adults (n = 141)	experienced the highest level of grief and depression, more sudden deaths, the lowest self-esteem, the highest marital dependency, and met criteria for CG.
Keesee et al. 2008	Bereaved parents (n=157)	The cause of the death (violent in nature) significantly predicted intensity of CG. Sense making and benefit finding significantly increased the portion of variance explained by grief severity, and benefit finding was found to predict lower severity of CG.
Metzger & Gray 2008	Bereaved members of on-line support group (n = 60)	As the level of interaction with a dying loved one increased, more features of CG were endorsed. Expressions of love and affection, and continued affiliation and closeness were significantly positively associated with CG.

		A greater degree of communication was related to higher levels of CG after an expected loss. Pre-loss acceptance was associated with lower CG.
Tomarken et al 2008	Caregivers of cancer patients (n = 248)	Pessimistic thinking and severity of stressful life events was an important factor in developing CG.

## References

- Barry, L. C., Kasl, S. V., & Prigerson, H. G. (2002). Psychiatric disorders among bereaved persons: The role of perceived circumstances of death and preparedness for death. *American Journal of Geriatric Psychiatry, 10*, 447-457.
- Beery, L. C., Prigerson, H. G., Bierhals, A. J., Santucci, L. M., Newsom, J. T., Maciejewski, P. K., et al. (1997). Traumatic grief, depression and care giving in elderly spouses of the terminally ill. *Omega: Journal of Death & Dying, 35*, 261-279.
- Boelen, P. A., Stroebe, M. S., Schut, H. A. W., & Zijerveld, A. M. (2006a). Continuing bonds and grief: A prospective analysis. *Death Studies, 30*, 767-776.
- Boelen, P. A., van den Bout, J., & van den Hout, M. A. (2003a). The role of cognitive variables in psychological functioning after the death of a first degree relative. *Behaviour, Research and Therapy, 41*, 1123-1136.
- Boelen, P. A., van den Bout, J., & van den Hout, M. A. (2003b). The role of negative interpretations of grief reactions in emotional problems after bereavement. *Journal of Behavior Therapy and Experimental Psychiatry, 34*, 225-238.
- Boelen, P. A., van den Bout, J., & van den Hout, M. A. (2006b). Negative cognitions and avoidance in emotional problems after bereavement: A prospective study. *Behaviour Research and Therapy, 44*, 1657-1672.
- Boerner, K., Wortman, C. B., & Bonanno, G. A. (2005). Resilient or at risk? A 4-year study of older adults who initially showed high or low distress following conjugal loss. *The Journals of Gerontology, 60B*, 67-73.
- Bonanno, G. A., Neria, Y., Mancini, A., Coifman, K. G., Litz, B., & Insel, B. (2007). Is there more to complicated grief than depression and posttraumatic stress disorder? A test of incremental validity. *Journal of Abnormal Psychology, 116*, 342-351.
- Bonanno, G. A., Wortman, C. B., Lehman, D. R., Tweed, R. G., Haring, M., Sonnega, J.,

- (2002). Resilience to loss and chronic grief: A prospective study from pre-loss to 18-months post-loss. *Journal of Personality and Social Psychology*, 83, 1150-1164.
- Bonanno, G. A., Wortman, C. B., & Nesse, R. M. (2004). Prospective patterns of resilience and maladjustment during widowhood. *Psychology and Aging*, 19, 260-271.
- Brintzen-hofeSzoc, K. M., Smith, E. D., & Zabora, J. R. (1999). Screening to predict complicated grief in spouses of cancer patients. *A Multidisciplinary Journal of Cancer Care*, 7, 233-239.
- Byrne, G. J., & Raphael, B. (1994). A longitudinal study of bereavement phenomena in recently widowed elderly men. *Psychological Medicine*, 24, 411-421.
- Carr, D., House, J. S., Wortman, C. B., Nesse, R. M., & Kessler, R. C. (2001). Psychological adjustment to sudden and anticipated spousal loss among older widowed persons. *The Journals of Gerontology*, 56B, S237-S248.
- Chen, J. H., Bierhals, A. J., Prigerson, H. G., Kasl, S. V., Mazure, C. M., & Jacobs, S. (1999). Gender differences in the effects of bereavement-related psychological distress in health outcomes. *Psychological Medicine*, 29, 367-380.
- Currier, J. M., Holland, J. M., & Neimeyer, R. A. (2006). Sense-making, grief, and the experience of violent loss: Toward a mediational model. *Death Studies*, 30, 403-428.
- Drew, D., Goodenough, B., Maurice, L., Foreman, T., & Willis, L. (2005). Parental grieving after a child dies from cancer: is stress from stem cell transplant a factor? *International Journal of Palliative Nursing* 11, 266-73.
- Dyregrov, K., Nordanger, D., & Dyregrov, A. (2003). Predictors of psychosocial distress after suicide, SIDS and accidents. *Death Studies*, 27, 143-165.
- Egger, M., Juni, P., Bartlett, C., Holenstein, F., & Sterne, J. (2003). How important are comprehensive literature searches and assessment of trial quality in systematic reviews? Empirical study. *Health Technology Assessments*, 7, 1-76.

- Faschingbauer, T. R. (1981). *The Texas Revised Inventory of Grief manual*. Houston: Honeycomb.
- Goodenough, B., Drew, D., Higgins, S., & Trethewie, S. (2004). Bereavement outcomes for parents who lose a child to cancer: Are place of death and sex of parent associated with differences in psychological functioning? *Psycho-oncology*, *13*, 779-791.
- Hardison, H. G., Neimeyer, R. A., & Lichstein, K. L. (2005). Insomnia and complicated grief symptoms in bereaved college students. *Behavioral Sleep Medicine*, *3*, 99-111.
- Herbert, R. S., Dang, Q. Y., & Schulz, R. (2006). Preparedness for the death of a loved one and mental health in bereaved caregivers of patients with dementia: Findings from the REACH study. *Journal of Palliative Medicine*, *9*, 683-693.
- Herbert, R., Dang, Q., & Schulz, R. (2007) Religious beliefs and practices are associated with better mental health in family caregivers of patients with dementia: Findings from the REACH Study. *American Journal of Geriatric Psychiatry* *15*, 292 - 390.
- Holland, J. M., Currier, J. M., & Neimeyer, R. A. (2006). Meaning reconstruction in the first two years of bereavement: The role of sense-making and benefit-finding. *Omega*, *53*, 175-191.
- Jacobs, S. C., Nelson, J. C., & Zisook, S. (1987). Treating depressions of bereavement with antidepressants. *Psychiatric Clinics of North America*, *10*, 501-510.
- Johnson, J. G., Vanderwerker, L. C., Bornstein, R. F., Zhang, B., & Prigerson, H. G. (2006). Development and validation of an instrument for the assessment of dependency among bereaved persons. *Journal of Psychopathology and Behavioral Assessment*, *28*, 301-318.
- Johnson, J. G., Zhang, B. H., Greer, J. A., & Prigerson, H. G. (2007). Parental control, partner dependency, and complicated grief among widowed adults in the community. *Journal of Nervous and Mental Disease*, *195*, 26-30.

- Jones, D., Harvey, J., Giza, D., Rodican, C., Barreira, P., & Macias, C. (2003). Parental death in the lives of people with serious mental illness. *Journal of Loss & Trauma, 8*, 307-322.
- Keesee, N.J., Currier, J.M. & Neimeyer, R.A. (2008) Predictors of grief following the death of one's child: The contribution of finding meaning. *Journal of Clinical Psychology* 64, 1145-1163
- Lichtenthal, W. G., Cruess, D. G., & Prigerson, H. G. (2004). A case for establishing complicated grief as a distinct mental disorder in DSM-V. *Clinical Psychology Review, 24*, 637-662.
- Kristjanson, L.J., Lobb, E.A., Aoun, S., Monterosso, L., Halkett, G. (2005). A systematic review of the literature on complicated grief. Commonwealth of Australia, Department of Health & Ageing, Canberra.
- Macias, C., Jones, D., Harvey, J., Barreira, P., Harding, C., & Rodican, C. (2004). Bereavement in the context of serious mental illness. *Psychiatric Services, 55*, 421-426.
- Melhem, N., Day, N., Shear, K.M., Day, R., Reynolds, C.F. Brent, D.A. (2004a). *Traumatic grief among adolescents exposed to their peer's suicide*. *American Journal of Psychiatry, 161*, 1411-1416.
- Melhem, N., Day, N., Shear, K., Day, R., Reynolds, C. F., & Brent, D. A. (2004b). Predictors of complicated grief among adolescents exposed to a peer's suicide. *Journal of Loss & Trauma, 9*, 21-34.
- Melhem, N. M., Moritz, G., Walker, M., Shear, M. K., & Brent, D. (2007). Phenomenology and correlates of complicated grief in children and adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry, 46*, 493-499.
- Metzger, P.L. & Gray, M.J. (2008). End-of-life communication and adjustment pre-loss

- communication as a predictor of bereavement-related outcomes. *Death Studies*, 32, 301-325.
- Middleton, W., Burnett, P., Raphael, B., & Martinek, N. (1996). The bereavement response: A cluster analysis. *The British Journal of Psychiatry*, 169, 167-171.
- Mitchell, A., Kim, Y., Prigerson, H., & Mortimer-Stephens, M. (2004). Complicated grief in survivors of suicide. *Crisis*, 25, 12-18.
- Mitchell, A., Kim, Y., Prigerson, H. G., & Mortimer, M. (2005). Complicated grief and suicidal ideation in adult survivors of suicide. *Suicide & Life-Threatening Behavior*, 35, 498-506.
- Neimeyer, R. A., Baldwin, S. A., & Gillies, J. (2006). Continuing bonds and reconstructing meaning: Mitigating complications in bereavement. *Death Studies*, 30, 715-738.
- Neimeyer, R. A., Burke, L., Mackay, M. & Stringer, J. (2010). Grief therapy and the reconstruction of meaning: From principles to practice. *Journal of Contemporary Psychotherapy*, in press [DOI 10.1007/s10879-009-9135-3].
- National Health & Medical Research Council (2000). How to review the evidence: Systematic identification and review of the scientific literature. Canberra: Commonwealth of Australia.
- Ott, C. H., Lueger, R. J., Kelber, S. T., & Prigerson, H. G. (2007). Spousal bereavement in older adults - Common, resilient, and chronic grief with defining characteristics. *Journal of Nervous and Mental Disease*, 195, 332-341.
- Pasternak, R. E., Reynolds, C. F., Schlernitzauer, M., Hoch, C. C., Buysse, D. J., Houck, P. R., (1991). Acute open-trial nortriptyline therapy of bereavement-related depression in late life. *The Journal of Clinical Psychiatry*, 52, 307-310.
- Piper, W. E., Ogrodniczuk, J. S., Azim, H. F., & Weideman, R. (2001). Prevalence of loss and complicated grief among psychiatric outpatients. *Psychiatric Services*, 52, 1069-1074.

- Prigerson, H., Bierhals, A. J., Kasl, S. V., Reynolds, C. F., Shear, K., Newsom, J. T., et al. (1996). Complicated grief as a disorder distinct from bereavement-related depression and anxiety: A replication study. *American Journal of Psychiatry*, *153*, 1484-1486.
- Prigerson, H., Bierhals, A. J., Kasl, S. V., Reynolds, C. F., Shear, M. K., Day, N., et al (1997). Traumatic grief as a risk factor for mental and physical morbidity. *American Journal of Psychiatry*, *154*, 616-623.
- Prigerson, H., Bridge, J., Maciejewski, P., Beery, L. C., Rosenheck, R., Jacobs, S., et al. (1999). Influence of traumatic grief on suicidal ideation among young adults. *American Journal of Psychiatry*, *156*, 1994-1995.
- Prigerson, H., Frank, E., Kasl, S. V., Reynolds, C. F., Anderson, B., Zubenko, G. S. et al (1995). Complicated grief and bereavement-related depression as distinct disorders: Preliminary empirical validation in elderly bereaved spouses. *American Journal of Psychiatry*, *152*, 22-30.
- Prigerson, H., & Jacobs, S. (2001a). Perspectives on care at the close of life. Caring for bereaved patients: "All the doctors just suddenly go". *Journal of the American Medical Association*, *286*, 1369-1376.
- Prigerson, H., & Jacobs, S. (2001b). Traumatic grief as a distinct disorder. In M. S. Stroebe, R. O. Hansson, W. Stroebe & H. Schut (Eds.), *Handbook of Bereavement* (pp. 613-645). Washington, DC: American Psychological Association Press.
- Prigerson, H., Maciejewski, P. K., Reynolds, C. F., Bierhals, A. J., Newsom, J. T., Fasiczka, A., et al. (1995). Inventory of complicated grief: A scale to measure maladaptive symptoms of loss. *Psychiatry Research*, *59*, 65-79.
- Prigerson, H., Shear, M. K., Newsom, J. T., Frank, E., Reynolds, C. F., Maciejewski, P. K., et al. (1996). Anxiety among widowed elders: Is it distinct from depression and grief? *Anxiety*, *2*, 1-12.

- Prigerson, H. G., Maciejewski, P. K., & Rosenheck, R. (2000). The interactive effects of marital harmony and widowhood on health, health service utilization and costs. *Gerontologist, 40*, 349-357.
- Prigerson, H.G., Horowitz, M.J., Jacobs, S.C., Parkes, C.M., Aslan, M., Goodkin, K. et al. (2009) Prolonged Grief Disorder: Psychometric validation of criteria proposed for DSM-V ICD-11. *PloS Medicine, 6*, 1-12.
- Riley, L. P., LaMontagne, L. L., Hepworth, J. T., & Murphy, B. A. (2007). Parental grief responses and personal growth following the death of a child. *Death Studies, 31*, 277-299.
- Schulz, R., Boerner, K., Shear, K., Zhang, S., & Gitlin, L. N. (2006). Predictors of complicated grief among dementia caregivers: A prospective study of bereavement. *American Journal of Geriatric Psychiatry, 14*, 650-658.
- Shear, K., & Shair, H. (2005). Attachment, and loss, and complicated grief. *Developmental Psychobiology, 47*, 253-267.
- Shear, K. M., Jackson, C. T., Essock, S. M., Donahue, S. A., & Felton, C. J. (2006). Screening for complicated grief among Project Liberty service recipients 18 months after September 11, 2001. *Psychiatric Services, 59*, 1291-7.
- Silverman, G. K., Johnson, J. G., & Prigerson, H. G. (2001). Preliminary explorations of the effects of prior trauma and loss on risk for psychiatric disorders in recently widowed people. *The Israel Journal of Psychiatry and Related Sciences, 38*, 202-215.
- Simon, N. M., Pollack, M. H., Fischmann, D., Perlman, C. A., Muriel, A. C., Moore, C. W., et al. (2005). Complicated grief and its correlates in patients with bipolar disorder. *Journal of Clinical Psychiatry, 66*, 1105-1110.
- Stroebe, M., Hansson, R. O., Stroebe, W., & Schut, H. (Eds.). (2001). *Handbook of bereavement research*. Washington, DC: American Psychological Association.

- Stroebe, M., van Son, M., Stroebe, W., Kleber, R., Schut, H., & van den Bout, J. (2000). On the classification and diagnosis of pathological grief. *Clinical Psychology Review, 20*, 57-75.
- Swarte, N. B., van der Lee, M. L., van der Bom, J. G., van der Bout, J., & Heintz, P. M. (2003). Effects of euthanasia on the bereaved family and friends: A cross sectional study. *British Medical Journal, 327*, 189-192.
- Tomarken, A., Holland, J., Schachter, S., Vanderwerken, L., Zuckerman, E. Nelson, C. et al. (2008). Factors of complicated grief pre-death in caregivers of cancer patients. *Psycho-oncology, 17*, 105-111.
- van Doorn, C., Kasl, S., Beery, L. C., Jacobs, S., & Prigerson, H. G. (1998). The influence of marital quality and attachment styles on traumatic grief and depressive symptoms. *Journal of Nervous & Mental Disease, 186*, 566-573.
- Vanderwerker, L. C., Jacobs, S. C., Murray-Parkes, C., & Prigerson, H. G. (2006). An exploration of associations between separation anxiety in childhood and complicated grief in later-life. *The Journal of Nervous and Mental Diseases, 194*, 121-123.
- Vanderwerker, L. C., & Prigerson, H. G. (2004). Social support and technological connectedness as protective factors in bereavement. *Journal of Loss & Trauma, 9*, 45-57.
- Wijngaards-de Meij, L., Stroebe, M., Schut, H., Stroebe, W., van den Bout, J., van der Heijden, P., et al. (2005). Couples at risk following the death of a child: Predictors of grief versus depression. *Journal of Counselling and Clinical Psychology, 73*, 617-622.
- Zhang, B. H., El-Jawahri, A., & Prigerson, H. G. (2006). Update on bereavement research: Evidence-based guidelines for the diagnosis and treatment of complicated bereavement. *Journal of Palliative Medicine, 9*, 1188-1203.

