



Research report

The heterogeneity of long-term grief reactions

Jenny H. Lotterman^{a,*}, George A. Bonanno^a, Isaac Galatzer-Levy^b^a Teachers College, Columbia University, New York, NY, USA^b New York University School of Medicine, New York, NY, USA

ARTICLE INFO

Article history:

Received 14 March 2014

Received in revised form

30 April 2014

Accepted 23 May 2014

Available online 2 June 2014

Keywords:

Bereavement
Complicated grief
Depression
Prospective
Resilience

ABSTRACT

Background: Individuals experience the loss of a spouse in varied ways. There is growing recognition of major depressive disorder and complicated grief as distinct post-bereavement disorders. However, most studies focusing on these different courses of functioning have not examined pre-loss functioning.

Methods: We used data from a prospective population based study to examine depression and grief among conjugally bereaved older adults. We compared latent trajectories of grief and depression symptoms based on data from pre-loss and 6, 18, and 48 months post-loss, and examined a number of pre- and post-loss predictor variables.

Results: The chronic grief and chronic depression trajectories did not differ in grief symptoms at any post-loss time point. However, a number of pre- and post-loss variables uniquely differentiated these two distinct trajectories.

Limitations: Measures used in the current study were based on self-report and compared only two trajectories. Additionally, the sample was restricted to older adults (M age=72) and thus our findings may not generalize to younger populations.

Conclusions: These two distinct trajectories – chronic grief and chronic depression – may appear similar when examining grief symptoms alone, though it is apparent that they have different long-term courses of functioning. It is important to understand pre-loss functioning as well as variables associated with each group in order to appropriately target treatment.

© 2014 Elsevier B.V. All rights reserved.

1. Introduction

While the death of a spouse is undoubtedly a uniquely stressful experience, recent research suggests that individuals experience bereavement in markedly different ways (Bonanno et al., 2002; Bonanno and Kaltman, 1999, 2001; Galatzer-Levy and Bonanno, 2012; Wortman and Silver, 2001). Indeed, approximately 10–15% of bereaved individuals will evidence long-term problems in functioning, while many others will exhibit a relative absence of grief symptoms, with much variation in between these two extremes (Bonanno, 2004, 2005; Bonanno et al., 2007; Horowitz et al., 1997).

Within the past decade, there has been debate concerning how to conceptualize post-bereavement disturbance, with disagreement concerning whether long-term grief reactions and chronic depression following loss are separable psychological phenomena. A growing consensus recognizes that *complicated grief* (CG) and *major depressive disorder* (MDD) are unique disorders, including different symptomatology profiles, courses, and responses to

treatment (Bryant, 2013; Deno et al., 2011; Zisook and Kendler, 2007). Understanding the long-term differences and similarities between grief reactions and depressive episodes post-bereavement has important treatment implications. As these reactions represent differing courses of functioning, it is additionally important to isolate predictors and indicators of these trajectories in order to better anticipate who might benefit from targeted interventions.

The current study focuses on bereaved individuals who evidence long-term difficulties coping with loss, and investigates whether they can be characterized as a single group or as multiple groups with unique symptom patterns. There remain a number of open questions resulting from methodological limitations of previous research, which has largely focused on cross-sectional data and has not been able to capture different patterns of response over time. With some exceptions (e.g., Bonanno et al., 2002), the majority of these studies have failed to include information about functioning measured pre-loss, a crucial component in determining patterns of grief reactions and how to understand the impact of pre-loss psychopathology on post-loss functioning. In fact, a number of studies have demonstrated that accurate assessment of pre-event or ongoing depression is crucial in understanding post-event functioning (e.g., Chentsova-Dutton et al., 2002; Metzger and Gray, 2008; Van Doorn et al., 1998). To address these

* Correspondence to: Columbia University, Teachers College, 252 West 120th Street, Box 102, New York, NY 10027, USA. Tel.: +1 914 484 0175. E-mail address: jl3533@columbia.edu (J.H. Lotterman).

problems in a prospective sample, we utilized data from a pre-existing prospective study, and compared patterns of depression and grief in a sample of conjugally bereaved adults from prior to the death of a spouse through 6, 18, and 48 months post-loss.

1.1. Chronic depression and chronic grief

While many bereaved individuals may feel sorrow or shock following the death of a loved one, these feelings often gradually recede and the individual is able to return to normal, pre-loss levels of functioning. For some, these feelings do not improve, and become debilitating. There are notable commonalities between CG and MDD, such as feelings of sadness, loss of interest, and a sense of guilt. Still, there is growing consensus across studies that CG symptoms, especially those involving *yearning* for the deceased and *avoidance of reminders* of the deceased, are distinct from other disorders (Boelen and Prigerson, 2007; Boelen and van den Bout, 2010, 2005; Bonanno et al., 2007; Bryant, 2013; Golden and Dalglish, 2010; Morina et al., 2010). In fact, only approximately 50–70% of bereaved individuals who meet criteria for CG also meet criteria for a major depressive episode (Bryant, 2013; Neria et al., 2007; Newson et al., 2011; Shear et al., 2005). These findings suggest that many people with complicated grief do not suffer from depression, and situates MDD and CG as distinct and separable disorders, with different clusters of symptoms.

Further evidence for the distinction between CG and MDD comes from treatment outcome studies. Validated treatments for major depressive disorder, such as Interpersonal Therapy (IPT) and antidepressant medication, have shown only minimal improvements in CG symptoms (Bryant, 2013; Reynolds et al., 1999). Complementarily, while alexithymia contributes strongly to depression, it has been shown *not* to contribute significantly to CG; further, while alexithymia has been found to influence responsiveness to psychotherapy for depression, it does not show the same influence on therapy response for CG (Deno et al., 2011).

In one of the few prospective studies, Bonanno et al. (2002) examined grief and depression trajectories of bereaved individuals interviewed approximately 3 years pre-loss, and at 6 and 18 months post-loss. They identified distinctions in pattern of response over time between a *chronic grief* group (16%; low pre-loss depression, high depression symptoms at 6 and 18 months post-loss) and a *chronic depression* group (8%; high pre-loss depression and high depression symptoms at 6 and 18 months post-loss). A subsequent follow-up analysis of these data covering a longer outcome period (48 months post-loss) and a latent growth modeling approach revealed that by 4 years post-loss the CG group showed marked reductions in both grief and depression symptoms, and also had fewer grief and depression symptoms than the chronic depression group (Galatzer-Levy and Bonanno, 2012). Indeed, the chronic depression group showed relatively little improvement throughout this longer period. This distinction illuminates the different pathways that depression and grief symptoms might follow, and further underscores the importance of investigating pre-loss functioning (Bryant, 2013).

1.2. Pre-loss depression

When an underlying depressive disorder is present, the loss of a loved one can precipitate the worsening of symptoms, perhaps to the level of a major depressive episode (Zisook and Shuchter, 2001). In fact, some studies suggest that individuals with a history of major depressive disorder are the most vulnerable group for experiencing psychological difficulties following loss: over 60% of those with histories of two or more major depressive episodes will experience such an episode within two months of loss (Zisook et al., 1997; Zisook and Shuchter, 2001). Additionally, major

depression is known to be a chronic, recurring condition (Keller et al., 1992; Zisook and Shuchter, 2001), and bereavement is one of the most commonly cited precipitants of a major depressive episode (Kendler et al., 1999; Lloyd, 1980; Zisook and Shuchter, 2001). Thus, pre-loss depression is likely to create conditions for enduring pain and suffering following the loss of a loved one.

It is possible that, when examining functioning over time, those with a history of prior major depressive episodes would also be more vulnerable to developing grief reactions—grief reactions may in part act as a proxy for a major depressive episode immediately following loss. Alternately, grief reactions may be layered *on top* of a depressive episode, in which case it is important to parse them apart in order to best match treatment with symptoms. There is ample evidence that psychotherapies created for the treatment of chronic grief are efficacious only when targeted to the specific population for which they were developed (Bonanno and Lilienfeld, 2008; Currier et al., 2008; Mancini et al., 2012). It follows that examining pre-loss functioning and level of distress over time may further increase the efficacy of grief therapies, allowing practitioners to adapt treatment accordingly.

1.3. Variables associated with grief or depression

Given the different profiles and courses of CG and MDD, different sets of variables are likely to be associated with these disorders. Indeed, chronic depression has been associated with higher levels of pre-loss dependency than complicated grief (both dependency on the spouse and interpersonal dependency in general), and with more negative evaluations of the spouse/marriage pre-loss than those with CG (Bonanno et al., 2002). Compared with individuals with CG, those with chronic depression have also been shown to have lower perceived coping ability pre-loss and lower extraversion (Bonanno et al., 2002). However, it was shown that those with complicated grief and major depression do not differ significantly in avoidant/dismissive attachment (Bonanno et al., 2002).

1.4. The current study

The current study utilized the trajectory categorization identified by Galatzer-Levy and Bonanno (2012) to examine the distinction between chronic grief and pre-existing chronic depression, but extended beyond these findings by considering both grief and depression symptoms as well as a broad range of predictor variables. In the current study, we examined grief symptoms in addition to depression symptoms to further examine the distinctiveness of these groups. We expected that although these groups showed separable patterns of depression, they would show relatively similar patterns of grief over time.

Further, we identified predictors of divergent bereavement responses from both pre-loss (baseline) and post-loss (6 months after the loss) in order to trace antecedents and markers of different patterns of bereavement reactions. Previous findings suggested that compared with individuals with CG, those with chronic depression were lower in extraversion and were more interpersonally dependent (Bonanno et al., 2002). Therefore, we hypothesized that those with chronic depression would be differentiated from those with chronic elevations in grief symptomatology and no history of depression by significantly lower levels of extraversion. We further hypothesized that those in the chronic depression group would demonstrate lower levels of emotional stability than the chronic grief group, given that the latter group eventually returned to normal levels of functioning. We also expected that the chronic depression group would be more vulnerable to stress.

We hypothesized that the following pre-loss predictors would differentiate CG subjects from chronic depression subjects: Following

previous findings in the literature, we anticipated that those in the chronic depression group would have less favorable evaluations of their spouses and marriages than the chronic grief group, with less emotional support to/from spouses (Bonanno et al., 2002). We also expected that those with chronic grief would receive more support from friends/relatives post-loss than those with chronic depression, and that anxiety levels would increase significantly for both groups. We further hypothesized that the chronic depression group would remain low in self-esteem both pre- and post-loss, while the chronic grief group would evidence a dip in self-esteem only post-loss.

In addition, we explored a number of possible predictor variables for which we did not have specific hypotheses. These included relationships with children (including hassles from children, frequency of contact, and emotional support provided), health satisfaction, and instrumental support.

2. Method

2.1. Participants

Bereaved participants' data were obtained as part of the Changing Lives of Older Couples (CLOC) study, a prospective study of a two-stage area probability sample of 1532 married individuals in the Detroit metropolitan area (for more detail, see Carr et al., 2000). Participants from the CLOC study who subsequently lost a spouse were identified and deaths verified. Widowed participants were invited for follow-up interviews at 6, 18, and 48 months after the spouses' deaths. Of the original 1487 participants, 545 participated in at least one follow-up interview, 301 participated in at least two follow-up interviews, and 104 completed all three follow-up interviews. The primary reason for non-response was ill health or death at follow-up (42%). Analyses in the current study were based on the 301 widowed individuals (269 women, 32 men) who participated in at least two follow-up interviews. Participants who remained in the study or dropped out did not differ significantly in pre-loss depression. Participants' average age at 6-months post-loss was 72 ($SD=6.5$) years old. The mean time between the pre-loss interview and the loss was 37.15 months ($SD=16.50$).

2.2. Measures of adjustment

2.2.1. Depressive symptoms

Depressive symptoms were measured using the Center for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977). The CES-D has shown adequate test-retest reliability and internal consistency across a wide range of subsamples (Roberts, Rhoades, and Vernon, 1990) and discriminates between depressed patients and controls (Boyd et al., 1982). The present study used a brief, nine-item version of the CES-D ($\alpha=0.85$) that has shown comparable reliability and validity statistics (Kohut et al., 1993).

2.2.2. Grief symptoms

Grief symptoms were measured using 16 items ($\alpha=.88$) derived from the Bereavement Index (Jacobs et al., 1986), the Present Feelings about Loss Scale (Singh and Raphael, 1981), and the Texas Revised Inventory of Grief (Zisook et al., 1982). The items represented five domains of grief symptoms: yearning, despair, anxiety, shock, and intrusive thoughts.

2.3. Pre- and post-loss predictor variables

2.3.1. Personality and individual characteristics

Dimensions of the five-factor model of personality (Neuroticism, Agreeableness, Openness, Extraversion, and Conscientiousness) were

measured using an abbreviated version of the NEO Personality Inventory (NEI-PI; Costa and McCrae, 1992). *Introspection* was measured using three items ($\alpha=0.75$). *Autonomy* was measured by averaging three items ($\alpha=0.75$). *Internal control* was measured by averaging four items ($\alpha=0.71$). *External control* was measured by averaging four items ($\alpha=0.68$). *Cynicism* was measured by averaging four items ($\alpha=0.70$). *Fatalism* was measured by averaging five items ($\alpha=0.86$). We measured *emotional stability* using a 13-item measure ($\alpha=0.73$) to map onto a continuum from high trait-based neuroticism to high levels of emotional stability (Pai and Carr, 2010).

2.3.2. Coping

Vulnerability to stress was measured by averaging four items ($\alpha=0.60$).

2.3.3. Interpersonal variables

We measured *interpersonal dependency* by averaging nine items ($\alpha=0.66$). *Emotional reliance* was measured by averaging five items ($\alpha=0.75$). *Positive emotional support from friends and relatives* was measured by averaging two items ($\alpha=0.71$). *Social integration* was measured by averaging two items ($\alpha=0.49$). *Hassles from friends and relatives* was measured by averaging two items ($\alpha=0.43$).

2.3.4. Religious involvement

Religious involvement was measured by averaging four items ($\alpha=0.80$).

2.3.5. Self-esteem

Self-esteem was measured by averaging five items ($\alpha=0.72$).

2.3.6. Marriage

Participants' *evaluation of self in the marriage* was assessed by averaging four items ($\alpha=0.59$). Higher scores reflected a more positive evaluation of the self in marriage. *Evaluation of spouse and marriage* was assessed using 10 items adapted from the Dyadic Adjustment Scale (Spanier, 1976): *positive evaluations of the marriage* were measured by averaging four items ($\alpha=0.85$); *negative evaluations of the marriage* were measured by averaging six items ($\alpha=0.88$). *Emotional support to spouse* was measured by averaging two items ($\alpha=0.55$). *Emotional support from spouse* was measured by averaging two items ($\alpha=0.72$).

2.3.7. Anxiety

Anxiety was measured by averaging ten items ($\alpha=0.86$).

2.3.8. Relationship with children

We measured *negative hassles from children* by averaging two items ($\alpha=0.48$). *Frequency of contact with children/grandchildren* was measured by averaging two items ($\alpha=0.52$). *Positive emotional support from children* was measured by averaging two items ($\alpha=0.70$). *Child dependence on the respondent* was measured by averaging three items ($\alpha=0.57$). *Respondent dependence on children* was measured by averaging three items ($\alpha=0.60$).

2.3.9. Health

Level of satisfaction with health was assessed by averaging three items ($\alpha=0.73$).

2.3.10. Instrumental support

This variable was measured by averaging three items ($\alpha=0.68$).

3. Results

3.1. Latent depression trajectories

Galatzer-Levy and Bonanno (2012) used Latent Growth Modeling to identify trajectories of depression scores in the same sample across 4 time points: pre-loss, and 6, 18, and 48 months post-loss. Their analysis revealed that the best fitting model identified four distinct trajectories: *resilient* (66.3%), defined by a significantly lower intercept than the other three groups, and a flat trajectory of depression scores from before the loss to 4 years post-loss; *chronic grief* (9.1%), defined by a dramatic increase in depression scores after the loss, which remained high until 18 months post-loss, but returned to pre-loss depression levels 4 years post-loss; *chronic depression* (14.5%), defined by a significantly higher intercept than the other three groups prior to loss, and a flat trajectory of depression scores from pre-loss to 4 years post-loss; and *depressed-improved* (10.1%), defined by high pre-loss depression scores, which were lessened by 6 months post-loss (see Galatzer-Levy and Bonanno, 2012 for further detail). This analysis shows clearly that the chronic grief trajectory and the chronic depression trajectory differed significantly in depression symptoms at 48 months post-loss. The current investigation focuses on these two distinct groups.

3.2. Grief symptoms

We initially examined these four trajectories using an analysis of variance (ANOVA) for grief symptoms at 6 months (T1), 18 months (T2), and 48 months (T3). Significant differences emerged at T1, $F(3, 199)=30.98, p < 0.001$, T2, $F(3, 191)=33.05, p < 0.001$, and T3, $F(3, 162)=13.53, p < 0.001$. However, Tukey post-hoc tests did not reveal a significant difference between our two groups of interest (the chronic grief group and the chronic depression group) at any time points: 6 months ($p > 0.10$); 18 months ($p > 0.10$), or 48 months ($p > 0.10$). Of note, although grief and depression scores were strongly correlated at T1, $r(247)=0.70, p < 0.001$, these scores were only moderately correlated by T3, $r(206)=0.46, p < 0.001$. This finding suggests that while grief scores may remain indistinguishable between the two groups over time, this is not the case for depression scores, which largely remit for the chronic grief group but not the chronic depression group.

3.3. Pre-loss predictors

To lessen the risk of Type I error, we first ran an omnibus analysis of variance including all predictor variables of interest. This was significant, $F(12, 52)=2.86, p < 0.01$. Accordingly, we next examined possible differences by variable using *t*-tests (see Table 1).

3.3.1. Personality and individual characteristics

There were significant effects at baseline (pre-bereavement) for *conscientiousness*, $t(74)=-2.06, p < 0.05$, and *emotional stability*, $t(74)=-4.50, p < 0.001$, with the chronic depression group lower in both. The chronic depression group was higher in *introspection*, $t(74)=2.47, p < 0.05$. No significant differences between chronic grief and chronic depression groups were found at baseline for *extraversion*, *agreeableness*, *autonomy*, *internal/external control*, *cynicism*, or *fatalism*, $p > 0.05$.

3.3.2. Coping

The chronic depression group was significantly higher in *vulnerability to stress* at baseline, $t(74)=2.39, p < 0.05$.

Table 1
Predictors measured pre-loss.

Variable	Mean (SD)		t
	CD	CG	
Conscientiousness	-0.37(0.91)	0.04(0.84)	-2.06*
Introspection	0.44(0.98)	-0.13(1.03)	2.47*
Extraversion	-0.16(1.09)	0.03(0.84)	0.83
Agreeableness	-0.16(1.13)	0.27(1.03)	-1.75
Autonomy	-0.04(0.89)	-0.14(1.00)	0.46
Internal control	-0.34(1.07)	-0.01(0.87)	-1.46
External control	0.17(1.05)	-0.11(1.06)	1.12
Cynicism	0.32(1.26)	0.12(1.03)	0.73
Fatalism	-0.06(1.06)	0.26(0.81)	-1.48
Emotional stability	-0.67(0.89)	0.12(0.59)	-4.50***
Vulnerability to stress	0.56(1.14)	0.02(0.76)	2.39*
Interpersonal dependency	0.51(0.97)	0.24(0.85)	1.29
Emotional reliance	-0.65(0.97)	-0.19(0.95)	-2.06*
Eval. of self in marriage	-0.23(1.12)	0.32(1.06)	2.19*
Emotional suppt to spouse	-0.24(1.18)	0.37(1.00)	-2.45*
Eval. of spouse/marriage	-0.50(1.30)	0.01(0.87)	-1.97*

$p < .10$, ** $p < 0.01$ Note: CD=Chronic depression; CG=Chronic grief.

* $p < 0.05$

*** $p < 0.001$

3.3.3. Interpersonal variables

The chronic grief group was significantly higher in *emotional reliance* at baseline, $t(74)=-2.06, p < 0.05$. No significant differences between chronic grief and chronic depression groups were found at baseline for *interpersonal dependency*, $p > 0.05$.

3.3.4. Marriage

At baseline, the chronic depression group had a significantly lower *evaluation of self within the marriage* than the chronic grief group, $t(74)=2.19, p < 0.05$, reported significantly less *emotional support to spouse*, $t(74)=-2.45, p < 0.05$, and a less favorable *evaluation of spouse and marriage*, $t(74)=-1.97, p=0.05$.

3.4. Predictors at pre- and post-loss

We examined variables that were measured pre- and post-loss using a series of repeated measures ANOVAs for the effects of time, group, and their interaction (see Table 2).

3.4.1. Interpersonal variables

For *positive emotional support from friends/relatives*, there was a main effect of time such that both chronic grief group and chronic depression group received more positive support at T1 than at baseline, $F(1, 63)=9.06, p < 0.01$. There were no significant main effects or interactions for *social integration* or *hassles from friends/relatives*.

3.4.2. Religious involvement

No significant main effects or interactions emerged.

3.4.3. Anxiety

For *anxiety*, there was a main effect of group, such that the chronic grief group experienced significantly less anxiety than the chronic depression group, $F(1, 63)=6.70, p < 0.05$. There was also a marginally significant interaction between group and time such that the difference in anxiety level was greater between groups at baseline than at T1, $F(1, 63)=3.65, p=0.061$. Follow-up tests of simple effects revealed a significant difference in mean anxiety level between groups at baseline, $t(74)=3.27, p < 0.01$, with the

Table 2
Predictors measured pre-loss and 6 months post-loss.

Variable	Mean (SD) CD	Mean (SD) CG	Time $F(1, 63)$	Group $F(1, 63)$	Time \times group $F(1, 63)$
Emotional support (friends/relatives)			9.06**	0.82	0.07
Baseline	0.03(0.78)	0.22(0.95)			
6 months	0.44(0.80)	0.56(0.80)			
Social integration			0.00	0.30	0.071
Baseline	-0.11(0.99)	-0.01(0.91)			
6 months	-0.13(0.92)	0.01(0.93)			
Hassles (friends/relatives)			2.92	0.81	0.895
Baseline	-0.05(0.81)	-0.09(0.94)			
6 months	-0.14(0.97)	-0.41(0.63)			
Religious involvement			0.25	0.09	3.67
Baseline	0.15(0.85)	0.08(0.90)			
6 months	-0.01(0.82)	0.18(0.95)			
Anxiety			1.11	6.70*	3.65
Baseline	0.65(1.27)	-0.13(0.60)			
6 months	0.54(1.22)	0.25(0.68)			
Self-esteem			0.79	7.14**	4.87*
Baseline	-0.65(1.09)	0.17(0.74)			
6 months	-0.27(1.11)	0.01(0.88)			
Emotional support (from spouse)			8.80**	2.92	2.80
Baseline	-0.68(1.53)	0.02(0.90)			
6 months	0.08(1.18)	0.22(0.95)			
Hassles (children)			3.26	4.10*	0.16
Baseline	0.55(1.05)	-0.05(1.22)			
6 months	0.23(1.34)	-0.26(1.14)			
Freq contact children/grandchildren			11.33***	0.39	0.76
Baseline	0.04(0.85)	0.07(1.10)			
6 months	0.29(0.68)	0.49(0.65)			
Emotional support (from children)			0.74	0.54	0.06
Baseline	-0.03(0.96)	0.15(1.01)			
6 months	0.11(0.90)	0.23(0.87)			
Child dependence on respondent			0.72	0.34	2.52
Baseline	-0.14(0.96)	-0.20(0.95)			
6 months	-0.42(0.86)	-0.11(1.06)			
Respondent dependence on children			2.13	0.78	0.13
Baseline	0.52(1.24)	0.24(0.95)			
6 months	0.72(1.19)	0.57(1.33)			
Health satisfaction			1.42	7.73**	0.17
Baseline	-0.51(0.95)	0.06(0.87)			
6 months	-0.64(1.00)	-0.01(0.90)			
Instrumental support			1.98	7.30**	2.52
Baseline	-0.56(0.97)	-0.16(1.03)			
6 months	-0.59(1.09)	0.22(1.13)			

Note: CD=Chronic depression; CG=Chronic grief.

$p < 0.10$

* $p < 0.05$

** $p < 0.01$

*** $p < 0.001$

chronic depression group showing higher levels of anxiety. At T1, no significant difference between groups was found, $p > 0.05$.

3.4.4. Self-esteem

For *self-esteem*, there was a main effect of group, such that the chronic grief group had significantly higher self-esteem than the chronic depression group, $F(1, 63)=7.14$, $p=0.01$. There was also a significant interaction between group and time such that the difference in self-esteem was greater at baseline than at T1, $F(1, 63)=4.98$, $p < 0.05$. Follow-up tests of simple effects revealed a significant difference in self-esteem between groups at baseline, $t(74) = -3.26$, $p < 0.01$, with chronic depression group lower in self-esteem. At T1, no significant difference between groups was found, $p > 0.05$.

3.4.5. Marriage

For *emotional support from spouse*, there was a main effect of time, such that participants reported significantly less emotional

support from their spouses at baseline than at T1 ($M=0.12$, $SD=1.06$), $F(1, 63)=8.80$, $p < 0.01$.

3.4.6. Relationship with children

For *negative hassles from children*, there was a main effect of group, such that the chronic depression group reported more negative hassles from their children than the chronic grief group, $F(1, 58)=4.10$, $p < 0.05$. For *frequency of contact with children/grandchildren*, there was a main effect of time, with participants reporting significantly lower frequency of contact at baseline compared with T1, $F(1, 63)=11.33$, $p=0.001$. No significant main effects or interactions emerged for *positive emotional support from children*; *child dependence on the respondent*; or *respondent dependence on their children*.

3.4.7. Health satisfaction

For *satisfaction with health*, there was a main effect of group such that the chronic depression group reported significantly less

satisfaction with health than chronic grief group, $F(1, 63)=7.73$, $p < 0.01$.

3.4.8. Instrumental support

For *instrumental support*, there was a main effect of group, such that the chronic depression group reported receiving less instrumental support than the chronic grief group, $F(1, 63)=7.30$, $p < 0.01$.

4. Discussion

Two different clients may present for grief treatment with virtually identical symptoms: low mood, loss of interest in activities, yearning for their deceased spouse, and avoidance of reminders of the loss. However, the first client had chronic depression symptoms for years, which gave way to symptoms of complicated grief when her husband died. Her current symptoms act as a proxy for her prior depression, and the depression increased her vulnerability to developing complicated grief. When her psychotherapist screens for complicated grief, it is clear that she meets criteria, and her previous depression is never acknowledged. However, given her long-term symptom profile, this client is highly vulnerable to stress, anxious, dissatisfied with her deceased husband and marriage, and lacking in instrumental support—variables strongly associated with chronic depression.

The second client never experienced an episode of major depression before his wife passed away, but also presents for grief treatment with symptoms of complicated grief. In contrast to the first client, he is highly emotionally reliant, satisfied with his deceased wife and marriage, and low in anxiety—variables associated with chronic grief without a history of depression.

Even if practitioners vigilantly screen clients for symptoms of complicated grief, the potential presence of pre-loss depression may go unnoticed or untreated. As the results of the current study illustrate, those with chronic depression and those with chronic grief are largely *indistinguishable* when examining grief symptoms alone. In order to best match treatment to symptoms, it is crucial that clinicians understand whether a client is suffering from long-standing depression with a grief reaction layered on top of that depression, or has developed a grief reaction in isolation without having suffered from prior depression. Each of these hypothetical clients would benefit from distinctive treatment protocols. For example, while Interpersonal Therapy and antidepressant medication are indicated for the treatment of MDD, they have shown poor treatment outcomes with regard to CG (Bryant, 2013; Reynolds et al., 1999). These treatments would be better applied to the case of a client with grief symptoms layered on top of prior depression (client #1), and not for a client with CG alone (client #2).

It is important to note that major depressive disorder and complicated grief frequently co-exist, and that each may increase the risk of developing the other. While across studies, it is clear that approximately 30–50% of individuals with CG do *not* meet criteria for a major depressive episode, suggesting that CG and MDD are indeed two different disorders, the remaining 50–70% of individuals meet criteria for *both* disorders (Bryant, 2013; Neria et al., 2007; Newson et al., 2011; Shear et al., 2005). It is clear that there is certainly confluence between these two trajectories, and that CG and MDD do often co-occur.

Previous investigations exploring the differences between complicated grief and major depression have left open a number of questions resulting from methodological limitations. The majority of studies have used cross-sectional data, examining differences across participants suffering from CG and MDD. These studies have addressed important concerns about post-bereavement disturbance and how it is characterized. However, this approach is limited, as it

does not allow researchers to follow participants over time and observe differing trajectories of response. Perhaps most importantly, cross-sectional analyses do not involve pre-event measurements, or prospective data. For this reason, it has remained largely unclear whether individuals who suffer greatly following the loss of a spouse are experiencing symptoms *because* of the death, or whether they began experiencing symptoms *before* the death, and grief is acting as a proxy or is co-morbid with prior depression. To parse apart these disorders and their trajectories, we included prospective data and followed participants from pre-loss through the loss of a spouse to four years post-loss.

The current study revisited findings from previous investigations (Bonanno et al., 2002; Galatzer-Levy and Bonanno, 2012) that identified two distinct trajectories of bereavement-related depression: chronic depression and chronic grief. When we examined patterns of grief symptoms in relation to these two trajectories we found that they were virtually indistinguishable—both groups evidenced grief symptoms to an equal degree across time. Indeed, as expected, if we had only examined grief symptoms, we would have assumed that these were not two distinct groups with distinct depression trajectories but rather a single group with a similar grief reaction.

These findings have several important implications for the treatment of bereaved individuals who experience difficulty recovering from loss. Grief therapy has been shown to be highly effective when targeted to adults and children experiencing high levels of distress following the loss of a loved one (Mancini et al., 2012). Highly sensitive diagnostic tools for complicated grief have made it possible to match treatment to the most fitting clinical samples (Bonanno and Lilienfeld, 2008; Prigerson et al., 1995a, 1995b). In fact, when clients were preselected for complicated grief, manualized treatment protocols had large treatment effects (Boelen et al., 2007; Bonanno and Lilienfeld, 2008; Shear et al., 2005). Taken together, these findings clearly show the importance of understanding distress during bereavement in a comprehensive way in order to enhance treatment efficacy.

Without prospective data, it is impossible to isolate which variables are uniquely associated with the development of these distinct types of reactions following loss. Because most studies have relied on post-loss retrospective memory of pre-loss functioning, variables that may predict either chronic grief or chronic depression have been confounded with functional and perceptual changes brought about by the loss itself. Identifying pre- and post-loss variables uniquely associated with each of these trajectories may aid in developing tailored treatment plans and protocols. For example, treatment for someone suffering from chronic depression might focus practically on seeking out sources of instrumental support. Alternately, a client with chronic grief may be struggling with their emotional reliance on their deceased spouse. In this case, finding other sources of reliance may be indicated.

Examining chronic depression and chronic grief groups in isolation, we did not find significant differences between groups with regard to extraversion or interpersonal dependency. This tells us that while these variables are useful in distinguishing one group from many others (Bonanno et al., 2002), they are not strong enough to differentiate only the two groups in question from one another. We did find that a number of pre- and post-loss variables were uniquely and strongly associated with one of the two distinct groups. The chronic depression group was less emotionally stable, less conscientious, and more introspective than the chronic grief group. The chronic depression group was also more vulnerable to stress, had less favorable evaluations of their spouses and marriages, and reported less emotional support *to* their spouses pre-loss than the chronic grief group.

The chronic grief group reported less anxiety overall than the chronic depression group, with this difference especially pronounced

pre-loss. The enduring depression group was lower in self-esteem, also evaluating themselves more negatively as husbands and wives pre-loss. However, the chronic grief group was significantly more emotionally reliant than the chronic depression group across time points. Of note, both groups retrospectively reported less emotional support from their spouses than they had reported at baseline. This not only illuminates an effect of grief on retrospective memory, it highlights the importance of obtaining prospective data, as retrospective memory of functioning was clearly impaired following loss.

Across time points, the chronic depression group reported receiving less instrumental support than the chronic grief group, less satisfaction with health, and more negative hassles from their children. Both groups reported increased contact with children and grandchildren following the death of their spouses.

5. Limitations

While the inclusion of prospective data in the current study aids in the formation of a clear picture of each of the two trajectories in question, it is important to note several limitations. First, data included in the current study was based solely on participant self-report. Future investigations should utilize more objective behavioral measures and reports of friends and family to gain additional information about group differences. Second, the current study focused *only* on two trajectories, though it is apparent from previous research that there are at least four distinct trajectories of response following bereavement. It will be important for future studies to include each of these trajectories, including resilience and depressed-improved, to track both depression *and* grief symptoms from pre-loss to post-loss and to identify variables associated with each distinct course of functioning.

A third limitation of the current study is that it focused on a specific age range of individuals (65 and older); the mean age of participants was 72. Findings may not be generalizable to younger populations. It would be illuminating for these analyses to be conducted with a younger age range. Notably, previous research has found that a greater proportion of younger-aged individuals experienced chronic grief reactions than in the current sample (Bonanno and Kaltman, 1999; Lehman et al., 1987).

Within the context of these limitations, the current study represents an important step in deconstructing the different and varied responses to the loss of a spouse, how these courses of response are defined, and with which variables they are associated. These considerations are crucial toward the development of treatment options that take into account not only current symptom profiles, but pre-event functioning, and both individual characteristics and contextual aspects of a person's life. We expect that the insights gleaned from the current study will advance both the understanding of how individuals respond to the loss of a spouse, and the development of relevant and targeted clinical interventions.

Role of funding source

There was no direct funding source for this study. The CLOC data analysis and data dissemination project was made possible by a grant from the National Institute on Aging, R01-AG15948-01A1 (Randolph M. Nesse, PI). The original data collection was made possible by a grant from the National Institute on Aging, R01-AG610757 (Camille Wortman, PI).

Conflict of interest

There is no conflict of interest to report.

Acknowledgement

The authors thank Dr. Camille Wortman and Dr. Ronald Kessler for their work initiating the Changing Lives of Older Couples (CLOC) project.

References

- Boelen, P.A., de Keijser, J., van den Hout, M.A., van den Bout, J., 2007. Treatment of complicated grief: a comparison between cognitive-behavioral therapy and supportive counseling. *J. Consult. Clin. Psychol.* 75 (2), 277.
- Boelen, P.A., Prigerson, H.G., 2007. The influence of symptoms of prolonged grief disorder, depression, and anxiety on quality of life among bereaved adults. *Eur. Arch. Psychiatry Clin. Neurosci.* 257 (8), 444–452.
- Boelen, P.A., van den Bout, J., 2005. Complicated grief, depression, and anxiety as distinct postloss syndromes: a confirmatory factor analysis study. *Am. J. Psychiatry* 162 (11), 2175–2177.
- Boelen, P.A., van den Bout, J., 2010. Anxious and depressive avoidance and symptoms of prolonged grief, depression, and post-traumatic stress disorder. *Psychol. Belg.* 50 (1–2), 1–2.
- Bonanno, G.A., Kaltman, S., 1999. Toward an integrative perspective on bereavement. *Psychol. Bull.* 125 (6), 760.
- Bonanno, G.A., Kaltman, S., 2001. The varieties of grief experience. *Clin. Psychol. Rev.* 21 (5), 705–734.
- Bonanno, G.A., Wortman, C.B., Lehman, D.R., Tweed, R.G., Haring, M., Sonnega, J., Carr, D., Nesse, R.M., 2002. Resilience to loss and chronic grief: prospective study from preloss to 18-months postloss. *J. Pers. Soc. Psychol.* 83 (5), 1150.
- Bonanno, G.A., 2004. Loss, trauma, and human resilience: have we underestimated the human capacity to thrive after extremely aversive events? *Am. Psychol.* 59 (1), 20.
- Bonanno, G.A., 2005. Resilience in the face of potential trauma. *Curr. Dir. Psychol. Sci.* 14 (3), 135–138.
- 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. *J. Abnorm. Psychol.* 116 (2), 342.
- Bonanno, G.A., Lilienfeld, S.O., 2008. Let's be realistic: when grief counseling is effective and when it's not. *Prof. Psychol. Res. Pract.* 39 (3), 377.
- Boyd, J.H., Weissman, M.M., Thompson, W.D., Myers, J.K., 1982. Screening for depression in a community sample: understanding the discrepancies between depression symptom and diagnostic scales. *Arch. Gen. Psychiatry* 39 (10), 1195.
- Bryant, R.A., 2013. Is pathological grief lasting more than 12 months grief or depression? *Curr. Opin. Psychiatry* 26 (1), 41–46.
- Carr, D., House, J.S., Kessler, R.C., Nesse, R.M., Sonnega, J., Wortman, C., 2000. Marital quality and psychological adjustment to widowhood among older adults: a longitudinal analysis. *J. Gerontol. Ser. B: Psychol. Sci. Soc. Sci.* 55 (4), S197–S207.
- Chentsova-Dutton, Y., Shuster, S., Hutchin, S., Strause, L., Burns, K., Dunn, L., Miller, M., Zisook, S., 2002. Depression and grief reactions in hospice caregivers: from pre-death to 1 year afterwards. *J. Affect. Disord.* 69 (1), 53–60.
- Costa, P.T., McCrae, R.R., 1992. Normal personality assessment in clinical practice: the NEO personality inventory. *Psychol. Assess.* 4 (1), 5.
- Currier, J.M., Holland, J.M., Neimeyer, R.A., 2008. Making sense of loss: a content analysis of end-of-life practitioners' therapeutic approaches. *OMEGA—J. Death Dying* 57 (2), 121–141.
- Deno, M., Miyashita, M., Fujisawa, D., Nakajima, S., Ito, M., 2011. The relationships between complicated grief, depression, and alexithymia according to the seriousness of complicated grief in the Japanese general population. *J. Affect. Disord.* 135 (1), 122–127.
- Galatzer-Levy, I.R., Bonanno, G.A., 2012. Beyond normality in the study of bereavement: heterogeneity in depression outcomes following loss in older adults. *Soc. Sci. Med.* 74 (12), 1987–1994.
- Golden, A.M.J., Dalgleish, T., 2010. Is prolonged grief distinct from bereavement-related posttraumatic stress? *Psychiatry Res.* 178 (2), 336–341.
- Horowitz, M.J., Siegel, B., Holen, A., Bonanno, G.A., Milbrath, C., Stinson, C.H., 1997. Diagnostic criteria for complicated grief disorder. *Am. J. Psychiatry* 154 (7), 904–910.
- Jacobs, S.C., Kasl, S.V., Ostfeld, A.M., Berkman, L., Kosten, T.R., Charpentier, P., 1986. The measurement of grief: bereaved versus non-bereaved. *Hosp. J.*
- Keller, M.B., Lavori, P.W., Mueller, T.I., Endicott, J., Coryell, W., Hirschfeld, R., Shea, T., 1992. Time to recovery, chronicity, and levels of psychopathology in major depression: a 5-year prospective follow-up of 431 subjects. *Arch. Gen. Psychiatry* 49 (10), 809.
- Kendler, K.S., Karkowski, L.M., Prescott, C.A., 1999. Causal relationship between stressful life events and the onset of major depression. *Am. J. Psychiatry* 156 (6), 837–841.
- Kohut, F.J., Berkman, L.F., Evans, D.A., Cornoni-Huntley, J., 1993. Two shorter forms of the CES-D depression symptoms index. *J. Aging Health* 5, 179–193.
- Lehman, D.R., Wortman, C.B., Williams, A.F., 1987. Long-term effects of losing a spouse or child in a motor vehicle crash. *J. Pers. Soc. Psychol.* 52, 218–231.
- Lloyd, C., 1980. Life events and depressive disorder reviewed: I. Events as predisposing factors. *Arch. Gen. Psychiatry* 37 (5), 529.
- Mancini, A.D., Griffin, P., Bonanno, G.A., 2012. Recent trends in the treatment of prolonged grief. *Curr. Opin. Psychiatry* 25 (1), 46–51.
- Metzger, P.L., Gray, M.J., 2008. End-of-life communication and adjustment: pre-loss communication as a predictor of bereavement-related outcomes. *Death Stud.* 32 (4), 301–325.

- Morina, N., Rudari, V., Bleichhardt, G., Prigerson, H.G., 2010. Prolonged grief disorder, depression, and posttraumatic stress disorder among bereaved Kosovar civilian war survivors: a preliminary investigation. *Int. J. Soc. Psychiatry* 56 (3), 288–297.
- Neria, Y., Gross, R., Litz, B., Maguen, S., Insel, B., Seirmarco, G., Rosenfeld, H., Jung Suh, E., Kishon, R., Cook, J., Marshall, R.D., 2007. Prevalence and psychological correlates of complicated grief among bereaved adults 2.5–3.5 years after September 11th attacks. *J. Trauma. Stress* 20 (3), 251–262.
- Newson, R.S., Boelen, P.A., Hek, K., Hofman, A., Tiemeier, H., 2011. The prevalence and characteristics of complicated grief in older adults. *J. Affect. Disord.* 132 (1), 231–238.
- Pai, M., Carr, D., 2010. Do personality traits moderate the effect of late-life spousal loss on psychological distress? *J. Health Soc. Behav.* 51 (2), 183–199.
- Prigerson, H.G., Maciejewski, P.K., Reynolds III, C.F., Bierhals, A.J., Newsom, J.T., Fasiczka, A., Frank, E., Doman, J., Miller, M., 1995a. Inventory of complicated grief: a scale to measure maladaptive symptoms of loss. *Psychiatry Res.* 59 (1), 65–79.
- Prigerson, H.G., Frank, E., Kasl, S.V., Reynolds, C.F., Anderson, B., Zubenko, G.S., Houck, George, C., Kupfer, D.J., 1995b. Complicated grief and bereavement-related depression as distinct disorders: preliminary empirical validation in elderly bereaved spouses. *Am. J. Psychiatry* 152 (1), 22–30.
- Radloff, L.S., 1977. The CES-D scale a self-report depression scale for research in the general population. *Appl. Psychol. Meas.* 1 (3), 385–401.
- Reynolds, C.F., Miller, M.D., Pasternak, R.E., Frank, E., Perel, J.M., Cornes, C., Houck, P., Mazumdar, S., Dew, M., Kupfer, D.J., 1999. Treatment of bereavement-related major depressive episodes in later life: a controlled study of acute and continuation treatment with nortriptyline and interpersonal psychotherapy. *Am. J. Psychiatry* 156 (2), 202–208.
- Roberts, R.E., Rhoades, H.M., Vernon, S.W., 1990. Using the CES-D scale to screen for depression and anxiety: effects of language and ethnic status. *Psychiatry Res.* 31 (1), 69–83.
- Shear, K., Frank, E., Houck, P.R., Reynolds, C.F., 2005. Treatment of complicated grief: a randomized controlled trial. *JAMA* 293 (21), 2601–2608.
- Singh, B., Raphael, B., 1981. Postdisaster morbidity of the bereaved: a possible role for preventive psychiatry? *J. Nerv. Ment. Dis.* 169 (4), 203–212.
- Spanier, G.B., 1976. Measuring dyadic adjustment: new scales for assessing the quality of marriage and similar dyads. *J. Marriage Fam.* 38, 15–28.
- Van Doorn, C., Kasl, S.V., Beery, L.C., Jacobs, S.C., Prigerson, H.G., 1998. The influence of marital quality and attachment styles on traumatic grief and depressive symptoms. *J. Nerv. Ment. Dis.* 186 (9), 566–573.
- Wortman, C.B., Silver, R.C., 2001. The myths of coping with loss revisited. In: Stroebe, Margaret S., Hansson, Robert O., Stroebe, Wolfgang, Schut, Henk (Eds.), *Handbook of Bereavement Research: Consequences, Coping, and Care*, Eds. American Psychological Association, Washington, DC, pp. 405–429.
- Zisook, S., Devaul, R.A., Click, M.A., 1982. Measuring symptoms of grief and bereavement. *Am. J. Psychiatry*.
- Zisook, S., Kendler, K.S., 2007. Is bereavement-related depression different than non-bereavement-related depression? *Psychol. Med.* 37 (6), 779–794.
- Zisook, S., Shuchter, S.R., 2001. Treatment of the depressions of bereavement. *Am. Behav. Sci.* 44 (5), 782–797.
- Zisook, S., Paulus, M., Shuchter, S.R., Judd, L.L., 1997. The many faces of depression following spousal bereavement. *J. Affect. Disord.* 45 (1), 85–95.