Guilt in Bereavement

Li, Jie; Tendeiro, Jorge N.; Stroebe, Margaret

Published in:
International Journal of Psychology

DOI:
10.1002/ijop.12483

International Journal of Psychology

International Journal of Psychology, 2019
Vol. 54, No. 4, 454–461, DOI: 10.1002/ijop.12483

Guilt in bereavement: Its relationship with complicated grief and depression

Jie Li[1], Jorge N. Tendeiro[2], and Margaret Stroebe[3,4]

[1]Department of Psychology, Renmin University of China, Beijing, China
[2]Department of Psychometrics and Statistics, University of Groningen, Groningen, The Netherlands
[3]Department of Clinical and Health Psychology, Utrecht University, Utrecht, The Netherlands
[4]Department of Clinical Psychology and Experimental Psychopathology, University of Groningen, Groningen, The Netherlands

This study investigated the relationship between guilt and well-being of bereaved persons, and explored potential differences in the associations between guilt-complicated grief (CG) and guilt-depression. In total, 1358 Chinese bereaved adults were recruited to fill out questionnaires. Participants ($N = 194$) who had been bereaved within 2 years of the first survey, filled out the same questionnaires 1 year later. Higher guilt was associated with higher degrees of both CG and depression. The level of guilt predicted CG and depression symptoms 1 year later. Bereavement-related guilt has a closer association with CG than depression. Responsibility guilt, indebtedness guilt and degree of guilt feeling are more prominent aspects of guilt in CG than in depression. These findings demonstrate the significant role of guilt (perhaps a core symptom) in mental health of the bereaved, having implications for identifying persons with grief complications and depression.

Keywords: Guilt; Bereavement; Complicated grief; Depression; Loss.

Guilt is a familiar experience to bereaved persons (Li, Stroebe, Chan, & Chow, 2014). It has even been considered to play a central role in the development of grief complications by some clinicians (Rando, 1993), yet there are discrepant findings in previous studies regarding the impact of guilt on psychopathology among bereaved persons.

Even though the majority of studies have suggested that guilt in bereavement is associated with mental and physical difficulties (Akiyama, Numata, & Mikami, 2010; Boelen & Lensvelt-Mulders, 2005; Field & Bonanno, 2001; Torges, Stewart, & Nolen-Hoeksema, 2008), several studies have failed to find such an effect. For example, one study found no significant relationship between guilt and a cluster of grief reactions, including "despair," "anger-hostility," "loss of control," "death anxiety" and "depersonalization (Hazzard, Weston, & Gutterres, 1992). Another study compared a group of persons suffering from complicated grief (CG),[1] which is characterised by a cluster of symptoms of distress and has been proposed to be a new disorder (Boelen & Prigerson, 2013), with bereaved counterparts who did not show such complications. No significant differences on guilt were found between these two groups (Golden & Dalgleish, 2012).

With these inconsistent findings, it is not surprising to see disparate views regarding the role of guilt in CG. In the diagnostic criteria for CG proposed by Prigerson et al. (2009) and Shear et al. (2011), guilt is not a core symptom. However, guilt is one of the symptoms in the criteria of prolonged grief disorder (PGD) proposed for the International Classification of Diseases-11 (ICD-11) (Maercker et al., 2013). There is also an item related to guilt and self-blame in the description of persistent complex bereavement-related disorder, which is not

Correspondence should be addressed to Jie Li, Department of Psychology, Renmin University of China, Beijing 100872, China. (E-mail: lijie2013@ruc.edu.cn).

This study is supported by the Beijing Natural Science Foundation 7164269 for data analysis and writing.
Jie Li contributed to study design, collecting and analysing data, and writing the manuscript; Jorge N. Tendeiro contributed to data analysis and writing the manuscript; Margaret Stroebe contributed to writing the manuscript.

[1]Even though Prigerson developed her CG measure as an index of complicated not normal grief, the cut-off point does not indicate "complications" in and of itself. It indicates that further, skilled assessment may be needed to establish whether or not there is need for clinical intervention.

classified as a recognised disorder in Diagnostic and Statistical Manual of Mental Disorders 5 (DSM 5), but which is included in the category of conditions meriting further study (American Psychiatric Association, 2013). The differences are likely to stem, at least in part, from lack of understanding and solid evidence on the relationship between guilt and CG.

The mixed findings in the literature are to some degree attributable to the lack of convergence in conceptualising and measuring guilt across studies (Li et al., 2014). To provide clarification and guidance for future studies, Li defined bereavement guilt as "a remorseful emotional reaction in grieving, with the recognition of having failed to live up to one's own inner standards and expectations in relationship to the deceased and/or the death" (Li et al., 2014, p. 166). Accordingly, bereavement guilt is regarded as a multidimensional construct. This is consistent with qualitative findings soliciting the actual experience of bereaved persons. For example, bereaved people feel guilty for various reasons, such as not preventing the death, not doing enough for the deceased, enjoying life again after the loved one's death and so on (Smith, Nunley, Kerr, & Galligan, 2011). Such complex, multidimensional components of guilt need to be taken into account in empirical research in order to yield a comprehensive understanding of its impact.

Additionally, besides the relationship with CG, the association between guilt and depression in bereaved persons has also been a focus of research (Akiyama et al., 2010; Torges et al., 2008). Losing a loved one through death can trigger not only grief but also depression (Harrison & Harrington, 2001). Even though guilt is common in depression, researchers have postulated that there are different types of guilt in CG and depression, respectively. That is, guilt is usually pervasive and generalised in depression, whereas in CG it is specific to the death of the loved one (Jordan & Litz, 2014; Shear et al., 2011). Little empirical evidence has so far been provided to support this view, probably due to the earlier lack of instruments to assess specific forms of guilt in bereavement. Studies using more general measures have yielded mixed results. Some studies have not found differential relationships between guilt with grief and depression (Boelen & Lensvelt-Mulders, 2005; Field & Bonanno, 2001). However, in a cross-sectional study using three self-constructed items on guilt, positive associations were found between guilt and grief reactions but not between guilt and depression (Akiyama et al., 2010). Furthermore, in one longitudinal study, researchers found that a certain pattern of regret is associated with grief but not depression (Holland, Thompson, Rozalski, & Lichtenthal, 2013), while another found that initial level of self-blame predicted change in grief but not change in depression over time (Stroebe et al., 2014).

Addressing the above knowledge gaps about the role of guilt in bereavement adjustment, the present study sought to answer two main questions: (a) Is guilt associated with mental health outcome in terms of grief complications and depression? and (b) Is there a difference between the associations of guilt-CG and guilt-depression (in terms of the closeness of the relationship between these variables) and between different subtypes (in terms of presence/absence of CG and depression)? It is expected that guilt in bereavement will correlate and predict CG and depression. This is because guilt in bereavement involves self-blame for failure to live up to one's inner standard, which may induce negative cognitions about oneself. Such negative cognitions have been shown to be associated with problematic grief (Boelen, van den Bout, & van den Hout, 2006) and depression (Kim, Thibodeau, & Jorgensen, 2011). We also expected the association between guilt-CG to be closer than that between guilt and depression. The content of bereavement guilt is closely related to the death of the close person. It involves not only negative evaluation on one's behaviour but also unfinished business regarding the relationship with the deceased. Guilt may denote a persisting inner bond with the deceased, at the cost of acknowledging the death (Field & Bonanno, 2001). It may impede the person's steps to accept the fact of death and reconstruct a new relationship with the deceased. This detrimental feature will yield more influence on grief than depression. In summary, we hypothesised that:

H1. Positive associations are predicted between guilt and CG.

H2. Positive associations are predicted between guilt and depression.

H3. Bereavement-related guilt has a closer association with CG than depression.

Both concurrent and longitudinal information are important to examine these hypotheses. Concurrent association can indicate the correlations between guilt and these outcomes, and the longitudinal association can show whether guilt early on predicts grief or depression symptoms at a later time point. Therefore, we conducted both cross-sectional and longitudinal surveys to examine our hypothesis.

METHOD

Participants and procedures

Data for this study were drawn from a research program on grief adaptation among bereaved Chinese adults. Participants were recruited from two Chinese online mourning websites. Recruiting advertisements which include a brief introduction of the research and inclusion criteria were posted on the main page of the websites to solicit eligible participants. Inclusion criteria were Chinese adults, at least 18 years old, who had lost first degree relatives (spouses, parents, children or siblings). The year since the death was not limited in this wave of the survey because

TABLE 1
Demographic and background information of participants

	Sample 1 (n = *1358*) *Mean* (SD)	*Sample 2* (n = *194*) *Mean* (SD)	*Sample 3* (n = *1063*) *Mean* (SD)
Age	41.85 (11.12)	42.09 (10.18)	42.35 (11.17)
Bereavement time (months)	25.96 (25.17)	10.60 (6.25)	30.78 (25.22)
	N (%)	*N* (%)	*N* (%)
Gender			
Male	665 (49)	89 (45.9)	533 (50.1)
Female	693 (51)	105 (54.1)	530 (49.9)
Education			
Primary or middle school	304 (22.4)	40 (20.6)	233 (21.9)
Adjunct college	517 (38.1)	64 (33.0)	402 (37.8)
University	537 (39.5)	90 (46.4)	428 (30.3)
Religion			
No religion	1029 (75.8)	157 (80.9)	801 (75.4)
Buddhism	247 (18.2)	29 (14.9)	201 (18.9)
Other religion	82 (6.0)	8 (4.2)	61 (5.7)
Lost family members			
Parents	978 (72.1)	155 (79.9)	764 (71.9)
Child	82 (6)	8 (4.1)	58 (5.5)
Spouse	154 (11.3)	19 (9.8)	125 (11.8)
Sibling	144 (10.6)	12 (6.2)	116 (10.9)
Cause of the death			
Illness	1003 (73.9)	154 (79.4)	785 (73.8)
Accidents	173 (12.7)	14 (7.2)	126 (11.9)
Suicide	26 (1.9)	3 (1.5)	20 (1.9)
Old age	90 (6.6)	12 (6.2)	80 (7.5)
Unknown	66 (4.8)	11 (5.7)	43 (4.0)

we wanted to access a wide diversity of persons for the cross-sectional sample. Persons who fit the criteria and who were interested in study participation could click the link to enter the research site. Participants clicked the corresponding buttons on the introductory page to give their informed consent and to start completing the questionnaires online. At the end of the survey, participants were invited to leave their email address if they were willing to be contacted for further research. Participants who were bereaved within 2 years at the first time of the survey were invited to fill in the questionnaires again 1 year later. The 2-year period was chosen as an inclusion criterion for the longitudinal survey because we wanted to trace bereavement reactions from a relatively early time point onwards. Selection of this time period also enabled us to recruit an appropriate sample size for the analyses. The data collection was approved by the Institutional Review Board of the study affiliated university.

The collected data were carefully scrutinised for its validity. Cases with missing data, strange patterns (such as same scores on all the items, repeated patterns of the scores) or duplicated demographic and death-related information were excluded from the analysis. As reported by Li and Prigerson (2016), ultimately, 1381 bereaved persons filled the questionnaires, and valid data were provided by 1358 of them. The percentage of valid respondents was 98.3% (Sample 1). Their demographic and other background information can be found in Table 1. There were 867 participants who had been bereaved within 2 years at the first time of the survey. They all provided their contact information, enabling invitations to be sent to ask them to fill in the same questionnaire 1 year later. In total, 197 of them responded, and valid responses were provided by 194 of them (Sample 2). The response rate was 22.72%. Although this is a large percentage of dropouts, this is not unusual for bereavement research (e.g., Field, Gal-Oz, & Bonanno, 2003; Holland et al., 2013). Chi-square tests were conducted to compare those who dropped out from the second wave ($n = 673$) with those who remained in the study ($n = 194$).[2] The chi-square test and independent T test found no group differences according to respondents/dropout status on age, gender, education level, religion, time since the loss, or any score of CG, depression and guilt. However, the chi-square test showed differences between the two groups on relationship to the deceased ($\chi^2 = 8.696$, $df = 3$, $p = .034$, Cramer's $V = 0.100$) and cause of the death ($\chi^2 = 5.317$, $df = 1$, $p = .021$, Cramer's $V = 0.078$). The proportion of losing parents among the Wave 2 participants was higher (79.9%) than for those who had dropped out (69.1%). There was also a higher proportion of Wave 2 participants bereaved from natural death (85.6%) than dropouts (78.0%).

Measures

CG symptoms

CG was measured using the Inventory of Complicated Grief (ICG). Scores indicate the frequency of a cluster of grief experiences on a 5-point Likert scale (0 = *never*, 5 = *always*; Prigerson et al., 1995). The Chinese version of ICG has been validated and showed good reliability and validity (Jie Li & Prigerson, 2016). Cronbach's α for the scale was .93.

Depression

Depression symptoms were evaluated using the depression subscale in the Chinese version of the Hospital Anxiety and Depression Scale (HADS-D; Leung, Ho, Kan, Hung, & Chen, 1993). It contains seven items for depression. The frequency of symptoms was rated on a 0–3 scale. Cronbach's α for the depression subscale was .85 in the present sample.

[2]Three respondents who participated at the second wave were excluded from the longitudinal analysis because they provided invalid data; they were counted as dropouts.

Guilt

Guilt in bereavement was measured using the Bereavement Guilt Scale (BGS), which was developed in line with the multidimensional conceptualization of bereavement guilt (Li, Stroebe, Chow, & Chan, 2017). Participants were asked to indicate their guilt experience on a 5-point scale ranging from 1 (*does not describe me at all*) through 5 (*describes me very well*) on 14 items. The BGS contains five subfactors reflecting different aspect of guilt: (a) Responsibility guilt—reflecting the guilt about not being able to prevent the death or attribute the death to oneself. A sample item is: "I think he/she would not have died at that time if I had done things differently". (b) Hurting the deceased—about wrong-doings which hurt the deceased in their past relationship. These items include "He/She was unhappy because of me". (c) Survivor guilt—expressing guilt about continuing to live or enjoy one's life after the death, for example, "I feel guilty for living on myself since his/her death." (d) Indebtedness guilt—reflecting guilt about failing to reciprocate regarding the parent or not doing things one felt obligated to do for the deceased. A sample item is "I feel I could not reciprocate** enough for what he/ she gave to me". (e) Guilt feelings—reflecting the intensity of the distressful feeling of guilt. These items include "My heart hurts when recalling things I feel guilty about." The construct validity of the measure was supported by the result of exploratory factor analysis and confirmatory factor analysis. The score of BGS was found negatively correlated with self-forgiveness and self-esteem. (Li et al., 2017). Each subfactor contains three items, except for guilt feelings, which contains two items. Cronbach's α was .913 for the total scale, .866 for responsibility guilt, .744 for hurting the deceased, .813 for survivor guilt, .780 for indebtedness guilt and .862 for guilt feeling. The average score of all items indicates the level of total guilt. Mean score of each dimension reflects the degree of guilt in different subtypes.

Statistical analysis

In order to test H1 and H2, the concurrent associations between guilt and CG and between guilt and depression were examined by a series of regression models on the cross-sectional data. In the first level of the model, demographic variables (age, gender, education level, religion) and death-related variables (time since the loss, relationship with the deceased, and cause of the death) were entered. The causes of death were coded according to natural death, which included illness and dying from old age, and unnatural death, which includes the other causes of death. Guilt or subfactors of guilt were entered in the second level to predict CG or depression, respectively, in different models. A series of similar regression analyses was used to examine the longitudinal relationship between guilt and outcome measures. More specifically, guilt (total or subfactors) at Time 1 was entered in the regression model, after controlling for demographic and death-related variables, to predict CG or depression at Time 2 (1 year later). To avoid the inflated association between guilt and CG due to content overlap, one item about survivor guilt in the ICG was removed when calculating the total score of ICG for the regression analysis. In order to test H3, the differences of the association between guilt-CG and guilt-depression are explored from two aspects. First, we conducted multiple regression analysis to compare the types and extent of guilt in CG and depression. In order to maintain optimal statistical power to detect the effect, we used the continuous score of CG and depression in the test, rather than divided participants into CG or depression significant groups using the cut-off scores of corresponding measurements. Second, we compared the standardised regression coefficients of depression and CG on different types of guilt (Cohen, Cohen, West, & Aiken, 2003). If the standardised regression coefficients of CG are significantly larger than that of depression, then there are further evidence that guilt has closer connections with CG than depression. Since one of the criteria of diagnosing CG is that symptoms lasted for at least 6 months, we only included participants whose family member had died at least 6 months ago in this analysis ($N = 1063$). The information for this sample (Sample 3) is reported in Table 1.

RESULTS

Correlations between variables

The correlations between the main variables in this study are presented in Table 2. Guilt was positively correlated with both CG and depression. The inter-correlations between subtypes of guilt were significant as well.

Guilt and CG

We examined the relationship between guilt and CG using regression analysis. After controlling for the demographic and death-related variables, both the cross-sectional and longitudinal associations between guilt and CG remained significant. Similar results were found in the relationship between each subtype of guilt and CG (Table 3). These findings indicate that higher guilt is associated with higher concurrent CG symptoms. Moreover, the degree of guilt predicted the symptoms of CG later in bereavement. This result supported H1 that guilt has a positive association with CG.

Guilt and depression

The above regression analyses were repeated for depression to test H2. As shown in Table 4, the regression

TABLE 2
Correlations between variables

	Responsibility guilt	*Hurting the deceased*	*Survivor guilt*	*Indebtedness guilt*	*Guilt feeling*	*Complicated grief*	*Depression*
Total guilt	.836	.718	.792	.787	.849	.591	.419
Responsibility guilt		.502	.583	.553	.618	.464	.306
Hurting the deceased			.447	.433	.510	.305	.255
Survivor guilt				.469	.638	.702	.550
Indebtedness guilt					.469	.638	.702
Guilt feeling						.486	.337
Complicated grief							.583

Note: Correlations were calculated using Sample 1 ($N = 1358$). All correlations were significant at $p < .001$ level.

TABLE 3
Summary of regression coefficients of total guilt and subfactors of guilt on complicated grief

	Cross-sectional (N = *1358)*			*Longitudinal* (N = *194)*		
	β	*Standardised* β	ΔR^2	β	*Standardised* β	ΔR^2
Total guilt	8.612	.529**	.252	.539	.497**	.207
Responsibility guilt	4.50	.385**	.133	1.237	.362**	.108
Hurting the deceased	3.767	.257**	.061	1.062	.228**	.044
Survivor guilt	8.093	.618**	.342	2.337	.570**	.296
Indebtedness guilt	5.071	.378**	.127	1.650	.390**	.121
Guilt feeling	5.249	.437**	.182	2.049	.353**	.114

Note: The ΔR^2 indicates the proportion of variance explained by the corresponding guilt factor over and above what is explained by the set of demographic and death-related predictors.
**$p < .001$.

coefficients of guilt (both total score of guilt and subtypes of guilt) on depression remained significant after controlling for death-related and demographic variables in the first level of the regression models. This indicates that there are positive associations between guilt and depression, as higher guilt is associated with higher depression, and it also predicts elevated depression symptoms 1 year later. These results supported H2.

The difference between guilt-CG and guilt-depression relationship

The multiple regression analysis was used to compare types of guilt featured in CG or depression. As can be seen from Table 5, the main effects of ICG were significant in all types of guilt, as well as in total guilt. However, the main effects of depression were not significant in responsibility guilt, indebtedness guilt and guilt feeling. It suggests that these types of guilt are more prominent in CG than depression.

Differences of regression coefficients of depression and ICG on guilt were tested by the following procedure. First the scores of all variables were standardised. Then, the following regression model was fit: $\text{Guilt} = b0 + b1 \times \text{Pred1} + \_b2 \times \text{Pred2}$, where Pred1 = (depression + ICG)/2 and Pred2 = (depression − ICG)/2. Finally, the regression coefficient of Pred2 is equal to the difference between the regression coefficients of depression and guilt.

The results (Table 6) indicated that all the differences were significant except when the regression is on "hurting the deceased." It suggested that all types of guilt are associated more closely with CG than depression, except "hurting the deceased."

TABLE 4
Summary of regression coefficients of total guilt and subfactors of guilt on depression

	Cross-sectional (N = *1358)*			*Longitudinal* (N = *194)*		
	β	*Standardised* β	ΔR^2	β	*Standardised* β	ΔR^2
Total guilt	2.051	.379**	.129	.117	.339**	.096
Responsibility guilt	.967	.250**	.056	.233	.214**	.037
Hurting the deceased	1.148	.236**	.052	.284	.190**	.031
Survivor guilt	2.041	.470**	.198	.543	.414**	.156
Indebtedness guilt	1.020	.229**	.047	.337	.249**	.050
Guilt feeling	1.210	.303**	.088	.438	.237**	.051

TABLE 5
Multiple regression analysis of Depression and ICG on guilt

	F *(3, 1059)*	p	*Partial* η^2
Total guilt			
Depression	7.56	<.006	.007
ICG	148.78	<.001	.123
Depression × ICG	2.99	.084	.003
Responsibility guilt			
Depression	2.95	.086	.003
ICG	95.76	<.001	.083
Depression × ICG	3.33	.068	.003
Hurting the deceased			
Depression	12.00	.001	.011
ICG	34.05	<.001	.031
Depression × ICG	5.077	.024	.005
Survivor guilt			
Depression	4.25	.040	.004
ICG	146.57	<.001	.122
Depression × ICG	2.59	.115	.002
Indebtedness guilt			
Depression	1.34	.248	.001
ICG	73.63	<.001	.065
Depression × ICG	3.79	.052	.004
Guilt feeling			
Depression	3.43	.064	.003
ICG	89.43	<.001	.078
Depression × ICG	1.733	.188	.002

Note: ICG = Inventory of Complicated Grief.

These results suggest two conclusions. First, the types of guilt featured in CG overlap with those in depression, but there remains a difference. More specifically, all types of guilt we examined were featured in CG, but responsibility to the death, indebtedness guilt and guilt feeling were not featured in depression. Second, bereavement guilt was more closely associated with CG than depression, given that the regression coefficients of ICG on most types of guilt were significantly larger than depression on guilt.

DISCUSSION

In this study, we measured multiple aspects of guilt in bereavement, and[3] investigated the relationship with CG and depression. The concurrent associations between guilt and mental health outcomes were examined in a large cross-sectional dataset, and prospective associations were examined by following a group of bereaved persons after 12 months. The results confirmed our expectations that higher guilt is associated with higher CG and depression. Furthermore, guilt did predict elevated symptoms of CG and depression 1 year subsequently. This is consistent with previous studies (e.g., Akiyama et al., 2010; Boelen & Lensvelt-Mulders, 2005; Field & Bonanno, 2001), which showed a link between guilt and various symptoms of distress in bereavement, while extending the scope beyond those studies in two respects. First, while most previous studies examined the concurrent correlation between variables, the present study further demonstrated that guilt-predicted grief and depression later on. The latter relationship remained even after the influence of demographic and death-related variables was partial out. Second, our study examined more comprehensive aspects of guilt in bereavement, rather than only self-attribution for the death, which was the main focus in previous studies.

Even though more studies are needed to explain whether and how guilt influences the mental health of bereaved persons, the present results should draw researchers' and clinicians' attention to the association between guilt and CG. Our results support the opinion of researchers working on ICD-11 that guilt ought to be considered as a presenting symptom closely connected to grief complications (Maercker et al., 2013). Meanwhile, there seem to be good reasons to argue that CG treatment should (at least partially) be based on the range of core symptoms so far identified. Given the close connection that we have demonstrated between guilt and CG, intervention should include the treatment of guilt-related symptoms, as some have already done (De Groot et al., 2007).

This study also found a significant association between guilt and depression, as it had between guilt and CG. However, on careful inspection, differences in the relationship become evident. First, the magnitude of associations between guilt and CG is larger than guilt and depression. It should be noted that the connections were not due to conceptual or item overlap between guilt and the dependent variables, because the item on self-blame in ICG was removed before regression analysis. Second, the multiple regression analysis suggested that each type of bereavement guilt was featured in persons with high ICG scores, but responsibility to the death, indebtedness guilt, and guilt feeling was not featured among those with high depression scores. While caution is needed in extrapolating from our findings alone, if supported by further investigation, there are likely to be clinical implications. To follow one line of reasoning: The DSM-5 has eliminated the bereavement exclusion[3] in depression diagnosis. Since depression and grief share similar presenting symptoms (such as "guilt"), clinicians may feel uncertain about whether the person is experiencing depression or grief complications (or even both). Therefore, establishing the specific featured forms of guilt in

[3]In DSM-IV, those experiencing a bereavement would not have been diagnosed with major depression unless their symptoms lasted longer than 2 months or were associated with marked functional impairment, a morbid preoccupation with worthlessness, suicidal ideation, psychomotor retardation or psychosis.

TABLE 6
Comparing differences in regression coefficients of depression and complicated grief

Dependent variable (Z score of)	*Difference in standardised regression coefficients*	t *(1060)*	p	*Partial* η^2	*95% Confidence interval*
Total guilt	−0.445	−8.369	<.001	.62	−0.549 to −0.341
Responsibility guilt	−0.435	−7.554	<.001	.051	−0.548 to −0.322
Hurting the deceased	−0.115	−1.828	.068	.003	−0.238 to 0.008
Survivor guilt	−0.352	−7.679	<.001	.053	−0.442 to −0.262
Indebtedness guilt	−0.445	−7.241	<.001	.047	−0.566 to −0.325
Guilt feeling	−0.399	−6.850	<.001	.042	−0.514 to −0.285

relationship to CG versus depression may ultimately be helpful for clinicians.

In general, the above results should also be interpreted with caution as there are some limitations in the study. First, participants in this study are all Chinese. Guilt is an emotion based on self-evaluation against inner standards, which are influenced by the moral codes in specific cultures (Markus & Kitayama, 1991). The manifestation and function of guilt in Chinese society might be different from other societies. Guilt seems to include a wider range of content and expressions in Chinese society than in western countries (Li, Wang, & Fischer, 2004). For example, Chinese moral standard emphasises role duties and reciprocation. People who fail to fulfil those requirements may feel indebtedness guilt in Chinese society, while it may not necessarily induce guilt in another culture. Therefore, whether the relationship between guilt and symptomatology found in the present study can be generalised to other countries remains to be seen (i.e., requiring replication across cultures). Second, participants in this study were all recruited through the Internet. So far, there is lack of a sound body of evidence to establish whether there is any difference between bereaved persons who use memorial websites and those who do not. There is some indication that differences may not be substantial: One study compared an online survey with a traditional paper and pencil method, finding no difference in the degree of grief or according to most demographic variables, except that the online survey recruited more a demographically diverse sample (Tolstikova, 2009–2010). Our sample also reflected substantial diversity of participants' background; we have no reason to assume that there was any systematic bias in recruitment. Third, even though an association between guilt and mental distress symptoms has been shown, the direction of causality is not clear. More longitudinal studies are needed to answer this question. Finally, the identification of CG or depression is based on cut-off scores of self-report questionnaires. A more stringent method might involve well-trained psychiatrists to give diagnosis by means of systematic clinical interviews.

Despite the above limitations, this study is the first to investigate several subtypes of bereavement guilt in relation to psychological outcomes among bereaved Chinese persons. It adds to our knowledge about the role of guilt in adjusting to the loss of a loved one. It contributes to theoretical understanding of the special nature of CG as distinct from depression. In due course, this line of investigation will hopefully help clinicians to identify and treat those with grief complications.

Manuscript received February 2017
Revised manuscript accepted February 2018
First published online March 2018

REFERENCES

Akiyama, A., Numata, K., & Mikami, H. (2010). Importance of end-of-life support to minimize caregiver's regret during bereavement of the elderly for better subsequent adaptation to bereavement. *Archives of Gerontology and Geriatrics*, *50*(2), 175–178. https://doi.org/10.1016/j.archger.2009.03.006

American Psychiatric Association (2013). *Diagnostic and statistical manual of mental disorders*. (5th ed.). Washington, DC: American Psychiatric Publishing.

Boelen, P. A., & Lensvelt-Mulders, G. J. L. M. (2005). Psychometric properties of the Grief Cognitions Questionnaire (GCQ). *Journal of Psychopathology and Behavioral Assessment*, *27*(4), 291–304. https://doi.org/10.1007/s10862-005-2409-5

Boelen, P. A., & Prigerson, H. G. (2013). Prolonged grief disorder as a new diagnostic category in DSM-5. In M. Stroebe, H. Schut, & J. Van den Bout (Eds.), *Complicated grief: Scientific foundations for health care professionals*. (pp. 85–98). New York, NY: Routledge.

Boelen, P. A., van den Bout, J., & van den Hout, M. A. (2006). Negative cognitions and avoidance in emotional problems after bereavement: A prospective study. *Behavior Research and Therapy*, *44*(11), 1657–1672. https://doi.org/10.1016/j.brat.2005.12.006

Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2003). *Applied multiple regression/correlation analysis for the behavioral sciences*. (3rd ed.). Mahwah, NJ: Erlbaum.

De Groot, M., De Keijser, J., Neeleman, J., Kerkhof, A., Nolen, W., & Burger, H. (2007). Cognitive behavior therapy to prevent complicated grief among relatives and spouses bereaved by suicide: Cluster randomised controlled trial. *British Medical Journal*, *334*(7601), 994–996. https://doi.org/10.1136/bmj.39161.457431.55

Field, N. P., & Bonanno, G. A. (2001). The role of blame in adaptation in the first 5 years following the death of a spouse. *American Behavioral Scientist*, *44*(5), 764–781. https://doi.org/10.1177/00027640121956485

Field, N. P., Gal-Oz, E., & Bonanno, G. A. (2003). Continuing bonds and adjustment at 5 years after the death of a spouse. *Journal of Consulting and Clinical Psychology*, *71*(1), 110–117.

Golden, A. M. J., & Dalgleish, T. (2012). Facets of pejorative self-processing in complicated grief. *Journal of Consulting and Clinical Psychology*, *80*(3), 512–524. https://doi.org/10.1037/a0027338

Harrison, L., & Harrington, R. (2001). Adolescents' bereavement experiences. Prevalence, association with depressive symptoms, and use of services. *Journal of Adolescence*, *24*(2), 159–169.

Hazzard, A., Weston, J., & Gutterres, C. (1992). After a child's death: Factors related to parental bereavement. *Journal of Developmental and Behavioral Pediatrics*, *13*(1), 24–30.

Holland, J. M., Thompson, K. L., Rozalski, V., & Lichtenthal, W. G. (2013). Bereavement-related regret trajectories among widowed older adults. *Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, *69B*, 40–47. https://doi.org/10.1093/geronb/gbt050

Jordan, A. H., & Litz, B. T. (2014). Prolonged grief disorder: Diagnostic, assessment, and treatment considerations. *Professional Psychology: Research and Practice*, *45*(3), 180–187.

Kim, S., Thibodeau, R., & Jorgensen, R. S. (2011). Shame, guilt, and depressive symptoms: A meta-analytic review. *Psychological Bulletin*, *137*(1), 68–96.

Leung, C. M., Ho, S., Kan, C. S., Hung, C. H., & Chen, C. N. (1993). Evaluation of the Chinese version of the Hospital Anxiety and Depression Scale. *International Journal of Psychosomatics*, *40*, 29–34.

Li, J., & Prigerson, H. G. (2016). Assessment and associated features of prolonged grief disorder among Chinese bereaved individuals. *Comprehensive Psychiatry*, *66*, 9–16. https://doi.org/10.1016/j.comppsych.2015.12.001

Li, J., Stroebe, M., Chow, A. Y. M., & Chan, C. L. W. (2017). The Bereavement Guilt Scale: Development and preliminary validation. *Omega: Journal of Death and Dying*, *72*(2), 166–183. https://doi.org/10.1177/0030222815612309

Li, J., Stroebe, M. S., Chan, C. L. W., & Chow, A. Y. M. (2014). Guilt in bereavement: A review and conceptual framework. *Death Studies*, *38*(3), 165–171. https://doi.org/10.1080/07481187.2012.738770

Li, J., Wang, L., & Fischer, K. W. (2004). The organization of Chinese shame concepts. *Cognition and Emotion*, *18*(6), 767–797. https://doi.org/10.1080/02699930341000202

Maercker, A., Brewin, C. R., Bryant, R. A., Cloitre, M., Ommeren, M., Jones, L. M., … Reed, G. M. (2013). Diagnosis and classification of disorders specifically associated with stress: Proposals for ICD-11. *World Psychiatry*, *12*(3), 198–206.

Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review*, *98*(2), 224–253. https://doi.org/10.1037/0033-295X.98.2.224

Prigerson, H. G., Horowitz, M. J., Jacobs, S. C., Parkes, C. M., Aslan, M., Goodkin, K., & Maciejewski, P. K. (2009). Prolonged grief disorder: Psychometric validation of criteria proposed for DSM-5 and ICD-11. *PLoS Medicine*, *6*, e1000121. https://doi.org/10.1371/journal.pmed.1000121

Prigerson, H. G., Maciejewski, P. K., Reynolds, C., Bierhals, A. J., Newsom, J. T., Fasiczka, A., … Miller, M. (1995). Inventory of complicated grief: A scale to measure maladaptive symptoms of loss. *Psychiatry Research*, *59*(1-2), 65–79. https://doi.org/10.1016/0165-1781(95)02757-2

Rando, T. A. (1993). *Treatment of complicated mourning*. (). Champaign, IL: Research Press.

Shear, M. K., Simon, N., Wall, M., Zisook, S., Neimeyer, R., Duan, N., … Keshaviah, A. (2011). Complicated grief and related bereavement issues for DSM-5. *Depression and Anxiety*, *28*(2), 103–117. https://doi.org/10.1002/da.20780

Smith, M. E., Nunley, B. L., Kerr, P. L., & Galligan, H. (2011). Elders' experiences of the death of an adult child. *Issues in Mental Health Nursing*, *32*(9), 568–574. https://doi.org/10.3109/01612840.2011.576802

Stroebe, M., Stroebe, W., van de Schoot, R., Schut, H., Abakoumkin, G., & Li, J. (2014). Guilt in bereavement: The role of self-blame and regret in coping with loss. *PLoS One*, *9*(5), e96606.

Tolstikova, K. (2009–2010). Internet method in bereavement research: Comparison of online and offline surveys. *Omega: Journal of Death and Dying*, *60*(4), 327–349.

Torges, C. M., Stewart, A. J., & Nolen-Hoeksema, S. (2008). Regret resolution, aging, and adapting to loss. *Psychology and Aging*, *23*(1), 169–180. https://doi.org/10.1037/0882-7974.23.1.169