

The Bereavement Guilt Scale: Development and Preliminary Validation

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Jie Li¹, Magaret Stroebe^{2,3}, Cecilia L. W. Chan⁴,
and Amy Y. M. Chow⁴

Abstract

The rationale, development, and validation of the Bereavement Guilt Scale (BGS) are described in this article. The BGS was based on a theoretically developed, multidimensional conceptualization of guilt. Part 1 describes the generation of the item pool, derived from in-depth interviews, and review of the scientific literature. Part 2 details statistical analyses for further item selection (Sample 1, $N = 273$). Part 3 covers the psychometric properties of the emergent-BGS (Sample 2, $N = 600$, and Sample 3, $N = 479$). Confirmatory factor analysis indicated that a five-factor model fit the data best. Correlations of BGS scores with depression, anxiety, self-esteem, self-forgiveness, and mode of death were consistent with theoretical predictions, supporting the construct validity of the measure. The internal consistency and test–retest reliability were also supported. Thus, initial testing or examination suggests that the BGS is a valid tool to assess multiple components of bereavement guilt. Further psychometric testing across cultures is recommended.

Keywords

guilt, bereavement, grief, Chinese

¹Department of Psychology, Renmin University of China, China

²Department of Clinical & Health Psychology, Utrecht University, Utrecht, The Netherlands

³Department of Clinical Psychology & Experimental Psychopathology, University of Groningen, Groningen, The Netherlands

⁴Centre on Behavioral Health and Department of Social Work & Social Administration, The University of Hong Kong, Hong Kong (SAR), China

Corresponding Author:

Jie Li, Department of Psychology, Renmin University of China, Beijing 100872, China.

Email: lijie2013@ruc.edu.cn

Guilt feelings are familiar to bereaved people, being widely reported as one of the main themes in their grief experience (Adolfsson & Larsson, 2004; McMenamy, Jordan, & Mitchell, 2008; Miles & Demi, 1983; Shanfield & Swain, 1984; Smith, Nunley, Kerr, & Galligan, 2011; Zisook & Shuchter, 1985). As scientific research has indicated, if extreme or persistent, they can be associated with health detriments (Field, Bonanno, Williams, & Horowitz, 2000; Gupta, Kulhara, & Verma, 1988; Harder, Cutler, & Rockart, 1992; Kowalski & Bondmass, 2008). Health-care professionals have also reported that difficulties in dealing with guilt are often a major source of complication among their bereaved clients (Berman, 1978; Tooley, 1975; Zimmerman, 2001). Systematic examination on this common and potentially pathological process will advance our knowledge on adjustment to bereavement and also contribute to psychological treatment for those in need. Therefore, it is important to ensure that the presence and intensity of guilt in bereavement are validly and reliably assessed.

Given that there are inconsistencies in conceptualizing and measuring guilt in psychological studies in general (Tilghman-Osborne, Cole, & Felton, 2010), it would seem inappropriate or even impossible, to simply adopt an existing scale to assess guilt in the specific field of bereavement. Actually, conducting domain-specific research on guilt has been advocated by researchers (Tangney, Stuewig, & Mashek, 2007), since “guilt requires a situational context for its manifestation” (Tilghman-Osborne et al., 2010, p. 544). Not surprisingly, then, efforts have been made to develop guilt measures in specific domains, such as the trauma-related guilt inventory (Kubany & Abueg, 1996) and caregivers guilt questionnaire (Losada, Márquez-González, Peñacoba, & Romero-Moreno, 2010).

However, examination of the scientific literature reveals that the major difficulty in assessing guilt in bereavement, similar to other fields, is a lack of convergence in conceptualization (Li et al. 2014). In the bereavement literature, guilt has been variously understood, for example, as a coping strategy (Garnefski & Kraaij, 2009; Weinberg, 1994), a (group) of cognitions (Boelen et al., 2003; Davis et al., 1995; Downey, Silver, & Wortman, 1990), or an emotion which is part of grief (Harwood et al., 2002; Kowalski & Bondmass, 2008; Lang et al., 1996). Clearly, for measurement purposes too, conceptual clarity based on a theoretically derived definition would be helpful. In a review of previous literature and conceptual analysis, the definition of bereavement guilt has been proposed 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). As reflected in this definition, in our view, bereavement guilt comprises both cognitive and affective aspects. It is regarded as a multidimensional construct, since the cognitive process can generate various components of guilt. This conceptualization is consistent with the range of responses reported by grieving people. For example, people feel guilty for various reasons after their loved one has died, such as

not preventing the death, not doing enough for the deceased, enjoying life again after the loved one's death, and so on (Kerr, 1994; Smith et al., 2011). In a model of sources of guilt in bereavement, Miles and Demi (1983, 1991–1992) identified different types of guilt, including death causation guilt, illness-related guilt, childrearing guilt, moral guilt, survival guilt, and grief guilt, from bereaved parents' responses.

On the basis of this conceptualization, shortcomings of previous assessments of guilt in bereavement become evident: They have typically used measures that have failed to reflect the complexity of the guilt experience. Different types of assessment have been adopted, but each is associated with some shortcomings. To illustrate, some studies have constructed just one or several items to measure guilt (De Groot et al., 2007; Surkan et al., 2006), or adopted one or several items from an instrument which was not specifically designed to measure guilt (Weinberg, 1994). These types of measures lack psychometric validity and only assess particular sources of guilt. Other studies have collected qualitative data and coded it to reflect guilt (Field & Bonanno, 2001; Field et al., 2000; Torges et al., 2008). This method opens the opportunity to explore all sources of guilt reported by participants. However, it does not delineate different components in guilt but simply sums up all sources to represent guilt in total. There are also some subscales in bereavement questionnaires measuring guilt or self-blame, for example, Grief Experience Inventory (Sanders, Mauger, & Strong, 1985), and the Grief Experience Questionnaire (Barrett & Scott, 1989). These subscales contain more than one source of guilt, but there is no evidence to show that they capture the comprehensive content of guilt. Again, such a strategy cannot be used to gain understanding of the multiple components of guilt in bereavement.

In sum, available measures have neither taken the range of components nor the variety of sources of guilt into account. These shortcomings have had major consequences with respect to understanding the emotion of guilt in bereavement. For example, the diversity in conceptualization and measurement of guilt has probably contributed to the huge range of reported prevalence of this phenomenon across studies (Li et al., 2014).

The aim of the present study was to develop a valid tool to measure bereavement guilt, which is guided by the above definition and accordingly takes the complex, multidimensional components of guilt into account. In contrast to most research in the bereavement field, we conducted this project in Chinese rather than a western society. Most investigations of guilt in bereavement have also been conducted in western cultures, even though the importance of cultural sensitivity has been emphasized by bereavement researchers (Rosenblatt, 2008) and proneness to guilt has been found to be more characteristic of certain eastern than western cultures (Anolli & Pascucci, 2005; Bear, Uribe-Zarain, Manning, & Shiomi, 2009). To examine guilt in Chinese society is particularly meaningful, given that guilt is an important and familiar—even basic—emotion

among Chinese people (Li, Wang, & Fischer, 2004). Also, guilt can be understood as involving inner standards which are influenced by moral systems in specific cultures (Markus & Kitayama, 1991). Unlike individualistic cultures—where obligations are to a greater extent left to personal choice—in collective cultures, such as China, duties and obligations are emphasized, mandatory, and if not fulfilled, lead to guilt (Bedford & Hwang, 2003; Hwang, 2001; Markus & Kitayama, 1991). For example, the concept of “Xiao” (Filial Piety) is a traditional moral code which indicates the obligations of adult children to their parents (Yang, Yeh, & Huang, 1989).

Given the significant obligations of adult Chinese children to their parents, the Bereavement Guilt Scale (BGS) was first developed and validated among this subgroup, and then cross-validated in a general group of bereaved Chinese people who lost their first degree relatives. Part 1 describes the process of generating the original guilt items. In Part 2, items from this pool were selected for in- or exclusion in the BGS, based on standard statistical procedures using data from a group of bereaved adult children (Sample 1). The psychometric properties of the newly developed BGS were examined in Part 3, first among bereaved adult children specifically (Sample 2) and second, extending to a broader range of bereaved family members (Sample 3).

Part 1: Generating Items

In order to generate items that represent the experience of guilt in bereavement, we invited 16 bereaved Chinese adult children (11 Females and 5 males) to be informants about their own guilt experience. Their age ranged from 20 to 59, $M = 43.38$, $SD = 12.05$. All of them lost either or both parent(s) on average 3.48 years ago, $SD = 3.43$. A semistructured interview was conducted with each of them. Their responses to questions such as “Can you talk about your guilt experience after your parent passed away?” “What do you feel guilty about after your parents passed away,” and “Can you describe your feeling when you were experiencing guilt to me?” were collected and transcribed for the purpose of developing scale items. Collecting participants’ narratives generated 64 guilt experience expressions, among which 25 items were retained after deleting repeated ones. Meanwhile, for maximizing the content validity of the BGS, some guilt expressions that were documented in the literature (Boelen & Lensvelt-Mulders, 2005; Hogan, Greenfield, & Schmidt, 2001; Sanders et al., 1985) but not reflected in the interviews were added to the items pool. Consequently, four expressions about survivor guilt were added. To increase the face validity and clarity of this newly developed scale, an expert panel including seven researchers and clinicians in this field was formed to discuss and scrutinize each item. Modifications were made accordingly, to improve the comprehensibility of items. The final item pool contained 26 items reflecting guilt cognition, and 3 items about guilt feeling.¹ For each item, the participants

were asked to indicate the degree to which the item described their actual experience from 1 (*does not describe me at all*) to 5 (*describes me very well*).

Part 2: Item Reduction

This part was conducted to evaluate each item with statistic procedures and select adequate items to form the preliminary version of BGS.

Method

Participants. Participants in this part (Sample 1) and in Part 3 (Samples 2 and 3) were all recruited from two online memorial websites, being asked to fill in the original version of BGS online. These websites provide virtual spaces where bereaved people can memorialize their deceased family members and friends, and express their grief. The data were carefully checked for irregularities, such as duplicate personal information. Ultimately, Samples 1 and 2 were comprised of 273 and 600 bereaved adult children, respectively. Sample 3 included mixed subgroups of bereaved people, including 100 bereaved adult children (different from those in Sample 2), 154 bereaved spouses, 81 bereaved parents, and 144 bereaved siblings. The background information for all three samples is presented in Table 1.

Procedure. The recruiting information and link to the online questionnaire survey were posted on the first page of the two websites. After clicking the survey link, interested persons are directed to an introduction page. The confidentiality of their information and rights of withdrawal at any time were stated in the introduction, which also stated that the inclusion criteria for participants were that they were Chinese adults who had lost a parent within the last 10 years. Participants were also informed that counseling services were available to them in case they feel distressed during or after the research. As a token of appreciation, after they finished all the questions, participants received a number of virtual coins provided by the respective websites. Ethical approval for this research was granted by the Human Research Ethics Committee for Non-Clinical Faculties in the university which the first author affiliated to before data collection.

Results

Explanatory factor analysis. Guilt cognition is expected to have a multidimensional structure, while guilt feeling is conceptualized to be unidirectional, with higher scores indicating more distressful feelings. Therefore, following the procedure adopted by Kubany and Abueg (1996), explanatory factor analysis (EFA) was only applied on 26 guilt cognition items using principal-axis factoring in SPSS.

Table 1. Demographic and Death Related Characteristics of Participants.

Characteristic	Sample 1 (N = 273)	Sample 2 (N = 600)	Sample 3 (N = 479)
Mean Age (SD) ^a	42.15 (10.43)	42.23 (10.19)	42.13 (12.51)
Gender			
Female	52	49.3	52.5
Male	48	50.7	47.5
Religion			
No religion	82.1	77.8	69.8
Buddhism	13.9	17.3	21.3
Other religions	4	4.8	8.9
Education			
High school and below	52.1	59	62
College and above	38.9	41	38
Cause of death			
Chronic illness	45.1	54.8	31.8
Sudden illness	39.6	34.2	34.2
Accident	7	6.5	23.4
Suicide	1.5	1.8	2.3
Others	3.6	2.7	8.2
Time since death			
Within a year	49	39.5	36
One to five years	38.5	45.5	51.9
Five to 10 years	12.5	15	12.1

Note. ^aData are presented in percentages, except for age (in years).

The principal-axis factoring method was preferred over principle component analysis because it is more suitable to identify latent variables while the latter is mainly adopted as data reduction method (Costello & Osborne, 2005). The items were subjected to direct oblimin rotation because it is possible that factors are correlated. The scree test suggested by Cattell (1966), the interpretability of factors, and the eigenvalues-greater-than one rule were all taken into consideration in determining the number of factors to retain. The first round of EFA suggested four factors accounting for 55.83% of the total variance. Items were analyzed to see if they (a) failed to load on either factor with a factor loading greater than 0.4, (b) have cross-loadings above 0.4 and the difference between two loadings is less than 0.2, and (c) have communality extraction less than 0.4. The item was removed if it fitted any one of the above criteria. The analysis process resulted in 11 items been removed from the scale. After removing those

items, similar methods were used to conduct EFA again. The final EFA still suggested four factors which accounted for 70% of the total variance. The factor loadings for retained items are presented in Table 2.

Further item analysis. In order to ensure item homogeneity, items were to be removed if their item-total correlation was less than .3. All corrected item-total correlations were found to be higher than .4 in this study. However, item redundancy should also be avoided to maximize the breadth of measurement and keep an optimal length of the scale. The selected item should load high on the factor it represents, while at the same time exhibit moderate to low item

Table 2. Rotated Factor Loadings in Final EFA.

Item	Factor			
	1	2	3	4
BGS25 I think he/she would not have died at that time if I had done things differently.	.791			
BGS22 He/She might still be alive if I had done a better job.	.790			
BGS16 I feel responsible for his/her death.	.767			
BGS17 He/she suffered because of me ^a .	.615			
BGS2 I treated ** with bad attitude. ²		-.813		
BGS3 I was not considerate enough to ** ^a .		-.755		
BGS14 He/She was unhappy because of me.		-.709		
BGS10 I did something hurtful to him/her ^a .		-.658		
BGS7 I did not do everything I could to improve our relationship.		-.555		
BGS18 I feel badly about ** whenever I feel happy since his/her death.			.753	
BGS4 I think I should not be happy anymore since ** has passed away.			.709	
BGS6 I feel guilty for living on myself since his/her death.			.691	
BGS13 I feel I could not reciprocate ** enough for what he/she gave to me.				.664
BGS29 I did not spend enough time with **.				.598
BGS8 There are many things I did not do for **.				.597

Note. Factor loadings less than 0.4 are not displayed in the table.

**represents the deceased family member.

^aThe item was removed in further item analysis.

intercorrelations (Boyle, 1991). The optimal item intercorrelations are expected to be lower than .7 to avoid the item redundancy. The analysis found three pairs of items (BGS2 and BGS3; BGS10 and BGS 14; BGS 17 and BGS 16) with correlations higher than .7. In each pair, the item which has higher loadings on its factor was retained and the one with lower loading was removed. This process resulted in the removal of BGS3, BGS10, and BGS17.

Summary of the factors about guilt cognitions. In the end, there were 12 items loading on 4 factors, which represent different aspects of guilt cognitions. Each factor contains three items, and each item loading was higher than 0.5. Factor 1 reflected guilt about not being able to prevent the death or attribute the death to oneself (e.g., “I think he/she would not have died at that time if I had done things differently”), and was labeled “*responsibility for death.*” Factor 2 was associated with wrong doings which hurt the deceased in their past relationship (e.g., “He/She was unhappy because of me.”). This factor was labeled “*hurting the deceased.*” Factor 3 contained items expressing guilt about continuing to live or enjoy one’s life after the death (e.g., “I feel badly about ** whenever I feel happy since his/her death”), and it was labeled “*survivor guilt.*” The last factor was made up of items reflecting guilt about failing to reciprocate regarding the parent or not doing things one felt obligated to do for the deceased. (e.g., “I feel I could not reciprocate ** enough for what he/she gave to me.”), thus it was labeled “*Indebtedness guilt.*”

Analyzing items on guilt feeling. The three items in guilt feeling were analyzed using inter-item correlation to check the internal consistency. The result indicated that one reverse scored item (BGS5) had very low correlations with other two items (.14 and .07, respectively). Therefore, it was removed from the scale. The correlation between the remaining two items was .74.³

Part 3: Psychometric Properties of the Measure Among Two Independent Samples

This part was designed to examine the psychometric properties of the newly developed BGS. The factorability was examined by Confirmatory Factor analysis. The construct validity was indicated by correlations between test scores of the developed scale with scores of other constructs, in accordance with predictions from theories. To be more specific, the construct validity is supported if the relationship between BGS and other variables is consistent with the following hypotheses: (a) Bereavement guilt is expected to be negatively associated with self-forgiveness (Strelan, 2007; Zechmeister & Romero, 2002). (b) The feelings of guilt and negative evaluations of one’s own behavior are also associated with negative evaluation of oneself (Boelen & Lensvelt-Mulders, 2005), thus with impairment of an individual’s self-esteem (Tangney, Burgrgraf, & Wanger, 1995).

(c) There are positive correlations between guilt and depression and anxiety (Harder et al., 1992; Harder & Zalma, 1990). (d) Those who were bereaved through a traumatic death (e.g., accident and suicide) are expected to report higher guilt than others whose family members died from chronic illness (e.g., Kubany, 2003; Lee & Scragg, 2001).

Method

Participants and procedures. The psychometric properties of BGS were not only tested among bereaved adult children (Sample 2) but also among a broader range of grieving family members (Sample 3), in order to provide evidence on its validity and reliability in a general bereaved population. The information on Samples 2 and 3 can be found in Table 1. The recruiting method and procedure were the same as Part 1, except that 24 participants from Sample 2 filled in the BGS again 3 to 5 weeks after the first time that they had filled in the questionnaire, to examine its test–retest reliability.

Instruments. In order to test the construct validity of BGS, other scales were included to test associations of the newly developed BGS with the constructs represented in these measures.

Bereavement guilt. The administered version of BGS contained 14 items on five aspects of guilt in bereavement.

Self-esteem. The Rosenberg Self-Esteem Scale (Rosenberg, 1965) was given. This is a well validated 10-item scale, which measures global personal self-esteem. Each item was rated on four points scale, ranging from 1 (*totally disagree*) to 4 (*totally agree*). The internal consistency of the scale in the present research is .80 in Sample 2 and .78 in Sample 3.

Self-forgiveness. One question was asked to assess the degree to which participants forgive themselves for things they did wrong and feel guilty about: “To what extent have you forgiven yourself about things that made you feel guilty during bereavement?” Participants could respond on a scale from 0 (*not at all*) to 10 (*completely*). This question has good face validity; it has been used as validity check item in other studies (Wohl & DeShea, 2008).

Depression and anxiety. Participants’ state of mental health was evaluated by the Hospital Anxiety and Depression Scale (Leung, Ho, Kan, Hung, & Chen, 1993), which contains seven items to measure anxiety and seven items to measure depression. It has been widely used among different populations and shown to perform well in assessing symptoms severity across various populations (Bjelland, Dahi, Haug, & Neckelmann, 2002). In the present research, the

internal consistency of depression subscale is .73 in both samples, and the internal consistency of anxiety subscale is .83 in Sample 2 and .85 in Sample 3.

All questionnaires used are in Chinese.

Results

Confirmatory factor analysis. A series of confirmatory factor analysis (CFA) were conducted with AMOS 16.0 to compare the one-factor model with the multidimensional model of bereavement guilt. The hypothesized models are specified later.

Theoretical Model 1: The experience of guilt was not organized into components, and guilt was a one dimension construct. In this model, all 14 items were loaded on one factor, namely bereavement guilt.

Theoretical Model 2: In this model, bereavement guilt comprises five components, namely, guilt feelings and four other factors which emerged from EFA. Items were expected to load on five factors, which were entered at the same level.

The goodness-of-fit indices for both models in Samples 2 and 3 are presented in Table 3. Model 1 did not fit the data well for either sample, as all the indices fail to reach acceptable values. Model 2 demonstrated good fit with the data. It supported the view that bereavement guilt contains multiaspects instead of single dimension.

Construct validity. The BGS and each of its subscales showed moderate negative correlation with self-forgiveness and self-esteem, and significant positive correlations with depression and anxiety. The correlation results in both samples can be found in Table 4. The BGS score of participants whose family members died from accident and suicide (in Sample 2: M=3.19, SD=0.72; in Sample 3:

Table 3 Goodness-of-Fit Indices for Two Competing Models.

	χ^2	df	χ^2/df	GFI	AGFI	NFI	TLI	CFI	RMSEA (90% CI)
Model 1									
Sample 2	1073.46**	77	13.94	.766	.680	.754	.724	.767	.147 (.139-.155)
Sample 3	1055.42**	78	13.53	.780	.704	.728	.699	.742	.162 (.153-.171)
Model 2									
Sample 2	210.60**	67	3.143	.951	.923	.952	.954	.966	.060 (.051-.069)
Sample 3	228.21**	67	3.41	.935	.897	.941	.942	.957	.071 (.061-.081)

Note. GFI = goodness-of-fit index; AGFI = adjusted goodness-of-fit index; NFI = normed fit index; TLI = Tucer-Lewis index; CFI = comparative fit index; RMSEA = root-mean-square error of approximation; CI = confidence interval.

**p < .001.

Table 4 Correlations Between BGS and Other Constructs.

BGS	Self-forgiveness		Self-esteem		Depression		Anxiety	
	Sample 2	Sample 3	Sample 2	Sample 3	Sample 2	Sample 3	Sample 2	Sample 3
Responsibility for death	-.38	-.45	-.30	-.36	.30	.32	.29	.27
Hurting the deceased	-.22	-.24	-.43	-.37	.33	.21	.24	.27
Survivor guilt	-.34	-.48	-.38	-.44	.52	.57	.42	.42
Indebtedness guilt	-.38	-.41	-.21	-.23	.29	.25	.25	.16
Guilt feeling	-.43	-.46	-.30	-.35	.37	.36	.34	.30
BGS total	-.45	-.50	-.41	-.43	.46	.42	.39	.35

Note. All correlations are significant, $p < .001$.

$M = 3.03$, $SD = 0.92$) were significantly higher than those who lost their loved ones from chronic illness (in Sample 2: $M = 2.62$, $SD = 0.82$; in Sample 3: $M = 2.55$, $SD = 0.93$), $t(393) = 5.15$, $p < .001$ (in Sample 2); $t(313) = 4.56$, $p < .001$ (in Sample 3). All these relationships are consistent with our hypotheses, supporting the construct validity of BGS.

Reliability. BGS is found to have good internal consistency, as the Cronbach α 's for all of the subscales, and the total scale were above .70 in both samples (Table 5). The test-retest reliability of the whole scale was .93, ranging from .72 to .90 on different subscales.

Discussion

The Chinese version of BGS was developed in line with our conceptualization of bereavement guilt as a multidimensional phenomenon. Construction of the scale was guided by input from bereaved people themselves, as well as from information derived from our review of the previous scientific literature. In adopting this approach, the intention was that items of this scale would be generated, analyzed, and selected to reflect the essence of the bereavement guilt phenomenon. Then we conducted a number of statistical analyses to examine the structure and psychometric properties of the newly developed BGS, which indicated that it was not only a valid but also a reliable measure of the manifestations of guilt in bereavement. As revealed by CFA, the five-factor structure of the BGS fitted the actual data much better than the one-factor model. Such results in turn support the conceptualization of bereavement guilt as being comprised of various components. It also provides support for the multifactor structure of guilt

Table 5 Internal Consistency and Test–Retest Reliability of BGS.

BGS	Cronbach's α		Test–retest correlation
	Sample 2	Sample 3	
Responsibility for death	.85	.88	.84
Hurting the deceased	.74	.74	.90
Survivor guilt	.80	.82	.73
Indebtedness guilt	.79	.75	.83
Guilt feeling	.85	.86	.72
BGS total	.88	.92	.93

measures that have been found in other areas, such as the trauma-related guilt scale (Kubany, 2003) and the care-giver guilt questionnaire (Losada et al., 2010). In fact, the BGS comprises subscales of guilt that had been widely mentioned in previous literatures, such as responsibility for the death and survivor guilt. At the same time, it also includes aspects that were less noticed and assessed before, such as guilt for hurting the deceased and indebtedness guilt. Moreover, it also includes one factor that depicts the distressful degree of the guilt feeling, which was neglected in most previous investigations.

The dimensionality, construct validity, and concurrent validity of BGS have been confirmed with a series of statistical analyses in different samples. The dimensionality has been supported by both EFA and CFA. The association with relevant constructs and variables, including self-forgiveness, self-esteem, depression and anxiety, and mode of death, are in accordance with theoretical predictions. BGS also demonstrated good internal consistency. The test–retest reliability appeared to be good too, although this conclusion must be tentative, given the small sample size included in the retest. Taken together, the BGS has so far emerged as a valid and reliable tool to facilitate more exploration on guilt in bereavement. It can be applied in future research to explore such aspects of bereavement guilt as its prevalence, risk factors, and associations with health outcomes. It also enables the investigation of each component of bereavement guilt separately, to gain more detailed knowledge. For example, different types of bereavement guilt may have different prevalence and risk factors. It is also useful for clinicians to assess their bereaved clients' guilt-related emotions, in particular what types of guilt exist, and how severe the feeling is. In summary, it can be used in both theoretical development and clinical settings.

It must be emphasized that this scale has been developed and validated so far only in Chinese samples. Considering the influence of culture on moral standards, which regulate the manifestation of moral emotions, such as guilt, it would clearly be useful to conduct investigations in other cultures, including western ones, in the future. Intriguing questions, such as whether the psychometric

properties of BGS found in this study can be replicated in other populations, or whether there are cross-cultural differences with regard to the content and prevalence of guilt in bereavement, are open to further investigation.

Appendix

Bereavement Guilt Scale

The following sentences are about feelings and thoughts people might have in bereavement. Please think about your experience in the past month, and indicate how much each sentence fits your actual situation. (** represents your deceased family member.) 1 = *Does not describe me at all*; 2 = *Does not quite describe me*; 3 = *Describes me fairly well*; 4 = *Describes me well*; 5 = *Describes me very well*.

1. I treated ** with bad attitude.	1 2 3 4 5
2. I think I should not be happy anymore since ** has passed away.	1 2 3 4 5
3. I feel guilty for living on myself since his/her death.	1 2 3 4 5
4. I did not do everything I could to improve our relationship.	1 2 3 4 5
5. There are many things I did not do for **.	1 2 3 4 5
6. I feel I could not reciprocate ** enough for what he/she gave to me	1 2 3 4 5
7. He/She was unhappy because of me.	1 2 3 4 5
8. I feel responsible for his/her death.	1 2 3 4 5
9. I feel badly about ** whenever I feel happy since his/her death.	1 2 3 4 5
10. I feel upset when I think about things I should have done differently.	1 2 3 4 5
11. My heart hurts when recalling things I feel guilty about.	1 2 3 4 5
12. He/She might still be alive if I had done a better job.	1 2 3 4 5
13. I did not spend enough time with **.	1 2 3 4 5
14. I think he/she would not have died at that time if I had done things differently.	1 2 3 4 5

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Notes

1. The imbalance of item numbers was because guilt cognition is comprised of different aspects, while guilt feeling was considered to be a single dimension, with higher scores indicating more intensive feeling.
2. The unusual phrase in this sentence reflected difficulties in translating the item into English. Its Chinese version emphasizes the “attitude” and “good manner” in treating the deceased family member.
3. Since there are only two items in this factor, even though the correlation between these items are higher than 0.7, neither of them was removed from the scale.

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Author Biographies

Jie Li is an assistant professor in the Department Of Psychology, Renmin University of China. Her research interests include bereavement adjustment, cognitions in grief, and posttraumatic growth.

Magaret Stroebe is professor at both the Department of Clinical and Health Psychology, Utrecht University, and the Department of Clinical Psychology and Experimental Psychopathology, University of Groningen, The Netherlands. She has specialized in the field of bereavement research for many years. With Henk Schut she developed the Dual Process Model of Coping with Bereavement. Her book publications include *Bereavement in Later Life: Coping, Attachment, and Developmental Influences* (2007) with Robert Hansson and the edited volume with Robert Hansson, Henk Schut, and Wolfgang Stroebe: *Handbook of Bereavement Research and Practice: Advances in Theory and Intervention* (2009). She recently edited "Complicated Grief: Scientific Foundations for Health Care Professionals" (with Henk Schut and Jan van den Bout). Her honors include an Honorary Doctorate from the University of Louvain-la-Neuve, Belgium, the Scientific Research Award of the American Association of Death Education and Counseling, in the United States, and the title in 2011 of Officer of the Order of Orange Nassau, in the Netherlands.

Cecilia L. W. Chan is Si Yuan professor of Health and Social Work, Department of Social Work and Social Administration, The University of Hong Kong. She heads a psychosocial oncology team and promotes empowerment and self-help among patients and bereaved family members.

Amy Y. M. Chow an associate professor at the University of Hong Kong, is the founding director of the first community bereavement counseling centre in Hong Kong. She is an elected board member of the prestigious International Workgroup on Death, Dying and Bereavement and serves the Body of Knowledge Committee and Grief Counseling Standards Task Force of Association of Death Education and Counseling.