Psychometric Properties of the Grief Cognitions Questionnaire (GCQ)

Paul A. Boelen[1,3] and Gerty J. L. M. Lensvelt-Mulders[2]

Cognitive behavioral conceptualizations of complicated grief propose that negative cognitions play a core role in the development and persistence of emotional problems after bereavement, because they generate negative emotions and cause mourners to engage in counterproductive attempts to avoid the implications and the pain of the loss. To facilitate the assessment of potentially problematic cognitions after bereavement, the Grief Cognitions Questionnaire (GCQ) has been developed—a 38-item questionnaire representing 9 categories of cognitions. Building on a previous study that supported the reliability and validity of the GCQ, the current study further examined its psychometric properties, with data of 531 bereaved individuals who completed research questionnaires online through the Internet. Confirmatory factor analyses supported the nine-factor structure with 9 interrelated factors. The reliability and convergent and discriminative validity were found to be adequate. Altogether the GCQ seems to be a useful tool for the assessment of negative thinking after bereavement in research and clinical practice.

KEY WORDS: complicated grief; cognitions; grief cognitions questionnaire; cognitive behavior therapy.

Although most people who are confronted with the death of a close relative manage to recover from their loss without problems, a significant minority of bereaved individuals develops the disorder complicated grief (Prigerson et al., 1997; Prigerson & Jacobs, 2001). This syndrome encompasses symptoms of separation distress (e.g., longing, yearning, and searching to the point of functional impairment) and traumatic distress (e.g., lack of trust in others, bitterness, avoidance, and identification symptoms), which have been found to be distinct from symptoms of bereavement-related depression and anxiety and to put the individual at risk for subsequent health impairments (Prigerson et al., 1999; Prigerson & Jacobs, 2001). Complicated grief was previously referred to as "traumatic grief" but was renamed to avoid confusion with posttraumatic stress disorder (PTSS).

Cognitive behavioral conceptualizations of complicated grief propose that negative beliefs and interpretations play a core role in the development of this disorder. More specifically it is thought that, after a loss, some mourners develop negative beliefs and interpretations that may contribute to emotional problems by generating separation distress and accompanying symptoms of depression and anxiety, and by causing mourners to engage in behavioral and cognitive strategies that are aimed at reducing distress in the short run but impede adjustment in the long run (Abrahms, 1981; Boelen, Van den Bout, & Van den Hout, 2003a, 2003b; Gluhoski, 1995).

Several authors have highlighted the importance of bereavement-related cognitions in recovery from loss, but they vary with respect to the specific cognitions that are thought to be involved. Many have stressed that loss events produce changes in pre-existing core beliefs about the self and the world and that these changes play an important role in the emotional reaction to bereavement. For instance, Janoff-Bulman (1989; Schwartzberg & Janoff-Bulman, 1991) and other influential grief theorists (e.g., Parkes, 1988; Rando, 1993) suggested that loss events cause disruptions in basic beliefs about self-worth and the meaningfulness and benevolence of the world. Other

[1]Department of Clinical Psychology, Utrecht University, 3508 TC Utrecht, The Netherlands.
[2]Department of Methodology and Statistics, Utrecht University, 3508 TC Utrecht, The Netherlands.
[3]To whom correspondence should be addressed at Department of Clinical Psychology, Utrecht University, PO Box 80140, 3508 TC Utrecht, The Netherlands; e-mail: P.Boelen@fss.uu.nl.

authors explicitly made a connection with Beck's cognitive theory of depression (Beck, Rush, Shaw, & Emery, 1979) and proposed that emotional problems after bereavement are, similar to depression, at least partially caused by a particular pattern of dysfunctional thinking involving the inclination to view the self, the world, and the future in a negative fashion. Robinson and Fleming (1992) and Gluhoski (1995), for instance, emphasized the importance of these three types of negative beliefs in the exacerbation and prolongation of mourning.

In addition to these global core beliefs that are assumed to be affected by loss and to render mourners vulnerable to difficulties in recovery, problematic grief has been linked with more specific types of cognitions and interpretations concerning the loss event and its sequelae. For instance, Field and Bonanno (2001) and Fleming and Robinson (2001) emphasized the importance of cognitions reflecting self-blame, over not having prevented the loss or having failed to live up to one's expectations in the relationship with the deceased. Others have stressed the importance of reactions of the social environment and suggested that negative evaluations of the available social support is important (e.g., Doka, 1989; Rando, 1993). Still others have proposed that the inclination to catastrophically misinterpret basically innocuous symptoms of grief as signs of personal incompetence or impending insanity, as well as other types of negative evaluations of grief reactions are key factors in problematic grief (Boelen et al., 2003b; Boelen, Kip, Voorsluijs, & Van den Bout, 2004; Malkinson, 1996). This notion is in line with the broader literature emphasizing the importance of negative interpretations of transient symptoms in many forms of psychopathology.

To increase means to assess potentially problematic cognitions after bereavement the Grief Cognitions Questionnaire (GCQ), assessing different categories of cognitions postulated to be important after a loss, was developed. This was done in the context of a study that explored the role of cognitive variables in recovery from bereavement (Boelen et al., 2003a). Construction of the GCQ was accomplished in three steps. First, on the basis of the aforementioned literature on cognitive variables in bereavement and other literature on grief, nine categories of cognitions were identified that have often been assumed to be associated with emotional problems after bereavement: global negative beliefs about the self, the world, life and the future, negative cognitions about self-blame, negative cognitions about other people's responses after the loss, negative cognitions about the appropriateness of one's grief reactions, cognitions reflecting the importance of cherishing the pain of the loss, and threatening interpretations of one's own reactions to the loss. Second, again

based on literature on cognitive variables in bereavement and on cognitive approaches to PTSD (e.g., Foa, Ehlers, Clark, Tolin, & Orsillo, 1999; Wenninger & Ehlers, 1998) and clinical interviews with patients suffering complicated grief, the first author generated between five and ten items within each of these nine categories. This resulted in a pool of 82 items. Third, all items were reviewed by two male experts on complicated grief and cognitive behavioral therapy who had extensive experience with patients suffering complicated grief. Standard steps outlined in literature on content validity in psychological assessment (e.g., Haynes, Richard, & Kubany, 1995) guided this process. The experts independently rated the clarity of each item as well as the degree to which items were representative and relevant to the cognitive domain they were designed to tap. In a final meeting, the first author and experts used these rates to select the best items and reword items if necessary, striving for a selection of approximately five items within each of the nine categories. This procedure resulted in the GCQ that contains 38 items representing nine categories of potentially problematic bereavement-related cognitions.

In the study the GCQ was originally designed for, it was found that the internal consistency and temporal stability of the instrument were adequate. In addition, total scores on the nine subscales were found to be related to the intensity of complicated grief, depression, and anxiety (Boelen et al., 2003a). These findings are in support of cognitive behavioral conceptualizations of complicated grief, yet also attest to the convergent validity of the GCQ.

Taking into account that assessing potentially problematic cognitions is relevant for theoretical reasons (e.g., to facilitate research on cognitions in grief) and for clinical purposes (e.g., to conceptualize a patient's problems in cognitive behavioral treatment), the present study explored the psychometric properties of the GCQ further, using data of Dutch bereaved individuals who filled in the GCQ and other questionnaires through the Internet as part of an extensive research project on cognitive variables after bereavement. A key aim of the present study was to evaluate the latent structure of the GCQ. Because there were clear ideas about how the items would cluster together, confirmatory factor analysis (CFA) rather than exploratory factor analysis was used to evaluate this latent structure. It was expected that a model with nine correlated factors, representing the aforementioned nine categories of cognitions would fit the data well. Given that the GCQ was not designed solely as a measure of general negative bereavement-related thinking, this model was expected to be more suitable than a one-factor solution in which all 38 items represented one underlying dimension.

The current study also examined the internal stability and temporal stability of the GCQ and tested predictions concerning its convergent and discriminative validity. With respect to the convergent validity, the GCQ was expected to be positively associated with a measure of pessimistic cognitions and inversely related with measures of positive cognitions, since it was constructed as a measure of (bereavement-related) negative thinking. In addition, based on cognitive behavioral conceptualizations of complicated grief, the GCQ was expected to be positively associated with symptoms of complicated grief, depression, and anxiety, as well as with the degree to which bereaved individuals were inclined to engage in rumination and behavioral avoidance of cues associated with their loss. With respect to the discriminative validity it was hypothesized that the GCQ would be able to distinguish individuals suffering from the disorder complicated grief—as defined by Prigerson et al. (1999)—from those who did not.

METHOD

Participants and Procedure

The current study is part of a larger research project on the role of cognitive variables in grief. For this project as a whole, participants have been recruited along different pathways. A first sample was recruited through grief-counselors, therapists, clergy, and other people who came in contact with mourners through their work-related or voluntary activities and who were found willing to hand out questionnaires to persons confronted with loss. Other participants for the project were recruited through an advertisement on a Dutch Internet site that was aimed at providing information about grief and bereavement to the general public. The advertisement explicated the aims of the project in short, and invited visitors of the Web site who had been confronted with a loss themselves to participate by filling in various questionnaires which would take about 30 min. Interested visitors could choose either to fill in a digital version of the questionnaires online, or to have a paper version sent to their home address. People who chose this latter option filled in their name and home address on the screen. This information was sent to the first author with a click on the "send" button. In total, 490 people were sent paper questionnaires and 260 (52%) of them returned these.

Included in the present study were the data of people who filled in questionnaires online.[4] After notifying their willingness to participate online by clicking a button on the screen, these participants entered a screen with additional information about the research. Questionnaires appeared with another click on a button on the screen. At the end of the questionnaires, it was again noted that the data would be used for research purposes and that these would be treated confidentially. To obtain informed consent, participants were asked to fill in their name and e-mail address if they understood and agreed with this, and then to click the "send" button. They were asked only to send the questionnaires if they had filled them in seriously and agreed that their data would be used in the research.

At the beginning of the questionnaires as well as on the last screen, it was stated that people could contact the first author through e-mail or telephone if they had additional questions about the research. Moreover, they were invited to contact the first author if they felt that the questionnaires were harmful, induced severe distress, or had raised (questions about) a need for professional help. Only approximately 20 people made use of this possibility. Most people telephoned with a need to communicate their feelings and to tell the story of their loss. Others just wanted to express their willingness to participate in additional studies. None of the responses pointed to severe distress and in all instances one or two telephonic conversations were sufficient to meet the needs of these people.

Data participants filled in were gathered and saved in a secured data-matrix. The first author and one technical professional collaborating in the project were the only ones who had access to the data. The questionnaire items and responses were coded (in numbers and letters) to limit the risks of understandable personal information getting in wrong hands. These measures were deemed sufficient to maintain confidentiality, also taking into account that no particular harmful (e.g., stigmatizing or embarrassing) information was being gathered, and because more extensive measures to ensure confidentiality would possibly heighten the threshold for people to participate.

In total, 671 individuals filled in the questionnaires online. The data-matrix was carefully checked for anomalous values, suspicious patterns in the data, and for data from people who had filled in the questionnaires more than once, which was checked by looking at the demographic variables. This resulted in the removal of

---

[4]The paper questionnaires used with mourners recruited through caretakers and mourners that had questionnaires sent to their homes differed slightly from the digital version and were used for other studies within the research project. Among other things, the digital version included no open-ended questions whereas the paper questionnaires did and it included some other measurement instruments.

Table I. Background and Loss Characteristics

Characteristics	Values
Background characteristics	
Gender [N (%)]	
Men	81 (15.3)
Women	450 (84.7)
Age (years) [M (SD)]	38.26 (11.60)
Education (years) [M (SD)]	15.43 (3.08)
Loss characteristics	
Deceased [N (%)]	
Partner	163 (30.7)
Child	70 (13.2)
Parent	198 (37.3)
Sibling	41 (7.7)
Other	58 (10.9)
Cause of death [N (%)]	
Illness <1 month	63 (11.9)
Illness >1 month	219 (41.2)
Traumatic (accident, suicide, homicide)	88 (16.6)
Unexpected medical cause (e.g., heart attack)	136 (25.6)
Other cause	25 (4.7)
Time from loss in months [M (SD)]	24.54 (26.91)

Note. Kinship was unknown for one participant.

71 sets of responses. To increase the homogeneity of the current sample, data of participants younger than 18 years of age ($n = 24$) and people who had lost a loved one more than 10 years ago ($n = 45$) were also removed. Thus, the final sample used in the current study comprised 531 individuals. Demographic characteristics and characteristics of the loss event participants had experienced are displayed in Table I. As can be seen, most participants were female, most had lost a partner or parent, and most had lost their relative due to illness.

Two additional small samples were used to investigate the test-retest reliability of the GCQ. The first retest sample consisted of 13 mourners who were recruited in the context of the aforementioned earlier study on the role of cognitive variables in grief (Boelen et al., 2003a). Their data were not included in that earlier study, because they did not receive professional help after their loss, which was one of the inclusion criteria of that study. They had completed the GCQ twice with a mean retest interval of 4 weeks. Their mean age was 54.1 years ($SD = 17.6$). Eight were women. Six had lost a partner, six a child and one had lost a parent, on average 2.5 years ago. Causes were illness ($n = 6$) and traumatic ($n = 7$).

The second retest sample encompassed 11 mourners randomly selected from the total group of mourners who responded to the Internet advertisement with the request to have paper questionnaires sent to their homes (as explained above). They completed the GCQ twice with a mean retest interval of 3 weeks. All were women, with a mean age of 37.6 years ($SD = 11.6$). Five had lost a

partner, three a parent, one a sibling, and two someone else, caused by an illness ($n = 8$) or a traumatic cause ($n = 3$), on average approximately 4 years ago.

Measures

Grief Cognitions Questionnaire

The Grief Cognitions Questionnaire (GCQ) is a 38-item measure of negative, bereavement-related cognitions (Boelen et al., 2003a). Items are divided into nine subscales representing the cognitive concepts described in the introduction. Subscales are named Self (6 items), World (4 items), Life (4 items), Future (4 items), Self-Blame (5 items), Others (3 items), Appropriateness of Grief (4 items), Cherish Grief (3 items), and Threatening Interpretation of Grief (4 items). Respondents rate their level of agreement with each item, on 6-point scales ranging from 0 (*disagree strongly*) to 5 (*agree strongly*). Total scale scores are calculated by summation of the item scores, with higher scores indicating stronger endorsement of the type of negative cognition that is measured by the scale.

Inventory of Traumatic Grief

The Inventory of Traumatic Grief (ITG; Prigerson & Jacobs, 2001) was used to assess the severity of complicated grief symptoms. It is a 30-item self-report measure tapping each of the symptoms of complicated grief (Prigerson et al., 1999) as well as other potentially problematic responses to loss. Respondents rate the extent to which they experienced each symptom during the last month on 5-point scales ranging from 1 (*never*) to 5 (*always*). The Dutch version used in the present study differs slightly from the original version, in that two items of the original version (items 26, representing feelings of unsafety; and 27, representing lessened sense of control) were combined into one item. In a recent study, psychometric properties of the 29-item Dutch ITG were found to be adequate (Boelen, Van den Bout, De Keijser, & Hoijtink, 2003). Among other things, the measure was found to be able to discriminate well between people who did and did not suffer complicated grief.

Symptom Checklist (SCL-90) Subscales Depression and Anxiety

The 16-item subscale Depression and the 10-item subscale Anxiety of the SCL-90 (Derogatis, 1983) were used to assess symptoms of depression and anxiety. Respondents rate how often they experienced the symptoms represented in the items in the last week on 5-point

scales ranging from 1 (*never*) to 5 (*always*). The psychometric properties of the Dutch SCL-90 have been found to be adequate (Arrindell & Ettema, 2003).

Life Orientation Test

The Life Orientation Test (LOT; Scheier & Carver, 1985) was used to measure optimistic and pessimistic cognitions. It is a 12-item questionnaire with four items tapping optimistic cognitions, four measuring pessimistic cognitions, and four filler-items. Respondents rate their agreement with each item on 5-point scales ranging from 0 (*strongly disagree*) to 4 (*strongly agree*). In English (Marshall, Wortman, Kusulas, Hervig, & Vickers, 1992) and Dutch studies (Vinck, Wels, Arickx, & Vinck, 1998), the LOT has demonstrated good reliability and validity. Among other things, the optimism and pessimism items have consistently been found to constitute two relatively independent scales.

Automatic Thoughts Questionnaire—Positive

The Automatic Thoughts Questionnaire—Positive (ATQ-P; Ingram & Wisnicki, 1988) was used to measure the degree of overall positive thinking. It contains 30 positive cognitions. Respondents rate each item on a 5-point scale ranging from 1 (*never*) to 5 (*all the time*), according to how often each thought or a similar thought popped into their minds during the past week. In English (Ingram, Kendall, Siegle, Guarino, & McLaughlin, 1995) and in Dutch studies (Boelen, Van den Bout, & Van der Ploeg, 2002), the questionnaire has demonstrated good reliability and validity.

Behavioral Avoidance Items

Five items were constructed to assess behavioral avoidance of bereavement cues (e.g., "I avoid places that remind me of the deceased," "I avoid looking at pictures of the deceased"). Participants were asked to rate how often they usually engaged in each avoidance behavior on a scale ranging from 0 (*never*) to 100 (*always*). For every participant a behavioral avoidance score was calculated as the mean of the five items.

Rumination Items

Three items were constructed to assess rumination on aspects of the cause of death (e.g., "I ruminate about the question why he/she died," "I dwell upon how the loss could have been prevented"). Participants rated how often they usually engaged in these ruminations on a

scale ranging from 0 (*never*) to 100 (*always*). For every participant a rumination score was calculated as the mean of the three items.

Statistical Analyses

CFA was conducted using Amos 5.0 (Arbuckle, 2003; Arbuckle & Wothke, 1999). One of the most important underlying assumptions that has to be satisfied when using CFA is that the measured variables have a multivariate normal distribution. Examination of the skewness and kurtosis and other relevant statistics showed that in the current sample GCQ scores were not normally distributed, with the majority of responses clustering around low frequencies of negative bereavement-related thoughts. Hence, a log-transformation was applied to the GCQ data, which is one of the recommended remedial strategies to deal with nonnormal data (West, Finch, & Curran, 1995). The re-expressed variables were analyzed using maximum likelihood estimation techniques. For all models errors were uncorrelated.

To evaluate goodness of fit, the following indices were examined: (a) the χ^2 statistic that indicates whether or not the pattern of covariation in the data can be explained by the postulated factor structure (although it is not the most informative index, as it is highly sensitive to sample size, it gives some information when comparing models, with lower values indicating better fit); (b) the ratio of χ^2 to degrees of freedom (χ^2/df) which decreases and approaches zero as the fit of the model improves (Hoelter, 1983); (c) the Comparative Fit Index (CFI), (d) the Tucker Lewis Index (TLI), and (e) the Normed Fit Index (NFI) of which values of $>.90$ indicate acceptable model fit (e.g., Bentler, 1990); and (f) the Root Mean Square Error of Approximation (RMSEA) of which values of $<.08$ indicate acceptable fit (Hu & Bentler, 1999). χ^2 difference (χ^2_{diff}) tests were used to compare the fit of competing models that were nested. The Akaiki Information Criterion (AIC; Akaiki, 1987) was used to compare the fit of models that were not nested.

Because data of the GCQ were not normally distributed, nonparametric statistics were used in the evaluation of the convergent and discriminative validity when possible (e.g., Spearman correlations, Mann–Whitney U tests).

RESULTS

Dimensionality

Of particular interest was the comparative evaluation of a one-factor model in which all 38 negative cognitions tapped by the GCQ loaded on one general factor of

Table II. Confirmatory Factor Analyses of the Grief Cognitions Questionnaire: Overall Model Fit

Model	χ^2	df	χ^2/df	CFI	TLI	NFI	RMSEA	AIC
1. One-factor model	7073.08	665	10.64	.62	.60	.60	.14	7225.08
2. Nine-factor model	4348.14	665	6.54	.78	.77	.75	.10	4500.14
3. Nine-factor model with correlated factors	1839.76	629	2.92	.93	.92	.90	.06	2063.76
4. Second order nine-factor model	2050.77	656	3.13	.92	.91	.88	.06	2220.77

Note. CFI: Comparative Fit Index; TLI: Tucker Lewis Index; NFI: Normed Fit Index; RMSEA: Root Mean Square Error of Approximation; AIC: Akaiki Information Criterion.

"bereavement-related negative thinking" and the model forwarded by Boelen et al. (2003a) in which the items loaded on nine factors, representing discrete categories of cognitions. The first order one-factor model was fit to the data first. Although this model served as a baseline model for the evaluation of the proposed nine-factor model, it was considered that theoretically it was possible that all 38 cognitions could be explained by a single homogeneous factor, rather than distinct categories. However, as shown in Table II, this model did not fit the data (e.g., CFI = .62, RMSEA = .14).

As a second step, a single order nine-factor model was tested in which the items were fixed to load on the nine factors that they were originally assumed to represent. We were interested in the extent to which the factors represented independent or interrelated negative thoughts. Therefore, in this second step a nine-factor model with nine orthogonal factors was tested first. Looking, among other things, at the changes in magnitude of the AIC (a smaller value of which indicates better model fit) this second model fit to the data better than the first model did (Table II). However, it was not in accord with acceptable model fit (e.g., CFI = .78, RMSEA = .10).

From a theoretical viewpoint, it was conceivable that the nine factors were associated rather than independent. In line with this, modification indices of the nine-factor orthogonal model indicated that correlating the factors would result in a significant improvement of the model. Thus, as a third step, the more constrained nine-factor model with oblique factors was fit to the data. Table II shows that the fit of this model was superior to that of the preceding model. Among other things, the χ^2 of this third model was significantly lower than that of the second model ($\chi^2_{\text{diff}} = 2508.38$, $\Delta df = 36$, $p < .001$). In fact, fit indices were consistent with acceptable model fit (e.g., CFI = .93, RMSEA = .06).

Taking into account suggestions of theorists that negative cognitions related to neurotic problems are perhaps best conceptualized hierarchically (Jolly & Kramer, 1994), it was considered relevant to examine whether the nine factors were subsumed by one global second order

common factor. Hence, a fourth analysis was conducted in which a second order nine-factor model was fit to the data. This model preserved a degree of differentiation among types of cognitions (similar to models 2 and 3), but concomitantly portrayed bereavement-related negative thinking as a unitary concept (similar to model 1). Table II shows that this model generated fit indices that were nearly equal to those of the oblique nine-factor model examined in step 3. However, a comparison of this fourth model with model 3 indicated that the more constrained oblique nine-factor model explained the data significantly better than the higher order model ($\chi^2_{\text{diff}} = 211.01$, $\Delta df = 27$, $p < .001$). In conclusion, the best fitting and interpretable model was the first order nine-factor model with correlated factors.[5] In Table III, standardized item factor loadings and correlations between the factors are displayed. All factor loadings were high, indicating that all items were good indicators of the nine factors.[6]

Reliability

Cronbach's alphas of the nine GCQ subscales and total scale are shown in Table IV. Cronbach's alpha of the total scale ($\alpha = 0.96$) and the subscales were all high, and did not increase with the deletion of a single item. In line with results of the CFA, which revealed that all

---

[5]Although the application of a log-transformation to the data is an appropriate way to deal with nonnormal data in CFA (West, Finch, & Curran, 1995) analyses were also conducted applying square root transformation to the data, and the method of bootstrapping (Efron, 2003). Using both methods, no substantial differences in the fit of the models were noted with the oblique nine-factor model consistently having the best fit to the data.

[6]Correlations among the factors in the nine-factor solution (Table III) showed that the subscales Self, World, and Life were highly interrelated. Although this suggests that the items of these three subscales are perhaps better conceptualized as representing one rather than three factors (which could be denoted as "global negative thinking") the corresponding alternative model with seven rather than nine correlated factors did not fit the data (e.g., CFI = .87, RMSEA = .08).

Table III. Factor Loadings of Items of the Grief Cognitions Questionnaire (GCQ) and Correlations Among Factors in the First Order Nine-Factor Solution With Correlated Factors (Estimated With the Total Sample, $N = 531$)

	Self	World	Life	Future	Self-Blame	Others	Appropri-ateness	Cherish grief	Threatening interpretation of grief
Since [–] is dead, I think I am worthless.	.89								
I see myself as a weak person since [–] passed away	.71								
I am ashamed of myself, since [–] died.	.60								
Since [–] is dead, I feel less worthy.	.85								
Ever since [–] died, I think negatively about myself.	.87								
Since [–] is dead, I am of no importance to anybody anymore.	.74								
Since [–] died, I realise that the world is a bad place.		.88							
The death of [–] has made me realise that we live in an awful world.		.86							
The death of [–] has taught me that the world is unjust.		.71							
The death of [–] has taught me that the world is a worthless place.		.87							
My life has no purpose anymore, since [–] died.			.91						
Life has got nothing to offer me anymore.			.85						
My life is useless since [–] died.			.93						
My life is meaningless since [–] died.			.92						
I don't expect that I will feel better in the future.				.75					
I don't have confidence in the future.				1.00					
My wishes for the future will never be fulfilled.				.83					
In the future I will never become really happy anymore.				.85					
Since [–] is no longer here, I have a negative view on the future.				.86					
I am partially responsible for [–]'s death.					.79				
I should have prevented the death of [–].					.84				
I blame myself for not having cared better for [–].					.66				
I will never be able to forgive myself for the things I did wrong in the relationship with [–].					.59				
If I would have done things differently, [–] would still be alive.					.82				
The people around me should give me more support.						.98			
Many people have let me down after [–]'s death.						.69			
People around me should show much more interest in me.						.87			
My grief reactions are abnormal.							.91		
I don't mourn the way I should do.							.78		
I do not react to this loss normally.							.88		
There is something wrong with my feelings.							.79		
I have to mourn otherwise I will forget [–].								.60	
As long as I mourn I maintain the bond with [–].								.85	
As long as I mourn I do not really have to let [–] go.								.84	
If I let go of my emotions, I will go crazy.									.85
If I would fully realise what the death of [–] means, I would go crazy.									.84
If I allow my feelings to come, I will loose control.									.86
Once I would start crying, I would loose control.									.70
Correlations between GCQ subscales									
World	.74								
Life	.81	.79							
Future	.71	.74	.82						
Self-Blame	.53	.51	.45	.44					
Others	.43	.36	.35	.33	.19				
Appropriateness of Grief	.62	.48	.47	.46	.38	.38			
Cherish Grief	.51	.49	.49	.50	.49	.28	.41		
Threatening Interpretation of Grief	.68	.62	.63	.60	.49	.40	.65	.55	

Table IV. Reliability Data of the Grief Cognitions Questionnaire

	Number of items	Cronbach's α in total sample ($N = 531$)	Test-retest correlations in the three week interval sample ($N = 11$)	Test-retest correlations in the four weeks interval sample ($N = 13$)
GCQ subscale				
Self	6	.90	.83	.78
World	4	.89	.83	.87
Life	4	.95	.97	.95
Future	5	.92	.88	.78
Self-Blame	5	.86	.58[a]	.76
Others	3	.88	.81	.93
Appropriateness of Grief	4	.91	.84	.79
Cherish Grief	3	.81	.82	.87
Threatening Interpretation of Grief	4	.89	.72[a]	.84
Total scale	38	.96	.94	.85

Note. All test-retest correlations are significant at $p < .005$, unless otherwise specified.
[a]Correlation is not significant.

items loaded highly on their respective factors, the item-total correlations of each item with the total score of the subscale it was part of were all positive and moderate to high (subscale Self, range 0.56–0.83; World, 0.62–0.82; Life, 0.84–0.91; Future, 0.74–0.82; Self-Blame, 0.60–0.73; Others, 0.65–0.85; Appropriateness of Grief, 0.73–0.87; Cherish Grief, 0.55–0.73; Threatening Interpretation of Grief, 0.65–0.81).

Cronbach's alphas of the measures used in the examination of the validity were also high: ITG, $\alpha = 0.96$; SCL Depression subscale, $\alpha = 0.94$; SCL Anxiety subscale, $\alpha = 0.91$; LOT Optimism scale, $\alpha = 0.82$; LOT Pessimism scale, $\alpha = 0.81$; ATQ-P, $\alpha = 0.95$; Behavioral avoidance items, $\alpha = 0.78$; Rumination items, $\alpha = 0.84$.

Test-retest correlations (Spearman ρ) of the GCQ subscales and total scale, calculated with the two additional samples who filled in the GCQ twice, with mean retest intervals of 3 and 4 weeks respectively, are shown in Table IV. To control for Type I errors a Bonferroni adjustment was used. Thus, for each of the 10 test-retest correlation calculated in both samples, a significance level of 0.005 (0.05/10) was required. Test-retest correlations were all statistically significant with the exception of two: In the 3-week retest interval sample, the test-retest correlations of the subscales Self-Blame and Threatening Interpretation of Grief were not significant ($\rho = 0.58$, $p = 0.06$ and $\rho = 0.72$, $p = 0.01$, respectively).[7]

Validity

First, Spearman correlations between the GCQ and the scores on the other cognitive measures (LOT Optimism scale, LOT Pessimism scale, and ATQ-P) were calculated. These and other correlations pertaining to the convergent validity are shown in Table V.[8]

As expected, the GCQ subscales and total score were positively correlated with the Pessimism scale of the LOT and inversely associated with its Optimism scale and with the ATQ-P. Second, to test the expected associations between the GCQ and post-loss psychopathology, Spearman correlations of the GCQ with the ITG, and SCL-90 subscales Depression and Anxiety were calculated. Table V shows that the GCQ correlated significantly with these symptom measures. To preclude that significant associations with complicated grief were merely attributable to confounds in content between the GCQ and the cognitive items of the ITG, the analyses were rerun after removing seven items of the ITG that represented cognitive grief reactions (e.g., "I feel that life is empty or meaningless without him/her"). Associations of the GCQ with this 22-item ITG ($\alpha = 0.91$) remained significant. Similarly, to control for possible confounds in content between the GCQ and the SCL-90 Depression subscale, correlations were recomputed after removing three cognitive items

---

[7]There were no reasons to expect that participants that filled in paper questionnaires in both retest samples would respond to the GCQ differently from the 531 mourners that filled in the GCQ online. In accord with this, GCQ scores of the people in the retest samples did not differ from scores of the mourners participating online.

[8]In total, 120 correlations were calculated with respect to the convergent validity (see Table V). To control for alpha-inflation a Bonferroni adjustment was used. Thus, a significant level of 0.05/120 = 0.0004 was required for each correlation, resulting in an overall α of 0.05 for all convergent validity correlations together. With this adjustment all correlations, with the exception of two, were significant (using two-tailed testing).

(representing self-blame, hopelessness, and worthlessness respectively) from this subscale. Correlations of the GCQ with this adjusted depression subscale ($\alpha = 0.92$) also remained significant (Table V).

As could be expected, the ITG correlated significantly with the SCL Depression subscale ($r = .79$) and with the SCL Anxiety subscale ($r = .66$, $ps < .0001$). Therefore, it was deemed relevant to examine whether the GCQ continued to be associated with complicated grief when the variance complicated grief shared with depression and anxiety was controlled. As can be seen in Table V, all GCQ subscales and its total score remained associated with the ITG when anxiety was partialled out of these correlations. In addition, the GCQ total score and all subscales, except the subscales Others and Appropriateness of Grief, continued to be related with complicated grief when depression was controlled.

A final expectation pertaining to the convergent validity was that the GCQ would be associated with the degree to which participants engaged in rumination and behavioral avoidance of bereavement cues. In line with this expectation, all GCQ subscales and total score were significantly associated with the behavioral avoidance and the rumination scores.

To examine discriminative validity, participants were divided into a group of individuals who scored above 90 on the ITG and thus likely met diagnostic criteria for complicated grief (CG; Prigerson et al., 1999) and a group who scored 90 or below and thus likely not met these criteria. This cutoff score was derived from a recent study in which Receiver Operating Characteristic (ROC) analysis showed that a score of 90 best predicted diagnostic status (Boelen, Van den Bout, De Keijser, et al., 2003). The CG-group comprised 154 and the No CG-group 377 individuals. GCQ scores of both groups were compared using Mann–Whitney U tests. Scores in the CG-group were expected to be higher than scores in the No CG-group. Results showed that individuals with CG indeed scored higher on all GCQ subscales and its total score than those without CG: Self, $z = -13.04$; World, $z = -13.99$; Life, $z = -15.25$; Future, $z = -13.86$; Self-Blame, $z = -8.44$; Others, $z = -6.35$; Appropriateness of Grief, $z = -8.59$; Cherish Grief, $z = -8.37$; Threatening Interpretation of Grief, $z = -12.10$; Total Score, $z = -15.30$ (all $ps < .001$).

Groups differed in time from loss, with individuals with CG being less removed from their loss than those without CG ($M = 21.03$ vs. $M = 25.97$ months; $t(328.56) = -2.05$; $p < .05$). Groups also differed in educational level. Participants in the CG-group had had less years of education than did participants in the No-CG-group [$M = 14.95$ vs. $M = 15.63$ years, $t(527) = -2.30$, $p < .05$]. Groups did not differ on any of the other background and loss characteristics (age and variation in gender, kinship to the deceased, and cause of the loss). Taking into account these differences, group differences on the GCQ were examined further, using analyses of covariance in which these variables were controlled for. Group differences remained significant for all GCQ subscales and its total score. Covariates did not affect group differences for the GCQ subscales and total score, with one exception: Educational level had an effect on the subscale Threatening Interpretation of Grief [$F(1, 529) = 8.32$, $p = .004$]. Participants who had fewer years of education were more inclined to interpret their grief reactions in a negative fashion than participants with more years of education.

Discriminant function analysis showed that the nine GCQ subscales classified 87.8% of the participants correctly into those with CG and without CG [Wilks' Lambda = .44, $\chi^2(9, N = 531) = 425.71$, $p < .001$]. Sensitivity was .84 and specificity was .89.

Normative Data

To facilitate comparisons of future findings with the GCQ with scores of the current sample, means and standard deviations of the GCQ subscale scores (calculated by summation of the item scores) were calculated. These were as follows: Self, $M = 7.25$ ($SD = 7.69$); World, $M = 5.85$ ($SD = 5.84$); Life, $M = 5.35$ ($SD = 6.11$); Future, $M = 7.72$ ($SD = 7.13$); Self-Blame, $M = 5.37$ ($SD = 6.40$); Others, $M = 5.51$ ($SD = 4.93$); Appropriateness of Grief, $M = 5.01$ ($SD = 5.67$); Cherish Grief, $M = 3.88$ ($SD = 4.26$); Threatening Interpretation of Grief, $M = 7.75$ ($SD = 6.36$). The mean of the total scale was $M = 53.70$ ($SD = 41.05$).

Scores of the current participants compared favorably with the responses of 329 individuals who completed the GCQ in paper-and-pencil format in the earlier study that the measure was originally designed for (Boelen et al., 2003a). The mean total score of this earlier study group was $M = 50.33$ ($SD = 37.45$) and did not differ significantly from the score of the Internet volunteers [$t(848) = -1.22$, $p = .22$]. In addition, there were no significant differences between both groups on seven of the nine GCQ subscales. The only differences were that Internet completers scored higher on the subscales Appropriateness of Grief [$M = 5.01$, $SD = 5.67$ vs. $M = 3.72$, $SD = 4.57$; $t(792, 76) = -3.66$, $p < .001$] and Threatening Interpretation of Grief [$M = 7.75$, $SD = 6.36$ vs. $M = 6.07$, $SD = 5.42$; $t(760, 01) = -4.12$, $p < .001$].

Table V. Spearman Correlations of the Grief Cognitions Questionnaire (GCQ) With Measures of Cognitions, Symptoms, and Avoidance Strategies ($N = 531$)

	LOT-pessimism	LOT-optimism	ATQ-P	ITG	ITG without cognitions	ITG controlling depression	ITG controlling anxiety	SCL-depression	SCL-depression without cognitions	SCL-anxiety	Behavioral avoidance items	Rumination items
GCQ-subscale												
Self	.53	−.51	−.61	.67	.62	.23	.46	.72	.69	.60	.44	.38
World	.52	−.51	−.54	.70	.66	.43	.57	.63	.61	.52	.38	.50
Life	.49	−.56	−.61	.77	.70	.40	.62	.73	.71	.56	.36	.42
Future	.58	−.61	−.62	.70	.65	.37	.56	.68	.65	.54	.38	.44
Self-Blame	.35	−.32	−.35	.43	.41	.19	.32	.44	.41	.38	.35	.51
Others	.33	−.30	−.35	.38	.35	.06[a]	.20	.43	.42	.37	.28	.23
Appropriateness of Grief	.42	−.33	−.44	.49	.48	.07[a]	.19	.54	.52	.52	.41	.30
Cherish Grief	.31	−.30	−.32	.47	.46	.25	.36	.43	.42	.34	.25	.37
Threatening Interpretation of Grief	.47	−.46	−.48	.68	.67	.32	.46	.66	.65	.62	.46	.50
GCQ total	.60	−.58	−.64	.80	.76	.44	.64	.80	.78	.67	.49	.55

Note. LOT: Life Orientation Test; ATQ-P: Automatic Thoughts Questionnaire-Positive; ITG: Inventory of Traumatic Grief; SCL: Symptom Checklist. All correlations are significant at $p < .0004$, unless otherwise specified.

[a]Correlation is not significant.

DISCUSSION

The present study explored the psychometric properties of the Grief Cognitions Questionnaire (GCQ)—an instrument that was devised as a measure of bereavement-related negative thoughts that play a role in the development and persistence of post-loss psychopathology. Confirmatory factor analysis showed that the 38 items of the GCQ loaded on nine correlated factors, that represent the nine categories of negative bereavement-related thoughts that the GCQ was originally designed to tap: global negative beliefs about the self, the world, life and the future, negative cognitions about self-blame, other people's responses after the loss, and the appropriateness of one's grief reactions, and cognitions about the importance of cherishing the pain of the loss and threatening interpretations of one's reactions to the loss. Results also showed that, although a second order nine-factor model with one higher order common factor did not provide the *best* fit, it provided a nearly identical fit to the first order oblique nine-factor model. This suggests that the GCQ's total score may be used as an index of overall bereavement-related negative thinking.

The GCQ subscales and total scale were found to possess adequate internal consistency, although it is important to note that the skewness of the data may have inflated the magnitude of the Cronbach's alphas somewhat. The temporal stability also appeared to be good. Although the subscales Self-Blame and Threatening Interpretation of Grief were found to be unstable in one of both retest samples, these scales were stable in the other retest sample. However, given that both retest samples were small, it would be important for future research to further look into the stability of the cognitive variables tapped by the GCQ.

Different findings supported the convergent validity of the GCQ. The nine subscales and total score were found to be inversely related with measures of positive thinking, and negatively with a measure of pessimistic cognitions. Furthermore, all GCQ subscales predicted the severity of symptoms of complicated grief, depression, and anxiety. Correlations of the GCQ with measures of complicated grief and depression remained significant when cognitive symptoms were removed from these measures. This indicates that associations of the GCQ with complicated grief and depression were not merely attributable to confounds in content between measures.

All GCQ subscales and the total score remained associated with complicated grief when anxiety was controlled. And all but two subscales and the total score remained associated with complicated grief when controlling depression. These findings show that most of the

cognitions represented in the GCQ, with the exception of those reflecting negative ideas about others and the appropriateness of one's grief reactions, have a specific association with complicated grief. Finally, in accord with cognitive behavioral conceptualizations of complicated grief, the GCQ was found to be significantly associated with the tendency of participants to avoid reminders of the loss and to ruminate about the events leading up to the death. It is noteworthy that the GCQ subscale Threatening Interpretation of Grief was among the subscales with the highest associations with both avoidance strategies. This concords with a notion that is central to current cognitive behavioral conceptualizations of complicated grief, that catastrophic misinterpretations of basically innocuous grief reactions are likely to contribute to the inclination of mourners to engage in counterproductive attempts to control and experientially avoid grief symptoms (cf. Boelen et al., 2003a, 2003b, 2004).

In support of the discriminative validity the GCQ discriminated well between bereaved individuals with and without complicated grief, even when educational level and time from loss were controlled. However, the division of participants was based on a cutoff score for a diagnosis of complicated grief that should be considered provisional rather than definite (Boelen, Van den Bout, De Keijser, et al., 2003). Therefore, it would be relevant for future studies to further investigate the ability of the GCQ to distinguish between individuals with and without complicated grief, using interview-based assessment to divide individuals accordingly.

A more general limitation of the current study is that all participants were recruited through the Internet and filled in questionnaires online. Therefore, as a potential threat to the reliability of the current findings, it cannot be precluded with certainty that there were participants who faked their scores or filled in questionnaires repeatedly, using different names and e-mail addresses. However, it can be argued that this has not seriously threatened the results, taking into account that there were no ways to benefit from intentional faking or repeated participation (e.g., participation was not rewarded), that the magnitude of the current sample likely compensated potential errors caused by unreliable responses, and, most importantly, data that were deemed unreliable were removed.

Another point of caution concerns the generalizability of the current findings. Because all participants were recruited through the Internet, and Internet users and nonusers still differ on demographic and psychological dimensions (Kraut et al., 2004) generalization of the current findings to the general population of bereaved individuals should be done with some caution. For instance, the educational level of the present participants is likely

higher than that of the general population of bereaved individuals, which limits the generalizability of the current findings.

In a related vein, there are potential problems related to the fact that all participants were self-selected. On the one hand it may be that people with more severe grief problems were overrepresented, because they considered the study as more important and were thus more willing to cooperate. On the other hand, it may be that the more distressed mourners were underrepresented because for them participating was too much emotionally confronting. However, in both instances there would be a restriction of range in grief severity, which would have resulted in an underestimation of the correlations between the GCQ and symptom measures and therefore would not invalidate the relations that were observed (cf. Edwards, 1976). Moreover, many of the results found with the current Internet sample compare favorably with findings of an earlier study among 329 mourners who had sought help in the aftermath of their loss and completed the GCQ in paper-and-pencil format (Boelen et al., 2003a). That is, the internal consistency, test-retest reliability, and associations of the GCQ with complicated grief, depression, and anxiety found in the current study are all in line with these earlier results. This pleads in favor of the generalizability of the present findings.

Yet still it is deemed relevant for future studies to further look into the reliability and validity of the GCQ using other samples, in order to gain insight into the applicability of the findings to other groups of bereaved individuals. In the current study in which participants were self-selected women were clearly much more willing to participate than men. This likely reflects the fact that, generally, women are more expressive of their emotions after loss than men (cf. Stroebe, Stroebe, & Schut, 2001). As the overrepresentation of women limits the generalization of the current findings to male mourners, it would be relevant for future studies on the GCQ to strive for recruitment of relatively equal numbers of men and women. Future studies could also address possible gender bias in the content of the GCQ. As the experts involved in its construction were all men, it might be that cognitions that are typical of male mourners dominate the scale. If so, these item characteristics might well artificially inflate the scores of male respondents. Method based in item response theory, in particular methods to detect "differential item functioning," would be useful in the examination of this issue.

Notwithstanding that further investigation of the GCQ is warranted, results of the present study indicate that the GCQ is a promising tool for the assessment of potentially problematic cognitions after bereavement. As such, it may be used in studies on the role of cogni-

tive variables in emotional problems after bereavement. Moreover, in clinical practice the GCQ may be useful for the identification of negative cognitions that are important targets of the cognitive behavioral treatment of these problems.

REFERENCES

Abrahms, J. L. (1981). Depression versus normal grief following the death of a significant other. In G. Emery, S. D. Hollon, & R. C. Bedrosian (Eds.), *New directions in cognitive therapy* (pp. 255–270). New York: Guilford Press.

Akaiki, H. (1987). Factor analysis and AIC. *Psychometrika, 52,* 317–332.

Arbuckle, J. L. (2003). *Amos 5.0 update to the Amos user's guide.* Chicago: Smallwaters Corporation.

Arbuckle, J. L., & Wothke, W. W. (1999). *Amos 4.0 user's guide.* Chicago: SmallWaters.

Arrindell, W. A., & Ettema, J. (2003). *Symptom Checklist. Handleiding bij een multidimensionele psychopathologie-indicator.* [Symptom Checklist. Manual for a multidimensional indicator of psychopathology.] Lisse: Swets & Zeitlinger.

Beck, A. T., Rush, A. J., Shaw, B. F., & Emery, G. (1979). *Cognitive therapy of depression.* New York: Guilford Press.

Bentler, P. M. (1990). Comparative fit indexes in structural models. *Psychological Bulletin, 107,* 238–246.

Boelen, P. A., Kip, J. J., Voorsluijs, J. J., & Van den Bout, J. (2004). Irrational beliefs and basic assumptions in bereaved university students: A comparison study. *Journal of Rational-Emotive and Cognitive-Behavior Therapy, 22,* 111–129.

Boelen, P. A., Van den Bout, J., de Keijser, J., & Hoijtink, H. (2003). Reliability and validity of the Dutch version of the Inventory of Traumatic Grief. *Death Studies, 27,* 227–249.

Boelen, P. A., Van den Bout, J., & Van den Hout, M. A. (2003a). The role of cognitive variables in psychological functioning after the death of a first degree relative. *Behaviour Research and Therapy, 41,* 1123–1136.

Boelen, P. A., Van den Bout, J., & Van den Hout, M. A. (2003b). The role of negative interpretations of grief reactions in emotional problems after bereavement. *Journal of Behavior Therapy and Experimental Psychiatry, 34,* 225–238.

Boelen, P. A., Van den Bout, J., & Van der Ploeg, E. (2002). Psychometrische eigenschappen van de Nederlandstalige versie van de Automatic Thoughts Questionnaire-Positive (ATQ-P). [Psychometric properties of the Dutch version of the Automatic Thoughts Questionnaire-Positive (ATQ-P).]. *Gedragstherapie, 35,* 269–286.

Derogatis, L. R. (1983). *SCL-90-R: Administration, scoring, and procedures. Manual II* (2nd ed.). Towson, MD: Clinical Psychometric Research.

Doka, K. (Ed.). (1989). *Disenfranchised grief: Recognizing hidden sorrow.* Lexington, MA: Lexington.

Edwards, A. C. (1976). *An introduction to linear regression and correlation.* San Francisco: Freeman.

Efron, B. (2003). Second thoughts on the bootstrap. *Statistical Science, 18,* 135–140.

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,* 764–781.

Fleming, S., & Robinson, P. J. (2001). Grief and cognitive behavior therapy: The reconstruction of meaning. In M. S. Stroebe, R. O. Hansson, W. Stroebe, & H. A. W. Schut (Eds.), *Handbook of bereavement research: consequences, coping, and care* (pp. 647–670). Washington, DC: American Psychological Association Press.

Foa, E. B., Ehlers, A., Clark, D. M., Tolin, D. F., & Orsillo, S. M. (1999). The Posttraumatic Cognitions Inventory (PTCI): Development and validation. *Psychological Assessment*, *11,* 303–314.

Gluhoski, V. L. (1995). A cognitive perspective on bereavement: mechanisms and treatment. *Journal of Cognitive Psychotherapy: An International Quarterly, 9,* 75–84.

Haynes, S. N., Richard, D. C. S., & Kubany, E. S. (1995). Content validity in psychological assessment: A functional approach to concepts and methods. *Psychological Assessment, 7,* 238–247.

Hoelter, J. W. (1983). The analysis of covariance structures: Goodness of fit indices. *Sociological Methods and Research, 11,* 325–344.

Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modelling, 6,* 1–55.

Ingram, R. E., Kendall, P. C., Siegle, G., Guarino, J., & McLaughlin, S. C. (1995). Psychometric properties of the Positive Automatic Thoughts Questionnaire. *Psychological Assessment, 7,* 495–507.

Ingram, R. E., & Wisnicke, K. S. (1988). Assessment of positive automatic cognition. *Journal of Consulting and Clinical Psychology, 56,* 898–902.

Janoff-Bulman, R. (1989). Assumptive worlds and the stress of traumatic events: Applications of the schema construct. *Social Cognition, 7,* 113–136.

Jolly, J. B., & Kramer, T. A. (1994). The hierarchical arrangement of internalizing cognitions. *Cognitive Research and Therapy, 18,* 1–14.

Kraut, R., Olson, J., Banaji, M., Bruckman, A., Cohen, J., & Couper, M. (2004). Psychological research online. Report of board of scientific affairs' advisory group on the conduct of research on the internet. *American Psychologist, 59,* 105–117.

Malkinson, R. (1996). Cognitive behavioral grief therapy. *Journal of Rational-Emotive & Cognitive-Behavior Therapy, 14,* 155–171.

Marshall, G. N., Wortman, C. B., Kusulas, J. W., Hervig, L. K., & Vickers, R. R. (1992). Distinguishing optimism from pessimism: Relations to fundamental dimensions of mood and personality. *Journal of Personality and Social Psychology, 62,* 1067–1074.

Parkes, C. M. (1988). Bereavement as a psychosocial transition: Processes of adaptation to change. *Journal of Social Issues, 44,* 53–66.

Prigerson, H. G., Bierhals, A. J., Kasl, S. V., Reynolds, C. F., Shear, M. K., Day, N., et al. (1997). Traumatic grief as a risk factor for mental and physical morbidity. *American Journal of Psychiatry, 154,* 616–623.

Prigerson, H. G., & Jacobs, S. C. (2001). Traumatic grief as a distinct disorder: A rationale, consensus criteria, and a preliminary empirical test. In M. S. Stroebe, R. O. Hansson, W. Stroebe, & H. A. W. Schut (Eds.), *Handbook of bereavement research: Consequences, coping, and care* (pp. 613–647). Washington, DC: American Psychological Association Press.

Prigerson, H. G., Shear, M. K., Jacobs, S. C., Reynolds, C. F., Maciejewski, P. K., Davidson, J., et al. (1999). Consensus criteria for traumatic grief. *British Journal of Psychiatry, 174,* 67–73.

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

Robinson, P. J., & Fleming, S. (1992). Depressotypic cognitive patterns in major depression and conjugal bereavement. *Omega, 25,* 291–305.

Scheier, M. F., & Carver, C. S. (1985). Optimism, coping, and health: Assessment and implications of generalized outcome expectancies. *Health Psychology, 4,* 219–247.

Schwartzberg, S. S., & Janoff-Bulman, R. (1991). Grief and the search for meaning: exploring the assumptive worlds of bereaved college students. *Journal of Social and Clinical Psychology, 10,* 270–288.

Stroebe, M., Stroebe, W., & Schut, H. (2001). Gender differences in adjustment to bereavement: An empirical and theoretical review. *Review of General Psychology, 5,* 62–83.

Vinck, J., Wels, G., Arickx, M., & Vinck, S. (1998). Optimisme gemeten. Validatie van de Nederlandstalige Levensoriëntatietest bij jongeren. [Assessing optimism in youth: Validation of the Dutch Life Orientation Test.]. *Gedrag & Gezondheid, 26,* 79–90.

Wenninger, K., & Ehlers, A. (1998). Dysfunctional cognitions and adult psychological functioning in child sexual abuse survivors. *Journal of Traumatic Stress, 11,* 281–300.

West, S. G., Finch, J. F., & Curran, P. J. (1995). Structural equation models with nonnormal variables. Problems and remedies. In R. H. Hoyle (Ed.), *Structural equation modeling. Concepts, issues, and applications* (pp. 56–75). London: Sage.