Running head: NORMAL AND COMPLICATED GRIEF

Are Normal and Complicated Grief Different Constructs?

A Confirmatory Factor Analytic Test

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Abstract

Nowadays much debate in the bereavement domain is directed towards the inclusion of Complicated Grief (CG) as a separate category in the Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric Association, 2000). Important within this discussion is the conceptual relationship between CG reactions and normal grief (NG) reactions. This study aims at elucidating this relationship by using data from 456 bereaved young adults, aged 17 to 25 years. We examined the structural distinctiveness of CG and NG reactions, using two criteria sets. The first set ties in with previous research in bereaved adults on the distinctiveness of CG and NG and allows to test the replicability of earlier findings. The second set links up with the recently revised criteria for CG and permits to investigate whether earlier findings hold for the new criteria. For both sets, two models for NG and CG were compared using confirmatory factor analytic procedures. These analyses revealed that CG and NG reactions can be distinguished by their very nature, except for one CG reaction (viz. “yearning”), that loaded on both factors.

In the past decades clinical and research interest in the subject of grief has grown exponentially. One of the more important developments has been the proposition of criteria for complicated grief (CG) (Prigerson, Shear et al., 1999). In order to delineate the boundary between normal and pathological or complicated grief reactions a panel of grief experts agreed that the presence for more than two months (nowadays six months) of certain marked symptoms of grief, such as chronic and disruptive yearning, pining, and longing for the deceased, trouble accepting the death, inability to trust others, excessive bitterness related to the death, uneasiness to move on, numbness and detachment, feeling that life is empty, bleak future, and agitation, should be the critical factor (Jacobs, Mazure, & Prigerson, 2000; Prigerson & Jacobs, 2001; Prigerson & Maciejewski, 2005; Prigerson, Shear et al., 1999). Since the proposition of CG, a sizable set of independent studies have supported its validity, by showing that symptoms of CG constitute a unidimensional symptom cluster that is distinct from other bereavement-related distress forms and that predicts enduring functional and health impairments (among others: Boelen & van den Bout, 2005; Boelen, van den Bout, & de Keijser, 2003; Boelen, van den Bout, de Keijser, & Hoijtink, 2003; Bonanno et al., 2007; Latham & Prigerson, 2004; Melhem et al., 2004; Prigerson et al., 1997; Prigerson et al., 1996; Prigerson, Bridge et al., 1999; Prigerson et al., 1995; Ritsher & Neugebauer, 2002). It is in light of this accumulated evidence that voices (see: Parkes, 2005) are raised to include CG as a distinct disorder in the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM: current edition, American Psychiatric Association, 2000). However, to date some important issues regarding the diagnosis and conceptualization of CG deserve further investigation (Goodkin et al., 2005; Stroebe et al., 2000). One of these topics bears upon the extent to which CG represents a truly unique pathological entity that can be differentiated from normal or more benign grief (NG).

According to the DSM (American Psychiatric Association, 2000) the differentiation between disordered/pathological versus normal behaviour lies in its association with *impairment*. The DSM states that a mental disorder is characterised by its association with current distress and disability. Following this reasoning, CG reactions should be more strongly related to impairment and distress than NG reactions. This notion was corroborated by evidence from several researchers. Prigerson and colleagues (1995) found that the Inventory of Complicated Grief (ICG), the standard self-report questionnaire to screen for CG symptoms, was significantly better at differentiating persons with a wide range of functional impairments than the Texas Revised Inventory of Grief (TRIG: Fashingbauer, Zisook, & DeVaul, 1987), a general grief questionnaire that is chiefly aimed at measuring NG symptoms. Boelen and colleagues (Boelen, de Keijser, & van den Bout, 2001; Boelen, van den Bout, de Keijser et al., 2003) found similar results in their examination of the psychometric properties of the Dutch version of the revised Inventory of Complicated Grief (ICG-r: Prigerson & Jacobs, 2001); the Dutch ICG-r was significantly more associated with different symptoms of psychopathology than the TRIG. These findings were substantiated in a recent study of Boelen and van den Bout (2008). Using a subset of items from the Dutch ICG-r (CG) and the TRIG (NG), these authors showed that - when controlling for shared variance between CG factor and the NG factor - the CG factor explained unique variance in all mental health and quality of life outcomes, while the NG factor in none of these outcomes. In sum, the above studies provide convergent evidence that CG reactions can be differentiated from NG reactions based on the impairment criterion.

Apart from the impairment criterion, the DSM (American Psychiatric Association, 2000) further defines mental disorders as distinct from normal or expectable reactions or behaviours. As Boelen and van den Bout (2008) argue, this definition implies that CG reactions should be distinguishable from NG reactions *by their very nature*. As persistence,

severity, and association with impairment are presumed to form the basis for distinguishing between CG and NG reactions (Prigerson & Maciejewski, 2005), this criterion of structural distinctiveness has hardly been investigated. First insight in the structural relationship between CG and NG can be gleaned from the correlations between CG and NG. Diverse studies demonstrated a strong and significant relationship between CG reactions, measured by the ICG or the ICG-r, and NG reactions, measured by the TRIG, with correlations ranging from .70 ($p < .001$) (Boelen et al., 2001: using ICG-r), over .71 ($p < .05$) (Boelen, van den Bout, de Keijser et al., 2003: using ICG-r), to .87 ($p < .001$) (Prigerson et al., 1995: using ICG). Using different measures, namely the Hogan Grief Reaction Checklist (HGRC: Hogan, Greenfield, & Schmidt, 2001) for NG and Complicated Grief Disorder criteria (CGD: Prigerson & Jacobs, 2001) for CG, Hogan, Worden and Schmidt (2003) found comparable high correlations between CG and NG factors[1], ranging from .53 [for Traumatic Distress (CG) and Disorganization (NG)] to .86 [for Traumatic Distress (CG) and Despair (NG)]. Such recurring high correlations seem to question the differentiation between NG and CG.

To further clarify the relationship between CG and NG Hogan, Worden and Schmidt (2003) performed principal component analyses on scores of 166 adult mourners on the HGRC (NG: Hogan et al., 2001) and on CGD (CG: Prigerson & Jacobs, 2001). Their analyses showed that HGRC items (NG) and CGD items (CG) clustered together in one dominant factor accounting for 73% of the variance. However, using confirmatory factor analysis and using only a selection[2] of items from the different measures (viz., TRIG representing NG, and the Dutch ICG-r representing CG) Boelen and van den Bout (2008) found that the selected CG and NG reactions were better conceptualized as representing distinct but correlated factors than as representing one single factor. Correlation between the two factors was .81.

[1] Apart from the NG factor "Personal Growth", which correlated negatively with the CG factors.
[2] An a priori selection of items controls for inflated correlations due to item overlap between TRIG and ICG-r.

As evidenced by these inconsistent findings, the conceptual relationship of CG and NG is not yet well understood. The current study intended to enhance our insight of this relationship by replicating the study of Boelen and van den Bout (2008). As all participants in their study had sought help, they were likely struggling with their loss. In this study we aimed to investigate the validity of their results in a sample that is not per se self-referred but in which bereavements are common and possibly debilitating. Prevalence studies on university campuses showed that confrontations with death and unresolved grief are very common in college students (Balk, 2001; Balk et al., 1998). As such, university students qualified our criteria. Concretely, keeping with Boelen and van den Bout (2008) we examined the comparative fit of two models on the relationship between NG and CG, namely a unitary model with CG and NG reactions loading on one single factor and a two-factor model with CG and NG reactions loading on two distinct but correlated factors. To complement earlier studies, we used two approaches. The first approach involved a pure replication of Boelen and van den Bout (2008) by selecting the same items to represent CG and NG. The second approach ties in with the recent revised criteria of CG, which is renamed in Prolonged Grief Disorder (PGD) (Prigerson, Vanderwerker, & Maciejewski, 2007). PGD is defined to be present when after the death of a loved one, one of the three 'Separation Distress' symptoms and five of the nine 'Cognitive, Emotional, and Behavioural Symptoms' are present and causing significant impairments for at least 6 months (see Table 4 for the symptoms of PGD). In this second approach, we evaluated the replicability of the two-factor structure to this revised symptom set.

Method

Procedure

At the end of one of the courses of the third author at the Faculty of Psychology and Educational Sciences at Ghent University students were informed about the bereavement research project at their university and were invited to participate in a study concerning grief experiences during emerging adulthood. Students interested in participating received the study packet. This packet contained a short letter of invitation, an informed consent form, questions concerning background characteristics (e.g., age, gender, family structure) and bereavement experiences (e.g., who they've lost, mode of death), and two questionnaires concerning grief symptoms. Time was given at the end of the lecture to fill out the questionnaires (which took approximately 15 minutes). Students who declined to participate were given the opportunity to leave the auditorium after the introduction of the study. All students were given contact information of the researchers in case they would have questions or problems related to the investigated topic.

Study Group

Of the 542 respondents who filled out the questionnaire packet 86 subjects were excluded from the analyses (N_{final} = 456). Subjects were excluded if they were 26 years of age or older (n = 7), if they hadn't experienced a significant bereavement (n = 55), if they were bereaved of a pet (n = 13), or if they had significant missing data (n = 11). Respondents were primarily female (83.3%, n = 379), with a mean age of 19.08 years (SD = 1.17). The majority of the respondents (83.6%, n = 381) lived in a two-parent headed family, 14.2% (n = 65) in a one-parent headed family [of which 3.9% (n = 19) due to death of a parent], and 2.2% (n = 10) in an otherwise structured family. The majority (50.4%, n = 230) of the respondents had lost a grandparent, 4.4% (n = 20) a parent, 1.4% (n = 6) a sibling, 18.5% (n = 84) another family member, 20.2% (n = 92) a friend, and 4.6% (n = 21) some other acquaintance (e.g., a

classmate, a neighbour). These deaths were caused by illness (56.4%, *n* = 257), accident (11.6%, *n* = 53), suicide (10.5%, *n* = 48), murder (0.4%, *n* = 2), or by other reasons (11.4%, *n* = 52). On average, 4.24 years (*SD* = 3.99) had passed since the bereavement.

Measures

To assess background and loss characteristics questions were devised after the example of the measure developed by Harrison and Harrington (2001). Respondents were asked whether relatives, friends or acquaintances had died, when they had died, the impact it had on them, whether they felt the need for professional help, and with whom they talked about it. We extended the measure with demographic questions related to age and gender of the respondent, family structure, and religion.

Complicated grief symptomatology (CG) was measured by the Inventory of Complicated Grief-Revised (ICG-r: Prigerson & Jacobs, 2001). The ICG-r is a 30-item self-report questionnaire designed to measure the proposed criteria of CG and other potentially maladaptive grief symptoms. Respondents are asked to rate on a 5-point scale (1 = never, 2 = seldom, 3 = sometimes, 4 = often, and 5 = always) how often each of the symptoms occurred in the last month. The total score, calculated by summing up the item scores, reflects the degree of maladaptive grief symptomatology. We used the Dutch version of the ICG-r (Boelen et al., 2001; Boelen, van den Bout, de Keijser et al., 2003), which consists of 29 items[3], with a possible total score ranging from 29 to 145. Adequate reliability and validity have been reported for the Dutch version (Boelen et al., 2001; Boelen, van den Bout, de Keijser et al., 2003). Cronbach's α for this study was .93, indicating high internal consistency.

Normal grief reactions (NG) were assessed by the Texas Revised Inventory of Grief (TRIG: Fashingbauer et al., 1987). The TRIG consists of two subscales focusing on 'past behaviour' (8 items) and 'present feelings' (13 items). In this study only the 'present feelings'

[3] In the Dutch version of the ICG-r item 26, representing feelings of unsafety, and item 27, representing lessened sense of control, were combined in one item.

scale ($TRIG_{present}$), measuring current grief reactions, was used as it accords best with the time frame of the ICG-r ('during last month'). Although the TRIG was originally devised as a general measure of grief, many items have been recognized nowadays as representing benign symptoms of grief as opposed to the more threatening and debilitating symptoms that are described in the CG criteria (Boelen & Van den Bout, 2008; Neimeyer & Hogan, 2001; Prigerson et al., 1995). Respondents were asked to rate on a 5-point scale (1 = completely false, 2 = mostly false, 3 = neutral, 4 = mostly true, and 5 = completely true) to what extent the enumerated grief reactions applied to them at present. The TRIG has been found to possess adequate reliability and validity (Fashingbauer et al., 1987). The translation of the TRIG into Dutch was done in accordance with the guidelines of the International Test Commission (Hambleton, 1994), using the translation back-translation procedure (Brislin, 1980) in combination with a committee approach (van de Vijver & Lueng, 1997). A Cronbach's α of .89 in this study designated high internal consistency, attesting to the reliability of the translated version.

Statistical Analysis

To evaluate the latent structure of the grief reactions we conducted confirmatory factor analyses[4] (CFA) using MPLUS version 4.1 (Muthén & Muthén, 1998-2006). Following recommendations in SEM-literature (Bollen & Long, 1993; Hu & Bentler, 1999) we relied on four measures to assess the fit of the two proposed models (viz., the unitary model and the two-factor model). More concretely, we examined (1) the Comparative Fit Index (CFI), (2) the Tucker-Lewis Index (TLI), (3) the Root Mean Square Error of Approximation (RMSEA), and (4) the Standardized Root Mean Square Residual (SRMR). For RMSEA and SRMR values less than .05 represent good fit, values of .05 to .08 represent moderate fit, and values of .08 to .10 represent adequate fit (Brown & Cudeck, 1993). For CFI and TLI, values greater

[4] Because of non-normality of the data, we used maximum likelihood (MLM) parameter estimates with standard errors and a mean-adjusted chi-square test statistic that are robust to non-normality.

than .90 are considered consistent with a good model (Bentler, 1990; Stevens, 1996). Finally, to compare the goodness of fit of the competing (nested) models, we used the Akaike and Bayesian Information Criterion (AIC and BIC respectively), with smaller values indicating better model fit.

This same procedure was followed for the two approaches (viz., the two criteria sets). In the first approach we employed the same items as Boelen and van den Bout (2008) to denote CG and NG (see Table 2). CG was represented by eight [5] ICG-r items that operationalize the proposed criteria of CG (Prigerson & Maciejewski, 2005), namely yearning, trouble accepting the loss, mistrust, bitterness/anger, numbness/detachment, life feels empty, bleak future, and agitation. NG was represented by six $TRIG_{present}$ items, namely missing, painful to recall memories, hiding tears, cannot avoid thinking of deceased, stimuli remind of deceased, and need to cry at times. In the second approach, CG was represented by nine[6] ICG-r items that are included in the revised criteria of CG/PGD (Prigerson et al., 2007): distressingly strong yearnings, sense of self as confused or empty, trouble accepting the loss, avoidance of reminders, inability to trust others, extreme bitterness/anger, pervasive numbness, feeling that life is unfulfilling, feeling stunned/dazed. NG was presented by the same six $TRIG_{present}$ items as in the first approach. Table 4 shows the selected CG/PGD and NG items.

Results

Preliminary Analyses

The mean ICG-r score for the present sample was 47.12 (*SD* = 15.47; range 29-132), which is far below the cut-off score > 90 for a diagnosis of CG (Boelen, van den Bout, de

[5] The symptom "uneasiness to move on", which is also part of the CG criteria, was not assessed.
[6] The symptoms "unbidden memories or intrusive thoughts related to the lost relationship", "intense spells or pangs of severe distress related to the lost relationship, and "extreme difficulty moving on with life (e.g., making new friends, pursuing interests)", which are also part of the PGD criteria, were not assessed.

Keijser et al., 2003); only seven (1.5%) of the participants scored above the cut-off. The mean $TRIG_{present}$ score was 33.88 (*SD* = 10.74; range 13-64).

Approach 1: Item Selection in Accordance to Boelen and van den Bout (2008)

As can be seen in Table 1, the fit indexes clearly indicated that the unitary model with CG items and NG items loading on one single factor did not adequately represent the data. Although the values for AIC and BIC (see Table 1) suggest that the two-factor model with the CG items and NG items loading on two distinct but correlated factors fitted the data significantly better, the fit indexes for this two-factor model were not satisfactory. Modification indexes indicated that correlations existed between the error terms of the CG items "trouble accepting the loss" and "bitterness/anger", and between the error terms of the NG item "missing" and the CG item "yearning". Accordingly, we tested the fit of an adjusted two-factor model in which these error terms were allowed to correlate. This adjusted model was clearly an improvement over the two-factor model (see lower AIC and BIC values), and the fit estimates (except one) were adequate (see Table 1). However, although the fit estimates of this adjusted model were in line with these of the adjusted model of Boelen and van den Bout (2008), the value of TLI lied on the borderline of acceptability. As the modification indexes further indicated a high value for the correlation between the NG item "missing" and the CG factor, we allowed a cross-loading of this NG item on both factors, in addition to the above mentioned correlations between the error terms. This second adjusted model showed further improvement and had fit estimates which were adequate on the whole line (see adjusted two-factor model 2 in Table 1). The correlation between the two factors was .69. Table 2 shows the factor loadings for this second adjusted model.

[insert Tables 1 and 2 about here]

Approach 2: Item Selection from the Revised Criterion Set for CG/PGD

As shown in Table 3, the one-factor model with NG and CG/PGD items all loading on one factor did not fit the data. Although the two-factor model yielded lower AIC and BIC values, attesting to a relatively better fit, the fit estimates were inadequate. Modification indexes indicated that correlations existed between the error terms of CG/PGD items "trouble accepting the loss" and "extreme bitterness/anger", "trouble accepting the loss" and "feeling stunned/dazed", and between the error terms of the CG/PGD item "distressingly strong yearnings" and the NG item "missing". Accordingly, we tested the fit of an adjusted two-factor model in which these error terms were allowed to correlate. This model was clearly an improvement relative to the two-factor model, given the lower AIC and BIC values, and the better fit estimates. Yet, again the value of TLI was on the borderline of acceptability. As the modification indexes indicated a high value for the correlation between the NG item "missing" and the CG factor, we allowed a cross-loading of this item on both factors, in addition to the above mentioned correlations between the error terms. This second adjusted model showed further improvement and had good fit estimates (see adjusted two-factor model 2 in Table 3). The correlation between the two factors was .76. Factor loadings for this second adjusted two-factor model are presented in Table 4.

[insert Tables 3 and 4 about here]

Discussion

The validity of CG as a new diagnostic category for the next version of the DSM (current edition, American Psychiatric Association, 2000) has been subject of much research and debate (Lichtenthal, Cruess, & Prigerson, 2004; Parkes, 2005; Stroebe et al., 2000). Although evidence on CG's distinctiveness from other bereavement-related disorders and CG's associations with impairment has accumulated (see: Prigerson & Maciejewski, 2005, for an overview), only few studies (Boelen & Van den Bout, 2008; Hogan et al., 2003) have

explored the structural distinctiveness of CG reactions from benign or normal grief (NG) reactions. In addition, these studies yielded diverging results. Hogan and colleagues (2003) found that CG and NG reactions clustered together in one factor, attesting to a lack of structural distinctiveness between CG and NG, while Boelen and van den Bout (2008) found that CG and NG were better conceptualized as representing distinct but related factors, attesting to structural distinctiveness of CG and NG. Given the current debate about inclusion of CG in the next edition of the DSM and DSM's definition of a mental disorder as distinct from normal/expected reactions, clarification of the structural relationship between CG and NG is highly needed and relevant.

It is in light of this need that we conducted a replication and extension of the study of Boelen and van den Bout (2008), using two criteria sets of CG. In accordance with Boelen and van den Bout (2008) the first set was based on the refined criteria set of CG (Prigerson & Jacobs, 2001; Prigerson & Maciejewski, 2005). In the second set we followed the revised criteria of CG/PGD (Prigerson et al., 2007). Broadly speaking, using both criteria sets we were able to replicate the findings of Boelen and van den Bout (2008), and hence disconfirm the findings of Hogan and colleagues (2003). In both approaches (or criteria sets) an adjusted model in which NG and CG reactions loaded on two distinct but correlated factors showed appropriate fit and was superior to a unitary model in which NG and CG reactions load on one factor. These results further corroborate that – although persistence, severity, and impairment have been proposed as the critical factors for distinguishing CG from NG reactions (Prigerson & Maciejewski, 2005) – CG/PGD criterion symptoms (see Tables 2 and 4) can be distinguished from NG reactions by their very nature. As such, our findings suggest – in accordance with Boelen and van den Bout (2008) – that CG/PGD fits with the definition of the DSM of a mental disorder as distinct from normal/expectable reactions (in this case NG reactions). Furthermore, the correlations between the NG and CG/PGD factor in our study

was .69 (first criteria set/approach) and .76 (second criteria set/approach), values that are in line with those of Boelen and van den Bout (2008: r = .81) and of previous studies, varying between .70 (Boelen et al., 2001) and .87 (Prigerson et al., 1995).

Notwithstanding these promising findings, some aspects merit additional comment. First of all, in line with the results of Boelen and van den Bout (2008) we needed to execute some modifications in the two-factor model in order to improve its fit. Modification indexes indeed showed that there existed correlations between the error terms of some of the reactions. In line with Boelen and van den Bout (2008), the error terms of CG reactions "trouble accepting death" and "bitterness/anger" correlated in both of our approaches. Furthermore, the error terms of the CG reactions "trouble accepting the loss" and "feeling stunned /dazed" and of the CG reaction "strong yearning" and the NG reaction "missing" correlated highly. Keeping with Boelen and van den Bout (2008) it was assumed that correlations reflected non-random measurement error stemming from content resemblance. Second, although the fit indexes for the first adjusted two-factor model were in line with those of Boelen and van den Bout (2008), who reported a CFI of .92, a TLI of .90, and a RMSEA of .07, the TLI can be considered as just on/below the border of acceptance. Modification indexes further indicated the need of a modification, namely the allowance of a cross-loading of "strong yearning" on both factors. As this modification (adjusted two-factor model 2) yielded significant better fit estimates, this implies that the distinction between the CG/PGD symptoms and NG symptoms, previously found by Boelen and van den Bout (2008), was confirmed in our sample for all but one CG/PGD item. This cross-loading might be due to translation effects. Yearning in the Dutch ICG-r is translated as "verlangen", a term which leans more towards longing than towards yearning. As such, although our data indicated clearly a cross-loading for this particular CG/PGD item, this does not necessarily imply that

the criterion symptom of "intense yearning" does not distinguish between NG and CG. Further research is obviously needed to clarify this effect.

These findings should be considered within the context of the study's limitations. First, although we found generalizability of previous findings in adults to a somewhat younger group of bereaved, it is obvious that further replication studies in other young bereaved groups are needed. Second, we used a translated version of the TRIG. Although the Cronbach's α is promising, more psychometric data on this Dutch version are needed. Third, we were not able to include all the proposed CG/PGD criteria; as such the conclusions about distinctiveness of CG/PGD and NG are limited to the grief reactions that were assessed.

Altogether, the present study confirms and extends the findings of Boelen and van den Bout (2008) on the boundaries between complicated/ prolonged grief reactions and more benign/normal grief reactions. Although this replication is promising in light for the inclusion of CG/PGD in the DSM, the cross-loading of "yearning" on both the NG and CG factor underscores the need for further exploring the exact nature of the boundaries between NG and CG.

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Tables

Table 1

Results of the CFAs Testing the Models on the Latent Structure of CG and NG Reactions (Approach 1)

Model	χ^2(df)	CFI	TLI	RMSEA	SRMR	AIC	BIC	*r*
One-factor	456.631 (77)	.807	.772	.104	.073	16010.477	16183.622	-
Two-factor	348.472 (76)	.862	.834	.089	.065	15865.996	16043.263	.768
Adjusted two-factor 1[a]	240.835 (74)	.915	.896	.070	.057	15740.696	15926.209	.771
Adjusted two-factor 2[b]	181.039 (73)	.945	.932	.057	.048	15671.246	15860.880	.688

Note. N = 456. CG, Complicated Grief; NG, Normal Grief; CFI, Comparative Fit Index; TLI, Tucker-Lewis Index; RMSEA, Root Mean Square Error of Approximation; SRMR, Standardized Root Mean Square; AIC, Akaike Information Criterion; BIC, Sample-size Adjusted Bayesian Information Criterion; *r*, correlation between two factors.

[a] Adjusted two-factor model 1 refers to a two-factor model in which correlations between error terms of CG items "trouble accepting the loss" and "bitterness/anger", and between the error terms of NG item "missing" and CG item "yearning" are allowed.

[b] Adjusted two-factor model 2 refers to a two-factor model in which correlations between error terms of CG items "trouble accepting the loss" and "bitterness/anger", and between the error terms of NG item "missing" and CG item "yearning" and a supplementary cross-loading of CG item "yearning" on both factors was allowed.

Table 2

Factor Loadings for Symptoms of Complicated Grief (CG) and Normal Grief (NG) from Confirmatory Factor Analysis among 456 Bereaved Youngsters (Approach 1)

	Loading	
	F1 (NG)	F2 (CG)
NG reactions[a]		
Sometimes missing the deceased	.716	
Painful to recall memories of the deceased person	.716	
Hiding tears when thinking about the deceased	.608	
Can't avoid thinking about the deceased	.542	
Things and people remind me of deceased	.546	
Feeling the need to cry at times	.826	
CG symptoms[b]		
Criterion A		
Chronic and disruptive yearning, pining, and longing for the deceased	.570	.161
Criterion B		
Trouble accepting the death		.528
Inability to trust others		.557
Bitterness or anger related to the loss		.537
Uneasy about moving on		NA
Numbness/ detachment		.708
Feeling that life is empty or meaningless without deceased		.742
Feeling that future is bleak		.678
Feeling agitated		.673

Note. NA = Not Assessed; NG = Normal Grief; CG = Complicated Grief.

[a] Assessed with the Texas Revised Inventory of Grief – Present scale.

[b] Assessed with the Dutch version of Inventory of Complicated Grief-Revised.

Table 3

Results of the CFAs Testing the Models on the Latent Structure of CG and NG Reactions (Approach 2)

Model	χ^2(df)	CFI	TLI	RMSEA	SRMR	AIC	BIC	*r*
One-factor	452.087 (90)	.825	.796	.094	.067	18077.278	18262.790	-
Two-factor	371.358 (89)	.863	.839	.083	.060	17971.415	18161.049	.818
Adjusted two-factor 1[a]	265.490 (86)	.913	.894	.068	.051	17844.232	18046.235	.828
Adjusted two-factor 2[b]	236.399 (85)	.927	.910	.062	.048	17809.207	18015.332	.760

Note. N = 456. CG, Complicated Grief; NG, Normal Grief; CFI, Comparative Fit Index; TLI, Tucker-Lewis Index; RMSEA, Root Mean Square Error of Approximation; SRMR, Standardized Root Mean Square; AIC, Akaike Information Criterion; BIC, Sample-size Adjusted Bayesian Information Criterion; *r*, correlation between two factors.

[a] Adjusted two-factor model 1 refers to a two-factor model in which correlations between error terms of CG items "trouble accepting the loss" and "bitterness/anger", "trouble accepting the loss" and "feeling stunned/dazed", and between the error terms of NG item "missing" and CG item "yearning" are allowed.

[b] Adjusted two-factor model 2 refers to a two-factor model in which correlations between error terms of CG items "trouble accepting the loss" and "bitterness/anger", "trouble accepting the loss" and "feeling stunned/dazed", between the error terms of NG item "missing" and CG item "yearning", and a supplementary cross-loading of CG item "yearning" on both factors was allowed.

Table 4

Factor Loadings for Symptoms of Complicated Grief (CG/PGD) and Normal Grief (NG) from Confirmatory Factor Analysis among 456 Bereaved Youngsters (Approach 2)

	F1 (NG)	F2 (CG)
NG reactions[a]		
Sometimes missing the deceased	.714	
Painful to recall memories of the deceased person	.722	
Hiding tears when thinking about the deceased	.614	
Can't avoid thinking about the deceased	.542	
Things and people remind me of deceased	.545	
Feeling the need to cry at times	.820	
CG/PGD symptoms[b]		
Separation Distress		
Unbidden memories or intrusive thoughts related to lost relationship		NA
Intense spells or pangs of severe distress related to lost relationship		NA
Distressingly strong yearnings for that which was lost	.490	.247
Cognitive, emotional, behavioural symptoms		
Sense of self as confused or empty since the loss because part of self died as a result of the loss		.612
Trouble accepting the loss as real		.570
Avoidance of reminders of the loss		.439
Inability to trust others since the loss		.528
Extreme bitterness or anger related to the loss		.598
Extreme difficulty moving on with life		NA
Pervasive numbness (absence of emotion) since the loss		.675
Feeling that life is unfulfilling, empty, and meaningless since the loss		.719
Feeling stunned, dazed or shocked by the loss		.639

Note. NA = Not Assessed; NG = Normal Grief; CG = Complicated Grief; PGD = Prolonged Grief Disorder.

[a] Assessed with the Texas Revised Inventory of Grief – Present scale.

[b] Assessed with the Dutch version of Inventory of Complicated Grief-Revised.