

## Assessment

# Psychometric Properties of the Dutch Inventories of Prolonged Grief for Children and Adolescents

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A significant minority of bereaved adults develops prolonged grief disorder (PGD), a syndrome encompassing debilitating symptoms of grief distinct from depression and anxiety. Few studies have examined the phenomenology and correlates of PGD among children and adolescents. In part, this is due to the lack of a psychometrically sound questionnaire to assess PGD symptoms in these groups. Based on an adult measure of PGD, we developed two questionnaires of PGD symptoms for children and adolescents named the Inventory of Prolonged Grief for Children (IPG-C) and Inventory of Prolonged Grief for Adolescents (IPG-A), respectively. Psychometric properties of these measures were examined in three samples, including mostly parentally bereaved children (aged 8–12 years, total sample  $n=169$ ) and adolescents (aged 13–18 years, total sample  $n=153$ ). First, findings showed that items of the IPG-C and IPG-A represented one underlying dimension. Second, the internal consistency and temporal stability of both questionnaires were adequate. Third, findings supported the concurrent validity (e.g., significant correlations with measures of depression and post-traumatic stress-disorder [PTSD]), convergent and divergent validity (stronger correlations with similar questionnaires of 'traumatic grief' than with two dissimilar questionnaires of 'ongoing presence' and 'positive memories') and incremental validity (significant correlations with an index of functional impairment, even when controlling for concomitant depression and PTSD) of the IPG-C and IPG-A. This report provides further evidence of the clinical significance of PGD symptoms among children and adolescents and promising psychometric properties of questionnaires that can be used to assess these symptoms. Copyright © 2011 John Wiley & Sons, Ltd.

### Key Practitioner Message:

- The Inventory of Prolonged Grief for Children (IPG-C) and Inventory of Prolonged Grief for Adolescents (IPG-A) were developed to be able to assess symptoms of Prolonged Grief Disorder (PGD) among children and adolescents.
- In different samples, the internal consistency, temporal stability, and concurrent and construct validity of these questionnaires were found to be adequate.
- The IPG-C and the IPG-A can be used in research examining causes and consequences of PGD, and the effectiveness of bereavement interventions for children and adolescents.
- This study provides further evidence of the existence and clinical significance of PGD symptoms among children and adolescents and supports the inclusion of a new category for bereavement-related disorders in DSM-5.

**Keywords:** Prolonged Grief Disorder, Children, Adolescents, Assessment

The loss of a relative to death is one of the most common and stressful life events that youths can experience

(e.g., Alisic, Van der Schoot, Van Ginkel, & Kleber, 2008; Breslau, Wilcox, Storr, Lucia, & Anthony, 2004). Bereavement among youths has been associated with increased psychiatric problems including depression, anxiety, post-traumatic stress-disorder (PTSD) and somatising disorders in the first 2 years following the loss (Brent, Melhem, Donohoe, & Walker, 2009; Cerel,

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Fristad, Verducci, Weller, & Weller, 2006). A growing literature has enhanced our knowledge about the phenomenology and correlates of pathological grief among youths, which has been variously labelled as traumatic, complicated and prolonged grief (e.g., Melhem, Day, Shear, Day, Reynolds, & Brent, 2004; Melhem, Moritz, Walker, Shear, & Brent, 2007).

Recent research on pathological grief among youths has been informed by research among bereaved adults. Specifically, since the mid-1990s, there is a growing recognition of a syndrome in adults that is referred to as prolonged grief disorder (PGD). As currently defined, PGD is a disorder that encompasses grief-specific symptoms including separation distress, a sense of disbelief regarding the death of a loved one, numbness and a sense that life is meaningless, present to a disabling and distressing degree at least 6 months following the death (Prigerson et al., 2009). PGD has been found to be distinct from uncomplicated grief and from depression and PTSD, and to be associated with persistent impairments in health and quality of life (Boelen & Huntjens, 2008; Boelen & Prigerson, 2007; Boelen & Van den Bout, 2008; Bonanno, Neria, Mancini, Coifman, Litz, & Insel, 2007; Dillen, Fontaine, & Verhofstadt-Denève, 2008; Prigerson et al., 2009).

There is growing evidence that the symptoms defining adult PGD also adequately represent pathological grief among children and adolescents. For instance, Melhem et al. (2004) found PGD symptomatology among adolescents exposed to a peer's suicide to be distinct from normal grief and found a diagnosis of PGD—defined as a score in the upper 25% of summed PGD symptom scores—to predict the onset and course of depression and PTSD at subsequent assessments. In another study by these authors among parentally bereaved children and adolescents, similar findings emerged, with PGD symptoms being associated with significant functional impairments beyond concurrent depression and PTSD (Melhem et al., 2007).

Although studies are beginning to shed light on the phenomenology and correlates of PGD among youths, to our knowledge, no validated measures are yet available that were specifically designed to tap PGD in this group. Melhem et al. (2004) used the Texas Revised Inventory of Grief (Faschingbauer, Zisook, & DeVaul, 1987) to assess pathological grief that includes some but not all symptoms that denote the PGD syndrome. In their later study, Melhem et al. (2007) assessed PGD using the adult version of the revised Inventory of Complicated Grief (ICG-R; Prigerson & Jacobs, 2001). Although they modified the wording of some items, their ICG-R was not specifically constructed for youths who may have compromised the findings. Specific measures of grief in children and adolescent have in fact been constructed in earlier studies. For example, Layne, Savjak, Saltzman, and Pynoos (2001) developed the Expanded Grief Inventory (EGI). Nevertheless, although

this measure has been found to have adequate psychometric properties (Brown & Goodman, 2005), it was designed to assess the construct of Childhood Traumatic Grief—defined as a combination of trauma symptoms and grief symptoms among traumatically bereaved children—rather than PGD symptoms *per se*.

To inform research and theorising about PGD in youths, and to be able to assess the effectiveness of bereavement interventions, it is important to have a measure that is specifically designed to tap PGD symptoms among children and adolescents. The fact that internalising problems are generally poorly recognised by parents (cf. De Los Reyes & Kazdin, 2005) emphasises that it is important that youths can report about their own emotional suffering following loss. The aim of the present study was to develop and examine Dutch questionnaires to assess PGD symptoms in children and adolescents. We constructed a children's version (for ages 8 through 12 years) and adolescents' version (for ages 13 through 18 years) of the 30-item ICG-R, a scale originally developed by Prigerson and Jacobs (2001) to assess symptoms of PGD (or complicated grief as it was formerly termed) in adults. Consistent with recent labelling, the questionnaires were named Inventory of Prolonged Grief for Children (IPG-C) and Inventory of Prolonged Grief for Adolescents (IPG-A). In this study, we examined the psychometric properties of the IPG-C and IPG-A. Specifically, we investigated their (a) dimensionality; (b) internal consistency; and (c) temporal stability—as well as their (d) concurrent; (e) convergent and divergent; and (f) incremental validity. Finally, we examined the extent to which scores on both questionnaires varied as a function of demographic and loss-related variables. Apart from seeking to contribute to the development of tools to assess PGD among youths, our secondary aim was to enhance knowledge about the phenomenology and (demographic and health-related) correlates of childhood PGD. The relevance of this is emphasised by the fact that Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV), does not yet include a specific diagnostic category for a disorder of grief (APA, 2000). Notably though, working groups preparing DSM-5 are now considering inclusion of such a disorder, although the naming and exact criteria of this disorder are still uncertain (APA, 2011; Prigerson et al., 2009; Shear et al., 2011).

## METHOD

### *Participants and Procedure*

Three samples were recruited from different sources. In all samples, participants aged 8–12 years comprised the children sample and completed the IPG-C. Participants aged 13–18 years comprised the adolescent sample and

completed the IPG-A. Children, adolescents and their parents from Sample 1 completed no additional questionnaires. Children, adolescents and their parents from Samples 2 and 3 completed complementary scales to be described below. Table 1 shows characteristics of all participants. In total, 169 children completed the IPG-C, and 153 adolescents completed the IPG-A.<sup>1</sup>

### Sample 1

Sample 1 included youths who participated in bereavement projects in Flanders (the Dutch-speaking part of Belgium) led by L.D. They were recruited through (a) media publicity; (b) direct mailing of self-support organisations to their members; (c) contact with victim services; and (d) announcements among psychology graduate students. People were deemed eligible for participation in the bereavement projects if they had lost a parent, brother or sister. Consequently, those who lost other relatives were not included in this sample. Sample 1 included 32 children and 63 adolescents. Assent was obtained from children, informed consent from parents and adolescents.

### Sample 2

Sample 2 was recruited through collaboration with a national grief support group for children in the Netherlands that offers council and advice to parents and children about grief and bereavement and organises support weekends for children and their parent(s). During the period of data collection for the present study, all families that had a child or adolescent applying for such a weekend were sent a letter. The letter included a description of the study and a stamped refusal card. If no refusal card was received within two weeks, the family was contacted and—if the parent(s) and the child agreed to participate—a home visit was planned. Home visits were conducted by trained graduate students. During the visits, aims of the study were explained and questionnaires administered. If so needed, the students could help with the completion of the questionnaires. Assent was obtained from children, informed consent from parents and adolescents. Sample 2 included 100 children and 26 adolescents. Because the support weekends were all focused on children bereaved by the loss of a parent or sibling, this sample did not include any children who lost other relatives. Fourteen randomly selected children and 10 randomly

selected adolescents filled in the IPG-C or IPG-A a second time, approximately 6 weeks ( $M=35.79$ , standard deviation [ $SD$ ]=5.47 days, range 25–45 days) later. These were all participants that were on a waiting list for a support group.

### Sample 3

The third sample was recruited via several outpatient clinics in the Netherlands. During the period of data collection, consecutive patients aged 8–18 years, who reported emotional problems associated with the death of a parent, sibling or other loved one among the complaints they sought help for, were invited to participate. Those who did so completed questionnaires accompanied by their therapist. Assent was obtained from children, informed consent from parents and adolescents. Sample 3 included 37 children and 64 adolescents. Four randomly selected children and 10 randomly selected adolescents filled in the IPG-C or IPG-A a second time, approximately 6 weeks ( $M=34.50$ ,  $SD=7.36$  days, range 25–46 days) later. These were all participants that were on a waiting list for help.

### Measures

All participants completed the IPG-C or the IPG-A, together with a questionnaire about demographic (e.g., age) and loss-related (e.g., mode of death) variables. In addition, children and adolescents from Samples 2 and 3 completed the Child PTSD Symptom Scale (CPSS), Children's Depression Inventory (CDI) and Extended Grief Inventory (EGI). Adolescents from Samples 2 and 3 also completed the Youth Self Report (YSR). In Samples 2 and 3, at least one of the parents completed the Child Behaviour Checklist/6–18 (CBCL).

### *Inventory of Prolonged Grief for Children and Inventory of Prolonged Grief for Adolescents*

Construction of the IPG-C and IPG-A was accomplished in five steps. We initially strove for a single children's version. Hence, for the first step, wording of the 30 items of the ICG-R (Prigerson & Jacobs, 2001; Dutch adult version by Boelen, Van den Bout, De Keijser, & Hoijsink, 2003) was simplified by three experts in the field of clinical child psychology. In the second step, this version was evaluated by five independent reviewers—two experts on psychological assessment for youths, one expert on child language and two clinical child psychologists with expertise in grief. Reviewers provided narrative feedback on item clarity and appropriateness for the age group (8–18 years). Moreover, they gave suggestions for simplification of instructions and some of the items, for children below 13 years of age. Accordingly, in the third step, it was decided to construct two versions for children and adolescents, respectively. Moreover, it was decided to replace the original 5-point response scale (with anchors 'almost

<sup>1</sup>The response rate in Sample 2 was 86% and in Sample 3 was 99%; the distribution of study information in Sample 1 precluded exact monitoring of the response rate, but the impression was that this was over 90%. Reasons for non-participation were not systematically recorded, but it was our impression that most of the people who refused participation did so because they did not feel that they could profit from participation themselves.

Table 1. Demographic characteristics, loss-related characteristics, and scores on prolonged grief and depression measures across samples

	Sample 1		Sample 2		Sample 3		Combined Samples	
	Children	Adolescents	Children	Adolescents	Children	Adolescents	Children	Adolescents
<i>n</i>	32	63	100	26	37	64	169	153
Demographic Characteristics								
Gender ( <i>n</i> (%))								
Male	11 (34.4)	30 (47.6)	51 (51.0)	7 (26.9)	23 (62.2)	17 (26.6)	85 (53.3)	54 (35.3)
Female	21 (65.6)	33 (52.4)	49 (49.0)	19 (73.1)	14 (37.8)	47 (73.4)	84 (49.7)	99 (64.7)
Age (M (SD))	9.97 (1.20)	15.17 (1.35)	9.71 (1.20)	14.35 (1.33)	9.97 (1.28)	15.27 (1.48)	9.82 (1.22)	15.07 (1.43)
Loss-Related Characteristics								
Deceased is ( <i>n</i> (%))								
Parent	17 (53.1)	41 (65.1)	93 (93.0)	23 (88.5)	20 (54.1)	41 (64.1)	130 (76.9)	105 (68.6)
Sibling	15 (46.9)	22 (34.9)	7 (7.0)	3 (11.5)	5 (13.5)	7 (10.9)	27 (16.0)	32 (20.9)
Other relative	–	–	–	–	12 (32.4)	16 (25.0)	12 (7.1)	16 (10.5)
Cause of death is ( <i>n</i> (%))								
Illness	18 (56.2)	35 (55.6)	58 (58.0)	14 (53.8)	23 (65.7)	41 (64.1)	99 (58.6)	90 (58.8)
Traumatic (accident, suicide, homicide)	8 (25.0)	21 (33.3)	23 (23.0)	5 (19.2)	8 (22.9)	10 (15.6)	39 (23.1)	36 (23.5)
Sudden medical cause (e.g., heart attack)	3 (9.4)	7 (11.1)	14 (14.0)	7 (26.9)	2 (5.7)	10 (15.6)	19 (11.2)	24 (15.7)
Other	3 (9.4)	–	5 (5.0)	–	2 (5.7)	3 (4.7)	10 (5.9)	3 (2.0)
Death was expected by participants?								
Yes	9 (28.1)	22 (36.1)	25 (25.0)	7 (28.0)	13 (35.1)	25 (39.1)	47 (27.8)	54 (36.0)
No	23 (71.9)	39 (63.9)	75 (75.0)	19 (72.0)	24 (64.9)	39 (60.9)	122 (72.2)	96 (64.0)
Time since loss in months (M (SD))	29.26 (23.51)	50.77 (40.67)	32.7 (22.57)	29.64 (24.99)	38.88 (29.64)	41.38 (39.11)	33.05 (24.08)	43.48 (38.22)
Symptom Scores								
IPG-C/IPG-A	51.77 (12.99)	50.52 (11.53)	51.40 (11.43)	50.23 (14.49)	47.95 (10.28)	50.59 (12.18)	50.71 (11.53)	50.50 (12.26)
CDI	–	–	9.10 (6.51)	10.35 (7.13)	9.20 (5.22)	14.26 (8.06)	9.13 (6.17)	13.13 (7.97)

Note. CDI=Children's Depression Inventory. IPG-C=Inventory of Prolonged Grief for Children. IPG-A=Inventory of Prolonged Grief for Adolescents.

never' to 'always') by a 3-point scale, with categories 1=almost never, 2=sometimes, 3=always. This decision was motivated by the fact that (a) the 3-point scale was deemed more easy to comprehend; (b) the 3-point scale matches other widely used questionnaire measures such as the CDI (Kovacs, 2003); and (c) a recent item-response theory analyses of the adult ICG-R indicated that response option thresholds were ordered when items were scored on 3-point scales but not when they were scored on 5-point scales (Boelen & Hoijtink, 2009). In the fourth step, the IPG-C was reviewed by five children between 8 and 12 years old (M=10.05 years) and the IPG-A by five adolescents aged 13 to 18 years (M=15.30 years). Children were asked to comment on the questionnaire's comprehensibility, which led to minor additional changes in wording. In the fifth step, both measures were evaluated again by six other children (three girls) and six other adolescents (three girls).<sup>2</sup> This did not lead to further changes. Thus, the final

<sup>2</sup>Children and adolescents reviewing the items in the fourth and fifth steps were all bereaved by the loss of a family member, other than a parent or sibling, within the last 3 years.

versions of the IPG-C and IPG-A both included 30 items, representing symptoms of PGD and other putative markers of debilitating grief symptoms. The general content of each item is shown in Table 2; English translations of the Dutch IPG-C and IPG-A are shown in the Appendix. Respondents were instructed to rate the frequency of each symptom in the preceding month, on 3-point scales (1=almost never, 2=sometimes, and 3=always).

#### Child Post-Traumatic Stress-Disorder Symptom Scale

The CPSS is a 17-item questionnaire that taps symptoms of PTSD symptoms as defined in the DSM (APA, 2000). It was originally constructed by Foa, Johnson, Feeny, and Treadwell (2001; Dutch translation Engelhard, 2005). Respondents rate the occurrence of symptoms on 4-point scales ranging from 0 (not at all/only once a week) to 3 (almost always/five or more times a week). Psychometric properties have been found to be adequate (Foa et al., 2001). In the present sample, the internal consistencies (Cronbach's  $\alpha$ 's) in the combined children sample ( $n=137$ ) and adolescent sample ( $n=90$ ) from Samples 2 and 3 were 0.85 and 0.91, respectively.

Table 2. Abbreviated items of the Dutch IPG-C and IPG-A and factor loadings in the one-factor solutions

	Item content	Factor loadings in combined children sample ( $n=169$ )	Factor loadings in combined adolescent sample ( $n=153$ )
1	Loss feels devastating	0.62	0.73
2	Thinking so much of him/her that it is difficult to do usual things	0.75	0.73
3	Memories of him/her are upsetting	0.47	0.53
4	Feel it's difficult to accept this loss	0.68	0.65
5	I yearn for him/her and want to be with him/her	0.65	0.69
6	I seek places and things that remind me of him/her	0.36	0.42
7	Feel angry about his/her death	0.50	0.62
8	Can hardly believe that s/he died	0.52	0.68
9	Feel shocked and overwhelmed by loss	0.60	0.89
10	Feel it is hard to trust people	0.68	0.67
11	Feel distant from other people	0.49	0.61
12	Do or feels things that s/he used to do/feel	0.56	0.40
13	Avoid thinking that s/he is dead	0.32	0.50
14	Life feels empty or meaningless	0.64	0.83
15	Hear his/her voice	0.59	0.42
16	I see him/her	0.63	0.34
17	Have difficulties to experience feelings	0.55	0.80
18	Feel guilty being alive while s/he is dead	0.73	0.78
19	Feel bitter inside	0.73	0.69
20	Feel jealous of others who didn't lose someone	0.37	0.50
21	Feeling that the future is meaningless	0.79	0.81
22	Feel lonely since s/he died	0.68	0.79
23	Feel that life is worthless	0.69	0.79
24	Feel like part of me died	0.68	0.73
25	Feel that his/her death changed everything	0.62	0.60
26	Feel unsafe	0.74	0.66
27	Feel like having no control over things happening	0.62	0.79
28	Do less well in different areas (in school with friends)	0.65	0.69
29	Feel tense since s/he died	0.72	0.73
30	Sleep poorly since s/he died	0.49	0.58

Note. IPG-C=Inventory of Prolonged Grief for Children. IPG-A=Inventory of Prolonged Grief for Adolescents.

### Children's Depression Inventory

The CDI developed by Kovacs (2003) taps symptoms of depression. It contains 27 groups of three statements representing depressive symptoms at increasing levels of severity, scored from 0 (symptom absent) to 2 (symptom present always/most of the time). For all 27 items, respondents select the statement that best describes the severity of the symptom during the preceding week. Items are summed to form an overall depression severity score. The original English (cf. Cole & Martin, 2005) and Dutch versions of the CDI (Timbremont, Braet, & Roelofs, 2008) have adequate psychometric properties. The  $\alpha$ 's in the combined children sample ( $n=137$ ) and adolescent sample ( $n=90$ ) from Samples 2 and 3 were 0.83 and 0.87, respectively.

### Extended Grief Inventory

The EGI, constructed by Layne et al. (2001; Dutch version by Dillen, 2005), is a 28-item measure designed to assess Childhood Traumatic Grief—a combination of

symptoms of grief and traumatic stress. Respondents rate the presence of each reaction during the previous month on 5-point scales ranging from 0 (rarely) to 4 (almost always/daily). The EGI constitutes three subscales: (a) Childhood Traumatic Grief; (b) Ongoing Presence; and (c) Positive Memories (Brown & Goodman, 2005). The first scale (23 items) assesses a combination of grief and post-traumatic stress reactions, the second (2 items) taps a sense of presence of the deceased, and the third (3 items) assesses the presence of positive memories of the deceased. Prior research has supported the psychometric properties of the EGI (Brown & Goodman, 2005). In the present samples, it was found that the three subscales had  $\alpha$ 's of 0.91, 0.49 and 0.64, respectively, in the combined children samples, and 0.95, 0.47 and 0.54 in the combined adolescent samples from Samples 2 and 3.

### Child Behaviour Checklist/6–18

The CBCL is a measure of emotional and behavioural problems of children and adolescents (aged 6–18 years)

constructed by Achenbach and Rescorla (2001; Dutch translation, Verhulst, Van der Ende, & Koot, 1996). It includes 118 items, representing different problem areas (e.g., anxious, depressive, somatic symptoms, aggressive behaviour, attentional problems). The measure can be completed by parents or other people close to the child. Items are rated on 3-point scales (0=not true, 1=somewhat or sometimes true, 2=very true/often true) and tap into eight different problem areas. Scores on some of these areas can be summed to obtain indices of Internalising Problems and Externalising Problems, whereas the summed score of all items represents a total problem score. Psychometric properties of the original version (Achenbach & Rescorla, 2001) and Dutch version (Verhulst et al., 1996) are adequate. In Samples 2 and 3, at least one of the parents completed the CBCL. In case both parents completed the scale, we only used data from one randomly selected parent. Random selection of CBCL's was justified, given that correlations between the father's and mother's version, if available, were high.<sup>3</sup> The internal consistencies of the Internalising subscale, the Externalising subscale and the Total scale in the combined children samples from Samples 2 and 3 were 0.95, 0.89 and 0.91, respectively, and in the combined adolescent samples from Samples 2 and 3 were 0.96, 0.88 and 0.92, respectively.

### Youth Self Report

The YSR, developed by Achenbach and Rescorla (2001), is a 120-item measure of emotional and behavioural problems among youngsters between 11 and 18 years of age. Its items are comparable with those of the CBCL except that they are written in the first person and completed by youngsters between 11 and 18 years of age. Items representing problems are rated using a forced-choice response format (0=not true, 1=somewhat/sometimes true, 2=very/often true). As with the CBCL, indices of Internalising Problems and Externalising Problems, as well as a Total Problem score can be obtained from the measure. Psychometric properties of the original version (Achenbach & Rescorla, 2001) and the Dutch version (Verhulst, Van der Ende, & Koot, 1997) are adequate. In the present study, the YSR was only completed by adolescents from Samples 2 and 3. The YSR yielded Cronbach's  $\alpha$ 's of 0.94 (Internalising Problems), 0.89 (Externalising Problems) and 0.87 (Total scale) in the combined adolescents samples from Samples 2 and 3.

<sup>3</sup>Specifically, for 39 children from Samples 2 and 3, data were available from both parents. The correlations between scores of the fathers and mothers for the Internalising score was  $r=0.87$ , for the Externalising score was  $r=0.92$  and for the Total score was  $r=0.87$  ( $p$ 's < 0.001). For 40 adolescents from these samples, data were also available from both parents. Correlations between scores of the fathers and mothers for the Internalising score was  $r=0.72$ , for the Externalising score was  $r=0.85$  and for the Total score was  $r=0.78$  ( $p$ 's < 0.001).

### Statistical Analyses

First, the dimensionality of the IPG-C and the IPG-A was examined, using exploratory factor analysis implemented in MPLUS 4 with maximum-likelihood estimation (Muthén & Muthén, 2007). The dimensionality of the IPG-C was examined using the three combined children samples ( $n=169$ ). The dimensionality of the IPG-A was examined using the three combined adolescent samples ( $n=153$ ). Second, the internal consistency and temporal stability of the IPG-C and IPG-A were examined. Next, several predictions were tested with respect to the validity of the IPG-C and the IPG-A. With respect to the concurrent validity, it was expected that PGD severity as tapped by the IPG-C and IPG-A would be significantly and positively associated with the severity of concomitant depression severity (CDI), PTSD severity (CPSS), and internalising problems, externalising problems and total problems as indexed by the CBCL. In addition, IPG-A scores were expected to be positively associated with YSR scores. With respect to the convergent and divergent validity, it was expected that the IPG-C and IPG-A both would be more strongly (and positively) associated with the Childhood Traumatic Grief subscale from the EGI, tapping a construct that is similar to PGD, than with the Ongoing Presence and Positive Memories subscales from the EGI, tapping dissimilar constructs. With respect to the incremental validity, we predicted that scores on the IPG-C and IPG-A would be significantly and positively associated with the degree to which children and adolescents experienced impairments in functioning as a result of the loss (indexed by one item from the IPG-C and IPG-A), even when controlling for concomitant depression (CDI) and PTSD (CPSS) severity. Finally, we explored the extent to which IPG-C and IPG-A scores differed as a function of demographic and loss-related variables that we assessed (see Table 1).

## RESULTS

### Characteristics of the Study Samples

Table 1 shows background and loss-related characteristics of the three samples. Across the samples, most participants had lost a parent. Most losses were due to illness and were experienced as being unexpected. Scores on the IPG-C and IPG-A (minimum 30, maximum 90) and the CDI are also shown in Table 1. Scores on the IPG-C did not differ between the three children's samples ( $F(2, 166)=1.38$ ,  $p=0.26$ ). Likewise, scores on the IPG-A did not differ between the three adolescent samples ( $F < 1$ ). Children and adolescents from Samples 2 and 3 completed the CDI. In comparison with reference groups from the study by Timbremont, Braet, and Roelofs (2008), scores fell in the subclinical range.

## Dimensionality

### *Inventory of Prolonged Grief for Children*

Exploratory factor analysis on the IPG-C, using data from the combined children samples ( $n=169$ ), resulted in the emergence of seven factors with eigenvalues greater than 1.00 (i.e., 11.94, 2.05, 1.63, 1.56, 1.26, 1.05 and 1.02). However, there were reasons to conclude that the IPG-C items are best characterised as one factor. First, the first factor explained 38% of the variance in the ICG-C with the second through the seventh factors each adding only 3 to 6% to the variance explained by the first factor. Second, inherent to that, the scree plot revealed a clear break after the first component. Thirdly, as shown in Table 2, in the one-factor solution, all 30 items had factor loadings  $\geq 0.30$ . Finally, in the models with more than one factor, several items loaded highly on more than one factor, and the components could not be interpreted in a meaningful way. Overall, the findings suggested that, within the present dataset, the IPG-C items clustered together into one underlying dimension of PGD symptomatology.

### *Inventory of Prolonged Grief for Adolescents*

Exploratory factor analysis on the IPG-A, using data from the combined adolescent samples ( $n=153$ ), resulted in the emergence of six factors with eigenvalues greater than 1.00 (i.e., 13.92, 2.23, 2.04, 1.58, 1.22 and 1.02). However, as with the IPG-C, it seemed that the IPG-A items are best characterised as one factor. First, the first factor explained 45% of the variance in the ICG-C with the second through the sixth factors each adding only 3.5 to 6.5% to the variance explained by the first factor. Second, the scree plot showed a clear break after the first component. Third, as shown in Table 2, in the one-factor solution, all items had factor loadings  $\geq 0.30$ . Finally, in the models with more than one factor, several items again had strong loadings on more than one factor, and the factors did not seem to represent easily interpretable aspects of PGD. Overall, the findings suggested that, in the current dataset, the IPG-A items represented a single dimension of PGD symptomatology.

## Internal Consistency

### *Inventory of Prolonged Grief for Children*

Cronbach's  $\alpha$  for the children in Sample 1 was 0.94, in Sample 2 was 0.91, and in Sample 3 was 0.89. For the combined children samples ( $n=169$ ), the  $\alpha$  was 0.91. In line with the results of the exploratory factor analysis, in the combined children samples, the item-total correlations were all positive and ranged from 0.24 (item 13) to 0.63 (item 26). Seventeen items had item-total correlation greater than 0.50, and the  $\alpha$  did not increase with the deletion of a single item.

### *Inventory of Prolonged Grief for Adolescents*

Cronbach's  $\alpha$  for the adolescents in Sample 1 was 0.93, in Sample 2 was 0.96, and in Sample 3 was 0.93. For the combined adolescent samples ( $n=153$ ), the  $\alpha$  was 0.94. In the combined samples, the item-total correlations were all positive and ranged from 0.27 (item 16) to 0.75 (item 9). Twenty items had item-total correlation greater than 0.50, and the  $\alpha$  did not increase with a deletion of a single item.

## Temporal Stability

### *Inventory of Prolonged Grief for Children*

The test-retest correlation for the 18 children from Samples 2 and 3 who completed the IPG-C twice with a 4-week to 6-week interval was  $r=0.88$  ( $p<0.001$ ).

### *Inventory of Prolonged Grief for Adolescents*

The test-retest correlation for the 20 adolescents from Samples 2 and 3 who completed the IPG-C twice with a 4-week to 6-week interval was  $r=0.72$  ( $p<0.001$ ).

## Concurrent Validity

### *Inventory of Prolonged Grief for Children*

Correlations of the IPG-C with the CDI, CPSS and CBCL scores for the combined children from Samples 2 and 3 are shown in Table 3. As predicted, the IPG-C was significantly and positively correlated with indices of depression (CDI) and PTSD (CPSS). Unexpectedly,

Table 3. Correlations between study measures among children and adolescents from Samples 2 and 3

	IPG-C		IPG-A	
	<i>r</i>	<i>n</i>	<i>r</i>	<i>n</i>
Post-Traumatic Stress (CPSS)	0.78**	135	0.76**	90
Depression (CDI)	0.62**	134	0.69**	90
Childhood Traumatic Grief (EGI)	0.86**	135	0.91**	89
Ongoing Presence (EGI)	0.52**	135	0.30*	89
Positive Memories (EGI)	0.38**	135	0.21	89
Internalising Problems (CBCL)	0.09	134	0.33*	83
Externalising Problems (CBCL)	0.05	134	0.36*	83
Total Problems (CBCL)	0.11	134	0.40**	83
Internalising Problems (YSR)	–	–	0.62**	84
Externalising Problems (YSR)	–	–	0.21	84
Total Problems (YSR)	–	–	0.49**	84

Note. Samples sizes differ due to occasional missing values. CBCL=Child Behaviour Checklist. CDI=Children's Depression Inventory. CPSS=Child Post-traumatic Stress-Disorder Symptom Scale. EGI=Extended Grief Inventory. IPG-C=Inventory of Prolonged Grief for Children. YSR=Youth Self Report.

\* $p<0.01$ . \*\* $p<0.001$ .

IPG-C scores were not significantly correlated with the CBCL scores.

#### *Inventory of Prolonged Grief for Adolescents*

Correlations of the IPG-A with the CDI, CPSS, CBCL and YSR scores for the combined adolescent from Samples 2 and 3 ( $n=90$ ) are also shown in Table 3. As predicted, the IPG-A was significantly and positively correlated with measures of depression (CDI) and post-traumatic stress (CPSS), with scores on the CBCL and with self-rated Internalising Problems and the Total Problems score on the YSR. Unexpectedly, IPG-A scores were unrelated to externalising scores on the YSR.

#### **Convergent and Divergent Validity**

##### *Inventory of Prolonged Grief for Children*

Correlations of the IPG-C with the EGI subscales for the children from Samples 2 and 3 ( $n=135$ ) are shown in Table 3. As predicted, the IPG-C was more strongly associated with the Childhood Traumatic Grief subscale than with the Ongoing Presence and Positive Memories subscales. Differences between correlations were significant ( $r=0.86$  versus  $r=0.52$ ;  $t=7.01$ ,  $p<0.001$ , and  $r=0.86$  versus  $r=0.38$ ;  $t=8.81$ ,  $p<0.001$ ).

##### *Inventory of Prolonged Grief for Adolescents*

Table 3 also shows correlations of the IPG-A with the EGI subscales for adolescents from Samples 2 and 3 ( $n=90$ ). As predicted, the correlation with the Childhood Traumatic Grief subscale was higher than with the Ongoing Presence and Positive Memories subscales. Again, differences between correlations were significant ( $r=0.91$  versus  $r=0.30$ ;  $t=9.35$ ,  $p<0.001$ , and  $r=0.91$  versus  $r=0.21$ ;  $t=9.86$ ,  $p<0.001$ ).

#### **Incremental Validity**

##### *Inventory of Prolonged Grief for Children*

Among the children from Samples 2 and 3 ( $n=135$ ) higher scores on the impairment in functioning item of the IPG-C (item 28) were significantly correlated with the summed score of the other 29 items of the IPG-C:  $r=0.54$ ,  $p<0.001$ . Regression analysis showed that—when controlling for the shared variance between scores on the IPG-C (without item 28), the CDI and the CPSS—IPG-C scores ( $\beta=0.26$ ,  $t=2.29$ ,  $p<0.05$ ) but not scores on the CDI ( $\beta=0.19$ ,  $t=1.81$ ,  $p<0.10$ ) and the CPSS ( $\beta=0.21$ ,  $t=1.67$ ,  $p<0.10$ ) predicted scores on this impairment in functioning item.

##### *Inventory of Prolonged Grief for Adolescents*

Similarly, among the adolescents from Samples 2 and 3 ( $n=90$ ), higher scores on the impairment in functioning

item from the IPG-A (item 28) were significantly correlated with higher total scores on the IPG-A (omitting this particular item);  $r=0.64$ ,  $p<0.001$ . Regression analysis showed that—when controlling for the shared variance between scores on the IPG-A (without item 28), the CDI and the CPSS—IPG-A scores ( $\beta=0.39$ ,  $t=2.84$ ,  $p<0.01$ ) but not scores on the CDI ( $\beta=0.08$ ,  $t=0.64$ ,  $p=0.53$ ) and the CPSS ( $\beta=0.21$ ,  $t=1.49$ ,  $p=0.14$ ) predicted scores on this item.

#### **Demographic and Loss-Related Correlates of PGD Severity**

##### *Inventory of Prolonged Grief for Children*

In the combined children samples from Samples 1, 2 and 3 ( $n=169$ ), scores on the IPG-C varied as a function of time from loss ( $r=-0.22$ ,  $p<0.05$ ) with lower scores being observed among those further removed from their loss. Scores did not vary as a function of age, gender, relationship to the deceased, cause of death and expectedness of the death.

##### *Inventory of Prolonged Grief for Adolescents*

In the combined adolescent samples from Samples 1, 2, and 3 ( $n=153$ ), scores on the IPG-A also varied as a function of time from loss ( $r=-0.23$ ,  $p<0.05$ ) but none of the other background and loss-related variables that we assessed.

## DISCUSSION

The aim of the present study was to examine psychometric properties of two questionnaires for the assessment of PGD symptoms among children (aged 8–12 years) and adolescents (aged 13–18 years), called the IPG-C and IPG-A, respectively. In doing so, we also aimed to enhance knowledge about the phenomenology and correlates of PGD symptoms in these groups. The questionnaires were adjusted versions of the 30-item revised Inventory of Complicated Grief (ICG-R), a scale originally developed by Prigerson and Jacobs (2001) to assess PGD in adults. The main findings can be summarised as follows.

First, it was found that both the IPG-C and the IPG-A represented one underlying dimension of PGD symptom severity. These findings are consistent with prior research among children and adolescents (e.g., Melhem et al., 2007) and adults (e.g., Boelen et al., 2003; Boelen & Hoijtink, 2009), which have also shown that PGD symptoms form a unidimensional construct. Second, Cronbach's  $\alpha$ 's of both questionnaires were high, further supporting that the variety of emotional (e.g., yearning), behavioural (e.g., avoidance), cognitive (e.g., reduced sense of meaning), interpersonal (e.g., reduced trust) and experiential (e.g.,

seeing the lost person) symptoms form a unitary and internally consistent construct. Third, test-retest analyses showed that the endorsement of items was stable across a 6-week period.

The fourth main finding was that higher scores on the IPG-C and the IPG-A were significantly correlated with symptoms of depression and PTSD, attesting to the concurrent validity of both questionnaires. Notably, among children, scores on the IPG-C were not significantly correlated with their parent's rating of internalising and externalising problems as indexed by the CBCL. However, among adolescents, scores on the IPG-A were in fact correlated with CBCL scores. These findings can be interpreted as indicating that parent's estimation of the severity of loss-related problems of their offspring is more accurate when these children are older (i.e., >12 years). Moreover, the findings suggest that it is important to be able to have young children (i.e., <13 years) report about their own grief, instead of solely relying on their parents' observation of their degree of emotional suffering following loss. The finding that parents seem more aware of the suffering of adolescents than of children seems unexpected. It is notable though that this may be due to the composition of the present study groups. That is, the combined adolescents from Samples 2 and 3 included relatively more participants who sought help at outpatient clinics (i.e., 64/90=71%) compared with the combined children (i.e., 37/137=27%). To the extent that adolescents who seek help are more inclined to communicate about their feelings than children who do not seek help, it is likely that parents of adolescents were more aware of their children's suffering than parents of younger children. At the same time, it is also possible that parents are generally more aware of the possible devastation a loss may bring about and more inclined to monitor the effects thereof, when their children are older.

We also examined the correlations of the IPG-C and the IPG-A with symptoms of Childhood Traumatic Grief, and the experience of 'ongoing presence' and 'positive memories' as tapped by the EGI (Brown & Goodman, 2005). As predicted, both the IPG-C and IPG-A were more strongly associated with Childhood Traumatic Grief—a construct that is similar to PGD—than with a sense of ongoing presence and positive memories of the lost person, constructs that are different from PGD symptoms. These findings support the convergent and divergent validity of the IPG-C and the IPG-A. Furthermore, these findings indicate that PGD symptoms in children and adolescents are phenomenologically similar to combination of grief and post-traumatic stress symptoms implicated in the concept of childhood traumatic grief. Findings obtained with the EGI should be interpreted with some caution, given that the internal consistencies of its subscales were not very strong.

Our findings also revealed that scores on the IPG-C and the IPG-A were significantly correlated with the degree to

which participants reported impairments in functioning as a result of the loss. These associations remained significant when controlling for concomitant depression and PTSD symptom severity. These particular findings provide initial support for the incremental validity of the IPG-C and the IPG-A. Moreover, it is in keeping with prior findings among children and adolescents (Melhem et al., 2007) and adults (Boelen & Prigerson, 2007; Bonanno et al., 2007) that PGD symptoms have a specific linkage with impairments in functioning beyond symptoms of depression and post-traumatic stress.

In our final rounds of analyses, we found that scores on the IPG-C and the IPG-A were lower among children and adolescents that were further removed from their loss but did not vary as a function of other demographic and loss-related variables, including age, gender, and mode and expectedness of the death. Again, these findings are fully consistent with findings from Melhem et al. (2007). Although more studies are needed to further elucidate possible correlates and risk factors for increased PGD severity in children and adolescents, these findings suggest that factors other than demographic variables and aspects of the loss event—possibly including cognitive behavioural variables such as thinking and coping styles—are more important determinants of PGD symptom severity (cf. Boelen & Spuij, 2008).

Altogether, the present findings suggest that the IPG-C and the IPG-A are reliable and valid tools to examine PGD symptomatology among children and adolescents. Thus, both scales may be used in future research examining causes and consequences of PGD in these groups, as well as in treatment studies examining the effectiveness of bereavement interventions for youths. Moreover, the findings enhance our knowledge of the phenomenology of childhood PGD in showing that PGD symptoms form a unidimensional construct that is associated with depression, PTSD, functional impairments and—at least among adolescents older than 12 years of age—with the severity of internalising and externalising problems as observed by their parents.

Some limitations should be taken into account when interpreting the present findings. First and foremost, both the IPG-C and the IPG-A are adjusted versions of an adult measure of PGD, the ICG-R. Consequently, the conceptualisation of childhood PGD as examined in this study is an extension of PGD as defined in adults (Prigerson & Jacobs, 2001; Prigerson et al., 1999). It would be useful for future studies to investigate if there are other symptoms, beyond those included in the item pool of the ICG-R, that are also or even more specifically indicative of problematic grief among youths. Second, the present study tested Dutch versions of the IPG-C and the IPG-A. Although it is conceivable that the present findings are generalisable to other Western, including English-speaking cultures, the psychometric properties of versions of the

questionnaires in other languages remain to be tested. Third, given the variety of methods of recruitment, most of the analyses that we conducted relied on a rather heterogeneous group of children and adolescents. Thus, it would be interesting for future studies to further examine psychometric properties of the IPG-C and the IPG-A, and—more generally—the phenomenology of childhood PGD, in more specified and homogeneous groups (e.g., children suffering severe emotional problems following loss). As a related point, although the cultural background of participants was not systematically assessed, it was our impression that most participants had a Western origin. Thus, generalisation of the present findings to non-Western subgroups remains to be determined. Fourth, CBCLs for participants from Samples 2 and 3 were completed by parents. Because of their own grief, these parents possibly were not the most reliable informants of their children's problems. Thus, it would be relevant for future studies to correlate PGD severity with indices of children's impairments rated by other, more distant informants such as teachers. A final point is that in Samples 2 and 3, participants completed questionnaires with the possible assistance of a student or their therapist, respectively. Such assistance was not present in Sample 1. Although this likely has not affected the current findings (particularly since most analyses were based on data from Samples 2 and 3) future studies should preferably provide assistance to all participants comprising the study group.

Notwithstanding these considerations, the current findings indicate that PGD symptoms can be reliably assessed among children and adolescents, using adjusted versions of the ICG-R (Boelen et al., 2003; Prigerson & Jacobs, 2001). The current study findings also provide further evidence of the existence and clinical significance of PGD symptoms among children and adolescents. Further studies are needed to examine causes, correlates, and consequences of these symptoms and, taking into account the lack of effective interventions for childhood grief (Currier, Holland, & Neimeyer 2007), useful treatments for these symptoms. The importance of such studies is stressed by the fact that, as noted, working groups preparing DSM-5 are considering inclusion of a new category for a specific disorder of grief in this influential diagnostic system (see APA, 2011).

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## APPENDIX

English translations of the Dutch Inventory of Prolonged Grief for Children (IPG-C) and Dutch Inventory of Prolonged Grief for Adolescents (IPG-A)

	IPG-C	IPG-A
1	That s/he died, feels as something that has torn everything apart.	<i>Idem.</i>
2	I find it hard to do the things I normally do, because I think of him/her so much.	I think of him/her so often, that it's hard for me to do the things I usually do.
3	Thinking of him/her confuses me.	Memories of him/her upset me.
4	It feels difficult that s/he died; I think it's not fair.	I find it hard to accept that s/he is dead.
5	I would like to be with him/her.	I long for him/her.
6	I want to go to places that are related to him/her.	I seek out and feel attracted to places and things that are associated with him/her.
7	I am angry about his/her death.	<i>Idem.</i>
8	I cannot believe that s/he died.	I can hardly believe that s/he died.
9	His/her death has scared me; I am totally upset by it.	I feel numb or overwhelmed by his/her death; I am totally upset by it.
10	I find it difficult to trust other people since s/he has died.	<i>Idem.</i>
11	I find it difficult to love other people since s/he died.	I feel unable to love other people or feel distant from other people, since s/he died.
12	I do or feel the same things as s/he did.	<i>Idem.</i>
13	I don't want to think about the fact that s/he is dead.	I do everything to avoid thinking about the fact that s/he is dead.
14	I feel no interest in things since s/he died.	Life feels empty or meaningless since s/he died.
15	I hear his/her voice speak to me.	<i>Idem.</i>
16	I see him/her stand in front of me.	<i>Idem.</i>
17	It feels as if nothing really touches me.	<i>Idem.</i>
18	It feels unfair that I am still alive while s/he is dead; I feel guilty about that.	I feel guilty about the fact that I am still alive while s/he is dead.
19	I continue to feel angry about his/her death.	I feel bitter and angry inside, because of his/her death.
20	I am jealous of people who did not lose someone.	<i>Idem.</i>

(Continues)

(Continued)

	IPG-C	IPG-A
21	I think that the future has no purpose without him/her.	<i>Idem.</i>
22	I feel very alone since s/he died.	I feel lonely since s/he died.
23	My life can only be pleasant if s/he is around.	Life feels meaningless without him/her.
24	It feels as if a part of me is dead.	It feels as if part of me has died with his/her death.
25	It feels as if his/her death has changed everything.	<i>Idem.</i>
26	I feel less safe since s/he died.	<i>Idem.</i>
27	I have no control over things happening in my life.	Since s/he died, it feels as if I cannot control things happening in my life.
28	I am doing worse (in school and with friends) since s/he died.	Since s/he died, my functioning in different areas is impaired (for instance my functioning in school, with friend, in my job).
29	I am more easily angry, nervous and scared since s/he died.	I feel tensed and easily annoyed since s/he died.
30	I sleep poorly, since s/he died.	<i>Idem.</i>

## REFERENCES

- Achenbach, T.M., & Rescorla, L.A. (2001). *Manual for the ASEBA school-age forms and profiles*. Burlington, VT: University of Vermont.
- Alicis, E., van der Schoot, T.A.W., van Ginkel, J.R., & Kleber, R.J. (2008). Trauma exposure in primary school children: Who is at Risk? *Journal of Child and Adolescent Trauma*, 1, 263–269. DOI: 10.1080/19361520802279075
- American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th edition, text revision). Washington, DC: Author.
- American Psychiatric Association. (2011). *Proposed revision for adjustment disorder*. Retrieved May 22, 2011, from <http://www.dsm5.org/ProposedRevisions/Pages/proposedrevision.aspx?rid=367>
- Boelen, P.A., & Hoijtink, H. (2009). An item response theory analysis of a measure of complicated grief. *Death Studies*, 33, 101–129. DOI: 10.1080/07481180802602758
- Boelen, P.A., & Huntjens, R.J.C. (2008). Intrusive images in grief: An exploratory study. *Clinical Psychology & Psychotherapy*, 15, 217–226. DOI: 10.1002/cpp.568
- Boelen, P.A., & Prigerson, H.G. (2007). The influence of symptoms of prolonged grief disorder, depression, and anxiety on quality of life among bereaved adults. A prospective study. *European Archives of Psychiatry and Clinical Neuroscience*, 257, 444–452. DOI: 10.1007/s00406-007-0744-0
- Boelen, P.A., & Spuij, M. (2008). Negative cognitions in loss-related emotional distress in adolescent girls: A preliminary study. *Journal of Loss and Trauma*, 13, 441–449. DOI: 10.1080/15325020802171292
- Boelen, P.A., & van den Bout, J. (2008). Complicated grief and uncomplicated grief are distinguishable constructs. *Psychiatry Research*, 157, 311–314. DOI: 10.1016/j.psychres.2007.05.013
- 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, 227–247. DOI: 10.1080/07481180302889
- Bonanno, G.A., Neria, Y., Mancini, A.D., Coifman, D., Litz, B., & Insel, B. (2007). Is there more to complicated grief than depression and PTSD? A test of incremental validity. *Journal of Abnormal Psychology*, 116, 342–351. DOI: 10.1037/0021-843X.116.2.34
- Brent, D., Melhem, N., Donohoe, M.B., & Walker, M. (2009). The incidence and course of depression in bereaved youth 21 months after the loss of a parent to suicide, accident, or sudden natural death. *The American Journal of Psychiatry*, 166, 786–794. DOI: 10.1176/appi.ajp.2009.08081244
- Breslau, N., Wilcox, H.C., Storr, C.L., Lucia, V.C., & Anthony, J.C. (2004). Trauma exposure and posttraumatic stress disorder: a study of youths in urban America. *Journal of Urban Health*, 81, 530–544. DOI: 10.1093/urban/jth138
- Brown, E.J., & Goodman, R.F. (2005). Childhood traumatic grief: An exploration of the construct in children bereaved on September 11. *Journal of Clinical Child and Adolescent Psychology*, 34, 248–259. DOI: 10.1207/s15374424jccp3402\_4
- Cerel, J., Fristad, M.A., Verducci, J., Weller, R.A., & Weller, E.B. (2006). Childhood bereavement: psychopathology in the 2 years postparental death. *Journal of the American Academy of Child and Adolescent Psychiatry*, 45, 681–690. DOI: 10.1097/01.chi.0000215327.58799.05
- Cole, D.A., & Martin, N.C. (2005). The longitudinal structure of the Children's Depression Inventory: testing a latent trait–state model. *Psychological Assessment*, 17, 144–155. DOI: 10.1037/1040-3590.17.2.144
- Currier, J.M., Holland, J.M., & Neimeyer, R.A. (2007). The effectiveness of bereavement interventions with children: A meta-analytic review of controlled outcome research. *Journal of Clinical Child and Adolescent Psychology*, 36, 253–259. DOI: 10.1080/15374410701279669
- De Los Reyes, A., & Kazdin, A.E. (2005). Informant discrepancies in the assessment of childhood psychopathology: A critical review, theoretical framework, and recommendations for further Study. *Psychological Bulletin*, 131, 483–509. DOI: 10.1037/0033-2909.131.4.483
- Dillen, L. (2005). *Extended Grief Inventory* [Dutch Translation]. Ghent: Ghent University.
- Dillen, L., Fontaine, J.R.J., & Verhofstadt-Denève, L. (2008). Are normal and complicated grief different constructs? A confirmatory factor analytic test. *Clinical Psychology & Psychotherapy*, 15, 386–395. DOI: 10.1002/cpp.590
- Engelhard, I.M. (2005). *The Child PTSD Symptom Scale* [Dutch Version]. Utrecht: Utrecht University.
- Faschingbauer, T., Zisook, S., & DeVaul, R. (1987). The Texas Revised Inventory of Grief. In S. Zisook (Ed.), *Biopsychosocial Aspects of Bereavement* (pp. 111–124). Washington DC: American Psychiatric Press.
- Foa, E.B., Johnson, K.M., Feeny, N.C., & Treadwell, K.R.H. (2001). The Child PTSD Symptom Scale: A preliminary examination of its psychometric properties. *Journal of the American Academy of Child and Adolescent Psychiatry*, 45, 1485–1493. DOI: 10.1207/S15374424JCCP3003\_9

- Kovacs, M. (2003). *Children's Depression Inventory (CDI): Technical manual update*. North Tonawanda, NY: Multi-Health Systems.
- Layne, C.M., Savjak, N., Saltzman, W.R., & Pynoos, R.S. (2001). *Extended Grief Inventory*. Los Angeles, CA: University of California.
- Melhem, N.M., Day, N., Shear, M.K., Day, R., Reynolds, C.F., & Brent, D. (2004). Traumatic grief among adolescents exposed to a peer's suicide. *The American Journal of Psychiatry*, *161*, 1411–1416. DOI: 10.1176/appi.ajp.161.8.1411
- Melhem, N.M., Moritz, M.P.H., Walker, M.S.W., Shear, M.K., & Brent, D. (2007). Phenomenology and correlates of complicated grief in children and adolescents. *Journal of American Academy of Child and Adolescent Psychology*, *46*, 493–499. DOI: 10.1097/chi.0b013e31803062a9
- Muthén, L.K., & Muthén, B.O. (2007). *Mplus user's guide* (5th ed.). Los Angeles, CA: Muthén & Muthén.
- 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. Schut (Eds), *Handbook of bereavement research; consequences, coping and care* (pp. 613–637). Washington DC: American Psychological Association.
- Prigerson, H.G., Horowitz, M.J., Jacobs, S.C., Parkes, C.M., Aslan, M., Goodkin, K., Raphael, B., Marwit, S.J., Wortman, C., Neimeyer R.A., Bonanno, G., Block, S.D., Kissane, D., Boelen, P., Maercker, A., Litz, B.T., Johnson, J.G., First, M.B., & Maciejewski, P.K. (2009). Prolonged grief disorder: Psychometric validation of criteria proposed for DSM-V and ICD-11. *PLoS Medicine* *6*(8): e1000121. DOI: 10.1371/journal.pmed.1000121
- Prigerson, H.G., Shear, M.K., Jacobs, S.C., Reynolds, C.F., Maciejewski, P.K., Davidson, J.R., Rosenheck, R., Pilkonis, P.A., Wortman, C.B., Williams, J.B., Widiger, T.A., Frank, E., Kupfer, D.J., & Zisook, S. (1999). Consensus criteria for traumatic grief. A preliminary empirical test. *British Journal of Psychiatry*, *174*, 67–73.
- Shear M.K., Simon N., Wall M., Zisook S., Neimeyer R., Duan N., et al. (2011). Complicated grief and related bereavement-issues for DSM-5. *Depression and Anxiety*, *28*, 103–117. DOI: 10.1002/da.20780
- Timbremont, B., Braet, C., & Roelofs, J. (2008). *Handleiding Children's Depression Inventory (herziene versie)* [Manual for Children's Depression Inventory (revised version)]. Amsterdam: Pearson.
- Verhulst, F.C., van der Ende, J., & Koot, H.M. (1996). *Handleiding voor de CBCL/4–18* [Manual for the CBCL/4–18]. Rotterdam: Erasmus Universiteit Rotterdam.
- Verhulst, F.C., van der Ende, J., & Koot, H.M. (1997). *Handleiding voor de Youth Self-Report (YSR)*. [Manual for the Youth Self-Report (YSR)]. Rotterdam: Erasmus Universiteit Rotterdam.