

Effectiveness of an inpatient group therapy for comorbid complicated grief disorder

RITA ROSNER,¹ GUDRUN LUMBECK,² & EDGAR GEISSNER²

¹Ludwig-Maximilians-Universität, Department of Psychology, Munich, Germany & ²Medizinisch-Psychosomatische Klinik Roseneck, Germany

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Abstract

We investigated whether inpatients suffering from comorbid complicated grief disorder benefited from an additional manualized nine-session group intervention. For this purpose, 50 patients participating in the additional complicated grief intervention were compared with 22 control patients who received treatment as usual. After grief intervention, we found large effect sizes with regard to improvement in complicated grief symptoms. Because we found no differences regarding overall mental distress and depressive symptoms (between the two groups), the grief intervention seems to be highly specific.

Keywords: cognitive behavior therapy; group psychotherapy; trauma; outcome research; grief

Experiencing the death of a loved one is a normal and painful process. Grief itself, despite its different manifestations and courses, is not a mental disorder. Nevertheless, about 15% of the bereaved show symptoms that impair them in everyday life (Bonanno, Boerner, & Wortman, 2008; Ott, 2003). For this group, symptoms of grief last longer, and are more intensive and more painful in comparison to the majority of the bereaved. Further characteristic attributes of abnormal grieving processes are intrusive symptoms related to the loss, avoidance of memories of the deceased person, and emotional numbing. For this syndrome the term complicated grief (CG) has been used (Horowitz et al., 1997; Prigerson, Shear, Jacobs, et al., 1999). CG is associated with deteriorated health (Stroebe, Schut, & Stroebe, 2007), increased depression, and suicidality (Boelen & Prigerson, 2007; Latham & Prigerson, 2004). CG 6 months after the loss is correlated with an increased risk of heart disease, high blood pressure, cancer, and altered eating habits (Prigerson, Vanderwerker, & Maciejewski, 2007). Furthermore, CG has been effectively differentiated from depression and posttraumatic stress disorder (PTSD) (Bonanno et al., 2007; Prigerson, Bierhals, Kasl, Reynolds, Shear, et al., 1996; Prigerson, Frank, et al., 1995; Prigerson, Shear, Newsom, et al., 1996). Currently, CG has been suggested as a new diagnosis

for DSM-V (Prigerson, Vanderwerker, & Maciejewski, 2008; Prigerson, Horowitz, et al., 2009). In order to be recognized as a mental disorder, CG has to prove its diagnostic validity on the basis of various diagnostic validators, such as prognostic significance, psychobiological disruption, and specific treatment requirements. The latter aspect is of special interest to this paper.

In general, meta-analyses evaluating the efficacy of treatments for grief give small (Kato & Mann, 1999: $d=0.11$; Fortner, 2000: $d=0.13$; Rosner, Kruse, & Hagl, 2005: $d=0.20$; and Currier, Neimeyer, & Berman, 2008: $d=0.16$) to at best medium effect sizes (ES) (Allumbaugh & Hoyt, 1999: $d=0.43$). However, studies including only patients with increased grief symptom severity showed larger effect sizes than those with subjects without substantial grief symptoms: Currier et al. (2008) reported an ES of $d=0.51$ and Rosner et al. (2005) reported an ES of $d=0.27$. Studies based on patients who meet the criteria for CG are still rare, and these studies have been carried out meeting the criteria of efficacy studies, e.g. non-naturalistic settings, RCT design, and excluding highly comorbid patients. The three most successful randomized controlled studies for the treatment of CG in terms of overall ES are: (1) one study on cognitive behavioral therapy (CBT) versus supportive counseling (Boelen, deKeijser,

Correspondence concerning this article should be addressed to Rita Rosner, Ludwig-Maximilians-Universität, Department of Psychology, Leopoldstr. 13, Munich, 80802, Germany. Email: rosner@psy.uni-muenchen.de

van den Hout, & von den Bout, 2007); (2) one study on an internet-based intervention in comparison with an untreated control (Wagner, Knaevelsrud, & Maercker, 2006); and (3) a study with two active conditions comparing complicated grief treatment to interpersonal therapy (Shear, Frank, Houck, & Reynolds, 2005). Since two of the studies used two active interventions (Boelen et al., 2007; Shear et al., 2005), it is reasonable to use pre- to post-effect size statistics for a comparison of the treatment protocols. Boelen et al. (2007) reported pre- to post-effect sizes of 1.36 for the combination of cognitive restructuring followed by exposure and 1.80 for the combination of exposure followed by cognitive restructuring. Shear et al. (2005) likewise achieved a pre- to post ES of 1.63 and Wagner et al. (2006) reported a pre-post ES of 1.41. All reported ES values are based on completer analyses.

Therefore, treatment efficacy for CG looks promising, even though successful treatment protocols, study designs, and intake criteria so far have been very diverse: for example, patients have been actively recruited through advertisements (in contrast to patients seeking treatment on their own initiative) and have had fewer comorbid disorders than usual patients. Boelen et al. (2007), for example, excluded severely depressed patients as well as patients with substance abuse disorders and provided no further information on additional diagnoses. Shear et al. (2005) excluded patients with substance abuse, psychoses, and bipolar disorders as well. However, they reported that 45% of patients met criteria for a current depressive episode and 49% of patients met criteria for PTSD. Wagner et al. (2006) likewise excluded patients with suicidality, severe depression, severe dissociative symptoms, and substance abuse.

There are still no effectiveness studies in clinical and especially in inpatient settings. Data on highly comorbid and treatment seeking patients are scarce. Therefore, effectiveness studies are necessary to prove that CG treatment can be efficacious under routine clinical conditions.

Efficacious treatment protocols are diverse. To identify the most promising therapeutic methods we (a) reviewed studies which reported large positive outcomes regarding shared specific therapeutic interventions and (b) evaluated in a meta-analysis therapeutic interventions by correlating them with positive CG outcome (Rosner et al., 2005; Rosner & Hagl, 2007). The most promising treatment strategies were the following: psycho-education about normal and complicated grief processes, exposure elements relating to the most painful aspects of the loss, and transformation of the loss to enable change. Therefore, we included these elements in our newly developed intervention for inpatients.

Furthermore, previous studies indicated possible moderators of treatment outcome. Higher symptom severity correlates with better outcomes (Currier et al., 2008); female gender has been inconsistently related to better outcomes; and being middle-aged was connected to better outcomes (Allumbaugh & Hoyt, 1999). Thus, we tried to verify whether these variables are related to outcome in our study.

In summary, evidence for CG as a distinct and relevant disorder is growing, effective treatments are emerging, but naturalistic studies in clinical settings are currently not available.

Hence, the goal of this study is to evaluate the effectiveness of a specific inpatient group therapy program for comorbid CG disorder. We tested three hypotheses, investigating whether:

- (1) the grief intervention was more effective than treatment as usual in improving patients' CG symptoms;
- (2) both groups improved in general distress as well as depression severity;
- (3) higher pre-treatment grief severity, female gender, and middle age were connected with better treatment effectiveness.

Method

Participants

All patients admitted between January 2006 and June 2007 to three wards (focusing on anxiety disorders/OCD, somatoform disorders and eating disorders, respectively) were interviewed at intake and diagnosed with the International Diagnostic Checklist for ICD-10 (IDCL; Hiller, Zaudig, & Mombour, 1995). Additionally, they completed a number of questionnaires (SCL-90 R, BDI) and an open clinical interview for CG. If the screening interview indicated a complicated grief disorder, patients were asked whether they would be interested in participating in the study. Thus inclusion criteria were: (a) positive screening results for CG; (b) willingness to participate in the study; and (c) no acute crisis. One hundred and seventeen inpatients met criteria for inclusion. Patients interviewed between January 2006 and June 2006 received treatment as usual (TAU); patients interviewed between July 2006 and June 2007 received treatment as usual plus the CG intervention.

Of those 117 inpatients, 45 patients (38%) dropped out of the study. Patients dropped out from the TAU group (23 patients = 51%) and from the CG group (22 patients = 30%) for a number of reasons, such as preliminary discharge from the hospital (20 CG; two TAU), unwillingness to complete further

questionnaires (no CG; seven TAU), unavailability for further interviews (one CG; 10 TAU), and missing data (two CG; three TAU). More patients dropped out of the TAU group, because for CG participants measures were given after the last group meetings, while TAU patients had to be asked specifically to complete their questionnaires. Patients who dropped out did not differ from the participants on any of the pre-intervention measures (ICG: participants: $M = 37.07$; $SD = 12.34$; $n = 72$; drop-outs: $M = 34.99$; $SD = 14.49$; $n = 45$; $t = 0.83$; $p = .41$; BDI: participants: $M = 26.22$; $SD = 8.74$, $n = 64$; drop-outs: $M = 25.45$; $SD = 10.81$; $n = 42$; $t = 0.40$; $p = .69$; SCL-90-R: participants: $M = 1.28$; $SD = 0.58$; $n = 69$; drop-outs: $M = 1.27$; $SD = 0.65$; $n = 42$; $t = 0.05$; $p = .96$).

Thus, 50 patients participated in all meetings of the CG group and 22 patients served as controls. Control group participants were recruited at the hospital before the implementation of the CG intervention to avoid confounding factors, such as grief severity or the knowledge of being excluded from an available treatment while other patients on the ward were allowed to participate in grief treatment. Preliminary to the implementation of the CG group, patients who met the CG group inclusion criteria were just asked to participate in the study by completing the questionnaires. T1 (pre-intervention) measurements were collected immediately after the patients' agreement to participate in the study. Subsequently, control patients received treatment as usual (TAU) and CG patients received TAU and the CG intervention.

As all patients were admitted to the hospital on the basis of various diagnoses, and given that CG is not yet an official diagnosis, CG was in all cases comorbid with other diagnoses. The frequencies of the first three diagnoses according to ICD-10 (WHO, 1997), other than CG, are listed in Table I. Chi-square tests between the two groups showed no significant differences in the number of diagnoses of any mental disorder between the CG group and the TAU group. Furthermore, CG group and TAU group patients did not differ regarding age, educational level, and gender (see Table 1).

Every patient met criteria for at least one disorder other than CG. On average, patients (age range 17–79) met criteria for 2.5 mental disorders according to ICD-10 (other than CG).

Measures

Open clinical screening interview for complicated grief. Based on the criteria for CG (Prigerson, Vanderwerker, & Maciejewski, 2007), six screening questions for CG were asked. First,

Table I. Sociodemographic Data and Primary Diagnoses of CG and TAU Group Participants

	CG group <i>n</i> = 50		TAU <i>n</i> = 22		Group comparisons
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>t</i>
Education (years)	11.3	1.5	10.8	1.3	1.68
Age	38.4	13.5	40	15.6	−1.62
	<i>n</i>	%	<i>n</i>	%	χ^2
Male	6	12	6	27	2.57
University degree	12	24	2	9	2.17
The first three diagnoses according to ICD-10					
Affective disorders	46	92	20	90	0.02
Anxiety disorders	12	24	9	40	2.11
Adjustment disorders	12	24	2	9	2.17
PTSD	5	10	4	18	0.94
Somatoform disorders	7	14	3	14	0.002
Eating disorders	19	38	5	23	4.27
Personality disorders	5	10	3	14	0.21
Other mental problems	5	10	3	14	0.21
Medical diagnoses	12	24	10	46	3.31
Missing	1	2	–	–	0.45

Note. Other mental problems: non-somatic sleeping disorders, substance use disorders. Medical diagnoses: various non-mental diseases. *T*-tests and χ^2 -tests were performed in order to determine pre-test differences between the CG group and the TAU group.

patients were asked at intake whether they had experienced the death of a loved one and whether the loss was still causing distress (loss criterion). In the case of such a loss, patients were asked whether they frequently thought about the deceased person, heard their voice or actually saw the deceased, yearned for the deceased, avoided reminders of the loss, experienced emotional emptiness, and felt as though a part of themselves had died. A person was considered to meet criteria for CG when reporting a corresponding loss and answering at least three of the questions positively. Psychometric data on these screening questions were not evaluated.

Inventory of Complicated Grief. The Inventory of Complicated Grief (ICG; Prigerson, Maciejewski, et al., 1995) is a questionnaire which aims to measure the intensity of CG symptoms with 19 items on a 5-point scale. It was translated into German and back-translated by a native English speaker to ensure correct translation. Factor analysis showed an identical structure to the English version: all items loaded on one common factor, with adequate Cronbach's alpha ($\alpha = .87$). Further details of the

psychometric properties of the translated questionnaire are described in Lumbeck (2009). The ICG was developed to discriminate between normal and complicated grief reactions and measure grief intensity. The cut-off score for the English version is 25. The ICG is the primary outcome measurement in this study.

Beck Depression Inventory. The Beck Depression Inventory (BDI; Beck, 1978; German version: Hautzinger, Bailer, Worall, & Keller, 1992) is a questionnaire used to measure the severity of depressive symptoms.

Symptom Checklist-90-revised. The Symptom Checklist (SCL-90-R; Derogatis, 1977; German version: Franke, 1995) is a self-report questionnaire measuring subjective psychological distress during the last 7 days. In addition to nine subscales, three global scores can be computed, of which the global severity index (GSI) is the most common. The GSI measures the intensity of global mental health distress and was used as an outcome measure in this study.

The ICG was completed before the first session of CG group therapy (T1) and at discharge of inpatient therapy (T2). Control patients completed the questionnaire at corresponding points in time. BDI and SCL-90-R were completed at admission and discharge. As patients stayed 4.5 weeks at the hospital, the length of time between T1 and T2 is about 30 days.

Intervention

A review of successful interventions for CG patients indicated that the most effective treatment protocols share specific therapeutic interventions (Rosner et al., 2005; Rosner & Hagl, 2007), such as psycho-education about normal and complicated grief processes, exposure elements relating to the most painful aspects of the loss, and transformation of the loss to enable change. The manual for the CG intervention was developed based on these results and was adapted to an inpatient clinical setting. Therapists were trained in the application of the manual. Therapists were two men and seven women with an average age of 35 years, and an average of 5 years of working as therapists. All therapists had a background in CBT. The CG intervention was composed of nine double sessions twice a week and thus lasted 4.5 weeks. The CG intervention was supplemented with creative therapy by the creation of pictures and collages relating to the deceased person. In addition, the “worst” moment of the loss was dealt with in a writing exercise during an individual therapy session. The contents of each

session were defined. This means TAU was slightly different for the CG patients. One single session was dedicated to the “worst moment” as compared to the treatment as usual condition in the TAU group. Because relating to the “worst moment” is in fact exposure, we shifted it to the individual therapy session to avoid vicarious traumatization of the other patients in the group. Topics and interventions in the CG group included psychoeducation (normal vs CG), models of grief (see Znoj, 2004), comorbidity, confrontation with the loss, development of a motivation for change, and cognitive-behavioral interventions to alleviate symptoms such as rumination, avoidance and dysfunctional cognitions. The concluding session was devoted to the development of new perspectives in life. In Table II session content and treatment strategies are described in more detail. Work sheets and session course of action can be found in the treatment manual (Rosner & Geissner, in preparation)

Every participant (CG group and TAU group) received TAU, which consisted of a personalized combination of individual and group therapy relating to the various disorders. Grief topics were not explicitly excluded in TAU, but were not treated in a standardized way: i.e. therapists were open to discuss grief issues, but did not introduce the topic. In fact, individual therapists reported that none of the TAU patients wanted to discuss grief issues. TAU usually consisted of one weekly individual therapy session, two weekly general group therapy sessions (1.5 hrs each), and one or two weekly indicative group therapy sessions relating to the primary diagnosis of the patient (1.5 hrs each). Furthermore, patients attended social skills training twice a week, physical therapy, and, depending on individual diagnoses, other therapies, such as table groups for eating disorders, biofeedback, etc. Medical consultation took place when required.

Statistical Approach

In order to include subjects with single missing data points in the questionnaires into statistical analyses, missing data were simulated using EM algorithms (expectation-maximization algorithms). Simulation of missing data, especially when considering estimation errors, is superior to the substitution of missing data by mean values because EM algorithms lead to a decreased bias in the data (Lüdke, Robitzsch, Trautwein, & Köller, 2007). Subjects with more than 10% missing data in one questionnaire were excluded from the respective analysis.

A sum score for the ICG was computed for each patient at each measurement point. Scores for patients in the CG intervention and TAU were

Table II. Session Contents and Treatment Strategies

Session	Session content	Treatment strategies
1	Psychoeducation about normal and complicated grief; models of grief (according to Znoj, 2004) Art therapy session: "My loss"	Work sheets on characteristics of normal and complicated grief (symptoms, course, health and social consequences); model of complicated grief; psychoeducation about dysfunctional thoughts Pictures or collages to enable the patient to introduce the deceased person to other group members
2	"My grief reaction"; introduction of the loved one using the pictures or collages prepared in art therapy	Presentation of the patient's own grief reaction (symptoms, course, consequences in daily life, coping strategies); each group participant describes the lost person and what was special about him/her
3	Introduction continued; working on treatment motivation; development of treatment goals	Four-blocker method similar to motivational interviewing; advantages and disadvantages of change; work sheets on treatment motivation and treatment goals
4	Comorbidity; introduction of writing task "worst moment"	Psychoeducation about possible comorbidities; work sheets concerning grief and its other health consequences; work sheets on coping strategies, short- and long-term consequences
	Individual therapy session: worst moment	Confrontation of thoughts, emotions, and/or situations that are avoided
5	Worst situation	Sharing of worst situation in group, further confrontation
6	Rumination	Psychoeducation; individual analysis of triggers and consequences of rumination
7	Dysfunctional cognitions	Psychoeducation about dysfunctional cognitions; work sheets on individual cognitions; cognitive restructuring
8	Avoidance	Feedback of all group members on rumination and dysfunctional thoughts; psychoeducation regarding avoidance and its consequences; identification of individual avoidance strategies; group discussion; future goals (after discharge)
9	Transformation: Development of new perspectives in life, coping with difficult situations	Review of important work sheets from earlier sessions; introduction of transformation and change; rituals of remembrance; group discussion on strategies to cope with future difficult situations; closing round

compared on the ICG, the BDI and the SCL-90-R. Given that the groups differed significantly in their mean pre-test scores on the ICG and the BDI, ES statistics were computed using a pre-test adjustment for Cohen's d (d_{adj}). As most intervention studies report only Cohen's d in the unadjusted version, both coefficients are reported. In order to evaluate potential influences of age on treatment outcome, the CG group was divided into three approximately equal groups according to age, even though age was not distributed equally in our sample.

Results

Outcome Related to Complicated Grief

Before treatment (T1), patients participating in the CG intervention differed from the participants in the TAU group regarding their sum scores on the CGI (see Table III).

Participants in the CG intervention showed higher mean grief scores at pre-test as compared to the TAU group. The different group sizes resulted in an unequal weighting of outliers, which may have contributed to the differences in pre-test scores. Both groups improved after treatment. A 2 (group: CG vs TAU) \times 2 (time: pre vs post) ANOVA with time as a repeated measures variable revealed a significant main effect, $F(1, 70) = 42.50$, $p < .001$, and

a significant interaction between group and time, $F(1, 70) = 10.10$, $p = .002$ (see Figure 1).

While patients in the CG intervention group reported higher grief scores before treatment in comparison with the TAU group, they improved more than the TAU group. Correspondingly, effect

Table III. Means and Standard Deviations for ICG, BDI and GSI for CG Group and TAU Group

	CG group intervention			TAU			Group comparisons	
	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>t</i>	<i>F</i> (group \times time)
ICG _{T1}	38.8	11.5	50	33.1	13.5	22	6.21**	
ICG _{T2}	25.4	10.7	50	28.5	15.9	22		10.1**
BDI _{T1}	25.3	9.0	40	28.7	7.7	17	-4.13**	
BDI _{T2}	11.1	9.0	40	16.7	11.2	17		0.27
SCLGSI _{T1}	1.2	0.5	48	1.5	0.6	20	-1.49	
SCLGSI _{T2}	0.7	0.5	48	1.0	0.6	20		0.01

Note. BDI, total score of the BDI; SCLGSI, GSI score of SCL-90-R. Assessment points 1 and 2 are marked as T₁ and T₂. Different sample sizes are due to missing data in BDI and SCL-90-R. *T*-tests were performed in order to compare pre-test scores of the CG group and the TAU group. 2 (group: CG vs. TAU) \times 2 (time: pre vs. post) ANOVAs with time as repeated measures were performed in order to compare therapy outcome for CG and TAU groups. *F*-values represent the interaction effect of group and time.

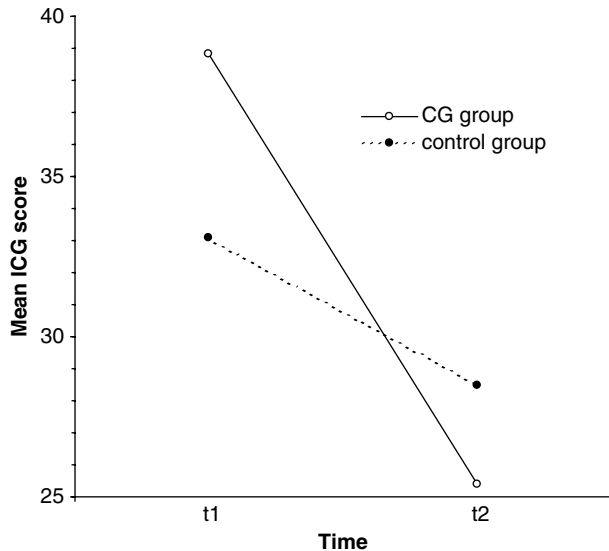


Figure 1. ANOVA of group × time effect.

size computation—using an effect size adjustment for pre-test differences—yielded a medium to large ES of $d_{adj} = 0.72$. When effect sizes were computed on the basis of pre–post differences in the CG group only (without controlling for effects of other treatments in inpatient therapy), a large ES of $d = 1.21$ resulted. Thus, CG group therapy was shown to be an effective treatment.

Outcome Related to General Distress and Depression Severity

TAU group scores on the BDI were significantly higher at pre-test as compared to CG group scores (see Table III). In order to verify whether the grief intervention improves only CG symptoms or whether depressive or general distress symptoms change as well, 2 (group: CG vs TAU) × 2 (time: pre vs post) ANOVAs for BDI and GSI mean scores as dependent variables were computed (Table III). Although both groups improved, there is no significant interaction with group effects for the CG group versus TAU (Table III).

Moderators

Next, possible moderators (age; gender; grief severity at the beginning of treatment) were analyzed. Repeated measures ANOVAs did not yield significant results for age or gender. To verify whether the CG intervention is differentially effective for higher pre-test ICG scores as compared to lower scores, two different analyses were conducted. For the first analysis (analysis 1), four CG group patients whose pre-test scores were lower than the mean

improvement of the CG group (which added up to just under 14 points) were excluded from the analysis. This was done to allow for both groups to change the same amount. If we had not excluded these cases, the pre-scores of those four patients, whose pre-scores were even lower than the average improvement, would render equal change impossible: a ceiling effect. In the next step, a median split was carried out for the remaining patients of the CG group ($Mdn = 39$). A 2 (group: high vs low ICG pre-test scores) × 2 (time: pre vs. post) ANOVA yielded significant differences. Although both sub-groups improved during treatment, grief intensity at pre-test significantly influenced improvement, $F(1, 47) = 13.1, p = .001$ (see Table IV). Computation of effect size statistics comparing both groups (high vs low ICG pre-test scores) revealed a large ES ($d = 1.8$). When considering only CG group patients with high pre-test scores, a large ES of $d = 1.90$ from pre- to post-measurement was found. The findings clearly suggest that the CG group intervention was more effective for patients with high pre-test grief scores in comparison with patients with lower scores.

To allow for comparison with other studies which used the suggested cut-off of 25 points for establishing CG diagnosis (Prigerson, Maciejewski, et al., 1995), and in order to rule out the possibility that differences between CG and TAU were due to confounding, we compared only those participants with scores above the cut-off in a second analysis (analysis 2). For this analysis, both groups (CG and TAU) were adjusted by excluding patients whose pre-test ICG scores were below the recommended cut-off of 25 points. Pre-test scores of 45 participants of the CG group and 15 participants of the TAU group were above the cut-off. A *t*-test showed that both groups no longer differed from each other at pre-test, $t(58) = 0.70, p = .49$. However, a 2(group: new CG vs new TAU) × 2 (time: pre vs post) ANOVA revealed similar differences between the two groups, $F(1, 58) = 8.86, p = .004; d_{korr} = 0.68$ (see Table V), as compared to analysis 1. This finding suggests that the large CG group treatment effects are not solely due to large ICG

Table IV. Means and Standard Deviations for CG Group Participants with High vs Low ICG Pre-test Scores at Pre- and Post-test

	High ICG			Lower ICG		
	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>
T1	47.7	6.6	25	30.8	6.1	24
T2	29.5	11.5	25	20.9	7.9	24

Note. T1 and T2 correspond to assessment before and after treatment.

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Table V. Means and Standard Deviations for CG and TAU Groups at Pre- and Post-test After Excluding Cases with ICG Scores Below 25

	CG group intervention			TAU		
	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>
T1	41.1	9.4	45	39.0	12.4	15
T2	25.9	10.9	45	32.3	20.0	15

Note. T1 and T2 correspond to measuring times before and after treatment.

pre-test scores. Treatment efficacy for the CG group intervention, however, increased ($d = 1.50$). This is not surprising when considering that the overall mean grief scores of both treatment and control groups were raised when looking at patients with CG diagnosis only, and patients with high grief scores benefited more from the intervention as compared to patients with lower scores, as mentioned above.

Discussion

The present findings suggest that the treatment of CG under naturalistic conditions in inpatient clinical settings (i.e. in a typical effectiveness setting) can be effective and that CG treatment is specifically effective for grief symptoms. This is an important finding because CG is, at present, under consideration to be established as a distinct mental disorder in DSM-V. To become established, a novel diagnostic category must meet manifold criteria, such as distinction of the diagnosis from others, specific risk factors, specific clinical correlates and course, as well as distinctive treatment requirements. This last aspect is a central topic of our study.

Based on a review of previous treatment studies concerning (complicated) grief, we developed a cognitive-behavioral intervention for the treatment of CG disorder and adapted the concept to an inpatient clinical setting. Unlike previously published studies, the patients in this study were diagnosed with several mental disorders at admission. In addition to affective disorders, anxiety and eating disorders were also frequent. PTSD, which is, besides depression, considered to be the most frequent comorbidity of CG in the literature (Melhem et al., 2004; Prigerson, Frank, et al., 1995; Silverman et al., 2000), was diagnosed infrequently in this sample. Furthermore, patients in our sample were, with a mean sum of 2.5 additional diagnoses, more distressed as compared to patients in other studies with highly successful treatments (Boelen et al., 2007; Shear et al., 2005; Wagner et al., 2006). In addition, inclusion criteria in these three studies were different from ours. Besides mental distress and different comorbidity patterns, our patients also differed from patients in other

studies regarding recruitment. Whereas in other grief treatment studies, patients were recruited actively, i.e. via advertising or following obituaries and offering treatments after the loss of loved ones, our patients came to the hospital to seek treatment for various diagnoses, and were then allocated to additional grief treatment when fulfilling criteria.

Participants in our study improved on measures of distress and depression severity. However, patients in the CG group improved more regarding intensity of grief symptoms compared to TAU patients. Effect size comparing CG and TAU yielded a medium to large ES of $d = 0.72$. In light of effect sizes reported in meta-analyses for patients with a strong therapy indication (Currier et al., 2008: $d = 0.51$; Rosner et al., 2005: $d = 0.27$), our results are remarkable—especially so when considering that many other studies were comparisons with no-treatment or waiting-list controls. Our findings suggest that our manual is considerably more effective than common grief interventions reported in previous meta-analyses. Our results are comparable to those of the most effective treatment protocols for CG in terms of effect sizes. For this comparison it is reasonable to use pre-post effect size statistics as control conditions vary substantially between studies. In our study a large pre-post ES of 1.21 was revealed. Boelen et al. (2007) reported pre-post effect sizes of 1.36 for the combination of cognitive restructuring followed by exposure and 1.80 for the combination of first exposure followed by cognitive restructuring. Shear et al. (2005) likewise achieved a pre-post ES of 1.63, and Wagner et al. (2006) reported an ES of 1.41. Yet as this was an inpatient study, treatment dosage was considerably higher than in the aforementioned studies where outpatients were treated.

Furthermore, the specific effect of CG group therapy on grief symptoms, in contrast to a very intense TAU condition without any grief-specific effects, supports the call for a grief-specific intervention. The findings also suggest that the CG group intervention was more effective for patients with high pre-test grief scores as compared to patients with lower scores.

In addition, it should be noted that our study, in contrast to previously published studies, was an effectiveness study and so gives preliminary evidence that transfer of the concept of CG into clinical reality is reasonable and beneficial for patients. Consequently, our results suggest that it is useful to screen for CG and to provide a grief-specific treatment protocol in clinical settings for patients admitted for various disorders.

Our study has several methodical limitations, such as the number of participants, the use of self-reports as primary outcome measures, and the different group sizes for CG and TAU. Unfortunately, it

was difficult to convince patients in the TAU condition to take part in the study from start to finish. This is partially related to another important limitation, which is the missing follow-up. The latter is especially significant, as Currier et al. (2008) reported that only few follow-up data are available. Besides known difficulties with follow-up studies, CG includes avoidance symptoms which will make it difficult for the non-treatment group patients to answer questionnaires. Differential drop-outs for the respective groups were therefore to be expected. Another limitation is the as yet not available psychometric evaluation of the screening procedure. Asking for an interpersonal loss is regarded as necessary to spare patients the grief questionnaire and is a standard procedure in grief studies. Yet the other screening questions were derived from CG criteria, but have not been evaluated so far.

Unfortunately, the TAU and CG groups differed not only in size, but also in pre-treatment scores. While patients in CG showed higher pre-treatment grief scores than patients in TAU, TAU patients were slightly more depressed and distressed. Bearing this in mind, we controlled for this difference statistically by calculating adjusted effect sizes. Nevertheless, those differences remain a major limitation.

On the other hand, the pre-post effects and controlled effect sizes are large, indicating the significance of our results. Our promising results have to be validated by other studies including severely comorbid patients.

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