

## Original Article

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# Effectiveness of a cognitive-behavioral group therapy for complicated grief in relatives of patients with cancer: A randomized clinical trial

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**Abstract**

**Introduction.** Complicated grief can affect a large number of individuals who have lost a relative due to cancer.

**Objectives.** To assess the efficacy of a cognitive-behavioral grief therapy (CBGT) group for complicated grief (CG) in those who have lost a relative due to cancer in comparison with a psychoeducational and emotional expression intervention group (PSDEEI).

**Methods.** A randomized clinical trial was used, in which 249 relatives of deceased cancer patients with CG were randomly assigned to CBGT or PSDEEI. Complicated grief (Inventory of Complicated Grief [ICG]), depression (Beck Depression Inventory [BDI-II]), hopelessness (Beck Hopelessness Scale [BHS]), anxiety (Beck Anxiety Inventory [BAI]) symptoms, and general health (Goldberg's General Health Questionnaire [GHQ28]) were assessed at pretreatment, posttreatment, and follow-up at 6 and 12 months.

**Results.** The CBGT group improved significantly ( $p < 0.001$ ), with the scores in ICG, BDI-II, BAI, BHS, and GHQ28 ( $p < 0.001$ ) being higher than those for the PSDEEI group in each of the assessed moments, with high effect sizes: ICG ( $\eta^2 = 0.16$ ), BDI ( $\eta^2 = 0.10$ ), BAI ( $\eta^2 = 0.06$ ), BHS ( $\eta^2 = 0.21$ ), and GHQ28 ( $\eta^2 = 0.21$ ). At the 12-month follow-up, the number of cases of CG decreased by 81.1% for the CBGT group vs. 31.7% in the PSDEEI group.

**Significance of results.** The CBGT treatment was effective for CG, depression, anxiety, and hopelessness symptoms and for mental health and was superior to the PSDEEI treatment.

**Introduction**

Grief is a normal psychological process that occurs after the loss of a loved one. It is an experience characterized by longing, emotional distress, sadness, anxiety, and loss of meaning or purpose. Most people adjust well to the new situation within a 6-month to 2-year period (Prigerson et al. 2009). However, there is a significant percentage of people who present complicated grief (CG), whose main symptoms include intense emotional grief, alteration of social, leisure, and work activities and even physical health problems (Prigerson et al. 2009; World Health Organization 2019). Lundorff et al. (2017) reported that 9.8% (95% CI: 6.8–14) of people can present CG. In the case of relatives of cancer patients, a higher prevalence has been reported, specifically, Guldin et al. (2012) found percentages of 40% at 6 months, 28% at 13 months, and 27% at 18 months, and Zordan et al. (2019) reported that almost 20% had CG 3 years after the loss. This justifies the importance of having effective psychological treatments for CG.

Research results in recent years with randomized clinical trials regarding cognitive-behavioral treatments have been very beneficial. Specifically, Rosner et al. (2014) and Rosner et al. (2015) tested the efficacy of a cognitive-behavioral grief therapy (CBGT) in 20 to 25 sessions, whereas Bryant et al. (2014) and Bryant et al. (2017) showed positive effects of a treatment consisting of 10 CBGT and 4 exposure therapy sessions. Wenn et al. (2019) reported good results using metacognitive therapy. Likewise, Litz et al. (2014) found positive effects of CBGT applied via the internet.

Furthermore, Shear et al. (2014) showed the efficacy of the Complicated Grief Therapy (a 16-session cognitive-behavioral intervention for grief), which proved its superiority with respect to interpersonal psychotherapy and drug treatments (Shear et al. 2016). This is the most studied treatment program so far (Iglewicz et al. 2020).

Most caregivers of people who die from cancer change adaptively to the loss. The pooled prevalence rate of grief disorders has been estimated to be 14.2% (95% CI, 11.7%–16.7%), ranging from 7% to 39%. The prevalence was higher in females (10%; 95% CI, 8.2%–12.1%) (Kustanti et al. 2021). Group interventions for grief in caregivers of cancer patients could be

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widely accepted, easily applicable, and effective, as the cause of death and the care processes of their loved ones are things that the members of the group have in common; thus, the group can provide a comfortable and safe social environment, which allows them to verify that they are not alone and that they are not the only ones who feel the pain of loss and feelings of mourning. Also, the group format has a lower economic cost. Therefore, it is important to check its effectiveness.

Kustanti et al. (2021) and Maass et al.'s (2022) reviews suggested that implementing bereavement support in a group format could be effective; however, the evidence is weak. To date, only Supiano and Luptak (2014) have shown that group therapy based on Complicated Grief Therapy was effective. Nevertheless, the efficacy of cognitive therapy for CG must be confirmed in the specific case of relatives of deceased cancer patients, specifically the CBGT, which is the intervention that, to date, has gathered the most empirical evidence in an individual format.

The objective of this study was to verify the efficacy of a cognitive-behavioral group therapy treatment to reduce the symptoms of grief, anxiety, depression, and psychopathological symptoms (CBGT) compared to a psychoeducational and emotional expression group intervention (PSDEEI) in relatives of oncology patients with CG.

The CBGT group received training in cognitive skills, emotional management, and behavioral activation that was hypothesized to be effective in overcoming CG. To demonstrate this, its effects were compared with those of a group such as the PSDEEI, who had the same interaction time with therapists and an expectation of improvement. This group also included information about grief and the expression of the emotions that accompany it but lacked any training in cognitive-behavioral skills.

The hypothesis of the present study was that the CBGT group would show decreases in symptoms of grief, depression, anxiety, hopelessness, and psychopathological morbidity from pretreatment to posttreatment, as well as at the 6- and 12-month follow-ups. These improvements in symptomatology would be greater than those of the PSDEEI group.

There is current evidence of the efficacy of CBGT. However, the contribution of the present study is to test the efficacy of CBGT in a group format specifically for CG in relatives of patients who have died of cancer, which has not been demonstrated to date.

The treatment model was based on Shear's Complicated Grief Therapy (Iglewicz et al. 2020; Shear et al. 2014), of which there is a group adaptation that has demonstrated its effectiveness (Supiano and Luptak 2014), and whose main components are psychoeducation for the understanding of grief and its acceptance, managing the symptoms and emotions of grief, carrying out valued activities and planning for the future, narrating the story of the death of the loved one, learning to live with their memories, and connecting with the memories of the deceased.

## Method

### Design

This study was a randomized clinical trial, with 2 parallel groups in which the effect of a group intervention using CBGT was compared to that of a group intervention using PSDEEI in CG (primary outcome) and symptoms of depression, anxiety, hopelessness, and mental health (secondary outcomes) in relatives of deceased cancer patients. Pretreatment, posttreatment, and follow-up measures at 6 and 12 months after treatment were taken.

The study took place between January 2018 and March 2020 at the La Paz University Hospital in Madrid. The project was approved by the ethical research committee of the La Paz University Hospital in Madrid.

### Participants

The sample consisted of relatives of deceased cancer patients who had symptoms of grief and were referred to the Oncology and Palliative Care Unit of the Hospital Universitario La Paz by the Palliative Care and Primary Care units in Area 5 of Madrid. All participants carried out a clinical interview to confirm the presence of CG symptoms. The inclusion criteria were the following: being over 18 years of age, speaking Spanish, having a relative who had died of cancer 6 months or more (any type of family relationship was included, but there were only 3 types: spouse, parent, and child), availability to attend all assessments and/or treatment sessions, and scoring 25 or more on the Inventory of Complicated Grief (ICG) –25 is the valid cutoff point empirically established by Prigerson et al. (1995) for CG for this inventory. The exclusion criteria were as follows: presenting psychopathological disorders or being under psychiatric treatment, substance addiction (according to the medical history), or undergoing any other grief treatments.

During the recruitment period, 249 relatives of deceased cancer patients met the inclusion criteria and went to the first assessment. Of these, 48.7% were referred by the Palliative Care Units and 35.8% were referred by Primary Care in Area 5 of Madrid. The experimental design included a follow-up period of 12 months. The attrition rate in clinical trials in palliative care was estimated to be 26% (95% CI: 23%–28%) for the primary end point and 44% (95% CI: 41%–47%) for the end of study (Hui et al. 2013). Specifically, the study by Supiano and Luptak (2014) showed a sample loss of 26% of the subjects from pre- to posttreatment in the CBGT group. The present study had follow-up periods of 6 and 12 months; therefore, in anticipation of a sample loss, it was decided to include a number greater than 100 in the CBGT experimental condition, with the aim of preserving the statistical power for intra-subject comparisons of this group at the 12-month follow-up. Thus, the randomization was not 1–1 but 1.15–1. Therefore, 133 subjects were assigned to the CBGT condition and 116 to the PSDEEI condition. Twenty-seven individuals in CBGT group and 35 individuals in PSDEEI group did not complete the treatment. The final sample that completed posttreatment assessment consisted of 187 grieving relatives. The post hoc statistical power analysis with this sample size is 0.99 (calculated by the Gpower program with an effect size of 0.25 and alpha of 0.05) (see Figure 1).

### Procedure

After the selection and random assignment of the participants, groups of 8 to 10 relatives homogeneous in terms of age and type of loss were formed. The CBGT and the PSDEEI were carried out by the same 2 psychologists, with training and experience in the treatment of CG, for both groups (they were not members of the research team). The treatments were carried out across sixteen 2-hour weekly sessions, over a period of 4 months. All participants were assessed at baseline, 1 week after the end of treatment (posttreatment) and after 6 and 12 months of follow-up. All assessments were conducted in person. The study was carried out over a period of 18 months, running 3 weekly intervention groups.

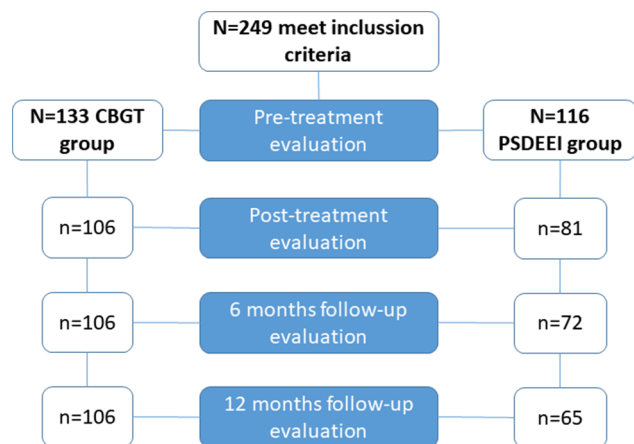


Fig. 1. Participant flow.

Participants in each of the groups were unaware whether they belonged to an experimental or control treatment condition. The evaluators were not blind regarding treatment allocation at posttreatment and follow-up phases.

### Experimental conditions

Both the CBGT and the PSDEEI had a psychoeducation module on CG in common, which was carried out in the first session in each group. Both groups underwent a total of 16 weekly sessions (2 hours of duration each), in groups of 8 to 10 people.

The specific components of the CBGT were (a) psychoeducation on grief and CG; (b) identifying and addressing cognitive, affective, physiological, and behavioral manifestations, especially guilt; (c) facilitating or favoring the acceptance of the reality of the loss, sharing personal experiences, reviewing the history of death, its implications, and consequences, and searching for meaning/purpose; (d) identifying and regulating emotion; (e) improving self-care; (f) facilitating optimal interpersonal functioning and communication; (g) working on personal values and goals; (h) Reviewing places and activities that are avoided; (i) working with memories and images; (j) imaginary conversations and letters to the deceased, and (k) maintaining the memory of the deceased in an adaptive way.

The specific components of the PSDEEI condition were to verbally express to the group the thoughts and emotions elicited by the loss and how they coped with them.

### Treatment fidelity control

Treatment sessions were audio recorded. Two tapes were randomly selected from each of the 16 CBGT sessions and 2 tapes from the PSDEEI groups, yielding a total of 32 recordings for each experimental group. The authors of the present study independently assessed whether or not the treatment components were carried out in each group and rated the quality of the treatment (on a scale ranging from 0 = unacceptable to 5 = optimal). Results show that the interventions were adjusted to the treatment program designed, and the mean quality of treatment was 4.8.

### Variables and instruments

A structured interview was carried out to collect sociodemographic data, referral data and clinical history, drug treatments, personal grief reactions, personal resources, and socio-family support.

The following instruments were used to measure the efficacy of the treatment:

- Beck Depression Inventory (BDI-II) (Spanish version) (Beck et al. 2011). The cutoff point to consider high levels of depressive symptoms was 21 in the present study. A score between 0 and 13 indicated a level of minimal depressive symptoms; between 14 and 19, mild; between 20 and 28, moderate; and between 29 and 63, severe. The Spanish version showed the same factorial structure as the original, with a test–retest reliability of 0.93, Cronbach's alpha of 0.89, and an adequate convergent and divergent validity (Beck et al. 2011).
- Beck Anxiety Inventory (BAI) (Spanish version) (Beck and Steer 2011). The cutoff point to consider high levels of anxiety symptoms was 21 in the present study. A score of 0–7 would indicate minimal anxiety; 8–15, mild anxiety; 16–25, moderate anxiety; and 26–63, severe anxiety. The Spanish version of the BAI showed a Cronbach's alpha of 0.90 and an appropriate diagnostic performance to discriminate between university students with and without anxiety disorder (area under the ROC curve = 0.80 (Beck and Steer 2011).
- Beck Hopelessness Scale (BHS), Spanish adaptation (Aguilar García-Iturrospe et al. 1995; Beck et al. 1974). The severity categories are as follows: 0–3, mild hopelessness within the limit; 4–8, slight hopelessness; 9–14, moderate hopelessness; and 15–20, severe hopelessness. In the present study ( $ICG \geq 25$ ), 8 was used as a cutoff point. The internal consistency of the BHS was 0.9 (Kuder–Richardson formula 20), and it had adequate criterion validity.
- Goldberg's General Health Questionnaire (GHQ28) (Goldberg 1978; Muñoz et al. 1979). It is a screening instrument that aims to detect psychological morbidity and possible cases of psychiatric disorders in contexts such as primary care or in the general population. It is a mental health assessment measure. Score ( $ICG \geq 25$ ) of 6 was considered indicative of psychosocial problem. GHQ28 shows high reliability (Cronbach's alpha = 0.97 and split-half reliability = 0.99). The factorial structure of the Spanish version was the same as the original, and it presented adequate levels of criterion validity (Muñoz et al. 1979).
- The Inventory of Complicated Grief (ICG – IDC in Spanish) (Limonero et al. 2009; Prigerson et al. 1995). The cutoff point to consider CG was ( $ICG \geq 25$ ) 25 at 6 months after death. The Spanish version showed a Cronbach's alpha of 0.88 and a test–retest reliability of 0.81, a factorial structure equal to the original, and an adequate criterion validity.

### Data analyses

The distribution of the categorical variables was presented in the form of absolute and relative frequencies, and the distribution of the quantitative variables was described by the mean and standard deviation or median and interquartile range, depending on the distribution of the data.

A univariate analysis was carried out to study the homogeneity of the 2 groups in terms of their sociodemographic characteristics and the baseline situation of the scales: to contrast the differences of the categorical variables, the chi-square test was performed, and to compare the differences between the quantitative variables, the Student's *t*-test for 2 independent samples or the nonparametric Mann–Whitney *U* test, depending on the distribution of the data, were used.

To study the efficacy of the treatment, a per-protocol analysis was performed, including the relatives that completed the follow-up ( $n = 171$ ). The development of the BDI, BAI, BHS, GHQ28, and ICG scales over time was analyzed by adjusting linear general models including the group (CBGT vs. PSDEEI) as a fixed factor and the measurement time as a repeated measures factor (pretreatment, posttreatment, 6 months, and 12 months). The Treatment  $\times$  Time interaction effect was also included, with an unstructured variance matrix. A statistically significant interaction effect indicated that the groups differed in their development. In the hypothesis tests for post hoc comparisons, the Bonferroni correction for multiple comparisons was used. The eta-squared value for the interaction effect was also presented as a standardized measure of effect size. This statistic describes the proportion of total variability attributable to a factor. Cohen (1988) provided benchmarks to define small ( $\eta^2 = 0.01$ ), medium ( $\eta^2 = 0.06$ ), and large ( $\eta^2 = 0.14$ ) effects. Moreover, 2 attempts to analyze the data were performed including all the relatives randomized (249) and all the relatives that completed the treatment ( $n = 187$ ). The development of the BDI, BAI, BHS, GHQ28, and ICG scales over time was analyzed by adjusting linear mixed models including the group as a fixed factor and the measurement time as a repeated measures factor (Cnaan et al. 1997). This model allows to analyze unbalanced repeated measures.

All tests were considered 2-tailed, and a  $p$ -value less than 0.05 was considered statistically significant.

## Results

The study sample was composed mainly of women, with a low educational level, aged close to 60 years, who had lost their husbands at least 6 months before. No statistically significant differences were found in the sociodemographic characteristics of the participants or in the time elapsed after death (see Table 1).

Regarding the efficacy of the treatment, in all the measures, a statistically significant interaction effect was obtained, and this indicates that, over time, the development of measures was different in each group. An improvement in the scores was observed in both groups, but this decrease was higher in the experimental group.

The eta-squared values ( $\eta^2$ ) associated to the interaction effect were high in the GHQ28 and ICG scores ( $\eta^2 = 0.21$  and  $\eta^2 = 0.16$ ) and slightly lower in BDI, BHS, or BAI ( $\eta^2 = 0.1$ ,  $\eta^2 = 0.08$ , and  $\eta^2 = 0.06$  respectively) (see Table 2 and Figure 2). Thus, the improvement observed in treatment effect vs. control was greater in GHQ28 and ICG.

In relation to the scores in the ICG, the CBGT group showed a decrease of 14.5 points (95% CI: 12.1–16.9) in the posttreatment, and the PSDEEI group exhibited a decrease of 3.1 points (95% CI: 0.4–5.9). The CBGT group reached normality values ( $<25$ ) at 6 months, while the PSDEEI group maintained a high score for CG symptoms at 12 months of follow-up.

In order to ease clinical interpretation, the percentage of clinical cases of CG (ICG  $\geq 25$ ) at each time of evaluation is shown in Table 3. In the posttreatment assessment, a percentage of CG of 47% was reached in the CBGT group compared to 86% in the PSDEEI group, which represents a relative difference of 45%. In the 12-month assessment, 65% of those in the PSDEEI group still continued with CG, while in the CBGT group, only 14% remained with CG. Therefore, there was a 78% higher reduction of symptoms in the CBGT group than in the PSDEEI group.

**Table 1.** Sociodemographic data and time (in months) since the loss

Sociodemographic data	CBGT ( $n = 133$ )	PSDEEI ( $n = 116$ )	Total ( $n = 249$ )	$p$ -value
Age, mean (SD; range)	58 (15; 24–79)	59 (16; 21–80)	59 (15; 21–80)	0.794
Gender				0.751
Male	24 (18%)	23 (20%)	47 (19%)	
Female	109 (82%)	93 (80%)	202 (81%)	
Education				
Primary	81 (61%)	73 (63%)	154 (62%)	0.735
Secondary	35 (26%)	26 (22%)	60 (24%)	
Higher education	17 (13%)	17 (15%)	35 (14%)	
Marital status				0.156
Married/couple	20 (15%)	7 (6%)	25 (10%)	
Single	15 (11%)	11 (14%)	32 (13%)	
Widowed	98 (74%)	65 (80%)	192 (77%)	
Relation to the deceased				0.297
Spouse/partner	98 (74%)	63 (78%)	187 (75%)	
Father/mother	20 (15%)	16 (17%)	40 (16%)	
Son/daughter	15 (11%)	5 (5%)	22 (9%)	
Months since the loss, mean (SD)	7.62 (6.14)	6.4 (4.4)	7.13 (5.5)	0.85

CBGT: cognitive-behavioral grief therapy; PSDEEI: psychoeducational and expressive emotional intervention.

Regarding the scores on the BDI-II, in the posttreatment assessment, the CBGT group showed a mean decrease of 8 (95% CI: 6.5–9.5), while the PSDEEI group decreased 2 points (95% CI: 0.2–3.7). The CBGT group achieved a low mean for depression symptoms (BDI-II  $< 13$ ) in the posttreatment assessment, whereas the control group reached those values later, at the 6-month follow-up.

Regarding the scores in the BAI, in the posttreatment assessment, the CBGT group showed a mean reduction of 8 (95% CI: 6.5–9.4), while the PSDEEI group decreased 2.9 points (95% CI: 1.2–4.6). The experimental group reached a mild mean of anxiety symptoms (BAI  $< 15$ ) in the posttreatment assessment, whereas the control group only reached this level later, at the 6-month follow-up.

Regarding the scores in the BHS, in posttreatment, the CBGT group had a mean reduction of 3.8 (95% CI: 3–4.7), while the PSDEEI group decrease was 0.5 points (95% CI: 0.4–1.5). The CBGT group achieved a low mean of hopelessness (BHS  $< 8$ ) in the posttreatment assessment, whereas the PSDEEI group achieved it later, at the 6-month follow-up.

Regarding the scores on the GHQ28, the differences at the posttreatment showed a significant decrease only in the CBGT group of 7.5 (6.8–8.4), while the mean score in the control group was similar to that for the pretreatment assessment. The CBGT group reached normality values ( $<6$ ) at the 6-month follow-up, whereas the PSDEEI group did not achieve normality values during the follow-up.

Similar results were obtained using an intention-to-treat analysis, shown in Supplementary Tables S1 and S2.

**Table 2.** Development of depression, anxiety, hopelessness, general health, and grief; GLM model results

GLM model results		Tests of within-subject effects				Models estimated means					Difference from baseline					
						PSDEEI		CBTG		PSDEEI		CBTG				
Outcome	Effect	df	F	Sig.	$\eta^2$	Time	Mean	SE	Mean	SE	Diff	95% CI	Diff	95% CI		
BDI	Time	2.4	208.4	<0.001	0.55	Pre	19.0	1.0	18.6	0.7						
	Treatment × Time	2.4	18.7	<0.001	0.10	Post	17.3	0.9	10.6	0.7	1.7	-0.1	3.5	8*	6.6	9.4
						6 m	13.1	0.8	8.3	0.6	5.9*	3.9	7.9	10.3*	8.7	11.9
						12 m	10.7	0.7	6.6	0.6	8.3*	6.1	10.5	12.1*	10.3	13.8
BAI	Time	1.7	203.2	<0.001	0.55	Pre	19.8	1.3	18.9	1.0						
	Treatment × Time	1.7	10.0	<0.001	0.06	Post	16.3	1.0	10.9	0.8	3.5*	1.7	5.3	8*	6.6	9.4
						6 m	13.3	0.8	8.4	0.7	6.6*	4.1	9.1	10.5*	8.5	12.4
						12 m	10.6	0.7	5.3	0.6	9.2*	6.3	12.0	13.7*	11.4	15.9
BHS	Time	2.3	124.6	<0.001	0.42	Pre	10.5	0.6	9.8	0.5						
	Treatment × Time	2.3	15.6	<0.001	0.08	Post	9.7	0.6	5.9	0.4	0.7	-0.4	1.8	3.8*	3.0	4.7
						6 m	8.1	0.5	4.1	0.4	2.4*	1.1	3.7	5.6*	4.6	6.7
						12 m	6.9	0.5	3.2	0.4	3.5*	2.1	5.0	6.6*	5.4	7.7
GHQ28	Time	2.1	377.0	<0.001	0.69	Pre	14.3	0.7	16.0	0.6						
	Treatment × Time	2.1	45.6	<0.001	0.21	Post	13.3	0.7	8.6	0.5	1.0	-0.2	2.3	7.5*	6.5	8.4
						6 m	9.3	0.7	4.6	0.5	5*	3.3	6.7	11.5*	10.1	12.8
						12 m	7.0	0.5	2.6	0.4	7.3*	5.5	9.0	13.5*	12.1	14.8
ICG	Time	2.3	284.4	<0.001	0.63	Pre	42.3	1.3	42.1	1.0						
	Treatment × Time	2.3	31.5	<0.001	0.16	Post	38.6	1.4	27.5	1.1	3.7*	0.7	6.8	14.5*	12.1	16.9
						6 m	28.7	1.0	19.8	0.8	13.6*	10.2	17.0	22.3*	19.6	24.9
						12 m	30.0	1.2	15.9	1.0	12.3*	8.6	16.0	26.1*	23.3	29.0

df: degree freedom; F: test F value; SE: standard error; Diff: difference; CI 95%: confidence interval 95; BDI-II: Beck Depression Inventory; BAI: Beck Anxiety Inventory; BHS: Beck Hopelessness Scale; GHQ28: General Health Questionnaire-28 items; ICG: Inventory of Complicated Grief; CBGT: Cognitive-Behavioral Group Treatment; PSDEEI: Psychoeducational and Expressive Emotional Intervention. \**p* < 0.05.

**Discussion**

The results of the present study show an optimal effectiveness of CBGT in reducing the mean symptoms of CG (more than 26 points in the ICG from the pre- to the posttreatment). The percentage of cases of CG at 12 months after the intervention was reduced by 81% in the CBGT group, compared to only a reduction of 32.7% of cases in the PSDEEI group. Similarly, the CBGT was effective in reducing the symptoms of depression, anxiety, hopelessness, and psychopathology. The results suggest that the CBGT is an effective treatment and superior to the group PSDEEI for GC.

The present study confirms Litz et al.'s (2014) efficacy results of the individual application of cognitive-behavioral treatment for CG, in which high effect sizes were obtained for CGI (Bryant et al. 2014, 2017; Rosner et al. 2015, 2014; Shear et al. 2016, 2014), as well as for the CBT intervention via internet. In these studies, the effects for the variables of depression and anxiety were less than those for the CG, although the works by Rosner et al. and Lintz et al. showed high effect sizes for the reduction of psychopathological symptoms. All of these are similar to the results of the present study.

To date, only one randomized clinical trial of group cognitive-behavioral therapy for prolonged grief has been conducted,

the one carried out by Supiano and Luptak (2014), on a sample of 39 older adults with CG, in which they compared this intervention with a standard group therapy (treatment as usual). Their results showed high effect sizes for the CG measures and a moderate effect size in the BAI, as in the present study, although they did not find significant effects for depression, unlike ours.

The diagnosis of prolonged grief in the DSM5-TR (American Psychiatric Association 2022) includes as a criterion a period of time of 12 months or more after death, although in the ICD-11 (World Health Organization 2019), the temporal criterion is a minimum of 6 months. Our study applied the treatments from 6 months after the loss, while most of the research on the treatments has been carried out with participants with more than 12 months after the loss. However, elevated symptoms of grief at 6-month may be predictive of PGD (Lundorff et al. 2021). Likewise, all the participants in our study were selected for presenting elevated CG symptoms (with ICG scores ≥25), thus, the intervention was justified. Lastly, we must point out that the results of this study provide evidence of the advantages of preventive intervention at 6 months to prevent the chronification of GC in the long term.

The main strength of the present study is that it is the first experimental investigation to test a cognitive-behavioral group therapy

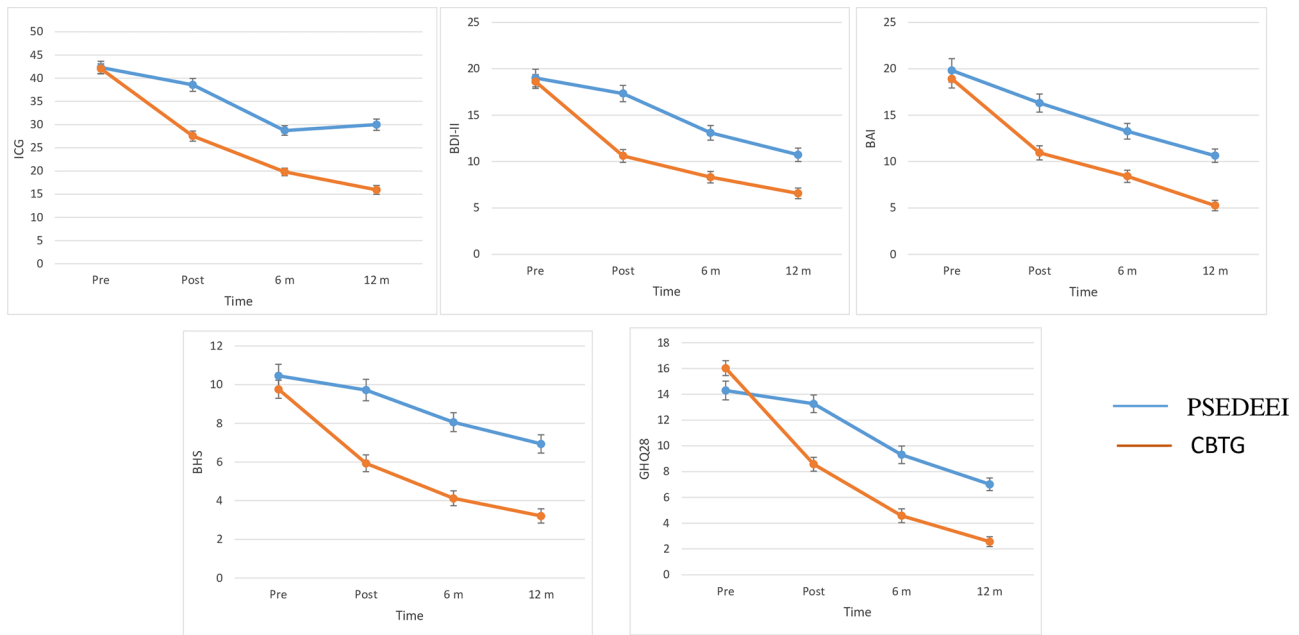


Fig. 2. Evolution of grief, depression, anxiety, hopelessness, and general health. Means and standard errors estimated by the GLM models.

Table 3. Presence of complicated grief

ICG (>25)	Control	Experimental	Complicated grief ratio	95% CI	Interpretation
Pretreatment	81 (100%)	106 (100%)			
Posttreatment	70 (86.4%)	50 (47.2%)	0.546*	0.438–0.680	45%
6-month follow-up	47 (65.3%)	16 (15.1%)	0.231*	0.143–0.374	77%
12-month follow-up	42 (64.6%)	15 (14.2%)	0.219*	0.133–0.362	78%

ICG: Inventory of Complicated Grief.

\* $p < 0.001$ .

treatment with relatives of deceased cancer patients for CG using a large sample, in a group format. In addition, the control condition was not a group without treatment, a waiting list, or a placebo but an active treatment group (psychoeducational and emotional expressive), over which the cognitive-behavioral group therapy has been shown to be superior.

Likewise, this study demonstrated that group treatment of relatives in mourning for cancer is a feasible and accepted treatment option, since, in this case, the relatives share the experience of the cause and the process of the disease, the death of their loved ones, and the experience of grief.

It should be noted that the treatment was applied in groups of 8 to 10 people, which has shown to be highly effective. This is important because it enables efficacy of the psychological intervention for the mental health of the bereaved with a reduction in its economic cost.

Finally, the treatment was effective on a sample of people with a low educational level. Boelen et al. (2011) pointed out that a low educational level is a predictor of lower efficacy of cognitive-behavioral treatments for CG. Shear et al. (2016, 2014) could not verify the efficacy of the treatment for people with a lower educational level as their samples were composed of a greater number of people with a higher educational level.

### Limitations

Among the limitations of the present study, it should be noted that the sample had a higher representation of women, which is common in other studies, and 75% of the sample are spouses/partners, but this impairs the generalization of the results.

In the experimental group, there was a loss of 20% of the participants between the pretreatment and the 12-month follow-up, and in the PSDEEI group, the lost participants were 44%. The number of dropouts was very small in the CBGT group considering that they took place between the treatment and the 1-year follow-up. Nevertheless, the loss was higher in the PSDEEI group. This could indicate that the PSDEEI was less attractive to the participants.

Another important limitation is that the application of the treatments was carried out by the same psychologists in both groups. Both psychologists were unaware of the objectives of the research and fidelity to the treatments was controlled, which could reduce the bias. On the other hand, the collection of posttreatment measurements in the follow-ups was not blinded, so there could be a not well controlled bias.

### Conclusions

CG affects a considerable number of relatives of deceased cancer patients. Evaluation and treatment of CG is an integral part of care. The CBGT was effective for CG, depression, anxiety, hopelessness, and psychopathological symptoms and was superior to psychoeducational and emotional expression intervention. In addition, the effects were maintained at the 12-month follow-up. The fact that cognitive-behavioral treatment is effective when applied in a group modality suggests that it may be a low-cost intervention procedure and accessible to a greater number of people. However, the present study has limitations, so more research is needed to verify the efficacy of CBGT in a group format for relatives of deceased cancer patients.

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**Data availability statement.** Available on request.

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