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Effectiveness of Psychotherapy-Based Interventions for Complicated Grief: A Systematic Review

Patolojik Yas Terapilerinin Etkinliği: Sistematik Derleme

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Öz

Yas tutmak, kaybın ardından kayba verilen tepkinin benzersizliği ile ilişkili olarak gelişen doğal, dinamik ve çok boyutlu bir süreçtir. Patolojik yas ise, bireyin doğal iyileşme sürecinde ortaya çıkan komplikasyonlar nedeniyle normal yas sürecinin alışılmadık şekilde uzadığı bir sendromdur. Yas tutan bireylerin yaklaşık üçte biri patolojik yas belirtileri göstermektedir. Patolojik yas yaşayan bireylerin kaygı, depresyon, fiziksel belirtiler ve yaşamı tehdit eden davranışları ifade eden bazı klinik şikâyetleri rapor etme eğiliminde oldukları belirlenmiştir. Bu çalışmanın amacı, patolojik yas tedavisi için geliştirilmiş olan psikoterapi modellerini tespit etmek ve bu modellerin yas sürecine uyum üzerindeki etkileri hakkında çıkarım yapmaktır.

Anahtar sözcükler: Patolojik, yas, tedavi, müdahale, sistematik derleme.

Abstract

Grief is a normal, dynamic and multidimensional process, which relates to the individuality and uniqueness of reactions to loss. However, complicated grief is a syndrome where normal grief is unusually prolonged because of complications in the natural healing process. Approximately one third of grieving individuals develop complicated grief symptoms. The individuals suffering from complicated grief tend to report clinical complaints that refer to anxiety, depression, psychical symptoms and life-threatening behaviours. The aims of this study were: to identify which psychotherapy-based interventions were designed for the treatment of complicated grief; and to make an inference about the effect of these interventions.

Key words*:* Complicated, prolonged, grief, treatment, intervention, systematic review.

A LOSS is an adverse external event which a person has no control over and changes one's belief system and cognitions; therefore, a cognitive and behavioural adaption to the consequences of death is required. Grief is a normal, dynamic and multidimensional process, which relates to the individuality and uniqueness of reactions to loss (Çelik and Sayıl 2003). The term of "normal grief" or "uncomplicated grief" encompasses a broad range of feelings and behaviours following intimate loss. However, a standard defini-

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tion for grief is difficult due to its multidimensional nature; e.g., gender, personality, and current life circumstances. Shear and Shair's (2005) definition for normal grief is that 'when people are deeply saddened by the death of an attachment figure during a period of weeks or months of acute grief (Kristjanson et al. 2006, Currier et al. 2008).

However, complicated grief (CG) or traumatic grief (TG) or prolonged grief (PG) is notably distinct from normal grief. Normal Grief is a generic process after a loss and is expected to end within 6 months (Bildik 2013). However, Complicated Grief is a syndrome where normal grief is unusually prolonged because of complications in the natural healing process; namely the insufficient integration of a new situation into pre-existing cognitive structures and distorted beliefs during the grieving process (Malkinson 2001, Groot et al. 2007). Proposed criteria for CG have already been defined to distinguish normal grief responses from symptoms of CG. According to these proposed criteria, the set of CG symptoms should be observed several times each day within the first 6 to 12 months after the loss (Miller 2012).

CG is also generally an under-recognized bereavement reaction. Although the terms are used interchangeably, grief is strictly different from bereavement. Bereavement is a state or an objective situation of having lost someone significant; grief, on the other hand, is an instinctual response to bereavement that has specific symptoms, as well as emotional and behavioural responses (Miller 2012).

Another confusing term in the grief literature is mourning which refers to the process which occurs after a loss of an emotionally significant person and the acts that express painful emotions which are shaped by the practices of a society and cultural group (McDaid et al. 2008).

According to statistics, the conditional prevalence of developing CG after bereavement is approximately 7% and the prevalence rate of CG in the general population is around 4%. On the other hand, the estimated annual prevalence for abnormal forms of grief varies between countries. E.g., the rates are 3.7% in Germany, 2.4% in Japan, and 4.2% in Switzerland (Kersting et al. 2011, Rosner et al. 2011). Due to this relatively high rate, in recent years, a number of instruments have been developed with the aim of measuring grief responses, identifying individuals who may be at risk of CG, as well as for the purpose of diagnosing CG. The instruments were examined for validity, reliability and availability of using the various tools in the clinical context (Kristjanson et al. 2006). The measures are as follows:

1. Texas Revised Inventory of Grief (TRIG)
2. Hogan Grief Reaction Checklist (HGRC)
3. Grief Evaluation Measure
4. Revised Grief Experience Inventory (REGI)
5. Core Bereavement Items
6. Inventory of Complicated Grief (ICG)
7. Inventory of Complicated Grief- Revised (ICG-R)
8. Impact of Event Scale (IES) (Kristjanson et al. 2006)

In order to highlight unique CG symptoms and to establish a pathological entity distinct from that of depression, anxiety disorder, and post-traumatic stress disorder (PTSD), several criteria have been established. First, the most common manifestations of CG were defined under four categories by Worden (1991): (1) feelings, (2) physical responses, (3) cognitions, and (4) behaviours. The most dominant emotions are sad-

ness, anger, guilt, shock, fatigue, loneliness and anxiety. During the grief process, individuals experience physical sensations, namely depersonalisation, lack of energy and over-sensation. Several cognitive deteriorations can also be observed, such as hallucinations, disbelief and preoccupation. Furthermore, social withdrawal, sleep and appetite disturbance, and avoidance of certain situations can all be grouped under the fourth category (Worden 1991). Prigerson et al. proffered a lapse of 6 months from the beginning of the onset of the symptoms to the actual diagnosis(Maercker and Lalor 2012).

Later, in 2009, the criteria labelled "Prolonged Grief Disorder" were developed by Prigerson and colleagues with the aim of distinguishing between the core symptoms of CG and other trauma-related disorders. Separation distress and impairment in functioning were evaluated as essential criteria for the diagnosis of CG (Kristjanson et al. 2006).

Finally, the inclusion of differential diagnostic category for CG in the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders (DSM) established provisional criteria for CG under the name of "Persistent Complex Bereavement Disorder". According to these consensus criteria, to ensure that individuals who receive the diagnosis are severe enough to warrant treatment they must have high distress levels and grief-related impairment persisting for at least 12 months following the loss. The symptoms must be inconsistent and out of proportion with religious, cultural and age-appropriate norms (Simon 2013). Currently, there is no differential diagnostic category in the fifth edition of the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders (DSM-5) which was published in May 2013 (Simon 2013).

With all the information mentioned above in mind, examining the effectiveness of interventions, both in relation to patients on an individual level as well as to providers of treatment should not be ignored. A systematic review of the effectiveness of these interventions may guide the researchers to design more effective interventions for the treatment of CG to speed up the recovery process.

This systematic review aims to investigate which psychotherapy-based intervention are designed for the treatment of CG; to assess the effectiveness of these interventions at post-treatment and follow-up assessments and to achieve the aims of this study, three research questions were designed. The research questions are: what are the psychotherapy-based treatment interventions for CG? and how effective are these interventions on the reduction of CG symptoms both in the short- and long-term?

Methodology and Method

Methodology

After a comprehensive search of the grief literature, two systematic reviews were identified about grief interventions. The first one was conducted to assess the effectiveness of grief therapy in 1999 (Allumbaugh and Hoyt 1999). The second one aimed to determine the short- and long-term effectiveness of both preventive and treatment interventions on grief (Wittouck et al. 2011).

The meta-analysis of Allumbaugh and Hoyt (1999) were conducted a decade ago. Since then, a wide number of papers were published, new interventions were designed, and the methodological quality of studies regarding grief interventions has improved.

The meta-analysis of Wittouck et al. (2011) only included qualitative randomised trials while also assessing the effectiveness of the interventions that were designed for the prevention of CG.

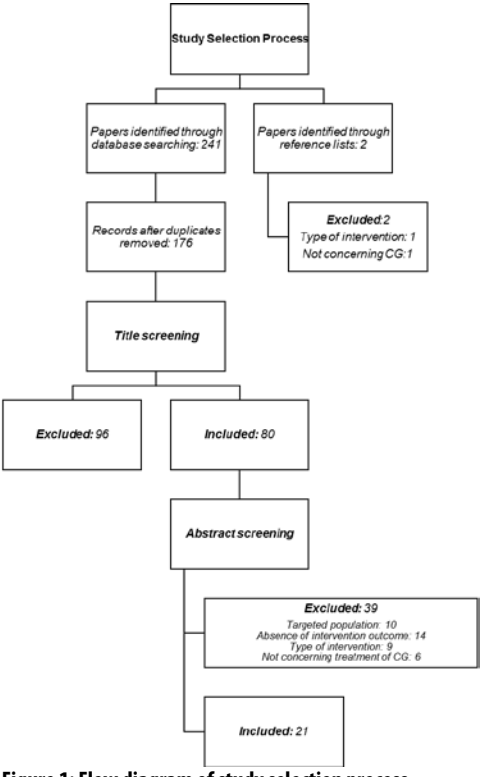

Figure 1: Flow diagram of study selection process

However, neither of these studies limited the psychotherapy-based treatment interventions specifically developed for adult population suffering from CG; the current study attempts to rectify this deficit. In addition, the current study is the first to analyse the outcomes in a narrative way and separately by the theoretical baselines and modality of interventions. In the view of the fact that non-random studies and case reports show more variability in their outcomes than do randomised studies, this review includes two types of quantitative study design (randomised and descriptive) in order to obtain an in-depth understanding, to obtain the full picture of this understudied topic, and to promote advancement in the quality of care and research on behalf of the individuals suffering from grief after a death.

In light of all of the information mentioned above, a systematic review was conducted to examine the effectiveness of treatment interventions for CG. Therefore, this study is the only systematic review to provide a quantitative review while making an inference from selected interventions' outcomes to identify the requirements for an

effective treatment model and to assist researchers to redesign their interventions accordingly.

Table 1. Quality assessment

	For all types				
Study	**Clear research question**	**Purposive data collection**			
Randomised controlled			**Randomisation**	**Blinding**	**Drop-out**
Shear et al. (2005)	✓	✓	Computer assigned		26%
Wagner and Maercker (2007)	✓	✓	X	✓	15%
Wagner et al. (2006)	✓	✓	Computer assigned	X	8%
Boelen et al. (2011)	✓	✓	Minimisation	X	25%
Piper et al. (2001)	✓	✓	Matching	X	23%
Boelen et al. (2007)	✓	✓	Minimisation	✓	27%
Piper et al. (2007)	✓	✓	Matching	✓	18%
Shear et al. (2014)	✓	✓	Computer assigned	✓	20%
Supiano and Luptak (2013)	✓	✓	Computer assigned	✓	27%
Rosner et al. (2014)	✓	✓	Computer assigned	✓	21%
Bryant et al. (2014)	✓	✓	Computer assigned	✓	24%
Barbosa et al. (2014)	✓	✓	X	✓	5%
Rosner et al. (2015)	✓	✓	X	X	37%
Eisma et al. (2015)	✓	✓	Simple randomisation	X	33%

Quantitative descriptive			**Purposive sampling**	**Representative sampling**	**Appropriate measurements**	**Drop-out**
Shear et al. (2001)	✓	✓	✓	Cannot tell	✓	38%
Asukai et al. (2011)	✓	✓	✓	✓	✓	13%
Botella et al. (2008)	✓	✓	✓	✓	✓	N/A
Boelen (2006)	✓	✓	✓	✓	✓	N/A
Wagner et al. (2005)	✓	✓	✓	✓	✓	N/A

Bhattachary (2014)	✓	✓	✓	✓	✓	X
Peri et al. (2016)	✓	✓	✓	✓	✓	N/A

√: yes, X: No, N/A: Not applicable

Method

Search Strategy

A systematic method for searching the literature was employed in the preparation of this review. Two strategies were run for selecting the relevant studies. First, a comprehensive electronic search in PubMed, PsychINFO (EBSCO), Web of Knowledge, Cochrane Library, ULAKBİM and EMBASE were performed with the use of the following search terms and Boolean operators : (complicated OR prolonged OR traumatic OR pathological AND grief) AND (treatment) AND (intervention) AND (death). The second strategy was searching the eligible studies' reference lists with regards to previous meta-analyses (These studies are marked with * in the current dissertation's reference list).

Searches in the databases were limited to English language material and only articles published between 1990 and January 2017 were assessed for their eligibility for inclusion. Searching filters were limited with human and aged 18+ in all databases. Unpublished studies were excluded from this systematic review. It must be noted, however, that the exclusion of these studies may lead to bias by over or underestimating the effects of interventions. The searches were completed on 15/01/2017. Therefore, studies published or entered in the databases after this date were not eligible for inclusion in this review.

Inclusion Criteria

A number of definite criteria were applied during the selection of the studies. The most vital criteria were that the paper had to assess a psychotherapy-based intervention designed for the treatment of CG and that it needed to evaluate the effectiveness of an intervention on CG symptoms as its primary aim. In terms of sample criteria for study selection, all individuals must be aged 18+ who meet the refined criteria for CG after the death of a loved one. In terms of study design, only quantitative researches were considered.

Exclusion Criteria

Any study focusing on mourning, bereavement, or the prevention of CG was excluded. Also, qualitative studies, studies of interventions developed for other loss-related diagnoses than CG, and studies of interventions for children, adolescents and caregivers or helpers were not included in this study. Papers that assessed CG symptom reduction as a secondary outcome were not included. Studies that focused on dementia patients, HIV patients, survivors' of suicide and patients with intellectual inabilities were excluded. Similarly, studies were not considered if the researcher focused on nurses' or therapists' grief and only one grief symptom such as autobiographical memory or severity of sleep disturbances. Studies were eliminated if the interventions were designed for the loss of pets and for pregnancies which ended in miscarriage, stillbirth and prenatal birth. All studies that were conducted in a palliative care unit and nursing homes, as

well as those which examined the impact of psychopharmacological interventions and alternative interventions, were omitted.

Table 2. Characteristics of studies

Study	Sample	Intervention	Objective	Assessment
CGT/TGT& IPT				
Shear et al. (2001)	N: 21	16 weekly sessions	To examine effectiveness of TGT on debilitating traumatic grief symptoms	Pre-,Post-treatment
Asukai et al. (2011)	N: 15	12 to 16 weekly sessions	To refine a treatment model for patients grieved by violent loss	Pre-, Post-treatment 3-, 6-, 12-month follow-ups
Shear et al. (2005)	CGT group: 49 IPT group: 46	16 sessions within 19- week	To compare CGT and IPT for the efficacy of grief amelioration	Pre-,Post-treatment
Shear et al. (2014)	CGT group:74 IPT group: 77	16 weekly sessions	To compare CGT and IPT for the efficacy of grief amelioration	Pre- Post-treatment 6- month follow-up
CBT&SC				
Boelen et al. (2011)	Intervention group: CR+ET: 23 ET+CR: 20 Control group: 11	12 weekly sessions	1.To determine the effectiveness of CBT on recovery from CG symptoms 2.To assess relationship between recovery from CG and changes in negative cognitions and avoidance behaviours	Pre-,Mid-,Post-treatment 6-month follow-up
Boelen (2006)	N: 2	Case 1: 12 sessions Case 2: 14 sessions	To illustrate how CBT based intervention effective for the alleviation of CG	Pre-, Post-treatment 6-week and 6-month follow ups
Boelen et al. (2007)	CBT groups: CR+ET:23 ET+CR:20 SC group:11	12 weekly sessions	To compare the effectiveness of CBT with SC for CG symptom reduction	Pre-, Mid-,Post-treatment 6-month follow-up
Botella et al. (2008)	N: 1	8 weekly sessions	To evaluate the efficacy of a cognitive-behavioural program supported by virtual reality to facilitate emotional processing in the treatment of CG	Pre-,Post-treatment 2-, 6-, 12-month follow-ups
Rosner et al. (2014)	Treatment group: 24 Waiting-list group: 27	20 weekly sessions	To develop and test the efficacy of an integrative CBT for PG	Pre-, Post-treatment
Bryant et al. (2014)	CBT/exposure: 41 CBT alone: 39	10 weekly group sessions 4 individual sessions	To test CBT for PGD by comparing CBT that contains exposure therapy and CBT alone	Pre-, Post-treatment 6-month follow up
Rosner et al. (2015)	N: 51	20 weekly sessions	To evaluate long-term effectiveness of integrative CBT for PG	Pre-, Post-treatment 1.5-year follow-up
Writing Therapy				
Wagner et al. (2006)	Treatment group:26 Waiting-list	2 sessions within 5-week	To develop an and test the efficacy of internet-based	Pre-, Post-treatment

	group:29		treatment model for CG	3-month follow-up
Wagner and Maercker (2007)	Treatment group: 22 Waiting-list group: 24	10 sessions within 5-week	To evaluate long-term effectiveness of an internet-based intervention for CG due to violent loss	Pre-, Post-treatment 1.5-year follow-up
Wagner et al. (2005)	N: 1	10 sessions within 5-week	To examine the effectiveness of internet-mediated writing intervention for individuals suffering from CG	Pre-, Post-treatment 3-month follow up
Eisma et al. (2015)	EX group: 18 BA group: 17 Waiting list group: 12	6 homework assignment with-in 8 weeks	To examine the effectiveness and feasibility of interned based EX and BA for CG	Pre-, Post-treatment 3-month follow up
Group Therapy				
Piper et al. (2001)	Interpretive therapy group: 53 Supportive therapy group: 54	12 weekly sessions	To examine the impact of two patient personality characteristics (QOR and PM) on treatment outcome for interpretive and supportive therapy for patients who met criteria for CG	Pre-, Post-treatment
Piper et al. (2007)	Homogeneous, high-QOR group interpretive group: 35 Homogeneous, low-QOR supportive group: 38 Heterogeneous, mixed-QOR interpretive group: 32 Heterogeneous, mixed-QOR supportive group:30	12 weekly sessions	To investigate the impact of group compositions on the outcome of two forms of group therapy (Interpretative& Supportive) with the patients experiencing CG **(composition variable:** level of QOR**)**	Pre-, Post-treatment
Supiano and Luptak, (2013)	CGGT 1: 11 CGGT 2: 9 TAU 1: 11 TAU 2 : 8	16 weekly sessions	To compare CGGT and TAU for the efficacy of grief amelioration	Pre-, Post-treatment 6- week follow-up
Narrative Intervention				
Barbosa et al. (2014)	Intervention group: 20 Control group: 20	4 weekly sessions	To evaluate the effectiveness of a cognitive narrative intervention for CG for controlling post-traumatic and depressive issues	Pre-, Post-treatment
Peri et al. (2016)	N:1	12 weekly sessions	To evaluate the efficacy of NR for PGD patients	Pre-, Post-treatment 3-month follow up

Note: QOR: Quality of object relations, PM: psychological mindedness

Data Collection

Potentially relevant articles were searched for by using the six electronic databases and were screened on the basis of their title and the references included in their reference lists. The details of this study's selection process are presented in Figure 1.

Results

Quality Assessment

An adapted version of the Mixed Methods Appraisal Tool (MMAT) was used to evaluate the methodological quality of the selected studies. The tool was particularly designed for the methodological quality assessment stage of mixed-method systematic reviews at McGill University (Pace et al. 2012). The methodological qualities and characteristics of the selected studies were represented in Table 1 and Table 2, respectively.

Data Analysis

As the selected studies were heterogeneous in their design and they varied in their methods and objectives, a narrative synthesis was seemed to be an appropriate method for the synthesis of outcomes. As used in this systematic review, narrative synthesis is a process of telling the stories of the outcomes by aiming to evaluate a wide range of components with relation to the interventions, not only focusing on their effectiveness (Popay et al. 2006). With regards to the first research question, the literature search identified six diverse types of interventions devised to expose the adverse physical and psychological symptoms associated with CG. First, the reported statistical data were assessed for each individual study under the category which it belongs to. Then, the findings were synthesised by combining and summarising the outcomes of individual studies in order to identify the resemblances and differences between the interventions' effects. The main findings of the studies are represented in Table 3.

Complicated Grief Therapy (CGT)/ Traumatic Grief Therapy (TGT)

CGT/ TGT were assessed for its effectiveness on debilitating grief symptoms in two pilot studies and two RCTs (Shear et al. 2001, 2005, 2014, Asukai et al. 2011)

Shear et al. (2001) conducted a pilot study to investigate the effects of a treatment program targeting the reduction of the severity of CG symptoms. To begin with, a significant reduction on CG symptom level with large effect size (ES) was measured in both completers and intent-to-treat analysis. Similarly, the same reduction was reported for depression and anxiety for both the completer and the intent-to-treat samples (see Table 3) (Shear et al. 2001).

Asukai et al. (2011) designed a treatment model for CG due to violent loss and tested the effectiveness of the intervention in a pilot study. The outcomes reflected a remarkable decrease and large ES on the CG scale. This marked reduction on depression, intrusion, avoidance and hyper-arousal scales were also found (see Table 3). Moreover, the changes in symptom severity on all 3 measures were also observed in 46% of participants in the 12-month follow-up. It was also found that the relationship to the deceased did not affect treatment efficacy (Asukai et al. 2011).

Additionally, a comparison between CGT and IPT was made by Shear et al. (2005) with an RCT and stratified by manner of death and therapy type. CGT intervention produced a more significant reduction on CG, depression and adjustment symptoms than IPT. A medium ES of the differences was measured in the completer samples on the ICG, BDI and Work and Social Adjustment Scale. Reduction rate of symptoms was found to be significantly higher and the time for response was shorter among the CGT group than the IPT group completers. It was also reported that CGT patients

using medication (43%) obtained 1.4 times more benefit than those not using medication during the treatment. In addition, the response rate was measured based on race, age, gender, time since death, and relationship with the deceased; no difference, however, was found amongst these factors (Shear et al. 2005). (see Table 3).

Shear et al. (2014) conducted a RCT to make a comparison between CGT and IPT. The difference between CGT and IPT reached statistically significant level at participants in favour of CBT. Among those receiving CGT, 52 individuals responded compared with 24 among those receiving IPT. The CGI Severity subscale score showed that of those in the IPT group, 41(64.1%) were still at least moderately ill but in the CGT treatment group 22 (35.2%) were ill. Additionally, CGT produced a more significant reduction on avoidance, depression and adjustment symptoms than IPT(Shear et al. 2014). (see Table 3).

Interpersonal Therapy (IPT)

IPT was employed in two RCTs with the aim of making a comparison with CGT (Shear et al. 2005, 2014)

The findings demonstrate that IPT produced an improvement in grief symptoms; however, the number of participants who responded to the intervention was remarkably lower in the IPT group (28%) than in the CGT group (51%). The study also reported that patients using medication (47%) obtained 2.1 times more benefit than those not using medication over the course of the treatment (Shear et al. 2005). (see Table 3).

IPT is a proven efficacious treatment for depression. By contrast, CG response to IPT was low in this RCT. Results of this study proved that CGT is statistically and clinically superior to IPT in ameliorating CG symptoms and impairment and in the rate of improvement in depression (Shear et al. 2014). (Detailed information for the outcomes of this study has already been reported above.)

Cognitive-Behaviour Therapy (CBT)

CBT was employed in eight studies, 5 of which are RCTs and the other three, case reports (Boelen 2006, Boelen et al. 2007, 2011, Botella et al. 2008, Bhattacharya 2014, Bryant et al. 2014, Rosner et al. 2014, 2015,

The RCT conducted by Boelen et al. (2011) was particularly focused on the effect of their treatment model on the recovery from CG through changing and altering negative-cognitions and avoidance behaviours. As predicted, changes in the avoidance found significantly correlated with reduction in CG severity at post-treatment and follow-up. This significant association was also measured for negative cognitions about the self, the future, life and catastrophic misinterpretations separately. Additional analysis was performed to investigate the association between CG symptom severity at pre-treatment and the benefits gained from the intervention. This association was observed in the long-term but not at post-treatment (Boelen et al. 2011). (see Table 3).

Similarly, the effect of conceptualisation on the recovery from CG was tested by Boelen (2006). A remarkable reduction of CG symptoms was achieved by working on poor integration, avoidance behaviours, and negative beliefs and misinterpretations. The scores at ICG for the first participant were diminished from 95 to 62 (34%) at post-treatment and to 44 (63%) at the 6-month follow-up. The scores for the second participant were reduced from 101 to 55 (46%) and to 48 (52%). In addition, the level of general psychopathology was decreased by 37% and 57% over the course of the treatment. The first participant's scores on the negative cognitions scale (self, life, future,

and threat) ranged between 28% and 42%, reaching 70% at the second one. After the intervention, both patients were scored below the cut-off score on the questionnaires for the diagnosis of CG (Boelen 2006). (see Table 3).

The second RCT aimed to make a comparison between CBT and supportive counselling (SC). The difference between CBT and SC reached a nearly statistically significant level at completers and a statistically significant level in intention to treat analysis in favour of CBT (Boelen et al. 2007).

In this study, the level of decrement was also assessed separately by the two forms of CBT (ET and CR), combinations of CBTs (ET+CR, CR+ET) and SC. In the direct comparisons of the forms, ET led to slightly more symptom reduction than CR and both CBTs led to more improvement than SC. In addition, the ET+CR (50%) condition generated more improved in patients than the CR+ET (31%) condition and SC (0%). Moreover, the changes in severity were also observed in the 6-month follow-up (Boelen et al. 2007). (see Table 3).

Botella et al. (2008) developed and tested the efficacy of CBT-based intervention by providing computer-generated simulations to express loss-related emotions. The intervention managed a significant reduction of the severity of CG symptoms from pre-treatment to post-treatment (57 to 26, 54%). The level of CG symptoms decreased by 7 (> 85%) to the 12-month follow-up. Additionally, a significant decrement (5 to 1) of general symptoms was also measured with CGI at the follow-up (Botella et al. 2008). (see Table 3).

Rosner et al. (2014) designed a treatment model for CG and tested the effectiveness of the intervention in a RCT. The findings suggest that the intervention for PGD is highly effective in terms of reducing grief severity. Similarly, the reduction was reported higher for comorbid depressive symptoms in PG-CBT group than waiting-list control group (Rosner et al. 2014).

The RCT conducted by Bryant et al. (2014) was particularly focused on to determine the relative efficacies of CBT with exposure therapy (CBT/exposure) or CBT alone for PGD. The findings proved that adding exposure to CBT led to greater reductions in grief and increased psychological and social functioning. At the post- treatment assessment only %19 of CBT/exposure patients scored above the cut-off score, whereas the percentage was %43 for CBT patients. In terms of treatment completers, fewer patients in the CBT/exposure condition at follow-up (14.8%) met criteria for PGD than those in the CBT condition (37.9%).

Similarly, the CBT/exposure intervention produced a more significant reduction on depression, negative cognitions relating to self blame, negative appraisals about the self than CBT alone. At follow-up, in the CBT/exposure condition only 4 participants met criteria for PTSD but in the CBT condition 11 participants met criteria for PTSD (Bryant et al. 2014). (see Table 3).

Rosner et al. (2015) organized and conducted a controlled trial to examine whether the initial symptom improvement could be maintained in the long-term. Fifty one patients, who had participated in a RCT conducted by Rosner et al. (2014), were followed up, 1.5- year after PG-CBT for PGD. Findings of this follow-up study proved that the initial therapy gains could be maintained, 1.5- year after post-assessment. Overall, 64% of the therapy completers had achieved clinically relevant improvement in

the end. The pre- to post-improvement in general symptomotology was also maintained (Rosner et al. 2015). (see Table 3).

Table 3. Main findings

Study	Main Findings:	
	CGT/TGT&IPT	
Shear et al. (2001) USA	ICG>25	Large ESs and significant differences were found for ICG scores: CG: ES= 2.19 (mean=22.79, SD=13.14, z=−3.11, p=0.002) ITT: ES= 1.45 (mean=16.91, SD=14.99, z=−3.51, p<0.001) Similar marked reductions with large ESs were measured in anxiety and depression scales: **CG:** anxiety: ES= 2.04; z=−3.06, p=0.002 depression: ES= 1.80; z=−2.98, p=0.003 **ITT:** anxiety: ; ES=1.08; z=−3.92, p<0.001 depression: ES=1.16 z=−3.44, p=0.001
Asukai et al. (2011) Japan	ICG>25	The intervention managed significant reduction with a large ES (1.72) in the CG symptoms: (F (4, 48) = 13.89, p < .001): intrusion: F (4, 48) = 12.70, p < .001 avoidance: F (4, 48)= 13.63, p < .001 hyper-arousal symptoms: F (4, 48)=:9.36, p <.001 Same significant reduction was measured in depression [F (4, 48) =4.02, p < .01].
Shear et al. (2005) USA	ICG>30	Both treatments produced improvement in CG symptoms. The response rates: CGT: 51% (95% CI, 37%-65%) IPT: 28% (95% CI, 15%-41%) The time for response was shorter for CGT than IPT (χ^2=5.65; P= .02) The reduction rate was greater for CGT than IPT: CG: χ^2= 7.56; P=.006; cohort RR, 2.03 [95% CI, 1.16-3.49] ITT : χ^2=5.07; P= .02; cohort RR:1.69 [95% CI, 1.03-2.77] Medium ES differences were measured on grief, depression and adjustment scales at CGT group. CG: F (5.18)= 66 , p<.03 depression: F (5.92)= 66 , p<.02 adjustment: F (4.47)= 66 , p<.04
Shear et al. (2014)	ICG>30	The rate of response was substantially and significantly greater for CGT than for IPT. CGT: 52 individuals (70.5%; 95%CI, 60.3%-82.6%) IPT: 24 (32.0%; 95% CI, 22.7%-45.2%) (Cohort RR, 2.20 [95% CI, 1.51-3.22]; P < .001; number needed to treat, 2.56). The rate of CG symptom reduction CGT: 1.05 ICG points per week IPT:0.75 points per week [t_{633} =3.85;P<.001] The rate of improvement in CG impairment (0.63 WSAS points per week with CGT and 0.39 points with IPT [t_{503} =2.87; P=.004]
	CBT&SC	
Boelen et al. (2011)	ICG-R (cut-off score did not reported)	The analysis of outcome reflected statistically significant effects of therapy on alleviating CG symptoms. Symptom reduction level was found to be significantly correlated with the reduction in negative cognitions. Reduction scores: **over the course of treatment** **follow-up:** self: β= 0.66, t= 5.58 β= 0.06, t= 4.75 life: β=0.72, t= 6.83 β=0.70, t= 6.31 future: β= 0.72, t=6.80 β= 0.68, t=6.05

		catastrophic misinterpretations: β= 0.82, t= 9.11 β = 0.83, t= 9.34 The symptom improvement was reported to be significantly associated with the effect of intervention on a reduction in avoidance behaviours. post- treatment: β=0.64, t= 5.40, p<0.001 follow-up: β= 0.71, t= 6.49, p<0.001 The effect of intervention at follow-up was found significantly related with the level of CG symptoms at pre-treatment (β= 0.54, t= 4.05, p<0.001), it did not found at post-treatment. (β=0.55, t= 4.19, p<0.001) The ES in the ET+CR condition was found stronger than CR+ET condition.
Boelen (2006) The Nether-lands	ICG-R>90	**Case 1:** The severity of CG symptoms decreased by 34% at the end of therapy and an additional 29% at 6-month follow-up. A reduction in general psychopathology symptoms (37%) and grief-related negative cognitions (ranging from 28% to 42%) was maintained over the course of treatment. **Case 2**: From pre- to post-treatment, grief and general psychopathology symptom levels diminished by 46% and 57%, respectively. A 70% decrement in negative cognitions subscales was measured. CG symptom improvement was maintained in follow-up. Both patients did not meet the criteria for CG diagnosis. (These scores compared with an outpatient control group.)
Boelen et al. (2007)	ICG>25	Between CBT conditions (ET+CR) and SC: statistically close-to-significant differences were found among completers: χ^2 (2, N= 39)= 5.53, p= .063 statistically significant differences in ITT analysis: χ^2 (2, N= 54)= 7.85, p= .02 ET+CR condition (50%) provided higher percentages of improved patients than CR+ET (31%) condition and SC (0%). ESs on ICG among completers at post-treatment : ET+CR= 1.80 CR=ET= 1.36 SC= 0.65 ET (0.50) generated largest effect on CG symptoms than CR (0.74) [(F (1.29) = 0.51)]. These reductions of symptom severity were maintained at 6-month follow-up.
Botella et al. (2008)	ICG>30	The severity of symptoms decreased from 5 (severely disturbed) to 1(normal) at CGI between pre-treatment and 12-month follow-up (80%). Significant reduction rates on CG symptoms were measured: pre- to post-treatment: 54% (57 to 26) 2-month follow-up: 68.5% (26 to 18) 6- and 12-month follow-up: >85% (18 to 6 and 7) A greater decrease was also measured in mood, impairment and depression scales.
Bhattachary (2014)	BDI (cut-off score did not reported)	The intervention coincided with a remarkable reduction in the level of subjective distress: pre- inter- post-treatment case 1: 28 18 12 case 2: 25 18 13 case 3: 25 20 14 These reductions of symptom severity were maintained at 6-month follow-up.
Rosner et al. (2014)	PG-13>31	Significant and large effects were found for PG-13 scores o f PG-CBT in comparison with WG. **ITT:** (d=1.32) **CG:** (d=1.61) pre-to post-treatment comparisons In PG-CBT, results were highly significant and showed large effects, **ITT:** t(23)=5.22, p<0.001, d=1.26 **CG:** t(18)=6.35, p<0.001, d=1.65

		control group did not change significantly **ITT:** t(26)=0.65, p=0.520, d=0.10 **CG:** t(22)=0.65, p=0.522, d=0.12 global mental health distress improved significantly with PG-CBT, t (23) =3.50, p=0.002, d=0.64, while no improvement was found control group, t(26)=1.57, p=0.129, d=0.20.
Bryant et al. (2014)	ICG (cut-off score did not reported)	CBT/exposure led to significantly greater decreases in PG symptoms relative to CBT from pre-treatment to follow-up (B [SE], −1.57 [0.39]; $t_{(122.92)} = -4.00$ [95%CI,−2.36 to −0.79]; P < .001). Participants in the CBT/exposure condition evidenced a stronger quadratic relationship between time and PGD symptoms compared with those in the CBT condition (B [SE], 0.49 [0.16]; $t_{(120.16)} = 3.08$ [95%CI, 0.18-0.81]; P = .003). After treatment, fewer participants in the CBT/exposure condition (6 participants [19%]) met criteria for PGD than participants in the CBT condition (13 [43%]) (n = 61) (odds ratio [OR], 2.89 [95%CI,0.92-9.07]; $\chi 2 = 3.42$;P = .06). At follow-up, fewer participants in the CBT/exposure condition (14.8%) met criteria for PGD than those in the CBT condition (37.9%) (Odds ratio, 3.51; 95%CI, 0.96-12.89; $\chi 2 = 3.81$; P = .04). CBT/exposure led to greater reduction of depression, negative appraisals about the self over time than CBT.
Rosner et al. (2015)	PG-13>31	Pre- to post-treatment comparison of grief severity was highly significant with large effects, **The ITT analysis**: t(26)=4.82, p<0.001, d=0.80 **The completer analysis**: t(17)=5.26, p<0.001, d=1.30 The GSI improved significantly ,with a small effect in ITT analysis, t(26)=3.36, p<0.002, d=0.27,and a medium effect in completers, t(17)=4.46, p<0.001, d=0.61 64% of the therapy completers had achieved clinically relevant improvement at 1.5-year follow-up.
	Writing Therapy	
Wagner et al. (2006)	IES-R>35	Large ESs of treatment were measured on the level of CG: pre- and post-treatment: Cohen's d= 1.25 to 1.52 pre-treatment and follow-up: Cohen's d= 1.17 to 1.63 Significantly higher changes of the main GC symptom domains measured in treatment condition participants (81%) than those at waiting-list (33%) (χ^2= 11.52, df= 1, p =.001). intrusion: χ^2= 13,34, df = 1, p =.001 avoidance: χ^2= 15.68, df = 1, p =.0001 failure to adapt:χ^2= 18.00, df = 1, p =.0001 For general psychopathology, large ESs of treatment were measured at post-treatment: depression: Cohen's d= 1.74 (F (1.27), p< .01) anxiety: Cohen's d= .96 (F (6.73), p< .01) general mental health: Cohen's d= .98 (F (2.93), p= .09) The intervention did not manage to improve psychical functioning [(Cohen's d= .02) (F (0.001), p= .97)].
Wagner and Maercker (2007)	IES>35	Clinically significant changes were observed on three symptom domains of CG: **post-treatment:** **follow-up:** intrusion: mean=12.8, SD=8.3 mean=10.1, SD=6.9 avoidance: mean=6.1, SD=6.8 mean=4.9, SD=4.1 failure to adapt: mean= 4.8, SD=3.5 mean= 3.9, SD=3.7 The percentages of participants with clinically significant complaints at post treatment: treatment group: 19%

		waiting list: 67% 95% of participants did not meet the criteria for CG at 1.5-year follow-up. Remarkable reductions on depression, anxiety and mental health scales were measured at both post-treatment and follow-up. The scores on physical health scale did not reflect significant change at both post-treatment and follow-up.
Wagner et al. (2005)	IES-R>35	The intervention coincided with a remarkable reduction in the level of maladaptive grief responses: pre-to post-treatment: 49 to 11 post-treatment to follow up: 11 to 23 Reduction of two main symptom domains: intrusion: from 33 to 6 at post-treatment and 14 at follow-up avoidance: from 16 to 5 at post-treatment and 9 at follow-up The scores on depression scale decreased from 10 to 1 and 3 to 1 on anxiety scales at post-treatment and remained at follow-up.
Eisma et al. (2015)	ICG>25	Significant interaction effects were found for exposure on CG ($p = .007$, $d = 0.8$) at post-test and ($p = .03$, $d = 0.7$) at follow-up. Similar marked reductions were measured in posttraumatic stress, depression, grief rumination, and anxiety. No significant interaction effects were detected for behavioural activation for ($p = .07$, $d = 0.4$) at post-test and ($p = .06$, $d = 0.6$) at 3-month follow-up. No significant effect was found for depression, posttraumatic stress, grief rumination, and anxiety. At post-test: moderate to large interaction effects in favour of exposure were observed for : complicated grief ($p = .27$, $d = 0.7$) depression ($p = .13$, $d = 0.8$) anxiety ($p = .16$, $d = 0.5$) grief rumination ($p = .16$, $d = 0.9$) At follow-up: Behavioural activation appeared more effective in reducing posttraumatic stress ($p = .53$, $d = 0.6$) and exposure in reducing depression ($p = .17$, $d = 0.6$).
	Group Therapy	
Piper et al. (2001)	PGI>10 IES>2 SAS-SR (1/6)	Large average ES for the change over the course of therapy was found in interpretive therapy (.75): CG symptoms: .98 general symptoms: .53 target objective severity and life dissatisfaction: .91 Moderate average ES was measured for supportive therapy (.50): CG symptoms: .79 general symptoms: .24 target objective severity and life dissatisfaction: .67 Clinical significant changes were measured in both forms of group therapy: anxiety: $\chi^2(1,N = 84) = 5.69$, $p = .017$ general symptomatic distress: $\chi^2(1,N = 85) = 4.40$, $p = .036$ A significant interaction effect was found between patients' QOR level, form of therapy, and lessening in CG symptom severity ($F(1,135) = 4.20$, $p = 0.42$). A significant interaction effect was measured for high-QOR patients in interpretive therapy ($Q(90) = 4.68$, $p < .01$). A significant interaction effect was found for low-QOR patients in supportive therapy ($Q(90) = 4.16$, $p < .05$). High PM level and reduction in grief symptoms was found significantly correlated ($F(1, 91) = 7.55$, $p < .007$).

Piper et al. (2007)	PGI>10 IES>2.0 SAS-SR (1/6)	The percentages of participants who achieved clinically significant change on the three major symptom domains of CG: intrusion: 40.3% avoidance: 43.2% pathological grief: 37.4% The average effect sizes: CG symptoms: .73 general symptoms: .52 There was no significant difference between the effectiveness of interpretive therapy and supportive therapy for general symptoms, CG symptoms, and target objective severity and life dissatisfaction. The QOR group composition was not associated with the reduction of CG symptoms. High QOR level and reduction in symptoms was found significantly correlated CG symptoms: (F (1, 15) = 11.18, β= -.007, p= .004 general symptoms: (F (1, 15) = 8.12, β= -.006, p= .012
Supiano and Luptak (2013)	BGQ>5	Participants receiving CGGT demonstrated higher treatment response than participants receiving TAU. The interaction effect Group × Time was significant, Λ = .39, F = 11.52 (3, 22), p < .001. A very large ES of η = 61, Cohen's d = 1.34 (95% CI = 0.483, 2.187) was found. at 6-week follow-up: The interaction effect Group × Time was significant, Λ = .45, F = 37.92 (1, 31), p < .001. A large ES of η = .55, Cohen's d = 2.42 (95% CI = 1.41, 3.43) was found. Improvement in CG among CGGT participants, as measured by the BGQ, suggests clinical significance. In that all 12 CGGT completers (100%) scored 5 or lower on the BGQ , in contrast to 1 of 4 (25%) of CGGT non-completers, 3 of 14 (21%) TAU completers, and 1 of 4 (25%) of TAU non-completers.
	Narrative Intervention	
Barbosa et al. (2014)	ICG ≥25	A significant difference between groups was found for CG (p < .01). The IG had a lower mean (M =25.32; SD = 6.46) when compared to the controls (M= 39.80; SD = 5.31). There was a very positive difference in traumatic stress outcome, with a significance level of p < .01. The IG had a lower mean (M= 15; SD= 7.45) compared to the controls (M= 42.80; SD= 7.73). The intervention group had a lower mean in depressive symptom outcome (M = 12.26; SD = 5.34) compared to the controls (M = 21.00; SD = 5.53)
Peri et al. (2016)	PG-13(cut-off score did not reported)	Patient no longer met the criteria for PGD on the PG-13 at the end of therapy or at follow-up. PG-13 scores decreased from 42 to 31 at post-treatment and to 23 at 3-month follow-up. On the BDI, patient went from moderate depression (22) to mild depression (15) at the end of therapy, and to minimal depression (11) at follow-up On the CAPS, there was a reduction from moderate symptomatology (50) before treatment, to mild/subthreshold (27) at the end of treatment, to asymptomatic (13) at follow-up. (These scores compared with a sample of PGD patients in a previous study.)

Note: BDI: Beck Depression Inventory, BGQ: The Brief Grief Questionnaire, CI: Confidence interval, CG: completers group, ES: Effect Size, ICG: Inventory of Complicated Grief, IES: Impact of Event Scale, ITT: Intent-to-treat Group, PG-13: Prolonged Grief Disorder Inventory, PGI: Pathological Grief Items, PM: **P**sychological mindedness, RR: Relative risk, SD: Standard Deviation, SAS-SR: Social Adjustment scale- Self report

Bhattacharya (2014) designed a CBT intervention for CG and effectiveness of the model was illustrated in 3 case reports. The scores at BDI for the first participant were diminished from 28 to 18 at inter-treatment and to 12 at post-treatment. The scores for the second participant were reduced from 25 to 18 and to 13. The scores for the third participant were decreased from 25 to 20 and to 14 over the course of treatment. The changes in subjective distress were also observed in the follow-up. The outcome of the intervention demonstrated that symptom reduction in short run, cognitive, emotional and functional improvement in long run. This also improved their coping and helped the participants to focus on the future(Bhattacharya 2014). (see Table 3).

Supportive Counselling (SC)

Supportive counselling was only used as an intervention in one study which compared SC with CBT (Boelen et al. 2007). The findings suggest that, even though SC provides an improvement in the severity of CG symptoms, the reduction rate did not reach a statistically or clinically significant level (Boelen et al. 2007). (Detailed information for the outcomes of this study has already been reported above.) (see Table 3).

Writing Therapy

Writing intervention was used as a grief treatment intervention in four selected studies (Wagner et al. 2005, 2006, Wagner and Maercker 2007, Eisma et al. 2015). It is noteworthy to mention that the intervention in each of these four studies was based on the CBT approach and that the writing tasks were delivered via e-mail.

A controlled study was conducted by Wagner et al. (2006) to investigate the efficacy of writing therapy on patients' recovery from three main symptom domains of CG, namely intrusion, failure to adapt, and avoidance. For the symptoms of CG, very large ESs were measured both immediately after the intervention and 3-month after the treatment. The difference reached a statistically significant level between the treatment condition and the control condition. The differences between the three symptom domains are represented separately in Table 3. 81% of the treatment condition participants at the post-treatment assessment and 92% of them at the follow-up scored below the cut-off scores for the diagnosis of CG. In contrast, the clinically significant change was found only in 35% of the control condition participants at the post-treatment assessment (Wagner et al. 2006).

The findings also proved the effectiveness of the intervention with large ESs on depression, anxiety, and general mental health. However, the severity of physical symptoms did not reduce in any significant way. Additionally, the satisfaction of being treated via the internet was assessed in this study and 85% of participants reported positive attitudes (Wagner et al. 2006). (see Table 3).

The second RCT was conducted to investigate the long-term effectiveness of structured writing tasks on CG. On each of the three symptom domains of CG (intrusion, avoidance and failure to adapt), clinically significant changes were measured at post-treatment and the reduction of symptoms was maintained at the 1.5-year follow-up (see Table 3). At the post-treatment assessment, only 19% of treated patients scored above the cut-off score, whereas the percentage was 67% for waiting-list patients. At the 1.5-year assessment, 95% of participants at treatment condition did not meet the criteria for CG. The intervention also achieved remarkable reduction in the severity of anxiety, depression and mental health symptoms. However, the findings did not reflect a signi-

ficant change in the physical symptoms of CG (Wagner and Maercker 2007). (see Table 3).

Wagner et al. (2005) designed an internet-based CG treatment intervention. The effectiveness of the model was illustrated in a case report. Reliable change on the CG scale was measured over the course of treatment (49 to 11). However, in contrast with RCTs, symptom reduction was not achieved in the long-term. The IES score increased from 11 to 23 at the 3-month follow-up assessment. In addition of the overall CG symptom change, two symptom domains were assessed separately. On the intrusion and avoidance sub-scales, scores decreased from 33 to 6 and from 16 to 5 over the course of treatment but an increase was observed (to 14 and 9, respectively) within three months. Similar with the RCT outcomes, the intervention produced decrement in depression and anxiety levels in the long-term (Wagner et al. 2005). (see Table 3).

A RCT was conducted by Eisma et al. (2015) to examine the effectiveness and feasibility of therapist-guided Internet-delivered exposure (EX) and behavioural activation (BA) for CG and grief rumination. At post-test, 36.4%of the BA group, 46.7% of the EX, and 10.0% of the control group had attained reliable change on grief rumination levels. At 3-month follow-up, 45.4% of the BA group, 66.7% of the EX, and 30.0% of the control group had achieved reliable change on grief rumination. The findings of the study proved that compared to a waiting list control group, both interventions resulted in large effects on CG and grief rumination at post-measurement, and that these effects were maintained at follow-up (Eisma et al. 2015). (see Table 3)

Group Therapy

Group therapy was assessed in three RCTs (Piper et al. 2001, 2007, Supiano and Luptak 2013). With regards to their primary hypothesis, the interaction effect between group composition on the basis of two patient characteristics (psychological mindedness [PM] and quality of object relations [QOR]) and the level of symptom reduction was examined by Piper et al. (2001). Overall, interpretive therapy was found to be more effective than supportive therapy for debilitating general symptoms and grief symptoms (Piper et al. 2001).

However, benefit from the form of therapy significantly differed associated with the patients' level of QOR. In particular, supportive therapy produced more reduction on all outcome variables for those participants with a low-QOR level and interpretive therapy for those with high-QOR level. Similarly, a high-PM level led to more favourable outcomes on maladaptive grief responses for both forms of group therapy. In addition to recovery from CG, group interventions produced clinically significant changes on the level of anxiety and general symptomatic distress (Piper et al. 2001). (see Table 3)

The second study was composed of homogeneous and heterogeneous groups on the basis of patients' QOR level and hypothesised an interaction effect between group composition and the improvement in symptoms. However, even if the participants in homogeneous groups were provided with more benefit than the ones in heterogeneous group, the difference did not reach a clinically significant level. The average ES for the grief variables (avoidance, present feelings and intrusion) was .73 while the size for the general variables (anxiety, general distress and depression) was .52 (Piper et al. 2007).

In contrast with the former study, the difference on symptom reduction in participants treated with interpretive therapy or supportive therapy was not measured on any

outcome variables. The association between patients' level of QOR was found directly related with a decrease in both CG symptoms and grief-related symptoms (Piper et al. 2007). (see Table 3)

The purpose of the third RCT was to compare the efficacy of CG group therapy with standard group therapy in older adults presenting with CG. The findings demonstrate that TAU produced an improvement in grief symptoms; however, the number of participants who responded to the intervention was remarkably lower in the TAU group than in the CGGT group. A very large effect size was found in favour of CGGT at post-treatment and at 6-week follow-up. 41% of the CGGT group achieved clinically significant improvement, defined as 50% reduction in PG-13 score. None of the 14 TAU participants achieved clinically significant change in CG as measured by PG-13. Similarly, participants in both conditions realized improvement in anxiety, but those in the CGGT group realized significantly more improvement (Supiano and Luptak 2013). (see Table 3)

Narrative Intervention (NR)

NR intervention was used as a grief treatment intervention in two selected studies (Barbosa et al. 2014, Peri et al. 2016). Peri et al. (2016) presented a case study demonstrating the implementation of modified NR for a PGD patient suffering from intrusive memories. The score at PG-13 was diminished from 42 to 31 at post-treatment and to 23 at the 3-month follow-up. The patient no longer met the criteria for PGD on the PG-13 at the end of treatment or at follow-up. Similarly, the score at BDI was reduced from 22 to 15 and 11. The scores indicate that the patient went from moderate depression to mild depression at the end of treatment, and to minimal depression at follow-up.

Additionally, on the CAPS, there was a reduction from moderate symptomatology before treatment to mild/subthreshold at the end of treatment, to asymptomatic at follow-up. The findings provide preliminary support for the effectiveness of NR for PGD patients, as they show a clinically significant decrease in psychopathology measures after treatment and an additional decrease at 3-month follow-up(Peri et al. 2016). (see Table 3)

Barbosa et al. (2014) designed a cognitive narrative intervention for CG. The effectiveness of the model was illustrated in a RCT. Reliable change on the CG scale was measured over the course of treatment. 94.7% of the treatment condition participants at the post-treatment assessments scored below the cut-off scores for the diagnosis of CG. In contrast, the clinically significant change was found only in 26.3% of the control condition participants at the post-treatment assessment.

Additionally, a positive difference was observed in traumatic stress outcome. The intervention group had a lower mean compared to the controls. Similarly, the intervention managed a significant reduction of the severity of depressive symptoms. These findings reinforce the idea that most people can improve if they discuss their traumatic life events, and constructing meaning for their emotions and thoughts (Barbosa et al. 2014). (see Table 3)

Discussion

This is only a systematic review, the purposes of which were to examine the effectiveness of CG treatment interventions by collecting data from different types of quantita-

tive studies while presenting a comprehensive analysis of the current literature. Before drawing a conclusion, there are several issues which need to be highlighted and the outcomes of selected studies should be assessed accordingly.

First, as noted in the introduction, CG is still not an officially recognised disorder in DSM-5. Therefore, the criteria used to define CG and the cut-off score to diagnose CG differed, and assessment tools the between studies. Therefore, it is not clear whether the differences on outcomes were observed as a result of intervention or due to the cut-off score and/or instrument used. On the other hand, there was a consistency in the criteria applied for participant selection among the studies which allows making comparisons between interventions. Furthermore, the majority of studies excluded those individuals diagnosed with any co-morbid disorders and/or those who have received treatment elsewhere during their intervention period. These criteria for the inclusion of participants also increased the reliability of the reported data for intervention effects.

Similarly, the majority of the included studies controlled the medications which were used by participants. In the presence of medication, if the participants received medication for clinical anxiety and depression, they were either excluded or the stability of the dosage and the type of the drug was controlled by a pharmacist over the course of treatment.

A number of remarkable limitations in the studies was also identified related to the characteristics of samples. To begin with, the effectiveness of interventions was examined with small sample sizes. Only group therapy intervention studies managed to collect the data from a large enough sample size (Piper et al. 2001, Piper et al. 2007).

Moreover, the percentage of participants who seek treatment for their grief-associated symptoms was considerably higher than those who were offered the treatment or referred by a clinic. However, it is important to note that confounds with participant recruitment procedures affect the outcomes of other moderator analyses(Genç and Aydın 2015). In the same line with the findings of previous meta-analyses, seeking ways to enhance patient motivation and an adherence to treatments seems to be essential to increasing positive outcomes (Allumbaugh and Hoyt 1999).

Likewise, the data was generally collected in Western countries. Only two studies were conducted in a non-Western country (Asukai et al. 2011, Bhattacharya 2014). It may also be asserted that a universal treatment model may not be designed and tested as grief experiences can be viewed as highly effected by context and that the real effect can be different in different cultural settings. Therefore, it is necessary to consider cultural differences in expected emotional levels after the loss, different ways of expressing symptoms and response to treatment.

Even if the collected data from writing interventions were geographically independent, all participants were treatment-seekers and only self-rated questionnaires were used. In addition, as was discussed by the author, the absence of face-to-face contact increases the possibility of participants misunderstanding the tools and tasks that they use, and the misevaluation of intervention effects by the investigators (Wagner et al. 2005) .

Lastly, as in most intervention studies, the researchers in the reviewed studies ignored the fact that multiple participants were treated by different therapists in the same study. The benefit from the intervention may be affected by the therapists' competencies or attitudes rather than the treatment techniques. Although the changes in the

outcomes were analysed according to the therapist and found no effect on the magnitude of change, there is still a doubt in drawing any definite conclusions (Piper et al. 2001, Boelen et al. 2007, Piper et al. 2007)

Conclusion

Before ending this systematic review, it is also noteworthy to mention that, the evaluation of the interventions may be affected by the limitations of this current review. A criticism might be made against this study's rejecting all qualitative studies and grey literature in this systematic review. Additionally, only articles written in English were placed in this study. Lastly, although a checklist was applied as a guide to appraising the quality of this current systematic review, due to the fact that there is an absence of a co-reviewer(s), this study as a whole might have been more open to researcher bias (Hemigway and Brereton 2009).

This systematic review found some evidence to support the effectiveness of psychotherapy-based interventions on patients' recovering from CG. The included studies reported positive outcomes for these interventions and indicated its effectiveness in both the short and long-term. The findings are in line with the existing meta-analysis which found significant pooled standardised mean differences in favour of grief interventions (Wittouck et al. 2011). Moreover, the outcomes of the included studies show an impact on their interventions, not only with recovery from CG, but also with the improvement of concurrent symptoms which refer to depression and anxiety.

All in all, the results of this systematic review demonstrate that CG can be treated effectively with the interventions which aim to adjust maladaptive CG reactions into more normal grief reactions. As evaluated interventions may have had flaws in their implementations, theoretical baselines, targets and techniques, their effects also varied. Overall, far superior outcomes were reported by the interventions which were particularly designed for grieving individuals, rather than interventions that could be applied to anyone.

On one hand, these benefits could not reach a statistically meaningful level in all of the included studies in relation to the reduction of dysfunctional cognitions and behaviours. These non-significant outcomes were reported especially by the interventions which were not specifically designed for grief amelioration. These findings emphasised that individuals require specialised treatment in order to be able to return to their premorbid level of functioning. On the other hand, no remarkable difference has emerged in the specific grief treatment interventions about whether one model is preferable to another.

However, there is still a doubt about the effectiveness of treatment interventions on CG. It may be asserted that the recovery from maladaptive symptoms may be related with time rather than the intervention effect. Even though improvement levels were less in the control group participants than for intervention participants, an improvement on symptoms was nevertheless observed among control group participants not receiving any treatment. In addition, the meta-analyses conducted by Wittouck et al. (2011) found a lack of effectiveness of preventive interventions and significantly small effect sizes from the interventions which were provided sooner after the death (Wittouck et al. 2011). These findings support the idea that an alleviation of symptoms follows a natural healing process and is achieved over time. Thus, adaptation to life after

the death of a loved one and recovery in symptoms could potentially be achieved without any professional help.

In order to attain a more definitive conclusion about the real effect that the interventions had and in order to increase the benefits from treatment, some further considerations are also highly recommended. To begin with, future research is needed to obtain evidence for the effect of interventions from prospective controlled studies designed with a large sample size including both genders. There is a need which is also identified in the grief literature for qualitative researches to obtain information about the perceptions of the participants about intervention and redesign their treatment model accordingly. In order to inform future research about the treatment of CG, it is recommended that a systematic review of the grief literature should be undertaken in the interventions for children, adolescents, and the elderly, as well as for patients with concomitant disabilities. Additionally, in order to obtain information about the perceptions of participants with regards to the interventions, a mixed-method systematic review is highly recommended.

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